The Chinese University of Hong Kong
The Nethersole School of Nursing
CADENZA Training Programme

CTP 004 – Dementia: Preventive and Supportive Care

Web-based Course for
Professional Social and Health Care Workers

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CHAPTER FOUR

Multi-disciplinary Approach in Rehabilitative and Long-term care of Dementia

Content

- Structure of care team for dementia
- General roles of different professionals working with dementia
- Non-pharmacological interventions for physical, cognitive, behavioral and psychological symptoms
- Environmental modification
- Enhancing disease-related self-care management of patients with dementia

Exercise 1

Consider:

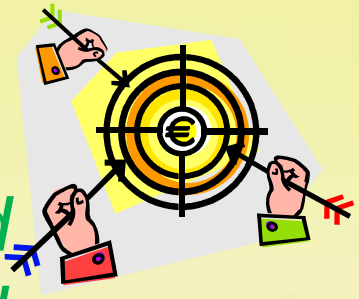
- What are the areas of good practice in your profession relating the assessment and intervention for elderly with dementia?
- What challenges do you face in your profession relating the assessment and intervention for elderly with dementia?

Multidiscipline

- Older dementia people suffer from a complex range of mental, physical and social problems
- No single profession adequately prepared to manage all the issues on its own (Collighan et al., 1993)
- American Psychiatric Association(APA) (2007) recommended an integrated multidisciplinary approach to diagnosing and managing dementia.

Patient Centered Care (PCC)

- Tradition management: focus on the physical changes in the brain and how to "manage" the symptoms related to these changes
- What is missing??
  - *Recognition of the person with the illness*
  - *What about their life before the illness*
  - *How they currently feel*
  - *Overlooked the influence of social and physical environments of a person with dementia*



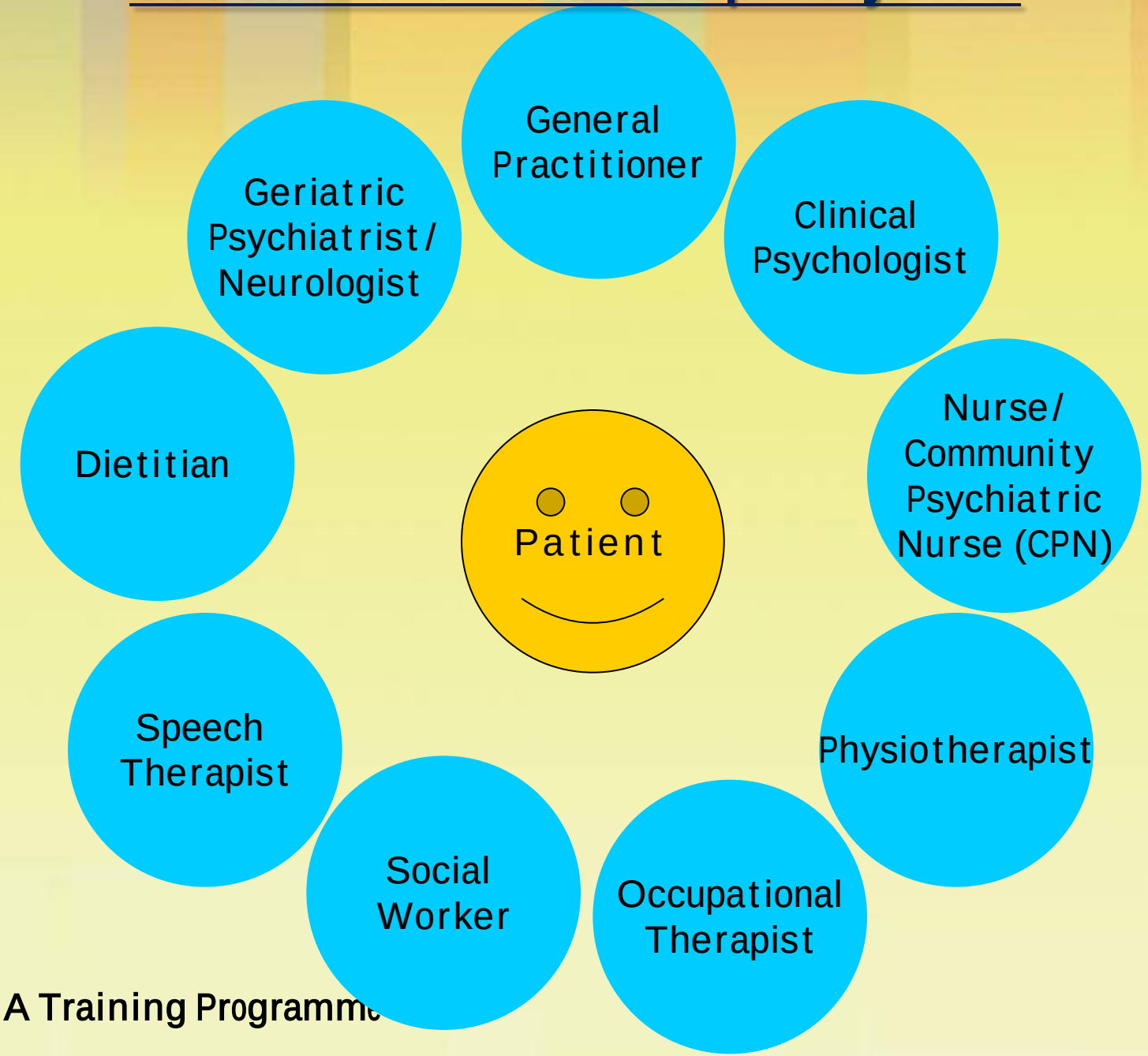
Patient Centered Care (PCC)

