

Mysteries of dementia: An insight development initiative through community based psycho-education – A guide

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ABSTRACT: The aim of this article is to promote psycho-education intervention through developing insight as a component among the careers in specific and stake holders in general. This article is drafted as outcome of observation. The psycho-education on dementia is a greater need in the present scenario is heightened through its rapid spread of Neuropsychiatric disability like dementia. Dementia has become as health crisis of present century in the globe. The Dementia occurrences are evident in developing countries due to population ageing, I. Many studies also projects that there is lack of awareness/insight with reference to dementia, a neuropsychiatric disability. The objective of creating insight through comprehensive review is to educate and create early detection; promote health seeking behavior in the community as the researcher's outcome. In order to fill the knowledge gap in the rural community psycho-education has used as a tool to educate stakeholders. The researcher has structured material to understand the insights of dementia. The content of the article to bring insight has structured psycho education programme level-1 for diploma nurses and carer with minimum school education includes: - what is dementia? Understanding about brain, Understanding about neurons, Classification concerning dementia and tips to maintain healthy brain. It needs further experiments with various stakeholders.

Keywords: Dementia, Disability, Psycho education, Insight development, Neuropsychiatry

Date of Submission: 05-09-2018

Date of acceptance: 20-09-2018

I. Introduction:

From conception to death the transformation takes place which are evitable in human being's capacities, in a positive sense are called developmental changes. The significance of developmental changes is to enable people to adapt to ecosystem in which they reside. According to Elizabeth Hurlock (). Old age is concluding period in lifespan. The closing period is bifurcated in to early old age (60-70 years) and advanced old age (70 years to end of life) period. The aged people are sometimes excluded from mainstream society which has to be highly discouraged. It is necessary to make them inclusive through family-based care system. Arun raj Kamal et al (2010). As the longevity in ageing population expands, the health issues increase along with the health expenditure is also raising in peak. Trends in population ageing are drawing the global focus. Cognitive disability is the mushrooming rapidly in ageing population is challenging in terms of care. There must be inclusive national strategy in action for welfare of persons with dementia and their families which is lacking in some countries like India.

According to Bauml Josef et al., (2006). The term psycho-education "comprises systematic, didactic psychotherapeutic intervention, which are adequate for informing patients and their relatives about the illness and in treatment, facilitating both an understanding and personally responsible handling of the illness and supporting those afflicted in coping with the disorder". The psycho education was employed by Anderson. It is a therapeutic exercise. The psycho-education promotes competencies and in decision making. In this article the goal of psycho-education is improving insight into illness.

Insight denotes a mental restructuring that leads to a sudden gain of explicit knowledge allowing qualitatively changed behavior. In-sight is referred to knowledge or understanding on illness. It is necessary for the carers with persons with dementia must have insight on what is dementia and its sign and symptoms. The mental health care act (2017) also insisting on knowledge and insight which has to promoted, where the researcher has involved in insight development initiative.

According to Joseph Boban et al (2014). Defines insight "as ability of a person to recognize the changes in him/her mind or body which affects his/her mental social functioning and the same time recognize the need for restoration of that ability and compliance of treatment which is known as insight".

Lisa Lang fuss Aasheim (2010). Emphasis psycho-education is structured with individuals/ groups that emphasize on new life skills for the prevention, growth or remediation. The psycho-educational groups are more

issue specific and leader directed. Psycho-education is the component of psychotherapy programme and considered to be a standard therapy.

II. THE GOALS OF PSYCHOEDUCATION

- Psycho-education renders useful information to eradicate myth and misconceptions of individuals and groups.
- Psycho-education helps individuals/groups to lessen the stress through greater level of understanding makes individuals to have their environments controlled and relaxed.
- Psycho-education helps to attain basic competencies.
- Psycho-education is not only to the person with disorder or disability even to the persons who caring like family members and friends.
- Psycho-education promotes informed self-responsibility, self-help component to manage the illness
- Psycho-education pays the role of carers to be an expert
- Psycho-education induces the self-management and improves coping.
- Psycho-education reduces hospital admissions
- Psycho-education can decrease the social stigma
- Psycho-education improves quality of life

Specifically, this article will enable to understand concerning neuro psychiatric disability. The psycho-education content will tell about understanding about nature of illness main symptoms, triggering factors, treatment and emergencies. This mapping of content will enable the professional (formal carer) to adopt psycho education guidelines. It will also assist the stakeholders who are involved in care will help them to recognize dementia in the community where by clinical prognosis and diagnosis of hidden victims will be hastened in healthy manner

MODES OF PSYCHOEDUCATION

The modes of psycho-education delivery are through Role play, writing, discussion, discussions and DVD's rarely class room teaching is adhered

EVOLUTION OF PSYCHOEDUCATION

The concept of psycho-education was traced from medical literature. In 1911 psychotherapy and reeducation was published by John E. Donley where its prominence was noted.

C. M. Anderson in 1980 used the term psycho-education in the context of schizophrenia in the field of mental health which he had stress on briefing the individuals about illness or disability, problem solving training, communication training and assertive training.

EFFECTIVENESS IN PSYCHOEDUCATION

The effectiveness of psycho-education can be sought though evaluation of understanding, interaction, review of materials as often as possible, using multiple teaching aids like ICT, eliciting real life experiences etc. makes the psycho-education more effective.

PSYCHOEDUCATION CONTRAINDICATIONS

The contraindication of psycho-education is: - It cannot be administered to a person with cognitive deficit. The individuals with sensory deficit like hearing and seeing. The individuals who have acute stress. The individuals who are in manic state are some contraindications of psycho-education

UNDERSTANDING BRAIN

Brain is one among the important organ in the human body. The adult human brain weighs on average about 1.2–1.4 kg. The weight of the brain is about 2% of the total body weight. The volume of the brain in men is 1260 cm³ and in women is 1130 cm³. Brain is central to nervous system. The parts of the brain are namely: - cerebrum, cerebellum and brain stem. Brain matures within 20 years of age. Neurons are basic working units of the brain and nervous system

The Cerebrum

The cerebrum fills up most the area with skull. It involves in functions like remembering, problem solving, thinking, feelings. It also controls movements. The outer layer of cerebrum is cortex. Specific regions of the cortex execute specific function. Firstly, interrupt sensation from an individual's body and outside world. Secondly, generate thoughts, draw plans and solve problems. Thirdly, forms and stores memories and finally, controls voluntary movements.

The cerebellum

It is known as little or hind brain. 50% of neurons are present in this region. The cerebellum sits at the back of every individual's head under the cerebrum. The cerebellum is a rounded structure located behind the brain stem, to which it is linked by thick nerve tracts. It is concerned mainly with the maintenance of posture and balance, the coordination of movement and responsible motor learning.

The brain stems

The brain stem is the one of the most vital regions where its functions for the sake of body survival

Lobes of the brain

In dementia complex cognitive functions which occurs in frontal, temporal and parietal lobes of left and right hemisphere. Each lobe and hemisphere is responsible to accomplish their own functions

The functions are depending on the structural dominance, it is evident by his/her hand dominance.

