A STUDY TO ASSESS THE IMPACT OF SELF LEARNING MODULE ON PREVENTION OF DEMENTIA IN ADULTS

BY Group IX

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CERTIFICATE

This is to certify that this thesis titled "A study to assess the impact of self-learning module on prevention of Dementia in Adults." Is the bonafide work in the partial 2ulfilment of the degree of bachelor of science nursing.

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AKNOWLEDGEMENT

First and foremost we are bound by gratitude of almighty God for giving us the necessary knowledge and ability in accomplishing our task.

We consider it is a great honour and privilege to be under the guidance of **Dean. Prof. Asia Qureshi** , Dean School of Nursing, Galgotias University. We offer our sincere regards and deepest gratitude to **Ms. Surabhi Verma**, for her sustained interest, guidance and encouragement which helped us conceptualising and completing the endeavour .

We express our profound gratitude to **Dean. Prof. Asia Qureshi** , Dean School of Nursing, Galgotias University who gave us opportunity to conduct this project.

We are extremely grateful to **Ms. Surabhi Verma** , who willingly spared her valuable time for direction and guidance for the preparation of tool, writing chapters and final editing of the project. Thanking you madam for helping us to finally completion and execution of our study.

We are grateful to **Ms. Surabhi Verma** for the expert guidance in analysis and interpretation of data.

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CHAPTER 1

CHAPTER-1

INTRODUCTION

"To care for those who once cared for us is one of the highest honour."

-Tia Walker

Dementia is the most feared and devastating disorder of late life. Current estimates reveal that there are about 18 million cases of dementia in the world and there will be about 34 million suffering from dementia. The overall prevalence of dementia ranges from 5% to 7%. Alzheimer's disease is the most common dementing disorder accounting for 80% of all cases of dementia. The number of people with dementia is steadily increasing. Alzheimer's Society believes that careful planning for the future is needed now to ensure that the right care and support is available.[1]

Current research focuses on many different aspects of dementia. Indian aged population is currently the second largest in the world.[2]

In 1947, when India achieved independence, the average life expectancy of an Indian was 32 years, with birth rate being high and few people surviving to old age. With the advancement of medical sciences and implementation of family planning program, the crude birth rate and death rate declined significantly with the average life expectancy of an Indian going up to 68.3 years. However, living longer did not mean living well as the increased life expectancy did not translate to improved quality of life due to lifestyle-related chronic noncommunicable diseases and its sequelae. Dementia is one such disease of the elderly with high morbidity and considerable socioeconomic impact. Dementia is a neurodegenerative disease of multifactorial causation, heterogeneous presentation, and variable prognosis. It is characterized by a decline in performance and cognitive impairment in multiple domains and affects a person's independence in doing activities of daily living.3]

Caring for a dementia patient can be challenging, as well as stressful. It can also take a physical and emotional toll on the caregiver. To provide the best possible care for patients, caregivers can start by looking after their own health and wellbeing. Having a strong support network really helps too. Apart from friends and family,help can also come from fellow caregivers in support groups. Support groups provide caregivers a place to share their feelings, gain emotional support and talk to people who they can relate to. Studies have shown that a healthy lifestyle can reduce the risk of developing chronic diseases and certain types of dementia. [4]

Dementia is an illness that affects the brain and its ability to function. Identifying the warning signs early can make a positive difference to the patient and family. Education helps the people to find out early signs of dementia and help them to take preventive measures. There are five healthy behaviours that appear to significantly reduce the risk of dementia. Those habits are: regular exercise, no smoking, low bodyweight, a healthy diet, and a low alcohol intake. Dementia mainly affects older people, although there is a growing awareness of cases that start before the age of 65. Creating awareness among adults regarding dementia will help in prevention and early detection of the early signs of dementia. Keeping above facts in view the researcher is keen to educate the adults regarding dementia. Thus has chosen to takeup the present study. [5]

BACKGROUND OF THE STUDY

Preparing society to meet the care needs of an aging population, anticipated to include a growing number of people living with dementia, requires deliberate, careful planning. Dementia is a global public health priority; the total number of people with dementia worldwide was estimated to be 35.6 million in 2010 and is projected to double every 20 years.1-4 Older Indian with dementia admitted to acute care hospitals comprise 20% to 30% of the total inpatient population, and this will continue to increase. A systematic approach to building capacity within the dementia care workforce has been recommended, not only in India but worldwide, in anticipation of the expanding demographic and in response to reports that episodes of acute illness requiring hospitalization in this population are associated with poor outcomes.[6]

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.[7]

Dementia is a clinical syndrome characterised by acquired loss of cognitive and emotional abilities that interfere with activities of daily living. It is a disease of the older adults. The overall prevalence of dementia in developed countries has been reported to be between 5% and 10% after 60 or 65 years and older. India is the second largest populous country. The prevalence doubles with every five-year increase in age. Looking at some studies, it appears that the prevalence of dementia in India is lower as compared to developed countries and even from other developing countries. The probable reasons for lower prevalence in India are enumerated as: False negatives, low life expectancy, shorter survival and duration of disease, low age-specific incidence. Risk factors include greater age, female sex, less

education, positive family history, Down's syndrome, stroke and its risk factors, head trauma with loss of conscionsness and thyroid diseases. Protective factors include higher education, APOE2 gene, intake of antioxidant substances, use of anti-inflammatory drugs, oestrogen supplements in women and also cigarette smoking (controversial). Alzheimer's disease has been found to be commonest cause of dementia. Patients of dementia require proper evaluation and management requires a multidisciplinary approach. The government and the social organisations should come forward and only a concerted effort of all people in every sphere of life will enable to tackle the new menace of this country.[8]

NEED OF THE STUDY

Dementia is the most feared and devastating disorder of late life. Current estimate reveals that there are about 18 million cases of dementia in the world and there will be about 34 million suffering from dementia. The overall prevalence of dementia ranges from 5% to 7%. Alzheimer's disease is the most common dementing disorder accounting for 80% of all cases of dementia. The number of people with dementia is steadily increasing. Alzheimer's Society believes that careful planning for the future is needed now to ensure that the right care and support is available.[9]

Tomorrow's elderly people are today's adult and Yesterday's children. Adulthood is a unique phase of human development. Adults are the important feature of every society and also a great resource of a nation. Alzheimer's disease can occur to any adult at any age. Women are three times more likely to be affected than men.[10]

Indian aged population is currently the second largest in the world. By 2020, of the countries with the largest elderly population in the world, five will be in developing world, China 230 million, India 142 million, Indonesia 29 million, Brazil 27 million, and Pakistan 18 million.[11]

The elderly population is on the rise and will soon be of considerable size of the total population. Senior citizens should therefore exert their rights for their due place in the society. The elderly population in India which was 7.7 crore, as per Census 2001, is projected to be around 9.5 crore in 2011. It is projected to further go up to 17.3 crore in 2026. Rise in the share of elderly in total population poses multiple challenges.[12]

Age-standardized prevalence for those aged ≥60 years varied in a narrow band, 5%–7% in most world regions, with a higher prevalence in Latin America (8.5%), and a distinctively lower prevalence in the four sub-Saharan African regions (2%–4%). It was estimated that 35.6 million people lived with dementia worldwide in 2010, with numbers expected to almost double every 20 years, to 65.7 million in 2030 and 115.4 million in 2050. In 2010, 58% of all

people with dementia lived in countries with low or middle incomes, with this proportion anticipated to rise to 63% in 2030 and 71% in 2050.[13]

100 years after the first description, Alzheimer's disease is one of the most disabling and burdensome health conditions worldwide. World health organization estimates that 24.3 million people have dementia today, with 4.6 million new cases of dementia every year (one new case every 7 seconds). The number of peoples affected will be double every 20 years to 81.1 million by 2040. Most people with dementia live in developing countries.[14]

As of 2013, there were an estimated 44.4 million people with dementia worldwide. This number will increase to an estimated 75.6 million in 2030, and 135.5 million in 2050. Much of the increase will be in developing countries. Already 62% of people with dementia live in developing countries, but by 2050 this will rise to 71%. The fastest growth in the elderly population is taking place in China, India, and their south Asian and western Pacific neighbours. Demographic ageing is a worldwide process that shows the successes of improved health care over the last century. Many are now living longer and healthier lives and so the world population has a greater proportion of older people. [15]

Alzheimer's disease is officially listed as the sixth-leading cause of death in he UnitedStates. It is the fifth-leading cause of death for those age 65 and older.However, it may cause even more deaths than official sources recognize. Most people with dementia live in developing countries An individual can lead a normal happy life only if he has a sound intellectual capacity with a good memory. Worldwide, 35.6 million people have dementia and there are 7.7 million new cases every year.[16]

Caring for a dementia patient can be challenging,as well as stressful. It can also take a physical and emotional toll on the caregiver. To provide the best possible care for patients, caregivers can start by looking after their own health and well-being.Having a strong support network really helps too. Apart from friends and family, help can also come from fellow caregivers in support groups. Support groups provide caregivers a place to share their feelings, gain emotional support and talk to people who they can relate to. Studies have shown that a healthy lifestyle can reduce the risk of developing chronic diseases and certain types of dementia. [17]

Dementia is an illness that affects the brain and its ability to function. Identifying the warning signs early can make a positive difference to the patient and family. The Alzheimer Society had conducted education series for people with dementia and their care partners to explore the journey ahead in a positive, informative and supportive environment. Participants had to learn about dementia, explore strategies to cope with changes and maximize quality of life, review information on planning for the future, and meet others who are going through similar experiences. Education helps the people to find out early signs of dementia and help them to take preventive measures.

There are five healthy behaviours that appear to significantly reduce the risk of dementia. Those habits are: regular exercise, no smoking, low bodyweight, a healthy diet, and a low alcohol intake. Dementia mainly affects older

people, although there is a growing awareness of cases that start before the age of 65.18 creating awareness among adults regarding dementia will help in prevention and early detection of the early signs of dementia. Keeping above facts in view the researcher is keen to educate the adults regarding dementia. Thus has chosen to take up the present study.[18]

PROBLEM STATEMENT

A study to assess the impact of self-learning module on prevention of Dementia in Adults.

OBJECTIVES

1. To assess the knowledge regarding dementia among adults.
2. To evaluate the effectiveness of self-learning module on dementia among adults.
3. To find association between pre-test knowledge scores and selected demographic variables.
4. To assess the relationship between knowledge about prevention of Dementia and selected demographic variables.
5. To develop, validate and disseminate self learning module on prevention of Dementia.

HYPOTHESES

H0: - There will be no significant difference in knowledge regarding prevention of dementia among Adults attending in community area pre and post interventional experimental group.

H1: - There will be significant difference in knowledge regarding prevention of Dementia among adults attending in community area pre and post interventional experimental group.

ASSUMPTION:-

Study assumes that:

1. Adults may have inadequate knowledge regarding Dementia.
2. Adults will be interested and willing to participate in the study.
3. Adults will be willing to give free and frank response.
4. Dissemination of self learning module will be helpful in creating awareness about Dementia among adults.
5. Adults may have increased risk for developing Dementia.

OPERATIONAL DEFINITIONS

Knowledge: Refers to the level of understanding and awareness regarding Dementia amongst adults as assessed by structured knowledge questionnaire.

Adults: Refers to adults in the age group of 35-45years.

Self- learning module: Refers to a document which is circulated electronically/manually which aims to impart knowledge on Dementia.

Effectiveness: It refers to the knowledge acquired on Dementia by dissemination of self learning module amongst adults as implicated by the post test scores.

Prevention: Refers to the action taken beforehand to avoid the occurrence of Dementia in an adult.

DELIMITATION

The study will be limited to the individual who are-

1. Have under 35-45 years of age.
2. Present during the period of data collection.

SUMMARY

Dementia disease progressive neurodegenerative disease that causes severe deterioration of functional and cognitive abilities. As the leading cause of age factor and stress in adults, it affects one in every 10 people who are more than 50 years of age. There is a vital need for student nurses with knowledge of Dementia disease to provide high quality care for the growing number of patients. The use of effective nursing interventions for the management of Dementia disease can help student nurses promote independence and quality of life for Dementia disease patients. Thus this study is under taken to assess the effectiveness of the self-learning module (SLM) on prevention of dementia in adults among employees.

CHAPTER II

CHAPTER – 2

REVIEW OF LITERATURE

The review of literature has been grouped under the following sections:-

2.1 Reviews related to dementia

2.2 Reviews related to knowledge regarding dementia among adults

2.3 Reviews related to prevention of dementia

2.1 Reviews related to dementia

A descriptive study was conducted to systematic review and partial meta-analysis of physical activity interventions in people with dementia in United Kingdom. The sample size was 896 participants. The information was collected by searching eight databases for English language papers and reference lists of relevant papers. Studies compared the intervention with a non-active or a no-intervention control and reported at least one outcome related to physical function, quality of life or depression. The study concluded that three of six trials that reported walking as an outcome found an improvement, as did four of the five trials reporting timed get up and go tests. Only one of the four trials that reported depression as an outcome found a positive effect. [19]

A study was conducted to know the agitation in demented patients in an acute care hospital: prevalence, disruptiveness, and staff burden.The study sample comprised 56 demented patients in the long-term-care unit during the study period. 95% of the patients with dementia were reported to have at-least one agitated behaviour; 75% had at least one moderately disruptive behaviour. A small group of six patients (11%) had 17 or more disruptive behaviours. The frequency of most behaviours did not vary significantly by shift. Length of stay on long-term care, Barthel Index score, and the use of psychotropic medications were

significantly associated with the number of agitated behaviours. The number of behaviours, their mean frequency, and their mean disruptiveness were all significantly correlated with staff burden.[20]

A study was conducted to investigate the incidence of Alzheimer's dementia among US population. The data was collected from 150 persons at least 90 years old. The study results showed that the incidence rate of dementia increased exponentially, from 12.7% per year for 90 to 94 year olds, to 21.2% per year for 95 to 99 year olds, to 40.7%per year for persons aged 100 years and older.[21]

An epidemiological study was conducted in Pune on dementia under the aegis of mental health program. The data was collected from 2145 people over 65yrs by door to door survey. The study results showed that the prevalence of dementia was 4.1%. The study concluded that poor awareness is a key public-health problem. The withdrawal of the elderly from the previous societal role, reduction in all types of interaction that is shift of attention from outer world to the inner world, reduction in the power and prestige of the elderly enhance aging process.[22]

A cross sectional study was conducted in Sao Paulo, to investigate the public's attitude towards help seeking and preferences for treatment of Alzheimer's disease. Data was collected from 500 household residents over 18 years old by face-to-face interviews depicting Alzheimer's disease and a structured questionnaire. The study result showed that public opinion rests firmly in the lay support system, Many alternative treatments (such as vitamins, physical exercise, vacation) were often rated as helpful. The study concluded that the attitudes and belief systems have an important impact on help-seeking and treatment recommendations. [23]

The study was done to provide a descriptive review of the literature examining everyday conversation in dementia in order to inform practice and research. A range of databases were searched using key words and explicitly described inclusion criteria leading to a final corpus of 50 titles. Using this qualitative methodology, each paper was examined and data extracted. Implications: The review indicates that interventions targeting conversation in dementia are often advocated in the literature but currently such approaches remain to be systematically evaluated. In addition, many of the important insights arising from these studies have yet to inform multidisciplinary dementia care practice.[24]

Data on the prevalence of dementia in India with a large and aging population is scant. They studied prevalence of AD and dementia in Kerala, South India, and effects of age, education and gender on it.2-phase survey on 2466 individuals aged ≥55 years living in community. Men constituted 41%, < 75 years age in 76.9% and education ≥4 years in 69.6%. Screening (Phase I) using the instrumental activity of daily living scale for the elderly (IADL-E) and the Addenbrooke's cognition examination (ACE). Diagnostic-assessment (Phase II) was in 532 screen-positives and 247 (10%) screen-negatives. Prevalence of dementia and AD is higher than any reported from the subcontinent suggesting that dementia in Kerala in South India is not uncommon.[25]