- **Principles of PCC**
  - *Uniqueness*
    - All people are unique and this must be acknowledged
  - *Complexity*
    - Many factors influence the way we see and respond to the world around us, as human is complex being
  - *Enabling*
    - Need to recognize the strengths and abilities of people with dementia, rather than just disability

Patient Centered Care (PCC)

- *Personhood*
  - Recognition of a sense of self, who we are and what place we hold in the world around us
  - Emphasis on the positive effects of daily interaction with other people
- *Value of Others*
  - PCC also recognizes the personhood of all people
  - Valuing the important roles of direct care staff and the way staff are supported by each other

Structure of a multi-disciplinary team



General role of different professionals working with dementia

Medical specialists

Geriatric Psychiatrist/Neurologist

- Comprehensive medical evaluation
  - Neuroimaging
  - Electroencephalogram (EEG)
- Diagnosis of the type of dementia – differential diagnosis
- Cognitive evaluation
- Behavioural assessment
- Mental state examination and psychiatric assessment
- Pharmacological intervention for cognitive and non-cognitive symptoms
- Consultant: Training/advice for other professionals

(Waldemar et al., 2000)

General Practitioner (GP)

- First contact with patient
  - Gate keeper
  - Early detection
- Risk factors identification and management
- Treatment of any co-morbid conditions
- Provide information, support and advice to patient as well as caregiver
- Referral to specialist if indicated

(Harris, 2004)

Clinical Psychologist (CP)

- Neuropsychological assessment for assisting diagnosis
  - Examine wide range of cognitive abilities
    - memory
    - orientation
    - attention
    - language
    - visual-spatial ability
    - executive functioning
  - Evaluate depression

- Monitoring change
  - Assist physician in determining the older adults response to any treatment e.g. pharmacological treatment
- Psychological interventions
  - Cognitive-behavioural therapies (CBT)
  - Psychological therapy
  - Psycho-educational programmes for carers
- Teaching/training and supervision/consultation

(Twining, 2004)

Nurse

- Patient assessment
  - Assist in medical assessment
  - Identification of strengths and needs of patient
- Care planning/evaluation
- Medication administration and monitoring
- Delivery of nursing care
  - General health issue
  - Wound management, incontinence, etc
- Evaluation of interventions, monitor side effects of medication
- Provide support and interact with family and caregivers
- Outreach and education

(Clibbens & Lewis, 2004)

Community Psychiatric Nurse (CPN)

- Assessment of care needs
- Advice on management of problems
- Investigation and medical diagnosis
- Health education
- Counselling/emotional support for the person with dementia
- Counselling/emotional support for the caregiver
- Crisis intervention

(Keady, 2005)

Physiotherapist (PT)

- Assessment and intervention for physical problems
  - Musculoskeletal problems
  - Mobility
  - Pain
  - Cardiopulmonary problems
  - Neurological deficits, e.g. stroke, parkinsonism

- Assessment and prescription of walking aids
- Home assessment and modification
- Education to carer
  - e.g. Transfer skills training for carer

(Kempenaar, 2005)

Occupational Therapist (OT)

- Assessment
  - The ability of patient to engage in meaningful occupation
    - *Ability to perform the activities required by patient's roles and environment*
    - *The extent of patient‘s physical and social environment which supports their engagement in activities*
    - *Patient's motivation towards activity and occupation*
  - Mental state, cognitive function, activities of daily living (ADL)
- Interventions to promote independence
  - Modifying physical (e.g. home) and social (work with carer) environment
  - Modifying or adapting purposeful activities or occupations
  - Cognitive training
  - Design and use of assistive tools

(Duggan, 2004; Perrin, 2005)

Social Worker

- Care management
  - *Assess patient needs and match with appropriate community-based services*
  - *Drawing up tailor-made care plans to promote independence*
- Risk assessment and management to support people to remain at home/community
- Collaboration with other professionals

(Dwyer, 2005)

Speech Therapist (ST)

- Analyzing, diagnosing and managing communication disorder and dysphagia
- Identifying which linguistic and environmental factors can be manipulated to improve communication
- Reduce the impact of the communication disorder and/or dysphagia on the person and their carers
  - providing advice, training and support to them and the multidisciplinary team

(Griffith and Baldwi, 1989; Royal College of Speech & Language Therapists (RCSLT), 2005)

Dietitian

- Provide nutritional assessments: target some of the problems in the patient with dementia (e.g. dysphagia, eating disorder, feeding problem, etc.)
  - *Diet control of co-morbid conditions, like diabetes, hypertension, gout, etc.*
  - *Weight management*
- Evaluation of feeding skills (along with OT and ST)

(Consortium formed the Canadian Collaborative Mental Health Initiative (CCMHI), 2008)

Research findings on multidisciplinary approach

- Study by Wolf (2008) comparing an integrated multidisciplinary approach with usual general practitioner practice on dementia care in Netherlands
- Methods:
  - 230 patients randomized into two groups
    - Intervention group (n=137):
      - Multidisciplinary assessment of patients (include old age psychiatry, geriatric medicine, neuropsychology, PT, OT, geriatric nursing and mental health nursing)
      - Covering aspects e.g. somatic screening, psychogeriatric assessment, evaluation of the required levels of care for patients and their carers
      - Multi-axis diagnosis and recommendations for treatment and management
      - Further referral to other hospital departments and paramedical disciplines for management

Research findings on multidisciplinary approach

- Control group (n=93):
  - General practitioners provided care as usual
  - Patient may be referred to memory clinic, geriatric medicine or the department of mental health for the elderly at the mental health community service

– Outcome measure: health-related quality of life (HRQoL) and other clinical measurement (e.g. MMSE, GDS, NPI, IADL, etc.)