Left Hemisphere:

Executes sensory and motor functions pertaining to right side of the brain; Assists the individuals to recognize and apply linear thinking with reference to language and the alteration takes place when the damage occurs in the left side of the brain, the right side of the body becomes weaker. The person may susceptible to have slurred speech, hard to finding appropriate verbatim.

Right Hemisphere:

Executes sensory and motor functions of the left brain. Assist in recognize and spatial aspects of information imbibed from Ecosystem and When right hemisphere is damaged the left side of the body get weaker and modifies the executing ability to feel, notice or recognize stimuli and It creates deficit in locating objects in space or judging distance. The right brain is responsible for non-verbal communication, drawing, construction, voice tones, spatial relationships, concrete and left side responsible for spoken and written language like word analysis, sequencing, numbers, filling forms, numbers, analytical, logical and abstract.

Frontal Lobe:

The frontal lobe functions as vital cognitive function, which are follows:

Organizing and planning, sorting from pool of information, know when the task has to be executed. Initiated to starting the task, identifies the flaws and rectify the them, able to calculate time, identify the chronological events and present it temporal perspective, identify and evaluate individuals thought and feelings, distinguishes triggers or causes of thoughts and feelings, has dominion over impulse responses pertaining to thoughts and feelings, accustom to new condition, switching on from one idea or action to another, abstract thinking and thinks multiple things at a time.

Temporal lobe:

Temporal lobe functions are as follows: Allows the person to understand language and express language. Remember recent events or information [in cooperation the hypothalamus]. It prevents the individuals to repeat the content twice in a conversation.

Parietal lobe:

Parietal lobe, functions are: Identifying spatial information, assimilate and organize sensory information, write and to perform arithmetic and identifies his/her own body and knows left and right orientation.

Hippo-campus is the heart of the brain and situated within medial temporal lobe. Regulates emotions and memory. The damage of hippocampus will leads to loss of ability to form new memories. So persons with dementia share old memories not the new memories. Long term memory is a function of limbic structures and multimodal association areas. Hippo-campus is linked with learning. It produces declarative and spatial relationship memory. Shrinking of hippocampus causes memory problems.

According to s.r.chandra (2018) defines memory as, "Memory is the mental process, which enables the individual to register and store information for later recall..... it involves registration or encoding, retention, storage or consolidation, stabilization and retrievals or decoding"

Abnormal aggregates of Brain are: Tau and Amyloid beta are destructors of immune system. Severely enlargement of ventricles and more space between folds, extreme shrinking of cerebral cortex and hippocampus

Amyloid-beta- Main component which hastens neuron death.

Tau a key protein that forms tangles inside neurons leading to death

The main hallmark is plaque seen as lesion in the brain.

III. UNDERSTANDING NEURONS

The working units of the brain and nervous system are neurons.

According to Dementia service information and development Centre (2014).

Neuron is defined as

“Every single nerve contains bundles of nerve cells or neurons, i.e. the messengers of the nervous system. Each neuron consists of a control Centre and fibers of varying lengths”.

The chemical (Acetylcholine) in the brain are neurotransmitters.

The three parts of neurons are classified as:

Cell body: The parts of cell body are nucleus, cytoplasm and cell organelles. The nucleus has DNA and info that the cells need for growth, metabolism and repair. Cytoplasm and cell organelles fills the cells, by chemicals and parts needed for proper functioning of cells.

Dendrites: It is the point of contact which branches off from the cell for receiving chemical and electrical signals called impulses from neighboring neurons

Axion: It sends impulses and extent from cell bodies and extends from cell bodies to meet and deliver impulses to another nerve cell. Axions can range in length from a fraction of an inch to several feet

Neurons have a cell membrane which maintains a separation from internal content to with surrounding environment.

Synopses are gap between neurons, where message move from one neurons to another as chemical or electric signals

Decline in a person’s cognition is due to changes in brain. There is no cure in dementia but can reduce the manifestation and maintain yet neurons death spreads and leads to total brain death.

DEMENTIA:

The term dementia is extracted from the Latin term “demens” meaning “without mind” or away from mind or loses of mind. Therefore terminological revision pronounced as minor and major cognitive disorders (DSM-V)

Dementia is a brain disease

Dementia presents as a looming and challenging public health crisis. Garima Srivastava et al (2016).

Dementia is the most devastating cognitive disorder of the elderly and needs extra attention to care.

Leena Mary Emmatty (2006). Mentions that dementia is a “hidden problem” or “invisible” in nature.

Arun raj kaimal et al. (2010) states dementia is chronic and a neuro-degenerating disability.

Raj Mohan et al. (2010) mentions dementia is a disease of multifactorial etiology.

Nilamadhav kar (2010) stresses that dementia is a tragedy for its victims and for their families. Alistair Burns (2009). Dementia is a clinical syndrome characterized by a cluster of syndrome and signs manifested by difficulties in memory, disturbance in language, psychological and psychiatric changes and impairments in activities of daily living.

According to ICD-10 Classification of Mental and Behavioral Disorders (2007). “Dementia is a syndrome due to diseases of the brain, usually of a chronic or progressive nature, in which there is disturbance of multiple higher cortical functions, including memory, thinking, orientation, comprehension, calculation, learning capacity, language and judgment”.

Consciousness is not clouded. Prabhjot singh et al (2014). If the consciousness is absent with good vital science the individuals is slowly moving to delirium. Dementia is the major disability which causes dependence and disability. Marieke Zwaanswijk et al (2013) & Sang E Lee et al (2016). Dementia need long term care facilities. Irene Ericsson et al (2011). For successful dementia care, personhood has to be taken into account.

DEMENTIA PREVALENCE

According to ALZHEIMERS DEMENTIA INTERNATIONAL REPORT (2015) 46.8 million around the world. Estimated prevalence of persons with dementia is as follows: 74.7 million by 2030, 131.5 million by 2050.

Asia has huge population with persons with dementia. 4.1 million Persons with dementia are prevalent in India, which has to be pondered and mediation to this problem with local and global remedies through care provisions. It is estimated 58% that of persons with dementia are prevalent in low and middle-income countries. Populations with cognitive disabilities are going to increase in the future where preparedness is obligatory for countries in Asia.

NEED FOR DIAGNOSIS Early identification and intervention are significant to be focused. The community as a whole are unaware of cognitive disabilities like dementia are experiencing distress within themselves and

the individual who carers for them. Early identification postpones the severity of the problem otherwise the symptoms go worsen in the later stages. According to World Alzheimer’s Report 2011 insist on the necessity of early diagnosis and intervention. Family sanitization on dementia is taken up the researcher through psycho education by building insight into professional and non-professionals in the community. Mental health has to conserved across lifespan (from birth to death) of the individual

HOW TO DISCLOSE DIAGNOSIS OF DEMENTIA

The person approaching for memory clinics and community based assessment

01. PREPARATION PHASE:

- Educate family members on general aspects cognition and related disabilities
- Explain the need for diagnosis
- Explain the advantages of assessment of cognition related factors
- Obtain the consent for diagnosis

02. DIAGNOSTIC PHASE:

❖ PRE DIAGNOSTIC CONSELLING – To stabilize the emotions of the family members to accept the diagnosis

❖ DISCLOSURE OF DIAGNOSIS

03. FINAL PHASE

POST DIAGNOSTIC COUNSELLING- How to strengthen the positives, Preparation for coping, ways in caring, panning for further assessment and interventions.