This study aimed to quantify the prevalence of undetected dementia and to examine its correlates. A systematic search was conducted until October 2016 for studies reporting the proportion of undetected dementia and/or its determinants in either the community or in residential care settings worldwide. Random-effects models calculated the pooled rate of undetected dementia and subgroup analyses were conducted to identify determinants of the variation. The prevalence of undetected dementia is high globally. Wide variations in detecting dementia need to be urgently examined, particularly in populations with low socioeconomic status.[26]

Prevalence studies on dementia and Alzheimer disease (AD) have reported a positive association with age. However, the trend of the association in the oldest-old categories has been the subject of discussion. The relationship between sex and AD has been inconsistent with these studies. Population-based studies using personal interviews, standard clinical diagnosis criteria (DSM-III for dementia, National Institute of Neurological and Communicative Disorders and Stroke–Alzheimer's Disease and Related Disorder Association for AD) and reporting age-specific incidence rates were included in the meta-analysis. The acceleration of incidence rates for AD and dementia slows down with the increase in age, although we find no evidence of a rate decline. Women are at higher risk of developing AD than men.[27]

They investigated whether social relations at work were associated with incident dementia in old age. Methods: One thousand five hundred seventy-two occupationally active men from the Copenhagen Male Study Cohort were followed from 1986 to 2014. Participants underwent a clinical examination at baseline

and answered questionnaires on whether they (1) had possibilities to be in contact with co-workers, (2) could get along with co-workers, and (3) were satisfied with supervisor. Two hundred forty five (15.6%) men were diagnosed with dementia during an average of 15.8 years of follow-up. After adjusting for potential confounders, limited contact with co-workers was associated with a higher risk of dementia (IRR ¼2.49, 95%confidence interval [CI] 1.14 to 5.44), but the other two measures were not. So there partially support that social relations at work are associated with incident dementia.[28]

To review employee stress and coping in response to high job demands in community-based dementia care organizations in Tasmania, Australia.25community-based dementia care workers were reviewed using self-report questionnaire data. Data were analysed for descriptive results and at an individual case level. Aged care workplaces that advocate employee wellbeing and support employees to cope with their work roles may be more likely to retain motivated and committed staff.[29]

The authors systematically re-viewed the literature on psychological approaches to treating the neuropsychiatric symptoms of dementia .A total of 1,632 studies were identified, and 162 satisfied the inclusion criteria for the review. Only behaviour management therapies, specific types of caregiver and residential care staff education, and possibly cognitive stimulation appear to have lasting effectiveness for the management of dementia-associated neuropsychiatric symptoms.[30]

They systematically reviewed and synthesised the evidence for clinical effectiveness and cost-effectiveness of non-pharmacological interventions for reducing agitation in dementia, considering dementia severity, the setting, the person with whom the intervention is implemented, whether the effects are immediate or longer term, and cost-effectiveness .They included 160 out of 1916 papers screened. Person-centred care, communication skills and DCM (all with supervision), sensory therapy activities, and structured music therapies reduce agitation in care-home dementia residents.[31]

To evaluate the effect of medical record use on figures for the incidence of dementia and the effect of apolipo-protein E (APOE) polymorphism on this incidence and neuro-pathologically defined Alzheimer's dis-ease (AD) in very elderly individuals. Age group, gender or APOE did not significantly affect the incidence of dementia, which was over 20% higher (85 vs. 69 per 1,000 person-years) if the cognitive status at death was ascertained by medical and social work records than without this evaluation. Medical records

should be analysed in studies on the incidence of dementia in very elderly individuals. APOE polymorphism does not affect the incidence of dementia in this age group.[32]

Twenty new consecutive patients with objective memory impairment were recruited in each Alzheimer centre over 6 months. Patient data were recorded using the anonymous patient protocol. Seven hundred and four patients from 36 memory clinics in 13 countries across Europe participated in the study. [M:F ratio 0.67. Mean age 75.4 SD 9.3 (51-102) Mean MMSE 21 SD 6 (0-30)] Five hundred and fifty-five patients had a clinical diagnosis of dementia [Alzheimer's disease (68.5%), vascular dementia (10.3%), frontal lobe dementia (5.6%), Lewy body dementia (4.1%), mixed dementia (5.6%)].[33]

Comparative analysis of factors contributing to the incidence of dementia led us to suggest explanations for this decline. 42,000 disabled and non-disabled individuals aged 65+ participating in National Long Term Care Surveys (NLTCS) were drawn from Medicare enrolment lists to ensure the US population aged 65+ is represented. A significant component of disability decline in the U.S. elderly population is the decline in vascular and mixed dementias, but not in Alzheimer's disease alone. Improved medical therapies and better education among the old appear to play important roles in this decline.[34]

Patients with autopsy-confirmed fronto-temporal dementia (FTD; n = 16) and Alzheimer's disease (AD; n = 32) were compared on first-letter and semantic category fluency tasks. A measure of the disparity between letter and semantic category fluency (the semantic index) was effective in differentiating FTD from AD patients, and this disparity increased with increasing severity of dementia. These unique patterns of letter and semantic category fluency deficits may be indicative of differences in the relative contribution of frontal-lobe-mediated retrieval deficits and temporal-lobe-mediated semantic deficits in FTD and AD.[35]

The study was done to explore the association between physical activity and the risk of cognitive impairment and dementia. Data come from a community sample of 9008 randomly selected men and women 65 years or older. A prospective cohort study on dementia was done High levels of physical activity were associated with reduced risks of cognitive impairment (age-, sex-, and education-adjusted odds ratio, 0.58; 95% confidence interval, 0.41-0.83), Alzheimer disease (odds ratio, 0.50; 95% confidence interval, 0.28-0.90), and dementia of any type (odds ratio, 0.63; 95% confidence interval, 0.40-0.98).[36]

2.2 Reviews related to knowledge regarding dementia among adults

A cross sectional study was conducted to investigate public stigma (stereotype, prejudice, discrimination) relating to Alzheimer's disease among adults. The data was collected by interview from 500 people aged between 18-65yrs living within the community. The study results showed that the 41.6% of the participants expressed stereotype; 43.4% prejudice, and 35.5% discrimination. The study concluded that dimension of stigma were highly prevalent in relation to Alzheimer's disease and more interventions are needed to reduce the effect of stigma.[37]

A study was conducted to investigate awareness of dementia in adults attending dementia-prevention programs in community healthcare center,Department of Geriatrics. Regarding the knowledge about dementia, 17% of the participants knew about drug therapy, and 13% of them knew about legal guardianship. The results indicated a limited knowledge about facilities where demented people can be placed (home: 39%, hospital: 43%, nursing home: 62%, group-home: 25%). The study concluded that the education of dementia to older adults may contribute to early diagnosis of the community level, thereby may maximize the effect of therapeutic interventions.[38]

A study was conducted to assess the racial differences in knowledge and attitudes about Alzheimer's dementia among adults .Data collected from 1176 adults aged 35 years and over (48.6% White, 25.7%Black, and 25.8% Hispanic) obtained through telephone interview. The result showed that Compared with White and Black respondents, Hispanics were more likely to report feeling well-prepared for handling a diagnosis of Alzheimer's disease in a family member. The study concluded that misconceptions about Alzheimer's dementia remain among large segments of the population and continued efforts are needed to educate the public about this disease.[39]

A study was conducted on providing education about Alzheimer's disease. Improving carers' knowledge of Alzheimer's disease has been associated with benefits for carer well-being. This has led to recognition of the

need to systematically evaluate dementia education tools. In this study dementia knowledge was measured before and after interventions designed to improve knowledge in a sample of 100 undergraduate students. Results showed that education improved Knowledge of Alzheimer's disease by 50% to 85%, as measured by increased scores on a dementia knowledge questionnaire. This study has important implications for public education about dementia and resource allocation for service providers.[40]

A population-based study was conducted among elderly Japanese-American men living on the island of Oahu, Hawaii. Data for this study were from the dementia prevalence survey. A total of 21% of family informants failed to recognize a problem with memory among subjects subsequently found to have dementia. Among subjects with very mild dementia, 52% of family informants failed to recognize a significant memory problem compared with 13% among more severely demented subjects. Of the subjects with dementia whose family informants did recognize a memory problem, 53% failed to receive a medical evaluation for this problem. The study concluded that Unrecognized dementia was common in our population, especially among mild cases. Cognitive screening programs for the elderly and public education policies designed to increase awareness of early signs of dementia are needed if interventions for individuals with potentially treatable dementias are to be implemented.[41]

A descriptive survey was carried out to investigate knowledge and fear of developing Alzheimer's disease in a sample of healthy adults. The sample size was 127 young adult and 118 older adults. The data was collected by using knowledge questionnaire; Younger adults obtained a score of (54 %) while older adults obtained (58%) on knowledge test. Knowledge and fear scores were not significantly correlated with having a family member or knowing someone with Alzheimer's disease.[42]

A comparitive study was conducted to know the awareness of cognitive deficits in adults with cognitive-impairment-no-dementia. In this study, examined whether community volunteers with cognitive-impairment-no-dementia and reduced awareness had worse cognitive performance and cognitive decline over 18 months than cognitive-impairment-no-dementia participants with intact awareness or healthy controls. The data collected from 92 participants with cognitive-impairment-no-dementia and 91 healthy controls with their respective informants. The study concluded that reduced awareness of deficit may be uncommon in community volunteer samples with cognitive-impairment-no-dementia. In addition, self-report

of cognitive complaints may be at least as useful as informant report when screening community-dwelling older adults at risk of cognitive decline and dementia.[43]

A study was conducted to examine the knowledge about Alzheimer's disease among 794 people by using knowledge questionnaire. The study results showed that the Knowledge about Alzheimer's disease was lower for dementia care givers, older adults, senior centre staff and undergraduate students. Across groups, respondents don't know about risk factors and prevention of Alzheimer's disease. The study concluded that the awareness program is necessary to the public about Alzheimer's disease.[44]

A study was conducted to assess the Knowledge of Alzheimer's Disease among Patients, Carers, and Non carer Adults. The data was collected by using a modified version of the Alzheimer's disease Knowledge questionnaire from 13 carers, 20 non carer older adults, and 10 people with Alzheimer's dementia. The result showed that the knowledge about Alzheimer's disease was lower for patients and non carers' adults.[45]

Knowledge of a disorder is the most important factor played for the prevention of disorder. Keeping this in mind a study on factors associated with public knowledge and attitude to dementia was conducted by Rosato M et.al. which included the Analysis of the 2014 Northern Ireland Life and Times survey, which included questions on knowledge of, attitudes to and personal experience with dementia Data comprised a number of questions assigning socio-demographic attributes–including: age; gender; highest educational qualification ; occupational social class ; economic activity ; personal and household income ; marital status ; housing tenure ; and finally, the locale in which the respondent lived .Respondents had relatively good general knowledge of dementia, but limited knowledge of specific risk factors .[46]

Alzheimer's disease is a progressive neurodegenerative disease that causes severe deterioration of functional and cognitive abilities. A quantitative evaluative research approach with pre experimental one group pre- test and post- test research design & the non- probability purposive sampling technique was used to select the 60 samples of B.Sc. (N) 4 year students. Findings of the study showed that majority of the student nurses were moderately adequate knowledge before administering the SIM. The SIM facilitated them to gain more knowledge regarding nursing management of client's with Alzheimer's disease which was evident in post -test knowledge scores. Hence SIM was an effective strategy for providing information and to improve knowledge of students' nurses.[47]

This review aimed to identify features of effective dementia educational programs. One hundred and fifty-two papers of variable quality were included. Despite methodological weaknesses and variability in methods adopted, there were some common features of training/education programs that appear more efficacious and these may be adopted as underpinning guidelines for the design of new dementia training and educational programs. There may also have relevance for adult professional development and workplace learning across a broad range of workplace settings.[48]

This study was conducted with the primary objective of determining the effectiveness of planned teaching on knowledge and attitude regarding the dementia among the family members of elderly in a selected community area. One group pre-test post-test design was used to find the effectiveness of planned teaching on knowledge and attitude regarding the dementia among the family members of elderly in a selected community area and also to determine the association between knowledge and attitude of family members regarding the dementia with their selected demographic variables. The analysis of the study revealed that there was a significant improvement in the knowledge and attitude of the family members of elderly. The planned teaching proved to be effective in improving the knowledge and attitude of the family members of elderly in selected community area.[49]

The purpose of this study was to analyse the cognitive profile of older adults in order to identify the ways that they learn, as well as to analyse older adults' attitudes, to aid in the development of an e-learning platform adapted to their needs. The sample of the study consisted of 103 older adults, aged 55+, from Greece. According to their responses, older adults seemed to prefer e-learning modules that presented the educational content step-by-step and contained practice questions and examples. In addition, respondents had positive attitudes toward the existence of assessment tests for after the completion of each module.[50]

Dementia is the most feared and divesting disorder of late life. Current estimates reveals that there are about 18 million cases of dementia in the world and by 2025, there will be about 34 million suffering from dementia. The overall prevalence of dementia ranges from 5 % to 7 %. Alzheimer's disease is the most common dementing disorder accounting for 80 % of all cases of dementia.[51]

This study investigated whether Australian adults recognise this as an important health issue, and hold beliefs and knowledge that are consistent with recommendations concerning dementia risk reduction. A cross-sectional telephone survey was undertaken of 1,003 Australians aged 20–75 years. People aged 60 years and over identified dementia as very important (17.2%) more often than those aged 40–59 years (5.1%) or 20–39 years (2.1%). While 41.5% of respondents believed the risk of dementia could be reduced, 26.9% were very confident that they could achieve this. Mental activity (57.1%) was identified as beneficial much more often than physical activity (31.3%), healthy eating (23.3%) and other cardiovascular health behaviours.[52]

A pre-experimental research design of one group pre-test and post-test with an evaluative approach was adopted for the study. A total of 50 family members of elderly who met the inclusion criteria were selected through purposive sampling technique. The researcher developed a planned teaching program on Alzheimer's disease, and structured knowledge questionnaire on Alzheimer's disease was used to collect the data. Descriptive and inferential statistics was used to analyse the data. The findings revealed that the planned teaching program is an effective strategy for improving the knowledge of the subjects.[53]

2.3 Reviews related to Prevention of dementia

A multi-centered controlled study conducted by Anna streber et.al. for dementia prevention. Prevention of dementia is a public health priority. Result shows that physical activity (PA) can reduce the risk of dementia, but the majority of people remain sedentary. They conducted a multi-centre controlled study with older adults (60+ years). The target group consisted of individuals (60+ years) at risk for dementia with one or more modifiable risk factors (see the “Background” section) which were assessed at baseline. The GESTALT-compact study investigated if an evidence-based multimodal program (GESTALT) which was reduced to a 12-week version has short- and long-term effectiveness compared to the standard prevention approach in Germany in real-world settings. PA is a proximal health behaviour that should be an integral part of multimodal interventions because it has the potential to address several risk factors and disease mechanisms simultaneously.[54]

A comprehensive review of literature on effective approaches that may hold promise for prevention of dementia was performed. Considering what types of biological and lifestyle factors may change the dementia risk is critical for disease prevention. Population-based studies have remarkably examined countless aspects that are essential in limiting the dementia risk, comprising of factors that classify individuals at dementia risk (depressive symptoms and vascular risk factors) or factors that might limit dementia risk (such as social activity, cognitive, vascular risk factor control, and diet rich in polyunsaturated fatty acids and anti-oxidants).[55]

National and global dementia plans have focused on the research ambition to develop a cure or disease-modifying therapy by 2025, with the initial focus on investment in drug discovery approach. Alzheimer's Society facilitated a taskforce of leading UK clinicians and researchers in dementia, UK funders of dementia research, people with dementia, and carer representatives to develop, usingiterative consensus methodology, goals and recommendations to advance dementia research. The taskforce developed 5 goals and 30 recommendations. The goals focused on preventing future cases of dementia through risk reduction, maximising the benefit of a dementia diagnosis, improving quality of life, enabling the dementia workforce to improve practice, and optimising the quality and inclusivity of health and social care systems.. A 10-point action plan provides strategies for delivering the proposed research agenda.[56]