– Results:

- No difference in cognitive functioning, behavioural and psychological problems, ability to perform activities of daily living, or emotional functioning
- Significant improvement in the proxy perception of HRQoL 6 months after the baseline measurement in intervention group
- Control group had decreased HRQoL

Summary of research findings

- Multidisciplinary approach is more effective than mono-disciplinary approach
- However, it is more complex, requiring a higher level of organization
- Challenging tasks for clinicians to combine their professional expertise and share responsibility for a patient

Exercise 2

- From your experience of working with older people, what do you think are the goals of rehabilitation?
- Can patient with dementia return to independence or health after rehabilitation? If not, why is rehabilitation still vital for patient who cannot achieve complete independence or health again?

Non-pharmacological interventions for physical, cognitive, behavioral and psychological symptoms

Aims of non-pharmacological intervention

- Influence emotional and behavioural change positively
  - Agitation, wandering, disturbance of the day-night rhythm, depression, apathy
- Enhance remaining skills and improve their adaptation to a life under cognitive limitation
  - Not primarily to reduce deficiencies which already existed
- Ease the carergiver's burden
- Should be pursued before pharmacological treatment

Douglas et al., 2004; Gräsel et al., 2003

Non-pharmacological intervention

- Psychosocial interventions
  - Reality Orientation (RO)
  - Reminiscence Therapy (RT)
  - Life-review therapy
  - Validation Therapy (VT)
- Behavioural approaches
  - Behavioural therapy
  - Cognitive behavioural therapy
- Alternative therapies
  - Art therapy
  - Music therapy
  - Movement therapy
  - Sensory therapy

Reality Orientation (RO)

- Developed by Folsom and colleagues in the 1960s
- One of the most widely used management strategies for dealing with patient with dementia
- Aim: to reduce
  - Anxiety caused by confusion
  - Frustration due to lack of stimulation
  - Dependence caused by sense of helplessness
- Re-orientate patient with memory loss
  - By providing repetitive orientation to their environment (time, place and person)
  - Assist patient to function as effectively as possible in the new environment

 (Ballard et la., 2001; Folaom, 1966; O'Connell, 2007)

Reality Orientation (RO)

- Two types
  - *Formal RO*
    - Programme of orientation information sessions
      - Address, seasons, date, etc.
    - 3-6 well-matched patients with staff
    - Use of supporting materials like diaries, clocks
  - *Informal (24 h) RO*
    - Continuous and repetitive reorientation with verbal and visual cues
    - Use of memory aids such as white boards with date, time, and temperature, photos, etc
    - Consistent orientating approach by all staff

(Ballard et al., 2001; O'Connell, 2007)

Reality Orientation (RO)

- Clinical evidences
  - Improving/maintaining cognitive abilities of patient with dementia, especially at early stage
    - Domains of orientation, memory and information
    - Benefited in relation to self-care and maintaining independence in ADL (Spector et al., 2005)
  - Verkaik et al.(2005) found that the effect of RO on apathy, depression and aggressive behaviour is limited.

Reality Orientation (RO)

- Limitations
  - Positive effects might take up to 3 weeks and diminish as soon as the treatment ceased (O'Connell et al., 2007; Woods, 1979)
  - Potential to evoke emotional distress in patients with dementia, especially those who are unaware of their symptoms
    - Confusion, emotional upset and agitated (Kunik et al., 2003; Phinney et al., 2002; Zanetti et al., 1995)
  - Patient with the following conditions are difficult to be included in RO class
    - *Visually impaired, hearing loss, aphasia*
    - *Severe medical conditions and confined to bed*
    - *Disruptive behaviours such as wandering, verbal aggression*

Reminiscence Therapy (RT)

- Recognized as an effective way of restoring high levels of well-being in patient with dementia since 1960s
- Definition: *"Vocal or silent recall of events in a person's life, either alone, or with another person or group of people"* (Woods et al., 1992)
- Aim:
  - *facilitate recall of past experiences so as to promote intrapersonal and interpersonal functioning, thereby improve well-being*
- Involve helping the patient to think about and relieve positive past experience
  - Discussion of past activities, events and experiences
  - Personally significant experiences e.g. family holidays, wedding, etc

Reminiscence Therapy (RT)

- Can be carried out in two basis
  - *Informal basis: carried out individually*
  - *Formal basis: in group sessions*
- Tapping on sparing cognitive capacity (remote/long term memory)
  - Use of triggers (e.g. photos, old-time objects) for triggering past memories
- Include a variety of activities
  - Art, music, use of artifacts, outings, cooking, etc
  - Focus on particular topic such as childhood or adolescence
  - Group serves to create historical records
    - Enhancing interaction in an enjoyable, engaging fashion

Reminiscence Therapy (RT)