GENETIC RISK:

Amyloid precursor protein [APP]:

Presenile 1(PSEN1)

Presenile 2 (PSEN2)

A vibrant of Apolipoprotein E [APOE]: A copy of APOE4 are very much dangerous to human being causing dementia.

APOE2 -Rare and may protect from Alzheimer’s

APOE3 -Common and seems to play a neutral role.

DIFFERENCE BETWEEN DEMENTIA AND PSEUDO DEMENTIA.

| DEMENTIA | PSEUDO DEMENTIA |
|---|------------------------|
| Insidious in nature | Rapid in nature |
| Fluctuating mood | Stable, depressed mood |
| Objective deficit | No objective deficit |
| Minimized and complaints with rationale | Many complaints |
| Normal self-image | Poor self-image |
| Slow progression | Fast in progression |

CLASSIFICATION IN DEMENTIA:

According to Peter.V. Ravins et al (2006). Types based on predominant topographic are:

Cortical dementia: It will affect the cerebral cortex which is the outer layer of the brain. Cortex is responsible for memory, language, agonizes and praxis. The cortical dementias are characterized by Amnesia, Aphasia, Apraxia and Agnosia.

| | |
|---------|---------------------------------|
| Amnesia | Loss of memory capacity |
| Aphasia | Language impairment |
| Apraxia | Impairment in learnt motor task |
| Agnosia | Impairment in recognition |

The typical symptoms of dementia are cannot recall or recognize, cannot do things, repeats

Sub-Cortical dementia: It affects prominently ability to coordinate memory, personality, poor memory recall, slowness in thinking and moving. Difficulty in decision making and reduced complexity of thoughts.

| | |
|------------------------|--|
| Dysmnnesia | Naturally poor memory |
| Delay | Slow |
| Dys-executive function | Malfunctioning of executive function |
| Depletion | Reduction from cognitive resources/reserves. |

Mixed cortical dementia: Manifestation of both characteristics pertaining to cortical and sub-cortical dementias are evitable known as mixed dementia.

Classification based on onset:

| | |
|----------------------------|---------------------------|
| Young/Early onset dementia | Below the age of 60 Years |
| Late onset dementia | Above the age of 60 Years |

Classification based on occurrence:

| | |
|-----------------------|---|
| Irreversible dementia | Cannot be treated. |
| Reversible dementia | Can be treated and symptoms can be improved |

<https://www.premierphysiciannet.com/Health-and-Wellness/Health-Topics/Family Health/#7>

TEN WARNING SIGNS OF DEMENTIA

| | |
|-----|---|
| 1. | Decline in memory |
| 2. | Struggle to accomplishment familiar chore |
| 3. | Problem with language |
| 4. | Perplexity in time and place |
| 5. | Poor or diminished judgement |
| 6. | Problems with abstract thinking |
| 7. | Misplacing belongings |
| 8. | Fluctuations in personality |
| 9. | Loss of initiative |
| 10. | Fluctuations in mood and behaviour |

[Source: Memory Loss & 10 Early Signs of Alzheimer’s | Alzheimer’s Association

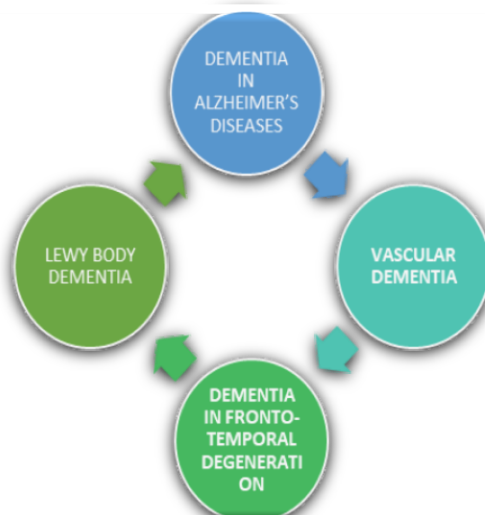
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CAUSES OF DEMENTIA

According to rajmohan and Mohandas (2010) causes of dementia are as follows:

| | | | | |
|-----------------|---------------------------------|-------------|-------------------|-----------------------|
| Age | Gender | Education | Social influences | Physical activity |
| Body mass index | Nutritional and dietary factors | Head trauma | Vascular factors | Chemical factors |
| Tobacco use | Alcohol harmful l intake | Depression | Inflammation | Linguistic influences |

MAJOR TYPES OF DEMENTIA:

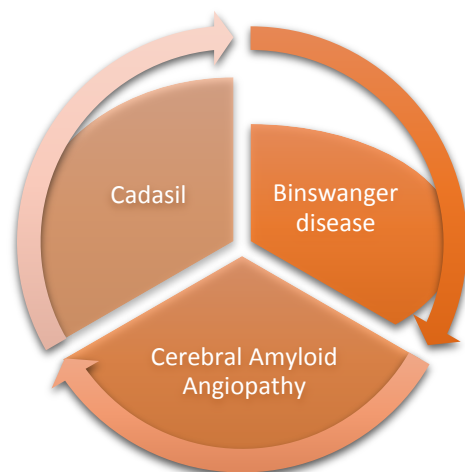


DEMENTIA IN ALZHEIMER’S DISEASES:

According to Giuliano Binetti (2002)

- ❖ Alzheimer's is said to be a slowly progressive brain disease,
- ❖ No new exchange of ideas, names and events due to forgetting.
- ❖ Apathy and depression are early shocking signs, Visual spatial perception and skill impairment, Difficulty in space, Language impairment, Insight impairment, Abstract processing impaired, Impaired communication, Disorientation, Poor judgment, Concentration, Anxiety and Confusion.
- ❖ Focal system including dysphasia-difficulty in swallowing, apraxia-motor disorder caused by the brain,
- ❖ Agnosia is the loss of the ability to recognize objects, faces, voices, or places, affects only a single information pathway in the brain,
- ❖ Acalculia- impaired mathematical skills
- ❖ Difficulty verbal interaction, Behavior changes, Difficulty to evaluate, plan and organize, no disturbance of consciousness, facial deficits and sensory loss, expressive lability, less expression of emotional concentration, incontinence, hallucination and restraint in pace and physical movement limitations occurs in later period.
- ❖ Prime symbol of abnormalities in the brain are sums of neurotic plaque outside of cells in the brain, neurofibrillary tangles inside cells in brain, Atrophy (loss or death of brain tissue), reduction of acetylcholine.
- ❖ Psychotic features like delusion and hallucination are predominant
- ❖ Finally, the persons with dementia are bed bound.
- ❖ When EEG is normally abnormal.