They discussed the latest evidence on interventions that may show promise for the prevention of cognitive decline. They appraise existing evidence primarily drawn from randomized controlled trials, systematic reviews, and meta-analyses, but also highlight observational studies in humans and relevant work in model organisms. Studies to date suggest that a multifactorial intervention comprising regular exercise and healthy diet, along with the amelioration of vascular risk factors, psychosocial stress, and major depressive episodes may be most promising for the prevention of cognitive decline.[57]

The objective of this paper is to summarize current knowledge on the most promising interventions for preventing cognitive decline. Electronic databases were searched using PubMed/Medline and Google Scholar to retrieve relevant research papers conducted in Saudi Arabia and internationally. Overall, limited evidence exists to support the cause-effect association between the progression/development of dementia and

preventative strategies. Studies to date provide the most promising strategies for dementia prevention that includes healthy diet, social engagement, physical activity, cognitive activity, and vascular risk factor control. [58]

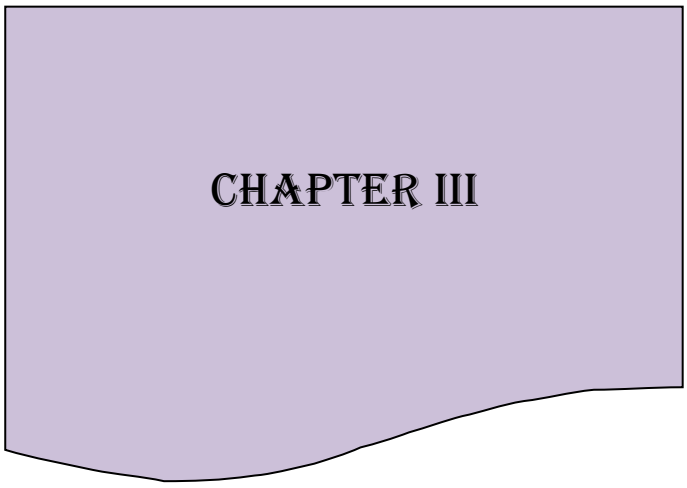
The objective of this study was to summarize current knowledge on the possible advantages of lifestyle interventions, with particular attention to physical fitness, cognitive activity, leisure and social activity as well as nutrition there were currently great difficulties in drafting effective guidelines in this field. That depends mainly upon lack of randomized controlled trials assessing benefits versus risks of particular lifestyle interventions strategies. However, due to the rapid increase of dementia burden, lifestyle factors and their amelioration should be already made part of decision making in light of their health-maintaining effects while awaiting for results of well-designed large prospective cohort studies in dementia.[59]

We systematically searched MEDLINE, PsycINFO, EMBASE, Cochrane Central Register of Controlled Trials, Cumulative Index to Nursing and Allied Health Literature, and Scopus for published studies and grey literature databases for unpublished study. They conducted a systematic review. Because we were aware of a dearth of direct evidence, we also performed an overview of systematic reviews on leisure activities that mimic formal continuing education. They searched identified 4933 citations. Available results demonstrate that cognitive reserve increases through continuing education and show a positive association of cognitive leisure activities with both improved cognitive function and lower dementia incidence.[60]

They studied the impact of diagnostic reliability on the possibilities for developing preventive strategies for AD, the scientific evidence to support moving from observation to action, on going intervention studies and the methodological issues and prospects for balancing strategies for high-risk individuals with those for broad population-based prevention. The associations between neuropathology and cognition were not entirely clear. In addition, the risk factors for AD dementia and the neuro-pathological hallmarks of AD may not necessarily be the same. Cognitive impairment had a clearer clinical significance and therefore remained the main focus of prevention. Risk/protective factors for dementia/AD need to be studied from a life-course perspective.[61]

They discussed methodological issues that might complicate the development of effective prevention interventions and explore the opportunities and challenges for future dementia prevention research. Since the

vast majority of people with dementia live in low- and middle-income countries, certain interventions should preferably be easy and affordable to implement across a wide range of health care systems. This suggests that interventions targeting certain factors could perhaps delay or prevent the onset of dementia.[62]



CHAPTER 3

METHODOLOGY

RESEARCH APPROACH

The research approach adopted in the present study was experimental survey approach, which was considered as appropriate because this study aims to assess the level of knowledge regarding dementia in adults.

RESEARCH DESIGN

The research design is the master plan specifying the method and procedure for collecting and analyzing the needed information in a research study. The selection of design depends upon the objectives of the study and variables to be studied. It determents how the study will be organized when data will be collected and what interventions are to be implemented. Research design selected for the present study was experimental design.

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Group	Pre test	Treatment	Post test
1	O1	X	O2

Fig 1: The research design for the study will be pre-experimental design, with one group pre test- post test design

O1:knowledge on dementia before self learning module.

X: self learning module on dementia.

O2: knowledge on dementia among adults after the administration of self learning module.

VARIABLES IN THE STUDY

Variables are qualities, properties or characteristics of person, things or situations that change or vary.

DEPENDENT VARIABLE - A dependent variable is the outcome of response due to the effect of the independent variable, which researcher wants to predict or explain. In this study knowledge regarding the dementia among adults is the dependent Variable.

INDEPENDENT VARIABLE – An independent variable is a stimulus or activity that is Manipulated or varied by the researcher to create an effect on the dependent variable. In this study self learning module on Dementia in terms of knowledge of among adults regarding dementia.

EXTRANEOUS VARIABLE – Extraneous variable is an uncontrollable variable that greatly influences the result of the study. In this study, the extraneous variable refers to age, gender, religion, marital status, dependent old aged adult in the family, patient of Dementia in the family.

RESEARCH SETTING

Setting is the physical location and condition in which data collection takes place in a study. The present study was conducted through online survey as in the lockdown period we could not access people .The researcher selected this setting for the following reason such as availability of sample and economic feasibility for conducting the study.

POPUPATION

The term population refers to the entire set of individual or objects that possess specific characteristics that the researcher is interested in studying. In this study, comprises of adults with the age group 35 to 45 yrs of among adults undergoing in selected Noida community area at Delhi/NCR.

SAMPLE

Sample size: Sample is a subject of the population selected to participate in a research study. In the present study, the sample consists of 60 individual was considered as samples for the study.

Sampling Technique: Sampling defines the process of selecting a group of people or other elements with which to conduct a study. The purposive sampling is based on the belief that a researcher's knowledge about the population can be used to hand pick the cases to be included in the sample. The sampling technique used in this study was random sampling technique. The data collected from the 60 samples who met the inclusion criteria from community area.

SAMPLING CRITERIA

INCLUSION CRITERIA

1. Assess knowledge regarding dementia in adults.
2. Patients, who can able to read, speak and understand Hindi or English.
3. Patients who are willing to participate in this study.

EXCLUSION CRITERIA

1. Adults who are having Dementia among adults.
2. Having other co morbid disorders and altered

DESCRIPTION OF TOOL

Research instruments or research tools are:
The devices used to collect data. The tools facilitate the observation and measurement of variables. The following tools are used for collecting data in this study. The tools has two parts

Part-1: - It consists of items on demographic variables like age, educational qualification, family history, gender, occupation, marital status, sources of information related to dementia and dependent adult in the family.

Part-2:- It consists of structured knowledge questionnaire on dementia.

VALIDITY OF TOOL

Validity refers to which an instrument measures what it is intended to measure. Content validity is the extent to which the method of measurement includes all the major elements relevant to the concept being measured. The demographic Performa statement of problem, objectives, hypothesis and operational definitions and criteria check list for validation of the tool were submitted to 5 experts to establish to content validity. The experts were requested to give their opinion regarding relevance, appropriateness and usefulness of the items of the tool. Tool was collected from all the experts and modification was made as per the suggestion.

PILOT STUDY

Pilot study helps to assess the data collection plans, identify the inadequacies of the plan and make due modification as requiring, find out the feasibility of conducting the present study and to determine the methods of statistical analysis. The pilot study was conducted on. 3rd April 2020 to 20th April 2020 to find out the feasibility, reliability and practicability of the study. The permission has been taken from the community area. The tool was administered to adults after obtaining their consent. At the end of the study respondents were thanked for their cooperation. The research design and the tools were found to be appropriate, clear and feasible. A pilot study has been conducted by dementia among adults at selected community area in Delhi/NCR. The tools were used knowledge profile and practice profile.

RELIABILITY OF THE TOOL

Reliability of the research instrument is defined as the extent to which the instrument yields the same results on repeated measures. If is then concerned with how consistently the measurement technique measures the topic of interest. Reliability of the tool was established by the use of 10 samples by means of split half method. Reliability of back inventory was established by CRONBACH"s ALPHA reliability co efficient which was 0.9. It indicates that tools are reliable.

DATA COLLECTION PROCEDURE

Data collection process is the gathering of information to address a research problem. To conduct study a self declaration consent was taken through online mode and the data was then collected through online mode. The investigator before collecting the data explained to fill the demographic Performa and standardized tools via mail.

CHAPTER IV

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter presents the analysis and interpretation of data collected to assess the impact of self-learning module on prevention of Dementia in Adults.

Polit and Hungler refer to data analysis as "systematic organisation and synthesis of research data, and the testing of a research hypothesis using those data". Kerlinger defines analysis as "the categorizing, ordering, manipulating and summarizing data to obtain answers to the research question". Interpretation refers to the process of making sense of the results and of the implication of the findings within the broader context.[63] In the present study the analysis and interpretation of the data collected from 60 adults regarding their knowledge on Dementia as stated below:

Objectives of the Study

6. To assess the knowledge regarding dementia among adults.
7. To evaluate the effectiveness of self-learning module on dementia among adults.
8. To find association between pre-test knowledge scores and selected demographic variables.
9. To assess the relationship between knowledge about prevention of Dementia and selected demographic variables.
10. To develop, validate and disseminate self learning module on prevention of Dementia.

For the present study quantitative approach and descriptive survey design was used. The study was conducted via virtual submission of the data using goggle forms from the participants of Delhi &NCR. 60 adults between the age group 35-45 years of age were selected using convenient sampling technique. The data were collected using structured questionnaires and were analysed using both descriptive and inferential statistics.

Organisation and Presentation of Data

The data were entered in master data sheet, followed by analysis and interpretation using descriptive and inferential statistics in accordance with the objectives of the study. The data were organized under the following sections:

Section 1: Description of sample characteristics.

- Frequency and percentage distribution of adolescent girls by their age, occupation, marital status, education, dependant family member in the house.

Section 2: Findings related to knowledge about Dementia

- Frequency and percentage distribution of adults by their knowledge scores regarding Dementia.
- Frequency and percentage distribution of adults by their demographic data.

Section 3: Findings related to association between knowledge of adults about Dementia and selected demographic variables.

- Chi square test to determine the association between knowledge about Dementia and educational qualification.
- Fishers exact value to determine the relation between age and the knowledge of adults.

Section 5: Validation of the Self learning module on Dementia .

- Criteria for the validation of informational booklet (Appendix VIII). The experts were asked to give their rating as 'Fully met', 'Mostly met', 'To some extent'. A column for remarks or any additions required was also given.

SECTION 1

Table 1: Frequency and percentage distribution of adults by the demographic characteristics.(age, type of family, family income)

Sample characteristics	Adults	
	Frequency(f)	Percentage(%)
Age		
35-40	**24**	**40**
40-45	**36**	**60**
Family income (per month in Rupees)		
10,000-50,000	**40**	**66.67**
50,001-1,00000	**18**	**30**
100001-1,50000	**2**	**3.33**
Type of family		
Nuclear	**44**	**80**
Joint	**16**	**20**

The table 1, depicts that out of 60 adults , 35-40 years of age were24(40%) and 40-45 years of age were 36(60%).

According to table1, in the total sample 60, 40(66.67%) of the girls adults had monthly family income of Rupees 10,000-50,000, 18(30%) had family income of Rupees 50,001-100000 and 2(3.33%) had family income of Rupees 100001-150000.

Table 1 reveals that, in the section of type of family, we see 44(80%) of the adults were of nuclear family and1 6(20%) of the adults belonged to joined family.

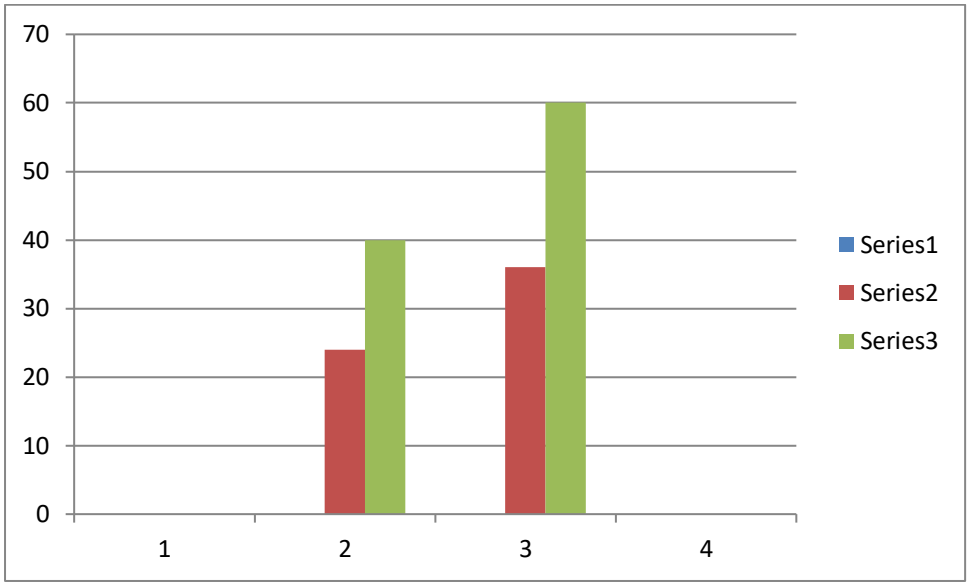

Fig 2: Bar graph representing the number and frequency of age groups of the adult population.

Section 2

Findings related to knowledge about Dementia based upon the Self Learning Module.

Table 2: Frequency distribution of adults according to their knowledge scores about Dementia.

Category	Pre Test		Post Test	
	Frequency	Percentage(%)	Frequency	Percentage(%)
Good 60%-79%	9	30	9	30
Average 35%-59%	21	70	19	63.33
Poor < 35%	0	0	2	6.67

Table 4, depicts the frequency distribution of adults according to their knowledge about Dementia. According to the scores of the Adults in the pre-test and post test, none of the adults scored more than 80%.In the Pre tests, number of adults who fell in 'Good' (60%-79%), 'Average' (35%-59%) and 'Poor' (<35%) categories were 30%, 70% and 0% respectively. Whereas in the post test, number of adults who fell in 'Good' (60%-79%), 'Average' (35%-59%) and 'Poor' (<35%) categories were 30%, 63.33% and 6.67% respectively.

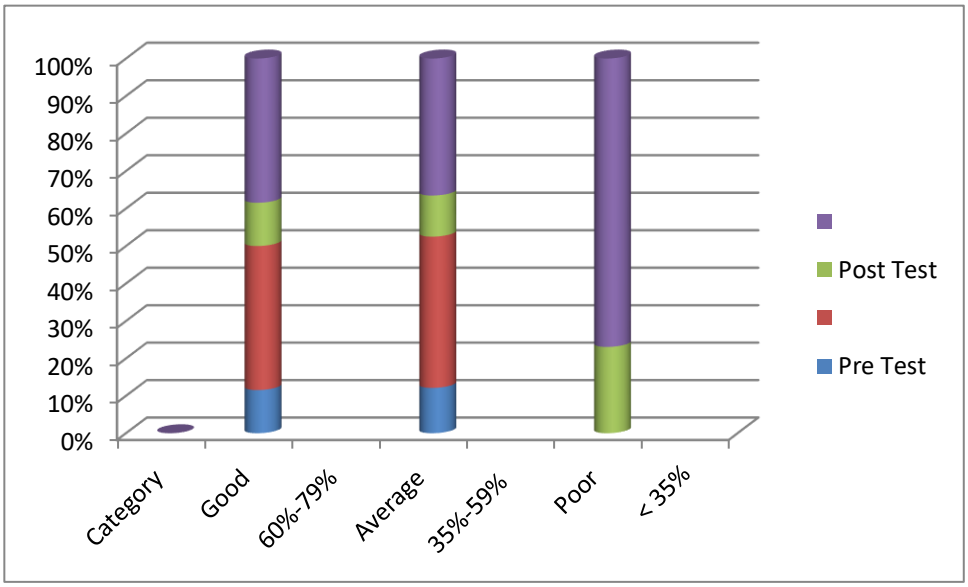

Fig 3: Cylindrical graph frequency distribution of adults according to their knowledge about Dementia in pre and post tests.