Clinical evidences

- Improvement in cognition and mood significantly 4 to 6 weeks after the end of the intervention period (Wood et al., 2005)
- Improvements in general behavioural function, although not statistically significant (Thorgrimsen et al., 2002)
- In one study where family caregivers were involved in RT, care-givers' strains were significantly reduced (Thorgrimsen, 2002)

Reminiscence Therapy (RT)

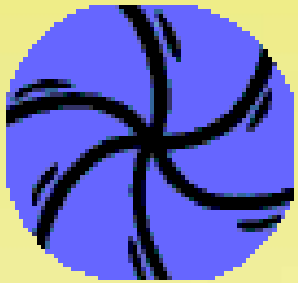
- Limitations
  - In individual cases, painful memories may surface, the supportive influence of the therapist is required
  - e.g. when talk about marriage, some may remember the unhappy relationship with husband and may feel distress

Life Review Therapy

- Definition: 'a process of re-evaluation, resolution and reintegration of past conflicts, perhaps giving new significance to one's life' (Buechel, 1986)
- Based on Erikson's eight stage  of life (refer to Late Adulthood, from 65 years, in the hyperlink)
- Unlike RT, life review is concerned with negative memories (Haight and Burnside, 1993)
- Aim: help patient to achieve adaptation, particularly appropriate for those with difficult pasts, by providing support, understanding and acceptance (Ballard et al., 2001; Kasl-Godley and Gatz, 2000)

Life Review Therapy

- Either in individual or in group sessions (Rattenbury et al., 1989)
- Methods include
  - Written or taped autobiographies
  - Pilgrimages (in person or through correspondence)
  - Reunions
  - Construction of genealogy
  - Creation of memorabilia via scrapbooks, photo albums, collection of old letters
  - Verbal or written summary of life work, life story book
  - Preservation of ethnic identity



(Butler, 1974; Lewis & Butler, 1974)

Life Review Therapy

- Benefits are believed to be similar to those of RT
- Can be used to resolve past problems and thus 'come to terms' with the present and future more readily (Ballard et al., 2001)
- *Limited* evidences of life review therapy with patient with dementia were found
- Significant effect of life review *on depressive symptomatology* in elderly people (Bohlmeiier et al., 2003)

Life Review Therapy

- Limitations
  - Patient might no longer retain the coping mechanisms to deal with distressing issues
    - Be careful when encouraging a patient to talk about distressing issues from the past
  - Not easy to be conducted in people with later-stage dementia
    - Lose the ability to review their past life experience

Validation Therapy (VT)

- Developed by Naomi Feil between 1963 and 1980 (Feil 1982; Feil 1993)
- Defined as the acceptance of the reality and personal truth of another's experience (Neal & BartonWright, 2003)
- Attempts to offer security in patient's own emotional state and their own time-place frames of reference by 'validation – acknowledgement of the feelings of individual‘ (Feil, 1982; Gräsel et al., 2003)
- Aim: "to help disoriented people be as happy as possible and to reduce anxiety"

  (Feil, 1993)

- Reconstruction of self-esteem
- Reduction of stress
- Justification of the life led
- Dealing with unresolved, past conflicts
- Use of drugs and physical means of coercion
- Improvement of verbal and non verbal communication
- Improvement in ambulation and physical well being
- Prevention of relapse into vegetation

Validation Therapy (VT)

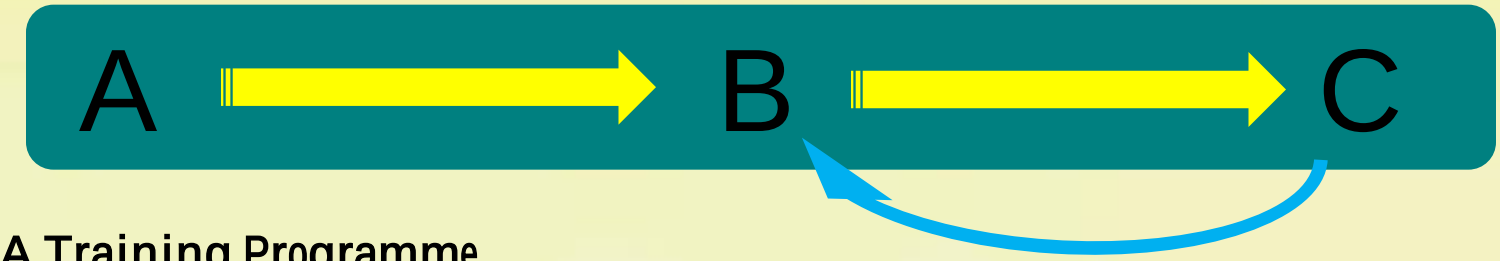
- Often used as a technique when communicating with persons with dementia who are confused and disoriented
- Can be initiate in groups or with individuals
- Empathy accepts whatever feelings are expressed by the patient without attempting to examine feeling that the patient chooses not to express (Feil, 1982)
- Makes use of special verbal and non-verbal communication techniques to establish and maintain contact with elderly, disoriented individuals
  - Touch, eye contact, mirroring body movements, music, listening, etc
- Base on assumption that all the words and actions of the patient have a real sense of purpose (Edwards, 1993)

Validation Therapy (VT)