VASCULAR DEMENTIA/MULTI-INFACIT DEMENTIA:



Cadasil

According to kurt jellinger (2002)

- ❖ A disease of the endothelium in small vessels given rise to small sub-cortical infarcts and hemorrhages' as well as to extensive white matter changes.
- ❖ Cadasil means hereditary multi-infract dementia.
- ❖ In dissimilarity to the common forms to vascular dementia patients are usually not hypertensive.
- ❖ Migraine attacks with visual misperceptions precede the onset of cognitive impairment.
- ❖ Fluctuation of mood with respect to variation in consciousness
- ❖ Anxiety and depression due to awareness of intellectual deficit
- ❖ Reports with emotional symptoms or personality or somatic changes occur.
- ❖ AD manifestations are different from cognitive impairment and dementia. Stepwise decline in cognitive capacity associated with minor strokes and persistent focal neurological symptoms. Demise of the individuals occurs 15-25 years after the patients first stroke.
- ❖ Transformations on the NOTCH-3 gene cause inclusions in the smooth arterial muscles, the arterioles walls are thickened which obstructs blood supply to the subcortical brain areas.

Binswanger disease

According to jos van der Poel (2002)

- ❖ Binswanger disease is a form of vascular dementia and was first described in 1894.
- ❖ The Binswanger is prone mainly in middle-aged hypertensive individuals who show indication of systematic vascular disease and who develop insidious fluctuating dementia with special involvement of memory, mood and cognition; seizures and mild stock.

- ❖ Pathological features are identified are lacunas, subcortical white matter demyelination, neuronal loss, ventricular and atheromas of the larger cerebral vessels.
- ❖ Symptoms identified are as follows: - Slowness of thought, disorientation, Lack of emotions, Apathy, Depression, Hostility, Mild intellectual impairment, Language difficulties, Problems reading and writing, Mood swings (something extreme), Loss of inhibition and uncommon behavior towards other people.
- ❖ The illness originates from an affection of small blood vessels in the brain, which continues by the loss of nerve cells. Risk factors evident are hypertension, atherosclerosis and cardiac problems. A rare form of cerebrovascular dementia caused by amyloid deposits in small- vessel walls which give rise to bleedings.
- ❖ A combination of neurological and psychopathological symptoms is stepwise progressive, hemorrhages because of neurological symptoms accompanied by progressive dementia.

Cerebral Amyloid Angiopathy

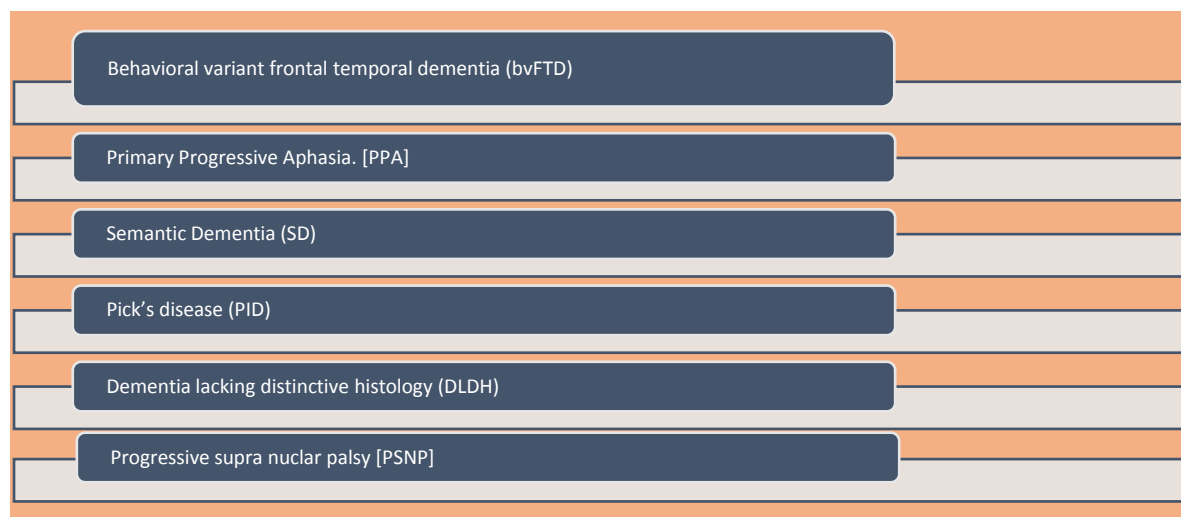
According to Kurt Jellinger (2002)

- ❖ It is a rare form of cerebro-vascular dementia caused by amyloid deposits in small-vessel wall which leads to hemorrhages.
- ❖ The manifested symptoms are neurological and psychopathological symptoms.
- ❖ Stepwise progressive, hemorrhages because of neurological symptoms accompanied by progressive dementia as found in binswanger disease.

DEMENTIA IN FRONTO-TEMPORAL DEGENERATION

According to Andre Dalacourte (2002)

- ❖ Frontal-temporal degeneration mentions to be the part of the brain which is preferably affects the frontal lobe and temporal lobes.



- ❖ The frontal and temporal lobes are responsible for emotional responses, behavior and language skills fetches malfunction.
- ❖ Due to the damage of these lobes the other manifestations give rise to a particular form of frontal lobe dementia and semantic dementias which is revealed as specific language dementia. It is mainly due to different dysfunctions of tau gene or tau protein. (Mutations, aggression, abnormal production).
- ❖ More prominently in frontal-temporal areas, the abnormal processes of tau are revealed by different types of brain lesions that accumulate in the cortex of the individuals. (Pick bodies, astrocytic plaques, neurofibrillary tangles).
- ❖ The histo-pathological features which gives rise to formation complementary classification based on lesions, or types of molecular abnormalities accountable for the lesion. This classification is known as histological subtypes.
- ❖ The histological classification consists of pick's diseases with pick bodies and FTDP-17. FTDP-17 is a mixed classification. "FTD" symbolizes Frontal-Temporal clinical symptoms. "P" denotes the parkinsonian manifestation. "17" stands for the number of the chromosome that bears tau gene with the pathological mutations which are responsible for this disease. DLDH is characterized by the absence of tau lesions, but the main molecular defect is related to decrease of normal tau proteins.

Frontal-Temporal Dementia (FTD)

According to Andre Delacourte (2002).

- ❖ Damage to the frontal and temporal lobe areas of the brain will cause multiple symptoms.
- ❖ Initial stages of frontal -temporal dementia, memory will still be intact, but the personality and behavior of the person will alter.
- ❖ The person may lose their shyness and become extrovert or alternatively may become withdrawn
- ❖ Changes in visual & auditory perception, spatial perception, orientation, praxis, memory, time orientation.; Spatial orientation, impairment in insight and speech., increasing impairment in spontaneity, little words, echolalia, preservation, mutism, comprehension, mental rigidity and inflexibility, concentration impaired; Emotional changes like depression, anxiety, excessive tearfulness, somatic pre-occupation, emotional concern fades, inappropriate emotional expressions.
- ❖ Mood and behavior changes occurs which includes impaired personal and social awareness, lassitude, disinhibition, not interested in family and work; They may talk to strangers, make inappropriate remarks in public and be rude or impatient.
- ❖ They may be aggressive and have fixed routines; Individuals begin to store things and become obsessive; Behavior may be sexually expressive but loss of interest; Develops sweet tooth and manifest weight gain; Alcohol abuse may occur; Compulsion to take anything and place in their mouth; May be distractible;
- ❖ Initial stages the memory not affected even thou difficulties in organization and concentration may lead to obvious memory problems.
- ❖ Later in the diseases a more generalized dementia develops and symptoms will be parallel to Alzheimer's disease; Inability to make out friends and family members; Individuals become incontinent and bed-ridden.
- ❖ FTD is slow progressive and forms symptoms of dementia; Progression spreads over several years

Primary Progressive Aphasia. [PPA]

According to Andre Delacourte (2002).