Section 3

Findings related to the comparison of knowledge about Dementia between pre tests and post test scores

This section deals with the analysis, description and interpretation of data collected to assess the knowledge of dementia amongst adults of Delhi &NCR.

- **Computation of mean, median and standard deviation of knowledge scores of adults about Dementia in Delhi &NCR.**

Mean, median , standard deviation, mean deviation, standard error, of mean difference were calculated and paired 't' test was used to find significance of difference of knowledge in pre test and post test.

Table 3: Mean, median, standard deviation, mean deviation, standard error, of mean difference were calculated and paired 't' test was used to find significance difference of knowledge of adults.

School	Possible range of scores	Range of obtained score	Mean score	Median	Standard deviation	Mean differen-ce	Standar-d error	t-valu e
Pre Test	0-20	7-15	10.30	10.50	2.184	0.1	0.561	1.78
Post Test	0-20	4-14	10.40	11.00	2.159			

't'(58)=2.00, not significant at 0.05 level of significance

The data in table reveals that, the mean score and median of knowledge of Dementia among adults were 10.30 and 10.50 respectively. The close distribution of mean and median suggest the distribution to be normal.

The mean and median of the knowledge scores of adults about Dementia was 10.40 and 11.00 respectively. The close distribution of mean and median suggest the distribution to be normal.

The standard deviation score for knowledge of Dementia was 2.159 , whereas in the pre test it was 2.184, which means the score was similar in variability.

The mean difference was 0.1 suggesting slight difference of knowledge in the two groups. Standard error was 0.561. Calculated ‘t’ value (1.78) was less than the table value of ‘t’(2.00) at df (58) and 0.05 level of significance which was found to be statistically non significant . Thus it was concluded that the knowledge about Dementia amongst adults of Delhi & NCR was not significantly different.

Section 4

Findings related to association of knowledge about Dementia with selected demographic variables.

This section describes the association of knowledge scores of Dementia of adults with the demographic variables. The data was analysed by using Chi square test.

Table 4: Association between knowledge about Dementia and average age of the adults in Delhi NCR.

n=60

Knowledge scores	Average age		χ^2
	below 39	above 39	1.609
below 10.3	14	15	
above 10.3	20	11	

χ^2 (1)= 3.84, The result is not significant at 0.05 level of significance.

Table 4 shows the Chi-square value of knowledge scores of adults on Dementia and the average age of adults. The Chi-square value was1.6093, which was less than the tabulated value of 3.84 at df 1at 0.05 level of significance. Hence, it was not significant at $p < .05$. Hence, there was no significant relation between knowledge about Dementia and age of adults.

Table 5: Association between knowledge about Dementia and Family type of the adults.

Knowledge scores	Family Type		
	Joint	Nuclear	Marginal Row Totals
below 10.3	28	6	34
above 10.3	16	10	26
Marginal Column Totals	44	16	60 (Grand Total)

χ^2 (1)= 1.681, **The result is not significant at p<.05.**

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Table 5 shows that the computed Chi square is 1.681.. This indicates that there is no significant relationship between the knowledge about Dementia and Family type of adults.

Table 6: Association between knowledge about Dementia and Annual Family Income of the adults.

Knowledge scores	AFI(Median)		
	100000 below	above INR 100000	Marginal Row Totals
below 17.92	10	8	18
above 17.92	14	7	21
Marginal Column Totals	24	15	39 (Grand Total)

χ^2 (1)= 0.50, **The result is not significant at p<.05.**

Table 6 shows that the computed Chi square is 0.50. This indicates that there is no significant relationship between the knowledge about Dementia and Annual Family Income of adults.

SECTION – V

Validation of Self Learning Module on Dmenetia.

Self learning module on Dementia was developed on the basis of review of literature and present study findings. A criteria rating scale consisting of 6 items with three response columns for rating against each criterion, like ‘fully met’, ‘mostly met’ and ‘to some extent’ was designed for validation of the content of information booklet.

The information booklet was given to seven experts for validation. The experts were from Psychiatry and Mental Health Nursing and Psychiatry Medicine (Appendix IX). Based on the feedback by the experts, the information booklet was modified and disseminated among participants in the month of April 2020.

TABLE-7

Criteria Rating Scale for Validating the Self Learning Module on Dementia.

S.No	Criteria	Fully Met	Mostly Met	To Some Extent
1	**Objectives**			
1.1	Realistic	7(100%)	0	
1.2	Appropriate	6(85.72%)	1(14.28%)	
2	**Selection of item**			
2.1	Based on objectives	7(100%)	0	
2.2	Items are adequate	7(100%)	0	
2.3	Items are relevant	7(100%)	0	
3	**Content is adequate**			
3.1	Regarding Dementia	7(100%)	0	
4	**Organisation of items**			
4.1	Organised logically	7(100%)	0	
4.2	Maintains correlation	7(100%)	0	
4.3	Arranged in sequence	7(100%)	0	
5	**Language**			
5.1	Clear and simple	6(85.72%)	1(14.28%)	
5.2	Easy to understand	7(100%)	0	
6	**Feasibility**			
6.1	Useful for providing information regarding Dementia	7(100%)	0	

Data in table 7 depicts that 10 items in criteria rating scale were marked as ‘fully met’ by all 7(100%) experts. And 2 items were marked as ‘fully met’ by 6(85.72%) experts. The self learning module was found to be valid.

Summary

This chapter dealt with the analysis and interpretation of the data collected from 60 adults from Delhi NCR. Descriptive and inferential statistics were used for the analysis. The demographic characteristics of the respondents were described using frequency and percentage. Frequency and percentage of respondents were also calculated for their Demographic profile and knowledge scores on Dementia and were depicted with help of graphs and figures. Chi- square was used to find the relation between the knowledge about Dementia amongst adults of Delhi NCR with the selected demographic variables. In this, it was seen that, religion and age had no significant relation with between the knowledge about Dementia amongst adults of Delhi & NCR.

Paired 't' test was used to compare the knowledge about Dementia amongst adults of Delhi & NCR. And it was concluded that the knowledge of Dementia amongst Delhi & NCR was not significantly different in pre and post test. The Self Learning Module on Dementia was validated by the experts using a criteria rating scale.

The next chapter, (chapter V) presents a summary of the study, major findings, conclusions drawn, discussions, implications, limitations and recommendations.

CHAPTER V

CHAPTER V

DISCUSSION

This chapter deals with the summary of the study, findings, conclusions, implications, limitations and recommendations for future research in the field of Nursing.

The present study was descriptive in nature and was conducted with aim to assess the impact of self-learning module on prevention of Dementia in Adults. The objectives of the study were:

1. To assess the knowledge regarding dementia among adults.
2. To evaluate the effectiveness of self-learning module on dementia among adults.
3. To find association between pre-test knowledge scores and selected demographic variables.
4. To assess the relationship between knowledge about prevention of Dementia and selected demographic variables.
5. To develop, validate and disseminate self learning module on prevention of Dementia.

Review of related research literature enabled the investigator in selecting an appropriate conceptual framework, methodology of the study and plan for statistical analysis. Quantitative approach and comparative descriptive design were considered to be most appropriate to fulfil the objectives of the study. Structured Knowledge Questionnaire prepared to assess the knowledge of Dementia was validated by experts from the field of Mental Health Nursing and Psychiatry. The reliability of the Structured Knowledge Questionnaire was found to be was established by Kuder-Richardson Formula (KR 20) and the reliability coefficient was found to be 0.723 for Structured Knowledge Questionnaire. The pilot study was conducted in the month of March, 2020 to study the effectiveness of the tool and to find out the feasibility of undertaking the study. Final data collection was done in the month of April, 2020.

The data analysis was done using descriptive and inferential statistics. The demographic characteristics of the sample were described using frequency and percentage and were depicted with the help of graphs and figures. Frequency and percentage were also used to describe the knowledge of adults Dementia among adults Delhi & NCR.

Paired 't' test value was used to find relation between the knowledge about Dementia between pre and post tests results. The association between knowledge about Dementia and age of adults were computed using Chi square test. Chi Square value was computed to determine the association between religion, age and the knowledge of adults. Self learning module on Dementia was validated.

Major Findings of the Study

Major findings of the study are summarised as follows:

1. **Findings related to sample characteristics revealed that:**
2. The table 1, depicts that out of 60 adults , 35-40 years of age were24(40%) and 40-45 years of age were 36(60%).
3. According to table1, in the total sample 60, 40(66.67%) of the girls adults had monthly family income of Rupees 10,000-50,000, 18(30%) had family income of Rupees 50,001-100000 and 2(3.33%) had family income of Rupees 100001-150000.
4. Table 1 reveals that, in the section of type of family, we see 44(80%) of the adults were of nuclear family and1 6(20%) of the adults belonged to joint family.

2. **Findings related to knowledge about Dementia amongst adults.**

- The results depicts the frequency distribution of adults according to their knowledge about Dementia.
- According to the scores of the Adults in the pre-test and post test, none of the adults scored more than 80%.In the Pre tests, number of adults who fell in 'Good' (60%-79%), 'Average' (35%-59%) and 'Poor' (<35%) categories were 30%, 70% and 0% respectively. Whereas in the post test, number of adults who fell in 'Good' (60%-79%), 'Average' (35%-59%) and 'Poor' (<35%) categories were 30%, 63.33% and 6.67% respectively.

3. **Findings related to the comparison of knowledge about Dementia between pre and post tests.**
4. The data in table reveals that, the mean score and median of knowledge of Dementia among adults were 10.30 and 10.50 respectively. The close distribution of mean and median suggest the distribution to be normal.
5. The mean and median of the knowledge scores of adults about Dementia was 10.40 and 11.00 respectively. The close distribution of mean and median suggest the distribution to be normal.
6. The standard deviation score for knowledge of Dementia was 2.159 , whereas in the pre test it was 2.184, which means the score was similar in variability.

7. The mean difference was 0.1 suggesting slight difference of knowledge in the two groups. Standard error was 0.561. Calculated 't' value (1.78) was less than the table value of 't'(2.00) at df (58) and 0.05 level of significance which was found to be statistically non significant . Thus it was concluded that the knowledge about Dementia amongst adults of Delhi & NCR was not significantly different.

8. **Findings related to association between knowledge of adults about Dementia and selected demographic variables.**

- Table 4 shows the Chi-square value of knowledge scores of adults on Dementia and the average age of adults. The Chi-square value was1.6093, which was less than the tabulated value of 3.84 at df 1at 0.05 level of significance. Hence, it was not significant at $p < .05$. Hence, there was no significant relation between knowledge about Dementia and age of adults.
- Table 5 shows that the computed Chi square is 1.681.. This indicates that there is no significant relationship between the knowledge about Dementia and Family type of adults.
- Table 6 shows that the computed Chi square is 0.50. This indicates that there is no significant relationship between the knowledge about Dementia and Annual Family Income of adults.

9. **Validation of self learning module on Dementia.**

- 10 items in criteria rating scale were marked as 'fully met' by all 7(100%) experts. And 2 items were marked as 'fully met' by 6(85.72%) experts. The self learning module was found to be valid.

Discussions

All the articles published in the Indian Journal of Psychiatry (IJP) from 1958 to 2009 on aging, dementia and other mental health issues of late life were systematically reviewed. There were only a limited number of research articles on dementia in the IJP. Most of the Indian studies on dementia were published elsewhere. People above the age of 60 years constitute about 5% of patients seen in tertiary care settings. High prevalence of psychiatric morbidity was reported among community resident older people. Depression was the commonest mental health problem in late life. We need to develop community-based interventions for management of common conditions like depression in late life. The effectiveness of these interventions

needs to be established. It is important to identify risk factors for depression and dementia in our population. We could then try and modify these factors to reduce the prevalence of these conditions..[64]

The first National Research Summit on Care, Services, and Supports for Persons with Dementia and Their Caregivers was held on October 16–17, 2017, at the National Institutes of Health. In this paper, participants from the Summit Session on Research on Care Needs and Supportive Approaches for Persons with Dementia summarize the state of the science, identify gaps in knowledge, and offer recommendations to improve science and practice in long-term care. Recommendations cover 4 areas focused on persons living with dementia: (1) symptoms (behavioral and psychological symptoms of dementia, function, cognition, and sleep); (2) dementia care settings (physical and social environments, home, and residential care); (3) living with dementia (living well with dementia, living alone with dementia, and living with dementia and intellectual and developmental disabilities); and (4) technology as a cross-cutting theme. The participants identify 10 of the most pressing research issues based on the findings from their collective papers. Final Summit recommendations included those presented by session participants and will be used to advise federal agencies and other organizations that fund research. [65]

At the point of diagnosis of dementia many people will be driving and go on to experience the significant life transition from driver to non-driver. Driving plays an important role in society enhancing independence, quality of life and general health and well-being. Hence cessation from driving can be a very difficult life transition to make. The aim of this integrative review was to summarise what is known about the impact and experience for people with dementia and their carers in the 'post-cessation' phase of retiring from driving. Thematic analysis utilised themes identified in previous life transition research focusing on driving cessation and these included processes, influences, emotions, roles and programmes. Analysis revealed a lack of formal processes to follow in surrendering one's licence and that the medical professions and multi-disciplinary teams should take more responsibility for the legal processes of driving cessation and supporting individuals at the point of and following this disclosure. People with dementia and their carers experience a significant impact upon their life roles and considerable emotional and psychological consequences. The review also suggested that there are a variety of influences affecting the life transition period from driver to non-driver such as family support and access to alternative forms of transport and that there is a need for development for interventions/programmes to support individuals with dementia post-driving cessation.[66]

Conclusions Drawn from the Study

The major conclusions drawn from the findings of the study:

- Two third of the adolescent girls had an average knowledge about Dementia
- There was a no significant relation between knowledge of Dementia and their age and religion of adults.
- There was no significant relation between the average age and the knowledge of Dementia.
- Half of the samples from pre test were having knowledge in terms of Dementia, although quite a few were low on knowledge. Whereas in the post test, a little over one third samples were had adequate knowledge.

Implications

The findings and discussion of the study recognises many implications in the following fields. These implications are necessary considering the risk of psychological distress and the development of an unproductive population, if these problems are not dealt carefully at the earliest.

Nursing Education

- Nursing education must focus its attention in preparing mental health nurses in such a way that they will be able to deal with the family as a whole and thus cater to their needs, especially old age.
- Curriculum in mental health nursing should include practical guidance and counselling to vulnerable group such as old age. The focus of the guidance and counselling should be mainly promotion of mental health and prevention of mental health problems amongst old age.
- Nursing curriculum should give priority to prepare nurses in identifying the needs of the adults and conduct need based health education programs for adolescents in a variety of settings such as school, family, community, hospital and other health care agencies.
- The teachers must ensure that the counselling needs of the adults are also met so that they are able to efficiently handle their problems related to effective management of Dementia .

Nursing Administration

- The nurse administrators can also conduct in-service education programmes for the nurses about the normal psychosexual development of adults and chances of being uninformed about the disorders.
- The nurse administrators must give priority to create awareness and conducting educational sessions in clinics as well as community and provide adequate funds to develop structured educational material such as pamphlets, information booklets for effective and healthy management of issues of adults.