- Proposed effects (Feil, 1993)
  - *Restoration of self worth*
  - *Reduction of the need for chemical and physical restraints*
  - *Minimization of the degree to which patients withdraw from the outside world*
  - *Promotion of communication and interaction with other people*
  - *Reduction of stress and anxiety*
  - *Stimulation of dormant potential*
  - *Help in resolving unfinished life tasks*
  - *Facilitation of independent living for as long as possible*
- However, there is *insufficient evidence* from randomized trials to draw any reliable conclusions about the efficacy of validation therapy (Neal & BartonWright, 2003)

Behavioural approach

- Behavioural therapy
  - Base on the principles of conditioning and learning theory
    - Classical conditioning: when a behaviour B is repeatedly associated with a stimulus (antecedent) A, that stimulus will eventually elicits B
    - Operant conditioning: Behaviour B elicit an environmental consequence C which will reinforce the behaviour, making behaviour B either more or less likely to occur in the future



Behavioural therapy

- Challenging behaviours are often learned and therefore can be unlearned (Ballard et al., 2001)
- Detailed assessment for the disruptive behaviour is need
  - *Understand the processes underlying the behaviour (the "A")*
  - *Identify the behaviour (the "B")*
  - *Describe the impact of the behaviour upon the quality of life of the patient (the "C")*

(Emerson, 1998)

Behavioural therapy

- Intervention
  - Three key features (Emerson, 1998)
    - Taking account of the person's preferences
      - Diet, activities as rewards for positive reinforcement?
    - Changing the context in which the challenging behaviour takes place
      - Eliminate the triggering scenarios
    - Disrupt the challenging behaviour using reinforcement strategies and schedules
      - Extinction, positive and negative reinforcement, schedules of reinforcement, punishment, contingency, etc

Behavioural therapy

- Therapeutic goals
  - Reduction in disturbing behaviors
  - Maintenance of current self-care skills
- Clinical evidences
  - Only *small number of studies* have demonstrated its effectiveness in dementia
    - *Successful reduction in wandering, incontinence and other form of stereotypic behaviours (Holden and Woods, 1982; Bakke, 1997; Woods, 1999)*
    - *Improve the degree of self care (Rinke et al., 1978)*

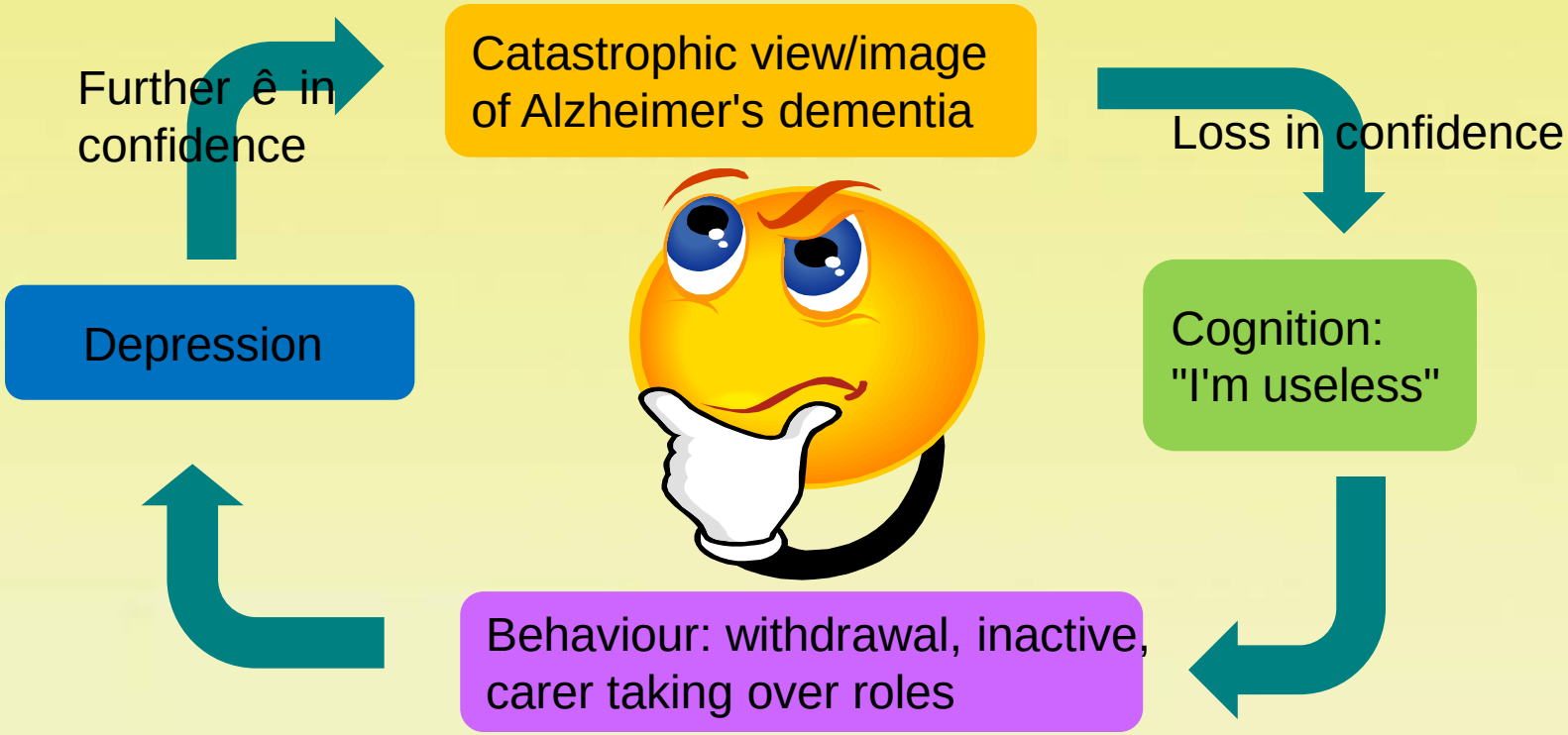
Cognitive Behavioural Therapy CBT

- Cognitive behavioral therapy (CBT) is a structured therapeutic method that improve mood, functional status and quality of life by
  - changing thoughts (cognitive therapy), and
  - changing behaviors (behavior therapy)
- Collaborative, time limited, structured and skill based
- Aim: influencing negative emotions that relate to inaccurate appraisal of events