- ❖ PPA manifests as many forms; It appears as a disorder of speaking (an articulatory problems).
- ❖ In severe stage, it advances by leading to total incapability to speak.
- ❖ The disease starts with word-finding disturbance (anomia) and proceeds to grammatical structure (syntax) and comprehension (semantic) of language.
- ❖ The speech delivery can be fluent or non-fluent; Memory, visual processing and personality remains relatively preserved until it reaches advance stages.
- ❖ To preserve themselves they must be engaged in hobbies and remained employed; Caused by mutation in Tau gene.
- ❖ PPA is linked with deviations of chromosome 3;
- ❖ Language rehabilitation is prime.
- ❖ Don't have hallucinations or delusions; Face difficulty in make sense of their words; Behavioral problems catch up early.

Semantic Dementia (SD)

According to Andre Delacourte (2002).

- ❖ Semantic dementia is the inability to match certain words with images and meanings there of (semantic memory).
- ❖ Loss of knowledge about the world, often signifies as language problem;
- ❖ Loss word and also the meaning for it; Problem in recognition occurs;
- ❖ This disorder retains individual's ability to speak quite frequently and ability to remember day to day events (episodic memory).
- ❖ Left side of the brain is prominent; Hypo-perfusion of the temporal cortex occurs.
- ❖ FTD with Parkinsonism linked to chromosome 17 (FTDP-17).
- ❖ Frontal temporal clinical manifestations are linked with Parkinsonism.
- ❖ Parkinsonism features are related to movement disorder such as rigidity, reduced speed uncontrolled movements and eye disorder accompanied by bradykinesia.
- ❖ The person may develop progressive behavioral changes, language disturbances and extra pyramidal signs; FTD is mainly due to abnormalities of tau gene or tau protein.

Pick's disease (PID)

According to Andre Delacourte (2002).

- ❖ Pick's diseases (PID) is a neuro-degenerative disorder that belongs to the group of fronto-temporal dementia. This is a rare type of pre-senile dementia.
- ❖ Picks Disease, is characterized by specific lesions named pick bodies that are found in the hippocampus and in the neocortex.
- ❖ Pick bodies are made up of tau proteins;

- ❖ Pick's disease is characterized by a slow deterioration of social skills and changes in personality, along with impairment of intellect, memory and language; Prime vital sign is insensitive to other people and Difficulty in identifying others individual's emotions.
- ❖ The symptoms include loss of memory, lack of spontaneity, difficulty in thinking or concentration and disturbance in speech.
- ❖ Other symptoms include gradual emotional dullness, loss of moral judgment and progressive dementia; A specific neurofibrillary degeneration, revealed by the presence of pick bodies in the hippocampus and fronto-temporal cortex and an abnormal processing of tau proteins are linked to this pathology.

Dementia lacking distinctive histology (DLDH)

- ❖ Dementia lacking distinctive histology (DLDH) is a degenerative disorder that belongs to the group of "frontal-temporal dementia".
- ❖ These FTD'S are named as FTD non-Alzheimer, non-pick, to emphasize that there is no accumulation of tau proteins.
- ❖ In initial stages of fronto-temporal dementia, memory will be intact, but personality and behavior of the person will change.
- ❖ The person may lose their inhibitions and become extrovert or become apathetic and withdrawn. They become aggressive, develop fixed routines; Some begin to store things and become obsessive; Loss of interest in sexual acts are common; Develop sweet teeth and overt leading to gain in weight.
- ❖ Extreme alcohol intake may lead to this condition and Spending money and losing cash can lead to problem.
- ❖ Pressure to put in their mouth whatever they find in the floor; Individuals are easily distractible; Problems in organizing and concentration may occur.
- ❖ In later stage of disease, the generalized dementia can develop, its symptoms will be similar as Alzheimer's disease.
- ❖ In this stage the individuals lack in recognizing their friends and family and also incontinent and bed ridden and Non-tau FTD linked with chromosome 3.

PROGRESSIVE SUPRA-NUCLEAR PALSY [PSP]

-STEELE-RICHARDSON-OLSZEWSKI SYNDROME

According to Andre Delacourte (2002).

- ❖ PSP is a disorder triggered by damage to certain nerve cells in the brain, characterized by progressive lack of coordination, tightening of the neck and trunk, complications in eye movement, [slow] movements, cognition [dysfunction] and difficulty in walking leading to falling.
- ❖ The early symptoms include a tendency of falling unexpectedly backward; Rigidity and backward arching of the neck; Difficulty in 'willed' up gaze and down gaze; The person face mildly instable and broad-based gait.
- ❖ PSP can be susceptibly misdiagnosed as Parkinson's diseases in the beginning stages; Tiny, cramped hand writing and personality changes to some extend indicators.
- ❖ Cognitive symptoms like verbal fluency, attention deficit, executive dysfunction, problems with complex and abstract thought and slowing of information processing.
- ❖ Behavior changes includes temper outbursts and emotional liability.
- ❖ First motor system will manifest followed by cognitive changes; Common psychiatric symptoms- Personality deviations, Apathy, Dysphasia and Depression as observed in other neuro-degenerative diseases, tau protein or tau gene is important causal factor.

LEWY BODY DEMENTIA

According to Clive Evers (2002)

- ❖ Dementia with Lewy bodies is a form of dementia that shares some similarity with both Alzheimer's and Parkinson's diseases.
- ❖ Lewy bodies was discovered by FH Lewy in the year 1912.
- ❖ Impairments in cognition, movement and behavior occur in this type of dementia.
- ❖ The Lewy body are small spherical protein deposit found to be in nerve cells inside the brain. These deposits disturb the normal functioning of the brain and curbs the action of vital messengers including dopamine and acetylcholine.
- ❖ These Lewy bodies are found in the brains of the individuals who are affected by Parkinson's diseases, a progressive neurological disease which challenges the smooth movements of the individual.
- ❖ DLB intensity often reveal rapid and lower to some extend and levels off; Rapid mood variation will be seen; annoyance outburst and aggression; depression is common; cognitive oscillations; visual spatial

difficulty; impairment of attention span; sensitivity towards noise, sometimes disinhibition; inappropriate behaviors and hallucination persists.

- ❖ Parkinsonism symptoms like bradycardia – slow movements; balanced impairment; coordination impairment; Falls; paranoia; delusion; short lived loss of consciousness are evitable
- ❖ The individuals with DLB exhibits experiences of memory loss, spatial disorientation and communication linked with Alzheimer’s diseases but have normal memory some times.
- ❖ Fluctuation of abilities occurs; Fainting, falls, unexplained vague weakness, getting sleep by day and having restless nights with confusion, hallucination and nightmare.
- ❖ The symptoms of Parkinson’s are slowness, muscles stiffness, trembling of the limbs, a tendency to shuffle when walking, loss of facial expression and changes in the strength and tone of voice.