Nursing Practice

- Findings of the study imply that mental health surveillance programme should be undertaken periodically among the adults to assess their knowledge on mental health conditions.
- The nursing personnel should be well equipped with the knowledge, skills and a positive attitude when dealing with adults and psychological and emotional problems, and should be able to understand the impact of mental health conditions adults in particular and society in general.
- Nurses should be able to assess coping strategies used by the care givers to deal with the life situations and teach them effective coping strategies in dealing with the problems they face as a result of caring for the diseased.
- The nurses should be aware of the resources available in the community where these adults can seek help in situations, so that the nurse can serve as the liaison between these community resources and the adults. These community resources can be counselling services, telephone help lines and self help groups.
- The main road to assistance comprise of early assistance , educational interventions to help adults to deconstruct myths.
- Nurse can utilise play and art therapy for catharsis among adults. Such interventions can help reduce suppression, depression and enhance socio-emotional development.

- Appropriate care techniques and increased awareness about peer and media influence can be imparted by community mental health nurses to reduce occurence and increase knowledge on the psychiatric disorders.

Nursing Research

- Knowledge of Dementia and co morbid conditions is one of the developmental tasks and a crucial phase of adulthood. With increasing number of adults and young adults facing increasing number of problem due to multiple types of psychological and degenerative disorders, this is a researchable area for all types of professionals such as psychiatrists, psychologists, nurses and social scientists.
- Nurses plays a vital role in increasing the professional body of knowledge which in turn enhances nursing practice. Thus, any amount of research will help to develop nursing practices that are required for healthy development of the adolescents. Research studies conducted by nurses in this area are rare. Studies of these kind will provide knowledge that will help cater to the needs of adolescents.

General Education

- Counselling services should be an integral part of school and college education as adolescent stage is considered to be a kind of maturational crisis. Besides a counsellor in school, health nurse can also play a significant role in looking after the mental health needs of adolescents including the body image issues.
- The school and college teachers should be taught about the impact of psychological disorder in adolescent groups, and also the impact of the same leading to Dementia.
- Life skill education should continue to be emphasised in the work areas which will help the adults cope up with their life stressors.

Limitations

- The study was confined to small sample of adults of Delhi & NCR which limits the generalisation of the findings of the study.

- The samples were selected with the help of convenience sampling technique, hence were subject to sampling bias by not providing representative sample from the population which limits the generalisation of the findings.

Recommendations

The aim of the present study was to be descriptive and not prescriptive. However, the researcher proposes the following recommendations for better implications in this field of the study.

- A similar study can be replicated on a wider range of sample to help validate and generalise the findings to the population unlike the present study which was conducted with a small sample size , thus limiting generalisation.
- Future research can also be done to address the co morbid conditions related issues of adults in relation to internalisations of ideal images and media influences.
- A study on knowledge and attitude of the care takers/parents towards dementia/alzhiemer's among adults can be conducted followed by training of the care takers on techniques and management of these issues.
- A descriptive study to assess the effect of media and peer group on the attitude and behaviours/psychology of the adults can be undertaken.

REFERENCES

1. Kaplan and Sadock “Comprehensive textbook Psychiatric.”“ 5th edition .USA: Lippincott Williams; 2000. 3045-3052
2. Sreevani R. “A guide to mental health and psychiatric nursing,”“2nd edition. New Delhi: Jaypee brothers, 2004. 136-145.
3. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Arlington, VA: American Psychiatric Publishing; 2013.
4. Haupt, Kargar A, Janner. Improvement in agitation and anxiety in dementia patient after psycho educational group intervention with caregivers. International Journal of Geriatric Psychiatry.2000 June; 15(2); P.1125-9
5. Burns. N, Groves S.K, “The practice of nursing research conduct”, Critique and utilization; Philadelphia: W.B. Saunders Co: 2002. 45-56
6. https://www.who.int/news-room/fact-sheets/detail/dementia
7. Sathianathan R, Kantipudi SJ. The dementia epidemic: Impact, prevention, and challenges for India. Indian J Psychiatry 2018;60:165-7.
8. Biswas A, e. (2020). Dementia in india--a critical appraisal. - PubMed - NCBI. Retrieved 4 May 2020, from https://www.ncbi.nlm.nih.gov/pubmed/16173292
9. Spector A, Orrell M, Schepers A, Shanahan N, Department of Clinical, Educational and Health Psychology, University College London, UK, A systematic review of 'knowledge of dementia' outcome measures, 28 October 2013.
10. Knowledge and fear of developing Alzheimer’s Disease in a sample of healthy adults. Available from : www.wikipedia.org/wiki/Dementia.
11. Martin J Prince, Indian Journal of Psychiatry, 2009, Vol 51, Issue 5, pages 8-15.
12. Berr C, Wancata J, Ritchie K. Prevalence of dementia in the elderly in Europe. Eur Neuropsychopharmacol2005;15:463–71.
13. Dementia statistics worldwide. URL: http://www.google.com [cited on 2007 Oct 6].
14. World Health Organisation. Alzheimer’s disease Help for Caregivers. Alzheimer’s disease International. Geneva: 2000. P.1-5.
15. Alzheimer's & Dementia: The Journal of the Alzheimer's Association Vol. 8, Issue 1, Supplement, Pages S1-S68.
16. American Association of Geriatric Psychiatry. 2005. AAGP position statement: Principles of care for patients with dementia resulting from Alzheimer disease [Internet]. [cited 2006 September 11]. Available from:http://www.aagpgpa.org/prof/position_caredmnalz.asp.
17. Faran C, Keane H. Multimodal intervention strategies for caregivers of persons. International Journal of Geriatric Psychiatry. 2000 Mar; 13(2): P. 220-4.
18. Quality of life and depression in older people with dementia. Available from : www.tnaionline.org/feb-10/13.htm
19.
20. 1. Johnson BS. Adaptation and Growth Psychiatric Mental Health Nursing. Second ed. USA: JB Lippincott Company. 1999. P.618-21.
21. 2. Haupt, Karger A, Janner. Improvement in agitation and anxiety in dementia patients after psycho educational group intervention with caregivers.International Journal of Geriatric Psychiatry.2000 Jun; 15(2); P.1125-9.
22. 3. Moos I, Bjorn A: Use of the life story in the institutional care of people with dementia: a review of intervention studies.Ageing and Society 2006, 26:431-454.
23. 4. Schweitzer P, Bruce E: Remembering Yesterday, Caring Today; Reminiscence in Dementia Care. A guide to Good Practice. London and Philadelphia: Jessica Kingsley Publications; 2008Martin J Prince, Indian Journal of Psychiatry, 2009, Vol 51, Issue 5, pages 8-15.
24. 5. Andrew Pollack: Advances in diagnosing Alzheimer’s Disease. The Hindu.2008 Oct 17. P.18
25. 6. https://www.ncbi.nlm.nih.gov/m/pubmed/27891726
    7.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4367932/
26. 8.https://bmjopen.bmj.com/content/7/2/e011146

27. 9.https://pubmed.ncbi.nlm.nih.gov/9736007/
28. 10.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5770110/
29. 11.https://pubmed.ncbi.nlm.nih.gov/26472594/
30. 12.https://pubmed.ncbi.nlm.nih.gov/16263837/
31. 13.https://www.ncbi.nlm.nih.gov/books/NBK262105/
32. 14.https://pubmed.ncbi.nlm.nih.gov/16352910/
33. 15.https://www.researchgate.net/publication/7710353_The_need_for_a_consensus_in_the_use_of_assessment_tools_for_Alzheimer's_disease_The_Feasibility_Study_assessment_tools_for_dementia_in_Alzheimer_Centres_across_Europe_a_European_Alzheimer's_Disease_Co
34. 16.https://www.ncbi.nlm.nih.gov/m/pubmed/16075674
35. 17.https://www.ncbi.nlm.nih.gov/m/pubmed/17201527
36. 18.https://www.ncbi.nlm.nih.gov/m/pubmed/11255456
37. 19.Mundt JC, Kaplan DA, Greist JH. Meeting the need for public education about dementia research support. 2000 Sep 25; 142 (39): P. 40-1.
38. 20.Moos I, Bjorn A: Use of the life story in the institutional care of people with dementia: a review of intervention studies.Ageing and Society 2006, 26:431-454.
39. 21.National Collaborating Centre for Mental Health: Dementia: The NICE-SCIE Guidelines on Supporting People with Dementia and their Carers in Health and Social Care. London: British Psychological Society and the Royal College of Psychiatrists; 2006
40. 22.Tanis J. Ferman, PhD, Mayo Clinic, Glenn E. Smith, PhD, Mayo Clinic, and Briana Melom, MA, LSW, Understanding behavioral changes in dementia, 27 November 2013.
41. 23.Spector A, Orrell M, Schepers A, Shanahan N, Department of Clinical, Educational and Health Psychology, University College London, UK, A systematic review of 'knowledge of dementia' outcome measures, 28 October 2013.
42. 24.Shaji, K. S., Smitha, K., Lal, K. P. and Prince, M. J., International Journal of Geriatric Psychiatry, 18: 1–6. doi: 10.1002/gps.649.
43. 25.Alzheimer's Disease International: World Alzheimer Report. London: Scientific Group, Institute of Psychiatry, Kings' College London; 2009. Traumatic brain injury and accelerated Alzeimer,s.Available from : www.alzheimers.org.uk › About dementia ,Jan;2013.
44. 26.LPeters R. Geriatric Psychiatry. 2009 May;24(5):452-8. doi: 10.1002/gps.2153.
45. 27.An interactive educational course for families caring for alzheimer,s and other dementia sufferers.Available from: www.helpforalzheimersfamilies.com/alzheimers-dementia-education.
46. 28.https://pubmed.ncbi.nlm.nih.gov/30817791/
47. 29.https://www.researchgate.net/publication/322941649_Effectiveness_of_Self_Instructional_Module_Sim_on_Knowledge_Regarding_Alzheimer's_Disease
48. 30.https://www.ncbi.nlm.nih.gov/m/pubmed/28989194
49. 31.https://www.researchgate.net/publication/319958388_Assessment_of_the_Effectiveness_of_Planned_Teaching_on_Knowledge_and_attitude_regarding_the_Dementia_among_Family_Members_of_Elderly_in_selected_Community_Area

50. 32.https://www.researchgate.net/publication/330148153_Cognitive-Based_E-Learning_Design_for_Older_Adults
51. 33.https://www.google.com/url?sa=t&source=web&rct=j&url=https://gfnpss.org/journal/wp-content/uploads/2018/02/all-Abstract-for-web.pdf&ved=2ahUKEwjI8djclOPoAhWQyzgGHdHpA8QQFjACegQIAxAB&usg=AOvVaw1NWwdLcHPf43Xowxf9wGX4
52. 34.https://www.researchgate.net/publication/263512880_Public_knowledge_and_beliefs_about_dementia_risk_reduction_A_national_survey_of_Australians
53. 35.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4776581/
54. 36.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5734238/
55. 37.https://www.researchgate.net/publication/333353529_Prevention_of_dementia_in_elderly_population_A_comprehensive_review_of_literature
56. 38.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6033035/
57. 39.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5546647/
58. 40.https://www.researchgate.net/publication/333353529_Prevention_of_dementia_in_elderly_population_A_comprehensive_review_of_literature
59. 41.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2915647/
60. 42.https://www.ncbi.nlm.nih.gov/m/pubmed/28789697
61. 43.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4390027/
62. 44.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6617301/
63. Polit D.F., beck C.T Nursing Research: Generating and Assessing Evidence for Nursing Practice. 8 . Ed. Philadelphia:Wolters Kluwer Health/Lippincott Williams & Willkins. 2008; 60
64. indian research on aging and dementia. (2010). Retrieved 3 January 2020, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3146224/
65. Kolanowski, A., Fortinsky, R. H., Calkins, M., Devanand, D. P., Gould, E., Heller, T., Hodgson, N. A., Kales, H. C., Kaye, J., Lyketsos, C., Resnick, B., Schicker, M., & Zimmerman, S. (2018). Advancing Research on Care Needs and Supportive Approaches for Persons With Dementia: Recommendations and Rationale. *Journal of the American Medical Directors Association*, *19*(12), 1047–1053. https://doi.org/10.1016/j.jamda.2018.07.005
66. The impact of driving cessation for people with dementia – An integrative review - Alison Holden, Helen Pusey,. (2020). Retrieved 2 March 2020, from https://journals.sagepub.com/doi/full/10.1177/1471301220919862

APPENDICES

APPENDIX I

INFORMED CONSENT FORM

TITLE- 'A STUDY TO ASSESS THE IMPACT OF SELF LEARNING MODULE ON PREVENTION OF DEMENTIA IN ADULTS'

You are being mentioned to be a part of the above mentioned study purely on voluntary basis. Before agreeing to participate in the following study it is important to read and understand the following information. An oral presentation of the document shall be made, if you have any questions, clarifications please discuss during presentation. You will be provided two copies of this form, please sign the original copy and submit to researcher for her records. Please retain the duplicate copy for your reference and records.

PURPOSE OF THE STUDY- To assess the impact of self learning module on prevention of Dementia .

PROCEDURE OF THE STUDY- A structured questionnaire to assess the pre test and post test knowledge of Dementia will be used. **RISK-** There is no risk associated as it is descriptive study and no intervention is involved.

COMPENSATION- You will not be entitled to any compensation for participation in this study. Your participation in this study is completely voluntary. Regarding any doubts questions about this study, you may contact personally to the investigator.

CONFIDENTIALITY- Your name and other details will be kept confidential will be accessible to the study personnel and if necessary to Institutional Review Board, Galgotias University, Greater Noida.

RIGHT TO WITHDRAW- By your free will, at any time you can withdraw from participation in this study and by doing so it will not have any negative effect on your career.

VOLUNTARY'S DECLARATION- I have thoroughly read and understood above information and I am ready to participate in this study on voluntary basis.

VOLUNTEER'S NAME: **VOLUNTEER'S SIGNATURE**

.....

.....

WITNESS'S NAME: **WITNESS'S SIGNATURE**

.....

.....

Investigator's name: B.Sc Nursing 4th year
Contact No. 9990127040
9711829274

APPENDIX II

To,

.....

.....

.....

Date :

Subject: Expert opinion for the content validity of the tool to assess knowledge about Dementia amongst adults of Delhi & NCR.

Sir/Madam,

We are students from final year of B.Sc Nursing at School of Nursing, Galgotias University, Greater Noida. We have selected the under mentioned topic for research project to be submitted to the university in partial fulfilment of university requirements for the award of B.Sc Nursing Degree.

Topic: "A study to assess the impact of self-learning module on prevention of Dementia in Adults."

For the purpose of the study, I have developed questionnaire to assess the knowledge of Dementia among adults of Delhi & NCR, we would request you to kindly go through the tool and give your expert opinion and critical comments for any modification and improvement.

Your esteemed opinion or any comments will provide the required direction and contribute immensely to the quality and content of our research study. We shall be grateful to you for your valuable remarks and sugestions.

Thanking You,

Yours Faithfully,

B.Sc Nursing Students

School of Nursing

Galgotias University

Greater Noida,Uttar Pradesh

APPENDIX III

CRITERIA RATING SCALE FOR VALIDITY OF TOOL ON ASSESSMENT OF KNOWLEDGE OF ADULTS ABOUT DEMENTIA

Respected Sir/ Madam,

Please go through the questionnaire to assess the knowledge about Dementia amongst adults . Express your opinion by marking against the specific column in the criteria. There are three alternative responses. Tick mark in the appropriate column. Please give your frank opinion in the remark column. If you feel the criteria is fully met, tick mark in column I, if you feel the criteria is partially met, tick mark in column II, and if you feel it doesn't meet the criteria tick mark in column III.

Kindly support your responses/comments and suggestions in the remark column for any modifications, additions and deletions, as your valuable comments will help the researcher to improve her efforts.