(Stanley et al., 2007)

Cognitive Behavioural Therapy CBT

- Relatively new area and tends to be focused on the treatment of distressing symptoms, e.g. depression
- Explanation of depression in dementia



(Adopted from Walker, 2004)

Cognitive Behavioural Therapy CBT

- **Cognitive components refer to**
  - How people think about
  - Create meaning about situations, symptoms and events
  - Develop belief about themselves
  - "Guided discovery": questioning to ask for peoples' meanings and stimulate alternative viewpoints
  - Behaviour experiments to test these alternatives
- **Behavioural components refer to**
  - The way people respond when under distress
  - e.g. avoidance, reduce activity and unhelpful behaviour that keeps problem going
  - CBT help the person feels safe to gradually test out their assumptions and fears and then change their behaviours

Cognitive Behavioural Therapy CBT

- **Objectives:**
  - Increasing enjoyable activities
  - Reinforcing and relearning basic problem-solving skills
  - Increasing managing current problems by setting realistic goals and expectations (Thompson et al., 1989; Teri, 1994)
- **Archived by**
  - Addressing the way the client thinks
  - Developing more flexible ways to think and respond (ê avoidance of activities)
  - Client can thus escape from the negative thinking patterns

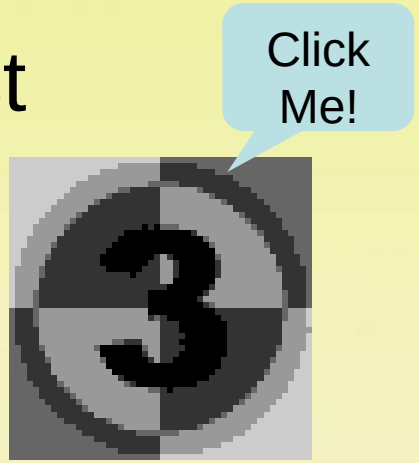
Cognitive Behavioural Therapy CBT

- Clinical evidences
  - Significant improvements in mood and decreases in frequency of troublesome behaviors among demented persons
- Depression in caregivers also was reduced (Teri, 1994; Teri et al., 1997)
- Anxiety symptoms decreased following cognitive-behavior therapy (King & Barrowclough, 1991; Radley et al., 1997)

Art therapy

- Positive influencing symptoms by
  - *Art contemplation*
    - *Visual elements are systematically made experienceable*
  - *Active artistic creation*
    - *Created under art therapist's guidance*
- Example: The Ennis Court Project

(http://www.carers-healingspur.co.uk/photos4.htm)



Art therapy

- Aim:
  - Offer patients opportunity to make decisions and feeling of being able to be in control of something
  - Provide sensory stimulation through line, colour and shape
- Clinical evidences
  - Achieve a greater sense of enjoyment and well-being (Sterritt & Pokorny, 1994)
  - Lower depression among those with art therapy (Waller et al., 1998)
  - Controlled studies is lacking

Music therapy

- Music therapy for dementia extends from musical improvisation via the singing of familiar songs, to simply listening to music (Gräsel et al., 2003)
- *Aim:*
  - *compensate for the severe limitations in the dementia patients' ability to act and to express themselves*
- The rhythm, melody of the music can facilitate physical, psychological and emotional responses of the patient

Music therapy

- Brotons et al. (1999) conclude that music therapy
  - Improve social skills and emotional state
  - Diminish behaviour problems
    - Agitation, excessive vocalization, wandering

(Casby and Holm, 1994; Fitzgerald-Cloutier, 1993; Norberg et al., 1996)

Movement therapy

- Movement therapy can be used in a wide variety stages of dementia in order to maintain and improve motor functions
  - Mild to moderately severe stage
    - Target balance, mobility, strength and stamina
  - Severe stage (no longer walk without help)
    - Sometimes possible to remobilize the patient
    - Passive movement of the limbs to avoid contracture.