Dementia in Parkinson’s diseases

According to Kurtjrlinger (2002)

- ❖ People with Parkinson’s disease have a higher risk of developing dementia; Parkinson’s disease is known as movement disorder;
- ❖ The movement disorder is due to dopaminergic neurons mainly in the substantial nigra;
- ❖ Due to changes in cortical structure in with general presence of Lewy bodies the cognitive changes occur.
- ❖ The commonest symptom is memory loss, loss of the ability to reason and carry out the everyday task (planning, problem solving, organizing)
- ❖ Individuals with (PDD) are obsessional, lose emotional control and sudden outburst of anger or distress. Language problems (slow in speech).
- ❖ It is a disease which is progressive and fluctuating in nature.
- ❖ Cognitive deficit with parkinsonism is known as Parkinson’s dementia.

STAGES OF DEMENTIA:

According to Reisberg et al., (1982) the stages of dementia are:

| STAGE NO | STAGE | OCCURRENCE |
|----------|-------------------------------|---|
| STAGE 1 | NORMAL | Appears to be usual without obvious signs although the brain changes may not be stirring |
| STAGE 2 | VERY MILD | No noticeable symptoms. Normal forgetfulness related to ageing |
| STAGE 3 | MILD COGNITIVE DEFICITS | Buds and increase in disorientation or forgetting, hardships in finding words, slight difficulty concentrating, decreased work performance can e noticed by the loved ones near them. |
| STAGE 4 | MODERATE | Reent memory is affected, difficulty in learning and handling new task, accomplishing personal task become difficult, may be denial and from family and friends noticed. Difficulty in concentrating, reduced memory of recent events, and difficulties managing finances or traveling alone to new locations. People have distress completing complex tasks efficiently or accurately and may be in denial about their symptoms. They may also start retreating from family or friends, because socialization becomes problematic. |
| STAGE 5 | MODERATELY SEVERE | Relapse in the memory, wanted assistance in ADL/IADL’s, can no longer manage personal accomplishments. In this stage have major memory deficiencies and need some assistance to complete their daily activities. So, dependency also starts to co-exists. |
| STAGE 6 | SEVERE | Can no longer able to administrate care for self, unable to sustain reemergence of their own family members names, affected speech, incontinence, depression, delusion, agitation may be evitable. |
| STAGE 7 | VERY SEVERE | Complete care round the clock is mandatory. Loss of speech, total assistance in terms of ADL/IADL’S, loss of psychomotor ability like walking. |

NOTE: Stages may overlap in some cases

IV. BEHAVIORAL PROBLEMS IN DEMENTIA

The behavioral problems of persons with dementia are as follows: -

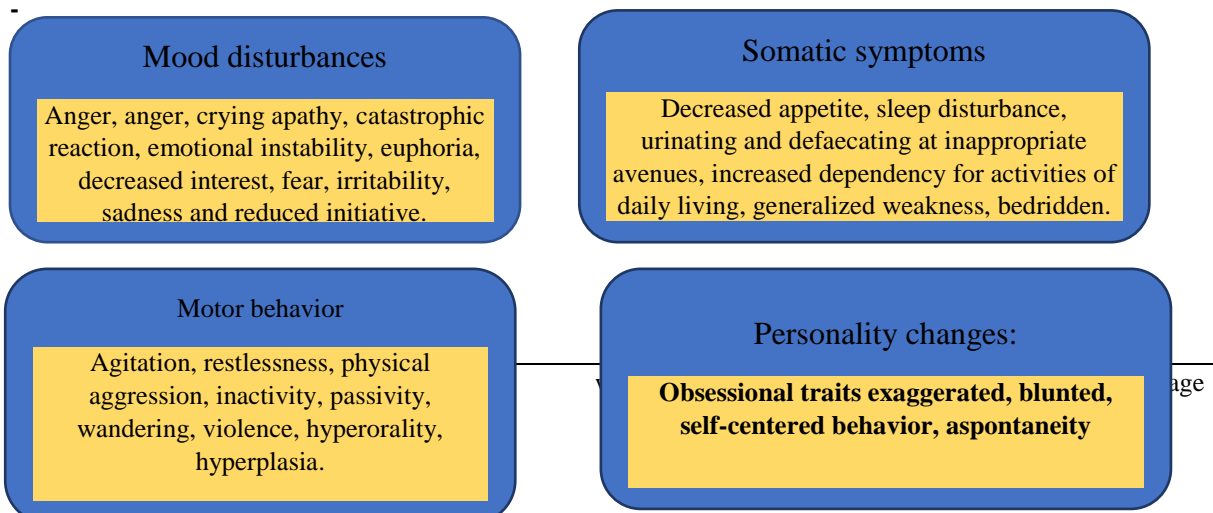
- Behavior is an outlet of thought manifested in action
- Challenging behavior is a deemed difficult to manage, harmful, potentially harmful, or disturbing to the person performing the action or to others. Such behavior should be viewed as an attempt to communicate by the person with dementia.

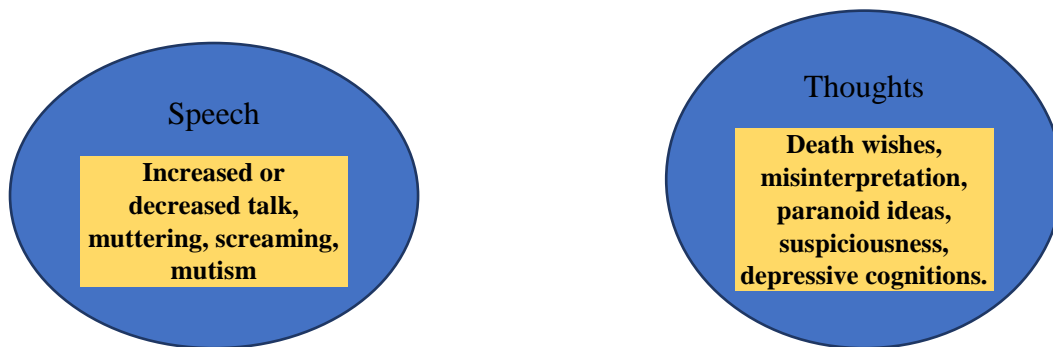
According to Steinberg Martin (2004). Mentions following behaviors: -