S.NO	CRITERIA STATEMENT	FULLY MET	PARTIALLY MET	NOT MET	REMARKS
1.	**Selection of the statements** • Based on objectives. • Content provided is relevant and valid. • Measures what it intends to measure. • Selected according to the needs of adults.				
2.	**Elicit relevant information about:** • Knowledge about Dementia.				

3.	**Organisation of the content and the presentation.** • Organised logically. • Arranged in sequence. • Maintains correlation.				
4.	**Language** • Simple and easy to understand. • Appropriate terminology.				
5.	**Practicability / Feasibility** • Number of items are adequate. • Useful for assessing knowledge about Dementia.				

If you have any other suggestions, please feel free to state here:

_____

_____

_____

_____

(Signature)

APPENDIX - IV

To,

.....

.....

.....

Date :

Subject: Expert opinion for the content validity of the Self Learning Module on Dementia.

Sir/Madam,

We are students from final year of B.Sc Nursing at School of Nursing, Galgotias University, Greater Noida. We have selected the under mentioned topic for research project to be submitted to the university in partial fulfilment of university requirements for the award of B.Sc Nursing Degree.

Topic: Topic: "A study to assess the impact of self-learning module on prevention of Dementia in Adults."

For the purpose of the study, we have developed Self Learning Module, we would request you to kindly go through the booklet and give your expert opinion and critical comments for any modification and improvement.

Your esteemed opinion or any comments will provide the required direction and contribute immensely to the quality and content of my research study. We shall be grateful to you for your valuable remarks and sugestions.

Thanking You,

Yours Faithfully,

B.Sc Nursing Students

School of Nursing

Galgotias University

Greater Noida,Uttar Pradesh

APPENDIX-V

CRITERIA RATING SCALE FOR VALIDITY OF SELF LEARNING MODULE ON DEMENTIA

Respected Sir/ Madam, Please go through the self learning module on Dementia . Express your opinion by marking against the specific column in the criteria. There are three alternative responses. Tick mark in the appropriate column. Please give your frank opinion in the remark column. If you feel the criteria is fully met, tick mark in column I, if you feel the criteria is partially met, tick mark in column II, and if you feel it doesn't meet the criteria tick mark in column III. Kindly support your responses/comments and suggestions in the remark column for any modifications, additions and deletions, as your valuable comments will help the researcher to improve her efforts.

S.No	Criteria	Fully Met	Mostly Met	To Some Extent	Remarks
1	**Objectives**				
1.1	Realistic				
1.2	Appropriate				
2	**Selection of item**				
2.1	Based on objectives				
2.2	Items are adequate				
2.3	Items are relevant				
3	**Content is adequate**				
3.1	Regarding Dementia				
4	**Organisation of items**				
4.1	Organised logically				
4.2	Maintains correlation				
4.3	Arranged in sequence				
5	**Language**				
5.1	Clear and simple				
5.2	Easy to understand				
6	**Feasibility**				
6.1	Useful for providing information regarding Dementia				

If you have any other suggestions, please feel free to state here:

_____

_____

_____

_____

(Signature)

APPENDIX VI

A Pre test structured questionnaire to assess the knowledge on Dementia amongst adults.

SECTION I–DEMOGRAPHIC PROFILE

CODE. NO | | | |

Instructions: The questions which follow refer to the demographic data of adults and the interviewer indicates the answer by placing a tick (√) against the response applicable to the subjects or filling in the required information.

- **NAME-**
- **AGE-**
- **SEX-**
- **TYPE OF FAMILY-**

I. Nuclear
II. Joint

- **RELIGION-**

I. Hindu
II. Christian
III. Sikh
IV. Muslim
V. Others

- **Do you have a family member aged 55 or above?**
  - **Yes**
  - **No**

- **If yes, is the person suffering from Dementia?**
- **Yes**
- **No**
- **Don't know**

- **Have you heard the term Dementia?**
- Yes
- No
- **Do you have any family members/s, friend/s, acquaintances who have Dementia?**
- Yes
- No
- **If yes, tick mark the source of information about Dementia.**

a) Media(social networking sites, newspaper, television, magazines, radio ,etc)
b) Books (any type)
c) Friends & Family.

d) Doctor /Nurse/ any other Health professional.

SECTION II- STRUCTURED KNOWLEDGE QUESTIONNAIRE (SKQ)

Instructions: -

- There are 20 descriptive statements to assess your knowledge on Dementia.
- Please read the statements properly and place a tick (√) against the appropriate option.
- Please do not leave any question unanswered.

1. The term Dementia means?

a) Prolonged loss of appetite
b) Sleeplessness
c) Loss of memory
d) Abnormal sensations

2. How Dementia is caused?

a) Dementia can be caused due to blood infection
b) Dementia can be caused due to stomach infection
c) Dementia can be caused due to HIV infection
d) Deficiency of calcium may lead to dementia

3. The stage of life in which Dementia occurs most commonly is?

a) Childhood
b) Adolescent
c) Adult
d) Elderly

4. State true or False for the statement "Dementia occurs in 20's"?

a) True
b) False

5. Which of the following is the most common cause of Dementia?.

a) Old age
b) Stress
c) Damage to nerve cell
d) Loss of blood in body

6. Out of the following which habits helps in preventing Dementia?

a) Exercise
b) Yoga
c) Household Chores
d) All of the above

7. Dementia is hereditary disorder (passed from parents to children). State true or false.

a) True
b) False

8. Which of the activities would not be affected by a person's dementia?

a) Their ability to drive
b) Their ability to count money
c) Their ability to dress themselves
d) Their ability to breathe

9. Dementia is a _____ and _____ disease that at the present time has no cure.

a) Chronic, persuasive
b) Chronic, persistent
c) Chronic, problematic
d) Chronic, progressive

10. Which of the following sentence is/are correct about Dementia?

a) In dementia mental ability declines and interfere the daily life.
b) A person suffering from this disease may forget his/her name.
c) Alzheimer's disease is a cause of dementia.
d) All the above are correct.

11. Which of the following sentence is/are correct about Dementia?

a) In dementia mental ability declines and interfere the daily life.
b) A person suffering from this disease may forget his/her name.
c) Alzheimer's disease is a cause of dementia.
d) All the above are correct.

12. Which of the following is not the symptom of dementia?

a) Problem solving or language and the ability to focus and pay attention.
b) Memory loss
c) Difficulty with thinking
d) Dementia people are able to control their emotions

13. What beside dementia can cause memory loss?

a) Depression
b) Some medications
c) Stress
d) All of the above

14. Name the type of dementia disease in which a neurodegenerative condition linked to abnormal structure in the brain?

a) Alzheimer's disease
b) Dementia with lewy bodies
c) Parkinson's disease
d) Huntington's disease

15. What has been shown to decrease brain functioning in healthy adults?

a) Smoking
b) Frequent socializing (besides intellectual gatherings, such as book groups)
c) Reading celebrity magazines
d) Drinking coffee

16. How long does Dementia takes to develop as a disease before we see warning signs?

a) 20-25 years
b) 22-23 years
c) 19-20 years
d) 24-25 years

17. "Dementia is a normal part of ageing" state true or false.

a) True
b) False

18. The most common form of Dementia is?

a) Alzheimer's
b) Lewy Bodies
c) Vascular
d) Parkinson's

19. What amongst the following is a risk factor for Dementia?

a) Age
b) Smoking
c) Chronic use of alcohol
d) All of the above

20. ' Patients with Dementia develop hallucinations' State true or false

a) True
b) False

POST-TEST
SECTION I–DEMOGRAPHIC PROFILE

CODE. NO | | | |

Instructions: The questions which follow refer to the demographic data of adults and the interviewer indicates the answer by placing a tick (√) against the response applicable to the subjects or filling in the required information.

- **NAME-**
- **AGE-**
- **SEX-**
- **TYPE OF FAMILY-**

III. Nuclear
IV. Joint

- **RELIGION-**

VI. Hindu
VII. Christian
VIII. Sikh
IX. Muslim
X. Others

- **Do you have an family member aged 55 or above?**
  - **Yes**
  - **No**

- **If yes, is the person suffering from Dementia?**
- **Yes**
- **No**

- **Have you heard the term Dementia?**
- Yes
- No
- **Do you have any family members/s, friend/s, acquaintances who have Dementia?**
- Yes
- No
- **If yes, tick mark the source of information about Dementia.**

e) Media(social networking sites, newspaper, television, magazines, radio ,etc)
f) Books (any type)
g) Friends & Family.
h) Doctor /Nurse/ any other Health professional.

SECTION II- STRUCTURED KNOWLEDGE QUESTIONNAIRE (SKQ)

(POST-TEST)

Instructions: -

- There are 20 descriptive statements to assess your knowledge on Dementia.
- Please read the statements properly and place a tick (√) against the appropriate option.
- Please do not leave any question unanswered.

1. **What part of the brain is crucial to the formation of memory?**

a) Hippocampus
b) Cerebellum
c) Frontal lobe
d) Thalamus

2. **Which of the following statement is/are correct about Alzheimer's Disease?**

a) Alzheimer disease is a degenerative disease of the brain that causes dementia and it has been found that it is closely linked with type-2 diabetes.
b) Alzheimer's disease is not a mental illness but it can cause symptoms related to mental health like depression, anxiety etc.
c) Alzheimer's disease is categorized into mild Alzheimer's disease, moderate disease and severe Alzheimer's disease.
d) All the above are correct.

3. **Name the type of dementia disease in which a neurodegenerative condition linked to abnormal structure in the brain?**

e) Alzheimer's disease
f) Dementia with lewy bodies
g) Parkinson's disease
h) Huntington's disease

4. **Which disease is characterized by specific types of uncontrolled movements but also includes dementia?**

a) Parkinson's disease
b) Mixed dementia
c) Huntington's disease
d) None of the above

5. Name a disease in which a person may show both Alzheimer disease and vascular dementia at the same time?

a) Alzheimer's disease
b) Parkinson's disease
c) Mixed dementia
d) Frontotemporal dementia

6. Which disease or dementia increases the likelihood of young onset Alzheimer's?

a) Frontotemporal dementia
b) Posterior cortical atrophy
c) Down syndrome
d) Normal pressure hydrocephalus

7. What is ARDSI?

a) Alzheimer's and related Disorders Society of India
b) Act related to Dementia, Symptoms and Infection
c) Alzheimer's and related Dementia Symptoms of India
d) None of the above

8. Which of the following statement is/are correct about mnemonics?

a) Mnemonic systems are techniques r strategies consciously used to improve memory.
b) The study and development of systems for improving and assisting the memory.
c) A device of any learning technique that aids information retention or retrieval in the human memory and it is a symbol used to specify a computing function.
d) All the above are correct.

9. Dementia is a neuropsychiatric disorder that has, as its primary causation, a disease process that affects the brain.

a) True
b) False
e)

10. What has been shown to increase brain functioning in healthy adults?

a) Vit-a
b) A high- fat, low- carbohydrate diet
c) Exercise
d) All of the above.

11. Which of the following can prevent the occurrence of Dementia?

e) Social involvement
f) Exercise.
g) Healthy food.
h) All the above are correct.

12. Which of the following is not the treatment regime for Dementia?

e) Psychotherapy.

f) Anti Tubercular Therapy

g) Psychotropic drugs

h) Anti Anxiety drugs

13. Which of the following is not the symptom of stage 2 dementia?

e) Progressive memory loss

f) Neglection of personal hygiene

g) Social isolation

h) Loss of ability to stand and walk

14. Sundowner's syndrome is characterised by

e) Drowsiness

f) Confusion

g) Ataxia

h) All of the above

15. State True/False "Brain exercises helps to boost the memory" ?

e) Yes

f) No

16. Which of the following is a brain exercise?

e) Knitting

f) Playing games

g) Cooking

h) All of the above

17. "Dementia is a normal part of ageing" state true or false.

c) True

d) False

18. The most common form of Dementia is?

e) Alzheimer's

f) Lewy Bodies

g) Vascular

h) Parkinson's

19. What amongst the following is a risk factor for Dementia?

e) Age

f) Smoking

g) Chronic use of alcohol

h) All of the above

20. State True or False "The closer to the evening more agitated and confused the client becomes"

a) Yes

b) No

APPENDIX VII

Answer key for Structured Knowledge Questionnaire.(pre-test)

SECTION II

1. a
2. c
3. b
4. a
5. a
6. b
7. a
8. c
9. c
10. b
11. a,b,c,d
12. a
13. a,b,c,d
14. a,b,c,d
15. a
16. b
17. a
18. c
19. d
20. a

Answer key for Structured Knowledge Questionnaire.(post-test)

SECTION II

1. a
2. c
3. b
4. a
5. a
6. b
7. a
8. c
9. c
10. b
11. a,b,c,d
12. a
13. a,b,c,d
14. a,b,c,d
15. a
16. b
17. a
18. c
19. d
20. a

APPENDIX- VIII

Scoring Key of Structured Knowledge Questionnaire

Item No.	Correct Response	Incorrect Response
1	1	0
2	1	0
3	1	0
4	1	0
5	1	0
6	1	0
7	1	0
8	1	0
9	1	0
10	1	0
11	1	0
12	1	0
13	1	0
14	1	0
15	1	0
16	1	0
17	1	0
18	1	0
19	1	0
20	1	0

SELF LEARNING MODULE

ON

B.Sc NURSING STUDENTS

(2016-2020)

SCHOOL OF NURSING

GALGOTIAS UNIVERSITY

Acknowledgment

First of all I wish to express my heartfelt gratitude to almighty God for giving me fortitude and strength to accomplish my work.

I owe a great deal of thanks to many people who supported me with their time and heartening throughout the research study to name a few:

I am thankful to Prof. Ashia Qureshi, Dean School of Nursing, Galgotias University for her valuable suggestions from the initiation of this endeavour till the conclusion.

I would like to express my sincere gratitude to Ms. Surabhi Verma , Assistant Professor , School of Nursing, Galgotias University for her support and guidance and thankful to her under her guidance and supervision this study has been accomplished. Her tireless efforts , patience and continuous inspirations that stemmed from them gave that extra leverage for the research to be completed on a high note.

My heartfelt thanks also goes to the experts for having spared their most valuable time for content validation of the tool and informational booklet.

Nothing would be possible without the wonderful family and friends. I am thankful to them for their support and undermining belief .

Preface

A need was felt to bring out the issue of Appropriate Knowledge on prevention of dementia . Human undergo a lot of changes during their lifetime and it is very important to accept positively. Dementia is not a single disease , it is an overall term that comes a wide range of specific medical conditions . In advancing times, it is estimated that the number of people living with dementia and it will double every 20 years with growth rate in India living highest..

Hence, it is very important to gain knowledge about dementia and its prevention. It is important to reduce the symptoms of progressive disease and maintain quality of life.

So we have made an attempt to explain few points to adults regarding Dementia and its prevention. This will help them to have knowledge about the disorder and prevent it further in their lives.

DEMENTIA

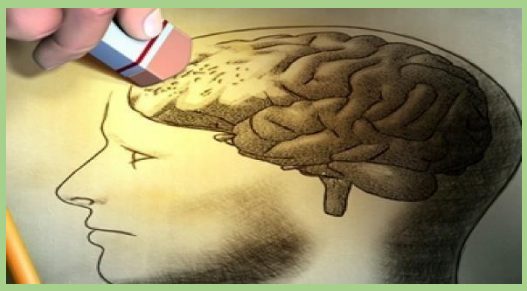
CONTENT

CONTENT

DEMENTIA

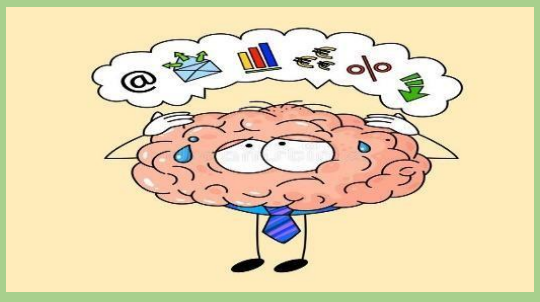
Dementia is a syndrome in which there is deterioration in memory, thinking, behaviour and ability to perform everyday activities.