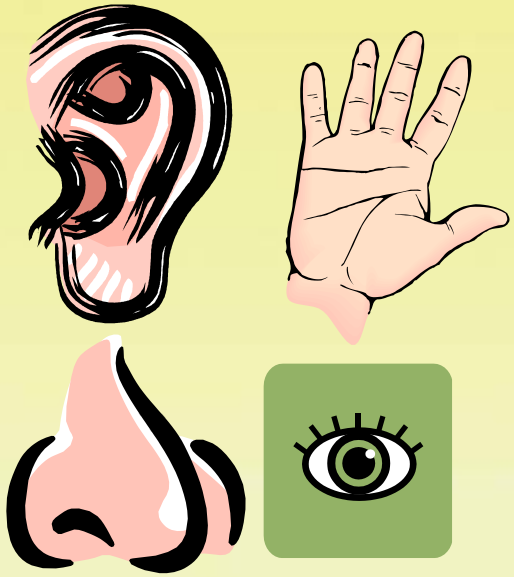
(Gräsel et al., 2003; Teri et al., 1998)

Movement therapy

- Achieve an improvement in social behaviour particularly in the group situation (Hopman-Rock et al., 1999)
- Aggressive behaviour can be reduced by a programme of regularly walks (Holmberg, 1997)
- Dementia patients may benefit more from a combination of movement therapy and music therapy than from music therapy alone (Groene, 1999)

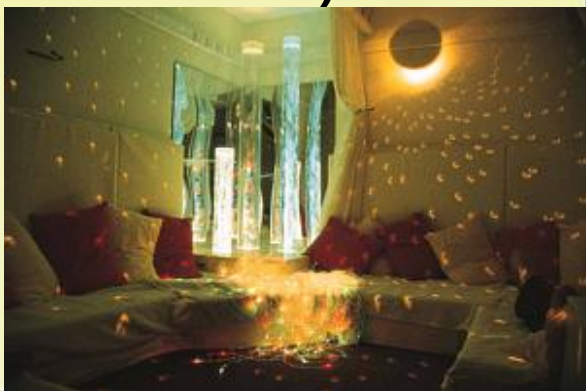
Sensory therapy

- Multisensory environment
- Bright light therapy
- Aromatherapy



Multisensory therapy

- "Snoezelen"
  - Originated from Haarendael Institution in Holland (Hulsegge & Verheul, 1987)
  - A trade mark of ROMPA® which describes a multi-sensory environment
  - Snoezelen is recognized as a room specifically designed (contains a variety of materials to stimulate different sense) to stimulate all the senses



Multisensory therapy

- Use for people with severe cognitive impairment
  - Provide sensory stimulations and interactions for patient with difficulty responding to general environmental stimuli and social interaction
  - Promoting relaxation among people who are experiencing restlessness or agitation.

Multisensory therapy

- Clinical evidences
  - Potential benefits in a variety of parameters including mood, engagement and relaxation (Long and Haig, 1992, Pinkney & Barker, 1994, Pinkney, 1997)
  - Improvement in well-being and a reduction in behavioural problems among people with severe dementia (Ballard et al., 2003)

Bright light therapy

- Target at the alternation in diurnal patterns of activity and altered sleep-wake cycle in patient with dementia
- Linked to changes in the diurnal rhythm of melatonin – hormone which plays a role in the regulation of the circadian rhythms
- Bright light may improve dysfunctions of diurnal rhythm

Bright light therapy

- Exposure to daylight or to specific wavelengths of light using fluorescent lamp, light box with artificial illumination
- Evidence suggested that bright light treatment may reduce sleep disturbance and agitation (Koyama et al., 1999; Mishima et al., 1998; Lyketsos et al., 1999)

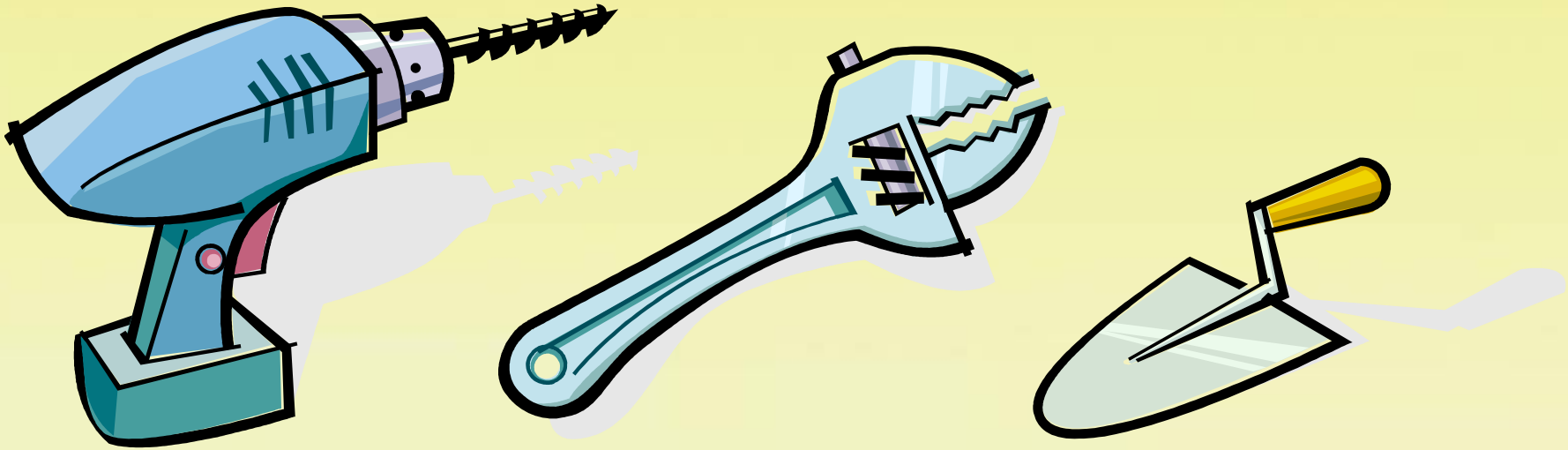
Aromatherapy

- A therapy which has been used for 'healing' since 3000 B.C.
- Administered in a number of different ways:
  - Inhaling oils through vaporization
  - Bathing or massage
  - Applying the oil in a cream or aqueous solution
- As an adjunctive to pharmacological treatment