| | |
|-------------------------------|---|
| Apathy /Mood | ‘An apathy syndrome is defined as a syndrome of primary motivational loss that is not attributable to emotional distress, intellectual impairment, or diminished level of consciousness’ Marin, R. S. (1991). |
| Delusions | According to Bourgeois James & Bienenfeld David (2017). “Delusions are false beliefs based on incorrect inference about external reality that persist despite the evidence to the contrary; these beliefs are not ordinarily accepted by other members of the person's culture or subculture”. |
| Disinhibition | According to Jordan Grafman "disinhibition" is a lack of restraint manifested in several ways, affecting motor, instinctual, emotional, cognitive, and perceptual aspects with signs and symptoms e.g. impulsivity, disregard for others and social norms, aggressive outbursts, misconduct and oppositional behaviors, disinhibited instinctual drives including risk taking behaviors and hypersexuality. |
| Aggression/agitation | Liu Jaianghong (2004). Aggressive forms of behavior can be characterized by verbal or physical attack. “Inappropriate verbal, vocal, or motor activity that is not judged by an outside observer to result directly from the needs or confusion of the agitated individual. Agitation is not a diagnostic term, but rather a term used by clinicians for a group of symptoms that may reflect an underlying disorder” |
| Hallucination | A deceptive perception of something which is not in real. Mostly visual and auditory hallucination are common (or) A persistent belief that something is seen, heard, or smelled, when nothing is really there. It is not based on fact, or even misinterpretation of fact. |
| Depression | An abnormal emotional state characterized by feelings of worthlessness, sadness, emptiness, and hopelessness |
| Irritability | According to Snaith RP, Taylor CM.1998. “It is a continuum of disturbance from mild to severe disordered behavior”. |
| Aberrant motor behavior | Unacceptable behavior which involves undesired outcomes and deviating from correct |
| Anxiety | Exaggerated and expectations of negative outcome |
| Euphoria | Elevated mood and extreme feeling of happiness |
| Appetite and Eating disorders | Difficulty in swallowing, Anorexia Nervosa & bulimia |
| Night time behaviors | Problem in sleeping patterns, sudden wakeups, insomnia, apnea – difficulty in breathing while sleeping |

All these symptoms cannot be seen yet some selected 2 or more listed can be seen. The neuropsychiatric symptoms are the behavioral and psychological problems of the individuals with dementia. Behavior problems manifest are through different ways like psychotic, behavioral, affective and somatic.

kar Nila madhab (2010) mentions list Behavioral and Psychological symptoms of dementia are as follows:





The author also mentions ways to sought out the problems as follows:

Define definite goal symptoms, reflect probable causes, define a treatment end point prior to the intervention, have long period plan rather than short period results, advance behavioral and environmental interventions, plan monitoring of interventions and outcomes, involve carers and staff in the process and discovery helping of the supporting agencies for remedy.

ASSESSMENT IN DEMENTIA

| | |
|---|---|
| Socio-economic status assessment and initial assessment by gerontological social work personnel's | |
| Physical examination | Scans and MRI, Hematology test, Biochemistry test Thyroid function test vitamin B12 test foliate test Cerebro- spinal fluids mid-stream urine & Biopsy |
| Radiologist investigations | CT SCAN MRI SPECT Electro encephalopathy |
| Trained Social Worker's Assessment | Clinical dementia scale [CDS] Neuro psychiatric inventory [NPI] Blessed Dementia Scale [BDS] Psychological test like cognitive behavioral investigation, Cambridge cognitive examination [CAMCOG] International classification of functioning [ICF] Mini-mental status examination [MMSE] |
| Psychological Test | Neuropsychological battery |

are some of the instigations done by interdisciplinary team of experts according to level of training in assessments are some of the instigations done by interdisciplinary team of experts according to level of training in assessments.

SERVICES FOR PERSONS WITH DEMENTIA

There many services for persons with dementia, even thou services rendered has to be enhanced in the country

| | |
|--|--|
| Memory clinic | Libraries for older adults |
| Assisted Living Programme | Hospital care |
| Community and Home Based Care | Nursing home care |
| Early Diagnosis and interventions | Palliative care |
| Hospice care | Nursing Home Care |
| District Mental Health Programme | Hospital care |
| Assisted technology and Tele care | Non-governmental organization. |
| Dementia villages | Help lines |
| Non-pharmacological and pharmacological intervention | Care companies |
| Meditation centers for family carers | Psycho-educational groups for families |
| Paid informal care | Paid care homes |

NON- PHARMACOLOGICAL INTERVENTIONS IN DEMENTIA

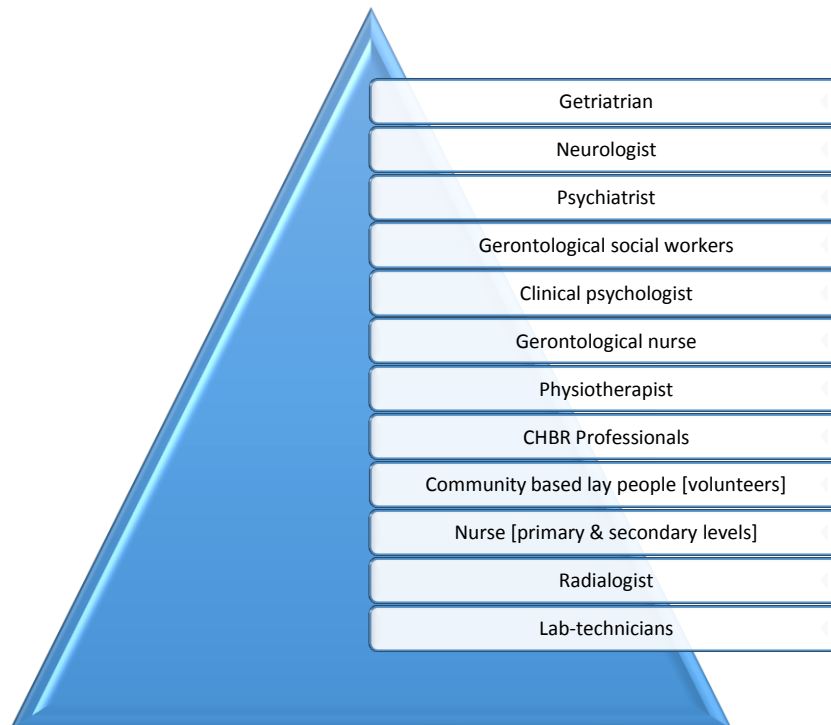
The researched had observed that non-pharmacological intervention is first line of intervention followed by pharmacological intervention. The non-pharmacological intervention is gaining momentum. The non-pharmacological interventions are not tailor-made; intervention is based on unique person’s ability or suitability which is reflected as personalized care.

| | | |
|--------------------------|----------------------|------------------------|
| Behavior therapy | Validation therapy | Aroma therapies |
| Reality therapy | Cognitive therapy | Multisensory therapies |
| Animal assisted therapy | Physical therapy | Book memory |
| Person centered care | Person centered care | Music therapy |
| Movements/ Dance therapy | Art therapy | Play therapy |

Tips to develop healthy brain across life span approach:

| | |
|--|---|
| Physical exercise | More than two languages have to be learnt, because bilinguals and multilinguals have more probability have less change |
| Cognitive stimulation through music | Breast feeding in first one to one and half years of age. |
| Literacy has to be promoted because illiteracy may lead to cognitive problem and further complications | Orientation about cause and effect |
| Playing games which promotes memory and concentration | Avoid television. |
| Have freedom of choice with power of discerning | Go for picnics to relax |
| Have nutritious food. Add adequate curry. Individuals who intake less curry may be susceptible to dementia | Explore and have accustom to use all Textures |
| Cognitive exercises (Practice recitation of poems, tables, cross words and numbers - sudoku). | Practice reading books and updating knowledge is needed |
| Create memory log book and follow. | Get rid of the monotonous course of life |
| Ventilate emotions. Catharsis. | Create humors and enjoys in leisure times. Don’t be monotonous |
| Reduce cholesterol. | Reduce stress in times difficult situations. |
| Built rich up social networks, social interactions and engagement | Safeguard your head. Wear helmets. |
| Prevent from falls and fatal accidents damaging head | Be engaged in work which make your brain to be alert |
| Make updates though MRI investigations and others | Fit parenting, healthy families, good home, school, work, work life balance, neighboring environment will contribute have healthy brain functioning |
| Safe sex | Adequate schooling |