Dementia is characterised by :



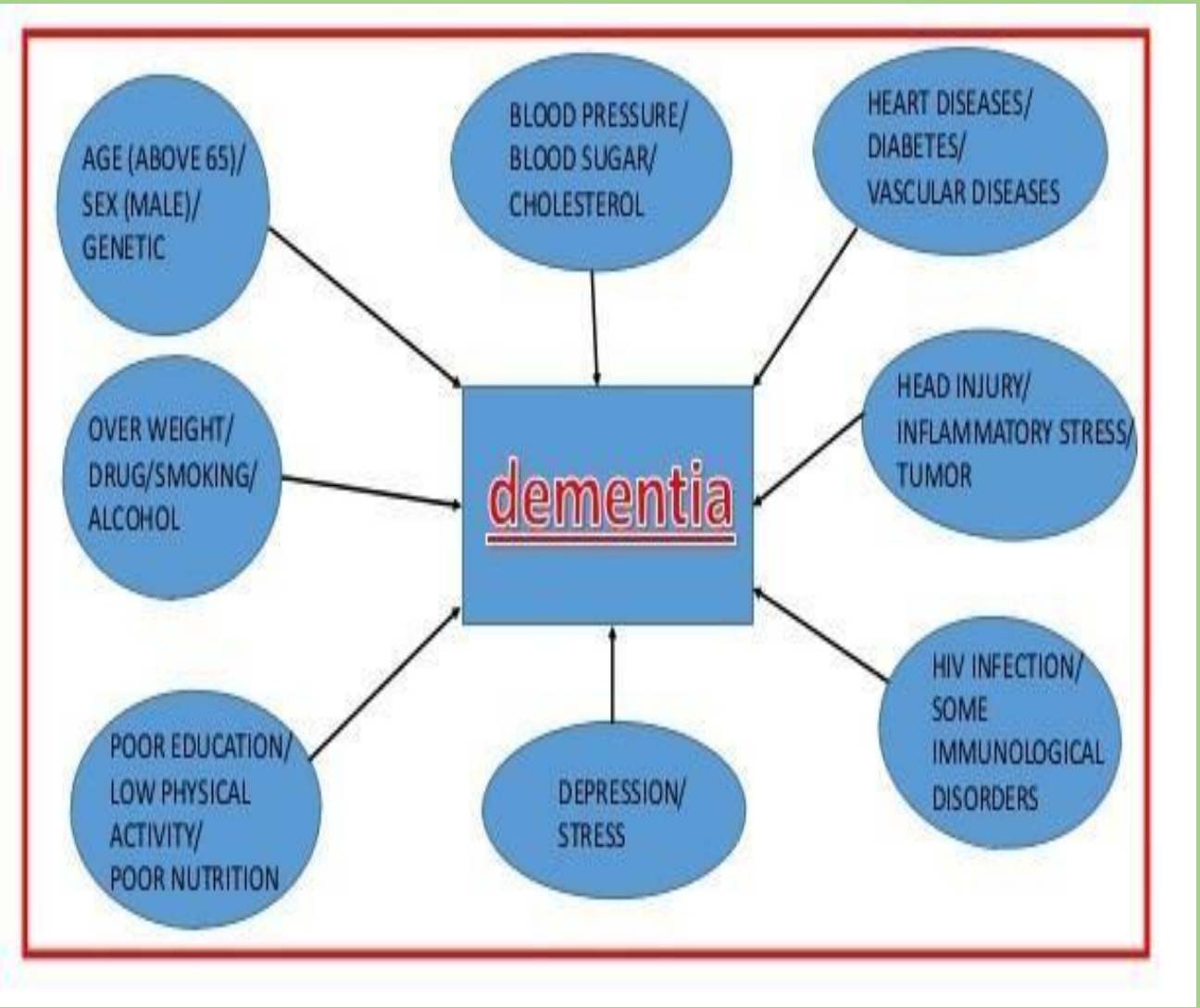
Memory Loss

Personality changes



Impaired reasoning

RISK FACTORS OF DEMENTIA

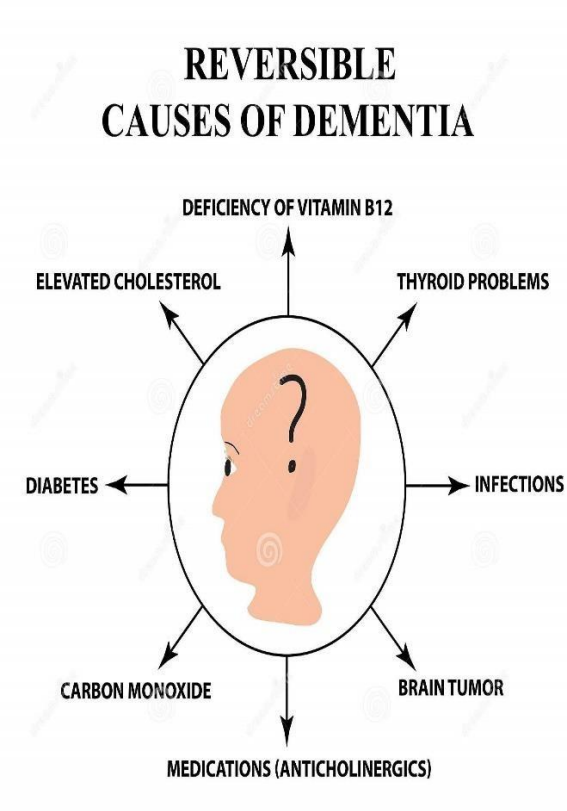


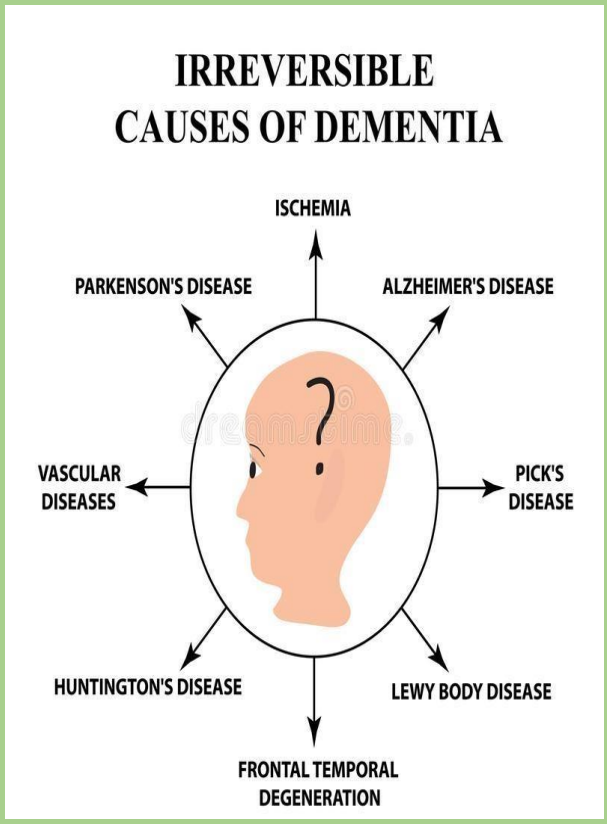
CAUSES OF DEMENTIA

1. **Reversible causes :** These are the conditions that may be associated with cognitive or behavioral symptoms that can be resolved once the primary etiology is treated.

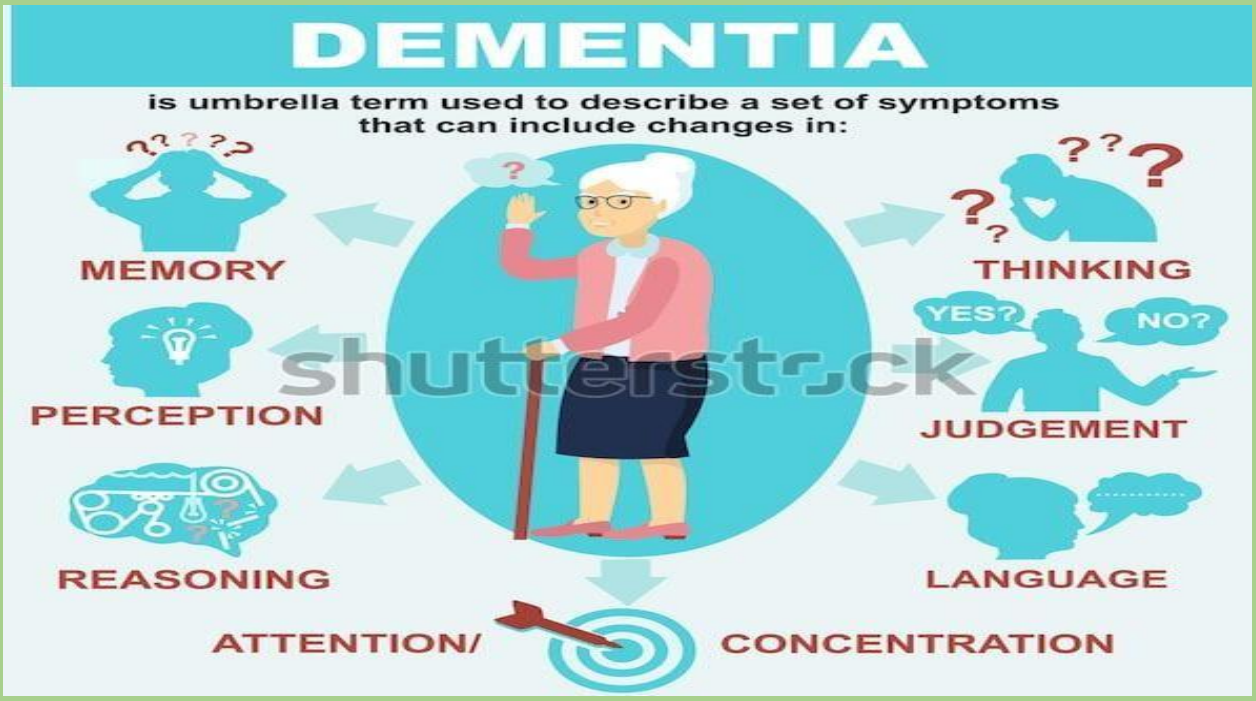
2. **Irreversible causes :** These are the condition which is associated with behavior and personality changes that can not be resolved and untreatable

   .





CLINICAL FEATURES



PERSONALITY CHANGES

- Lack of interest in day to day activities
- Easy mental fatigability
- Self-centered
- Decreased self-care

MEMORY IMPAIREMENT

- Recent memory affected

CLINICAL FEATURES

COGNITIVE IMPAIRMENT

- Disorientation
- Poor judgement
- Decreased attention space

BEHAVIOURAL IMPAIREMENT

- Stereotyped behavior
- Alteration in sexual drives

AFFECTIVE IMPAIREMENT

- Labile mood
- Irritability
- Depression

NEUROLOGICAL IMPAIREMENT

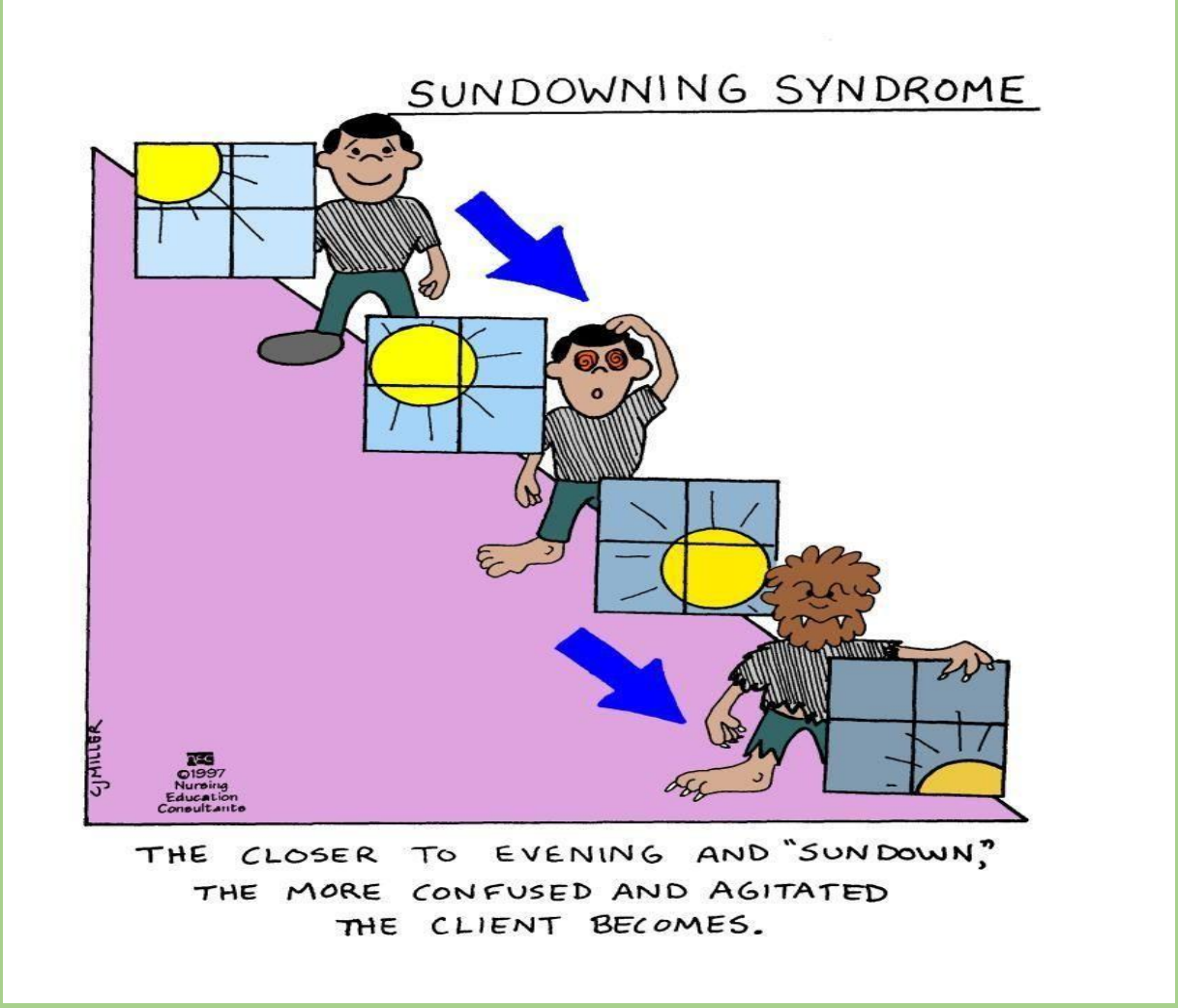
- Aphasia

CLINICAL FEATURES

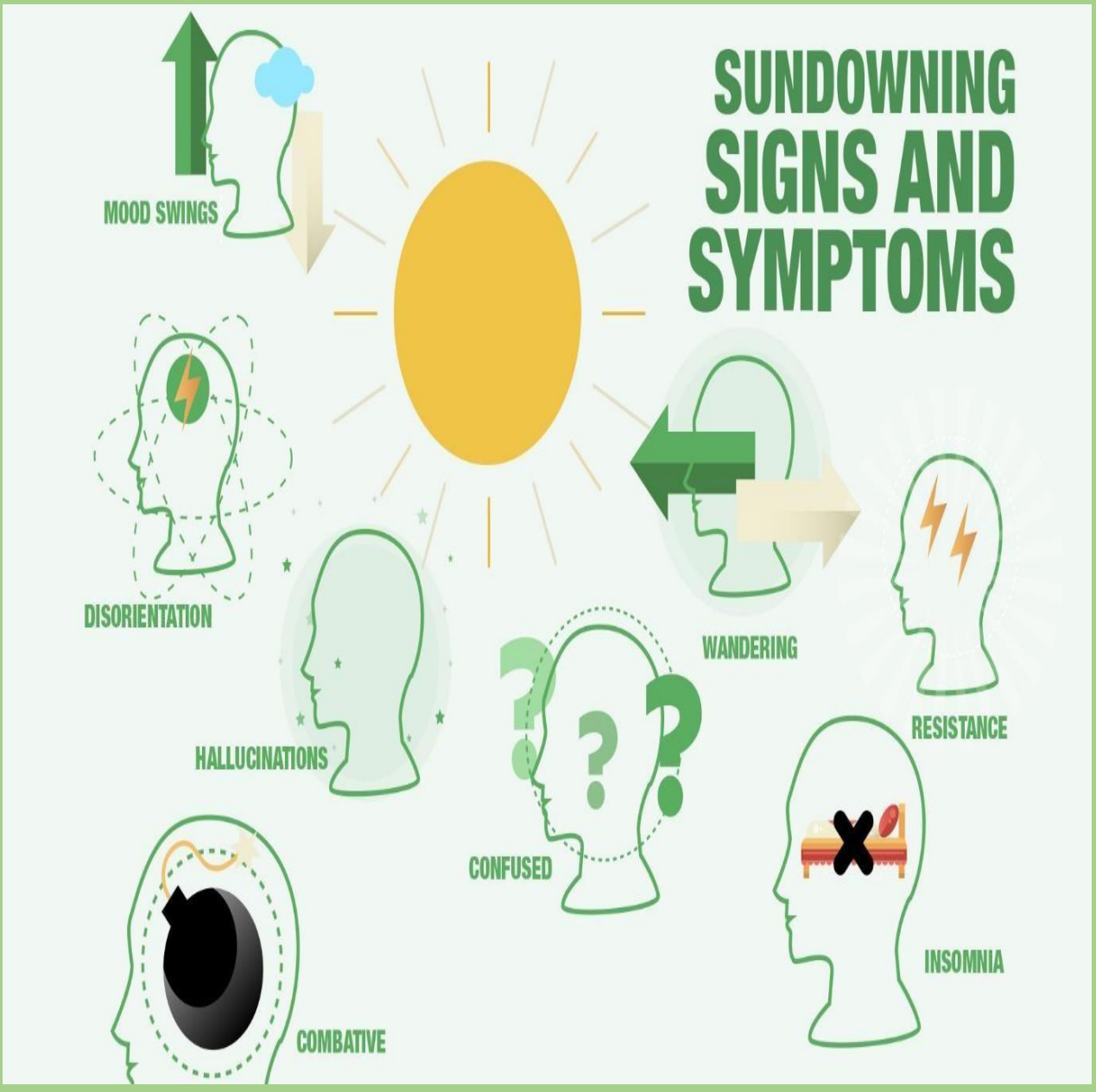
CLINICAL FEATURES

SUNDOWNER SYNDROME

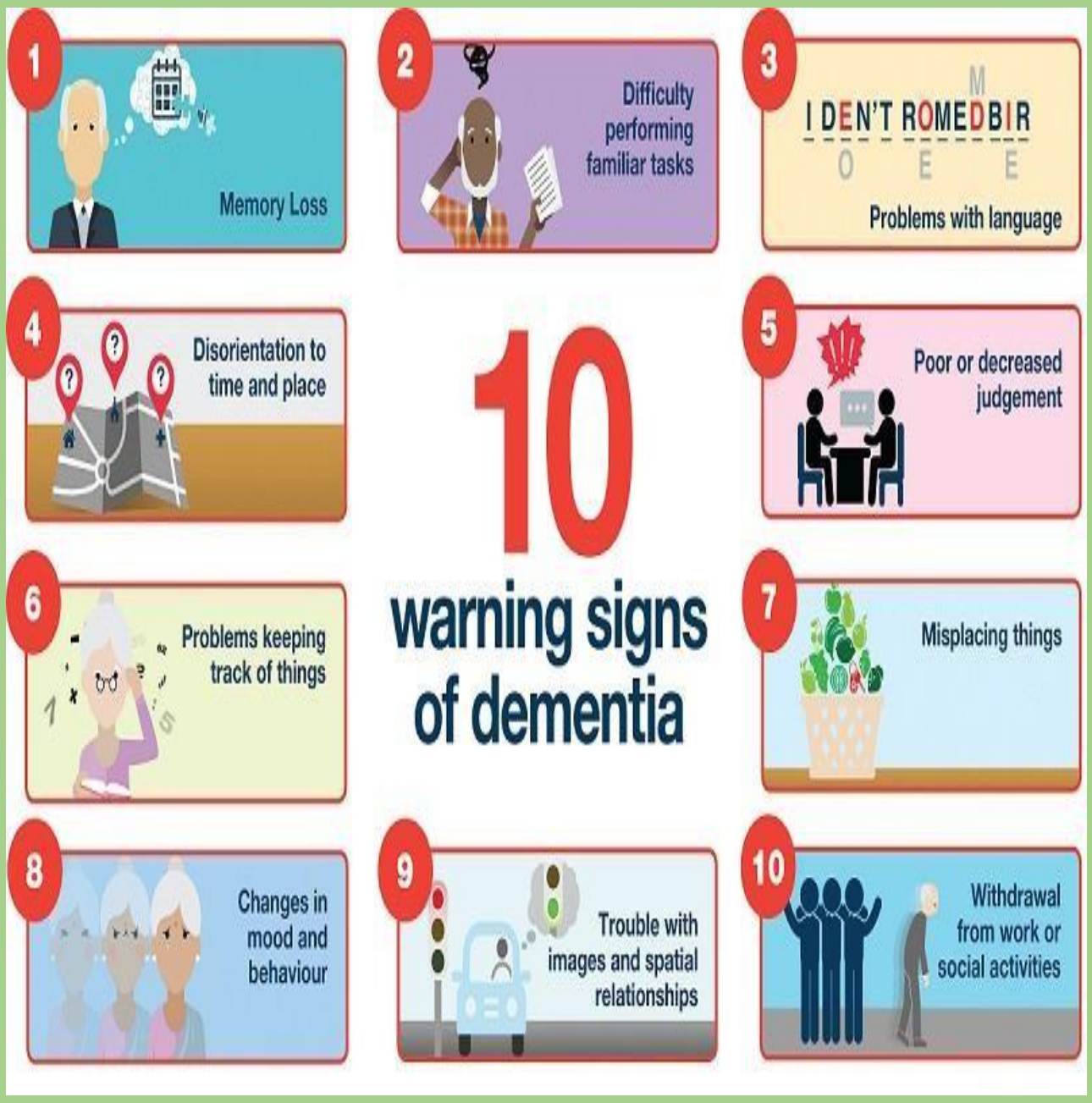
It is characterized by drowsiness, confusion, ataxia, accidental falls may occur at night when external stimuli such as light and interpersonal orienting cues are diminished



SIGN AND SYMPTOMS OF SUNDOWNER SYNDROME



WARNING SIGNS OF DEMENTIA



STAGES OF DEMENTIA

STAGE 1 : EARLY STAGE (2 TO 4 YEARS)

- Forgetfulness
- Declining interest in environment
- Hesitancy in initiating actions
- Poor performance at work

STAGE 2: MIDDLE STAGE (2 TO 12 YEARS)

- Progressive memory loss
- Irritable, anxious
- Difficulty in following simple instructions
- Wandering
- Neglects personal hygiene
- Social isolation

STAGE 3: FINAL STAGE (UP TO A YEAR)

- Marked loss of weight
- Unable to communicate
- Does not recognize family
- Incontinence of urine and feces
- Loss of ability to stand and walk
- Death due to aspiration pneumonia

TYPES OF DEMENTIA

1. ALZHEIMERS DISEASE
2. VASCULAR DEMENTIA
3. LEWY BODY DEMENTIA
4. PARKINSON”S DEMENTIA
5. FRONTOTEMPORAL DEMENTIA

DIET FOR DEMENTIA PATIENT

1. RAW LEAFY GREENS

2. CRUCIFEROUS VEGETABLES

3. NUTS

4. BEANS

5. WHOLE GRAINS

6. LOW FAT DAIRY PRODUCTS

7. OLIVE OIL

FOODS TO BE AVOIDED

SUGAR

ALCOHOL

CARBONATE DRINKS

SUGARY FOOD

DEMENTIA PREVENTION TIPS

NO SMOKING

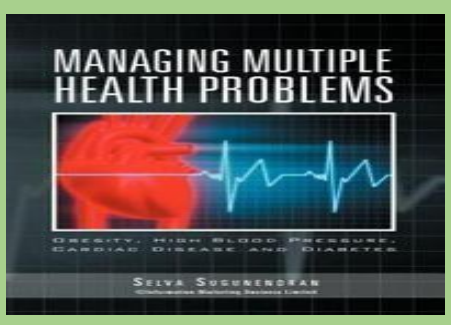
STAY AT HEALTHY WEIGHT

EXERCISES

HEALTHY FOOD

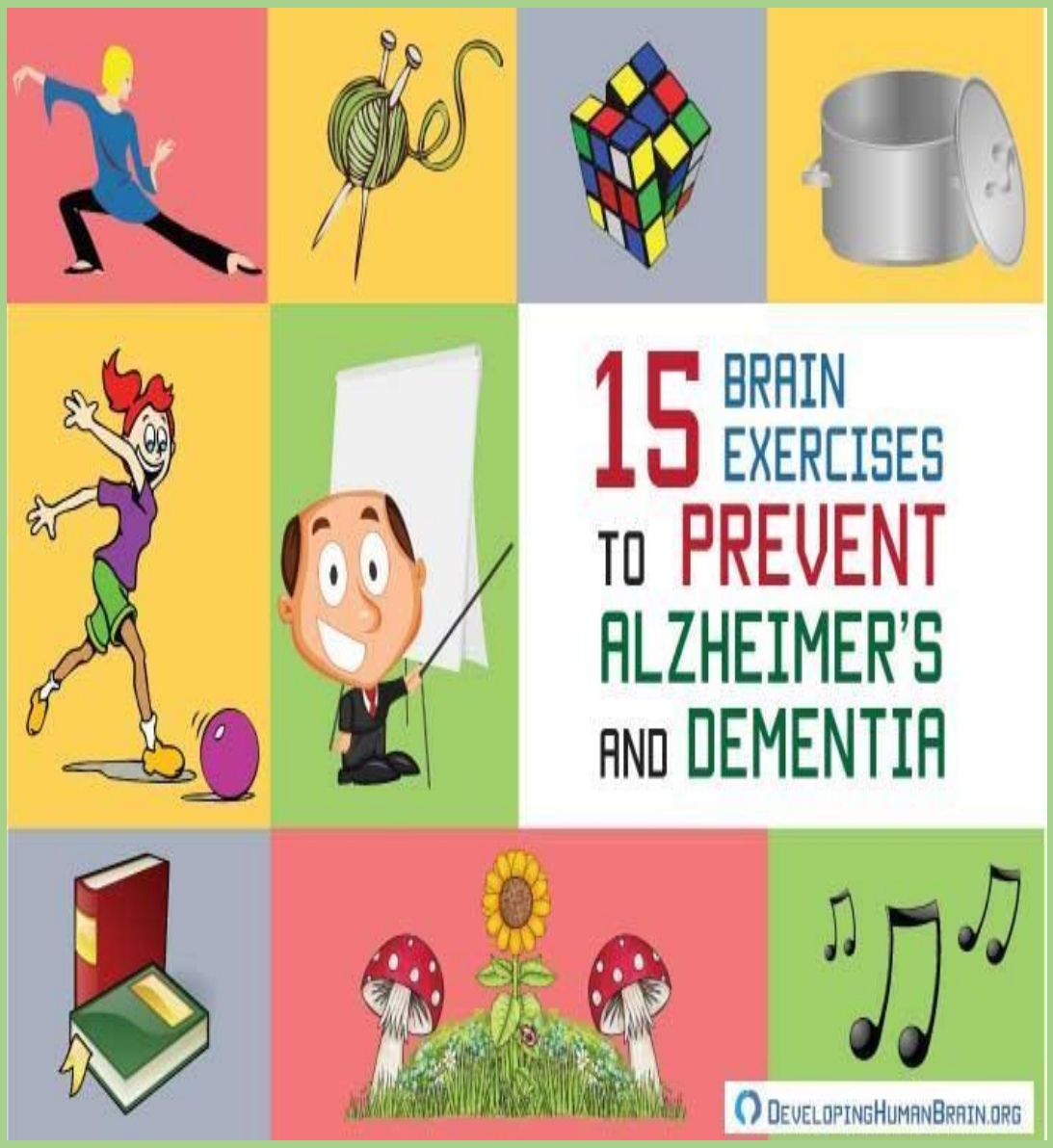
SOCIAL INVOLVEMENT

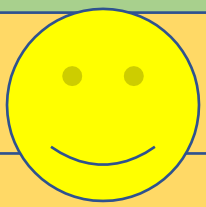
MANAGE HEALTH PROBLEMS



DEMENTIA PREVENTION TIPS

BRAIN EXERCISES TO BOOST MEMORY





IS RECOVERY POSSIBLE FROM DEMENTIA ??

In general, Dementia is decline in thinking mostly including memory deterioration

Yes, we can slow and reduce the worsening of symptoms of dementia to live happy life by some preventive measures, dietary measures, brain exercises and treatment with medication.

The path to recover can be long and challenging.

"Treatment for dementia is available"

- ✓ *Seek help from a professional with specialized knowledge in mental health or psychiatric doctor.*

If you need treatment , consult psychiatrist doctor. The overall treatment aim of treatment is

a) To slow down the progression of dementia
b) To control behavioral symptoms
c) To maintain quality of life
d) To maximize function of daily activities

TREATMENT

1. Psychotherapy
2. Environmental modification
3. Psychosocial intervention
4. Medication
    - ✓ Psychotropic drugs
    - ✓ Anti-anxiety drugs
5. Occupational therapy
6. Simplifying task
7. Brain exercise
8. Dietetics

Dementia is a general term for any disease that causes a change in memory and thinking skills that is severe enough to impair a person's daily functioning. Most types of dementia cause gradual worsening of symptoms over the course of years due to progressive damage to nerve cells in the brain caused by underlying disease process which referred to as neurodegeneration. It is more common as people grow older , it is not a normal part of aging.

It affects memory, thinking, orientation, comprehension, calculation, learning capacity, language, and judgement. Consciousness is not affected. The impairment in cognitive function is commonly accompanied, and occasionally preceded, by deterioration in emotional control, social behaviour, or motivation. Dementia results from a variety of diseases and injuries that primarily or secondarily affect the brain, such as Alzheimer's disease or stroke.

Dementia is one of the major causes of disability and dependency among older people worldwide. It can be overwhelming, not only for the people who have it, but also for their careers and families. There is often a lack of awareness and understanding of dementia, resulting in stigmatization and barriers to diagnosis and care. The impact of dementia on carers, family and society at large can be physical, psychological, social and economic

It is possible to recover but path to recover is very long. Treatment for dementia is available; seek help from a professional with specialized knowledge in mental health.

CONCLUSION

Dementia is a syndrome in which there is deterioration in memory, thinking, behaviour and the ability to perform everyday activities. Although dementia mainly affects older people. Worldwide, around 50 million people have dementia, and there are nearly 10 million new cases every year. Alzheimer disease is the most common form of dementia and may contribute to 60–70% of cases. Dementia is one of the major causes of disability and dependency among older people worldwide. Dementia has a physical, psychological, social, and economic impact, not only on people with dementia, but also on their careers, families and society at large.

REFERENCES

- R Sreevani, A guide to mental health and psychiatry nursing, 4th edition
- Bimla Kapoor, Text book of psychiatry Nursing, 2nd edition

WEBSITES

- **https://www.who.int/news-room/fact-sheets/detail/dementia**
- **https://www.mayoclinic.org/diseases-conditions/dementia/symptoms-causes/syc-20352013**
- **https://www.medicinenet.com/dementia/article.htm**