MUTI-DISIPINARY APPOARCH IN DEMENTIA CARE



V. SUGGESTIONS

To individuals:

- ❖ Brain safety has to be ensured through wearing an armor to the head [helmet, ISO supervised]
- ❖ Go regular exercises 45 minutes daily
- ❖ Add green leafy vegetables in your diet
- ❖ Add calcium food diet
- ❖ All more curry and eat
- ❖ Involve healthy social interaction
- ❖ Expose nature sunlight in the morning hours
- ❖ Stimulate physic and brain
- ❖ Avoid sedentary life style.
- ❖ Attend brain gym.
- ❖ Promote information seeking behavior related to health and wellbeing and practice in life
- ❖ Utilization of primary health center for formal care and specialized dementia centers

To Gerontological social work professionals

- ❖ Administer psycho-education in the institution and in the community for families to develop insight about dementia
- ❖ The board of studies of all universities must realize the need of the hour and has to acknowledge the need to promote a new concentration as PG Diploma in social gerontology with the extension of MSW OR MA in Social Work with the specialization of medical and psychiatric social work or family and child welfare or human right only to deal and combat with problems of ageing. It must **not be diluted** by any graduation concept.
- ❖ The course must not for job seeking motive or specialty promotion motive. It must evolve dedication and commitment. The admission requirement must be minimum 2 years of work experience in the field of ageing. Need to incorporate dementia and management in social gerontology curriculum.

- ❖ Encourage term papers, field practicum, field placements in social gerontology with dementia care concentration.
- ❖ The thrust of the social gerontology must be community based and home-based oriented curriculum with idea of felicitating dementia care.
- ❖ Research has to be done on dementia care and care models have to be promoted through testing in Indian context and the scientific content must be disseminated through scientific publications.
- ❖ Ethics has to be promoted in dementia care professions.
- ❖ Training on dementia care has to be planned and executed among the youngsters promoting elderly care especially dementia care, fostering intergenerational bonding and responsibility.
- ❖ Methods of social work must be administered in dementia care by social workers.
- ❖ Individual and group psycho education must be promoted by clinical social workers or social gerontologist.
- ❖ Support groups and care has to be promoted and established by social workers for dementia carers
- ❖ Dementia care center must be monitored through minimum care standards in professional and in establishment and management of care centers.
- ❖ Conduct the capacity building programme among formal and informal carers
- ❖ Sensitizing on elderly neuropsychiatric problems to individuals across life stages [children, youth and early adulthood] by ensuring intergeneration bounding. It also culminates intergeneration responsibility of care or caring.
- ❖ CARE industries can be promoted for training home nurses and placement in dementia care with legal procedures involved in care.

To community

- ❖ The community gains knowledge's through attending educational support groups
- ❖ The community-based organizations can be erected like CBR-community based programmes concept in the light of CBO'S- community based organizations.
- ❖ The social capital and social engagement can be drawn for dementia care for promotion dementia care education and mediation.
- ❖ Share details about dementia in urban, rural and tribal community about dementia and its management.
- ❖ Eradicate stigma in the community about dementia through social interaction.
- ❖ Form support, neighborhood and recreational groups for healthy ageing and imparting or sharing knowledge about dementia.
- ❖ Propagate in media, Avoid misleading propagandas.
- ❖ Tap allocation of funds to age with reference chronic neuropsychiatric disability
- ❖ Promote self-sustainable programs for persons with dementia
- ❖ Promote community based palliative care programs through PHC's and evaluate its effectiveness.
- ❖ Tap funding sources explaining realities and make the victims to emancipate.
- ❖ Corporate social responsibility must invest and work for dementia care as a priority to enhance quality of life

To government

- ❖ Affordable and accessible services in health care must be delivered to person with dementia with reference to non-communicable diseases (NCD's)
- ❖ The government must substantiate longevity in citizen's life with quality of life.
- ❖ Man-power inadequacies have to be handled in terms of elderly care [dementia care] professionals with reference to the booming population of the elderly.
- ❖ Geriatric social work or social gerontology course has to be started in the country to fill therapeutic gaps in the country.
- ❖ Geriatric clinics has to erected with free services in terms of dementia, stroke etc. with reference to attained knowledge thorough psycho education
- ❖ Government has to fund the non-governmental organization to perform transparent and accountable effective services in the gross root in promote knowledge and services.

- ❖ Primary Health Centers has to resources center for elderly but merely referral center for neuropsychiatric problems of elderly also engaged in education and imparting services in preventive care.
- ❖ The governments take up the role in promoting professionals in field social gerontology to place in different levels in each block, district and state as geriatric welfare officers with training in social gerontology as their training or 5 years' experience in social gerontological research and policy formulation with social work as their graduation. This facilitates to conduct TOT Programme, research and policy formulation in different levels of administration. May be part of district mental health programme.
- ❖ Promotion of geriatric social work having knowledge in dementia is mandatory for emancipation suffering elderly and establish quality of life in elderly in general and specifically with persons with dementia.
- ❖ Sensitize the government in utilization and allocation funds towards propaganda of psychoeducation through ICT.
- ❖ The countries with more ageing population needs a separate ministry for Ageing and national institute of ageing [NIA] IN India for education and therapy
- ❖ The government must be favorable on ageing population. One way, all are going across old age. so, priority has to give on elderly care education to lay workers and professionals more specifically on dementia care.
- ❖ Dementia is going to be a global challenge in the country so preparedness in terms of education and policy has to yield.
- ❖ Steps have to be taken to promote dementia friendly societies curbing the barriers. It has to done through education of communities.
- ❖ Social workers have to be given opportunity/funded in mass propagation like mass media to erase myth and misconceptions [stigma] in general public

VI. CONCLUSION.

The dementia is generally having problem with cognitions leading to forgetting and confusion accompanied by diminishing of functional loss leading to total brain death. Dementia is a rapid growing problem of the individuals who are above 60 years of age which has no cure. The older adults are mostly neglected. The rural communities do not know about the chronic cognitive disability. This psycho-education initiative will lead to insight among the carers and other stake holders, at large in the tribal, rural community. The insight on dementia must be researched to the unreached and to ignorant people for planning early identification and intervention. This psycho-educational initiative can rescue them from progression of much chronic neuro-cognitive disability with psychiatric manifestations. The elderly neuro psychiatric problems, dementia in large have to be given priority. While dual governments' in India much consider while allocation of budgets and make policy drafting and bring it specifically for individuals with dementia and family carers, keeping the health cost into consideration which is going to be challenge for the country. The dual government has to be given priority to enhance elderly with neuro degenerative diseases.

Note::This content is subjected to changes in the advancement of medical science and

ACKNOWLEDGEMENT

My sincere thanks to Indian Council for Social Science[ICSSR] funding which is helping me to disseminate the knowledge on dementia to many in the globe and bringing insight to unreached. I thank my sister who is in Texas for her support while drafting this article.

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