Aromatherapy

- The healing properties of aromatherapy include:
  - Promotion of relaxation and sleep
  - Relief of pain
  - Reduction of depressive symptoms (Perry & Perry, 2006)
- Aromatherapy has been used for people with dementia to
  - *Reduce disturbed behaviour (Brooker 1997)*
  - *Promote sleep (e.g. Wolfe & Herzberg, 1996)*
  - *Stimulate motivational behaviour (MacMahon,1998)*
- Improve cooperation and communication, using combination of lavender and melissa (Mitchell, 1993)

Environmental modification



Environmental modification

- Design is regarded as a therapeutic resource to promote well-being and functionality among patients with dementia
- Designing environment
  - General attributes
  - Building organization

General attributes of the environment

- Investigate desired qualities of the overall facility environment
- **Non-institutional character**
  - Homelike ambiance: personalized rooms, domestic furnishings, natural elements, etc.
  - Aim to improved intellectual and emotional well-being
  - Environment that facilitate social interaction; reduced agitation, trespassing and exit seeking; greater preference and pleasure; improved functionality (Annerstedt, 1994; Cohen-Mansfield & Werner, 1998; Sloane et al., 1998)

General attributes of the environment

- **Examples**
  - Provide places to put ornaments and knickknacks (e.g. shelves)
  - Provide options in resident room decor (e.g. wall colour, curtains)
  - Provide spaces to personalize and decorate entryways to bedrooms

General attributes of the environment

- **Sensory stimulation**
  - Sensory overstimulation may increase distraction, agitation and confusion
  - Over-stimulation is associated with loud noise (e.g. loud talking, singing and clapping), crowding and disruptive behaviour from others (Nelson, 1995)
  - While sensory deprivation has been identified as potential problem (Cohen & Weisman, 1991)
    - Residents may have ê concentration and perception
    - May experience visual or auditory hallucination
  - Careful balance between environment overstimulation and deprivation

General attributes of the environment

- **Example of proper sensory stimulation**
  - Removing unnecessary clutter, overstimulation from TV, alarms, loud noise, etc
  - Provide tactile stimulation in surfaces and wall hangings that signal a transition to another room or area
  - Limited stimulation activity area by hanging cloth partitions to reduce distractions among residents (Namazi and Johnson, 1992)
  - Eliminate unnecessary noise
    - e.g. Use of solid core doors/ sound deadening materials which minimize staff and service-induced noise

General attributes of the environment

- **Lighting and visual contrast**
  - Patient with dementia faces particular visual deficits
    - *Difficulty with colour discrimination, depth perception and contrast sensitivity (Cronin-Golumb, 1995)*
    - *Irritation from glare (Brawley, 1997)*
      - *Confusion, agitation and increase risk of falls*
  - Recommendation:
    - Strategies to reduce glare, minimize confusion concerning depth perception, increase contrast and overall light levels and exposure to bright light

General attributes of the environment

- ***Example of lighting and contrast***
  - Use of dimmers on electrical circuitry to adjust light intensity
  - Avoid floor, wall finishes with highly complex patterns that confuse the vision
  - Avoid shiny floor surface which could present as water/reflect light and produce indirect glare
  - Avoid high levels of glare which cause great uncertainty
    - Window treatments in facilities should be sheers or translucent shades which allow light to diffuse without totally blocking the view

(Briller et al., 2001a)

General attributes of the environment

- **Safety**
  - Residents' attempts to leave facilities or home
    - Design solutions to prevent unwanted exiting by exploiting patient's cognitive deficits.
  - Associated behaviours with wandering cause problems e.g. excessive walking, leaving the unit, invading other residents' personal space
  - Surveillance is essential by staff for maintaining safety in environments for patient with dementia (Morgan & Stewart, 1999)
    - While in private resident rooms, enclosed charting spaces, secluded outdoor area and activity spaces hinder staff surveillance
  - Preventing falls among residents is another important safety concern

General attributes of the environment

- **Examples of preventing breakaway**
  - Modifying doorway to reduce exiting
    - Disguising doors: painted a mural across the door, paint the door handle or panic bar to match the door colour
    - Must not impede the use of the door in emergency
  - Minimize visibility through door while other side of door may interests resident
  - Try to create a secure outdoor area where residents can come and go as they please
    - Accompany residents to areas off the unit and outside when possible
  - Use of lock and alarm systems

Example

General attributes of the environment

- **Example of wandering management**

  Ensure safety and provide meaningful wandering

  – Providing residents with a secure place to wander, reduced negative sequelae (Burgio et al., 1996)

  – Corridors and pathways should be interrupted with social interaction areas and have either a circular route or an activity space as the destination

  – Proper locking of all cupboards or storage areas on wandering routes

  – Environmental stimuli: place familiar objects, furniture and pictures within the wandering path

General attributes of the environment

- **Example of fall prevention**
  - Floor surfaces need to be nonslip and have low drag resistance for residents who use assistive devices
  - Floor surfaces must be level (remember of poor depth perception in patient with dementia)
  - Minimize colour contrast and patterns in floor (may appear to resident as raised or lowered surfaces)
  - Installation of handrails and keep it clear

(Briller et al., 2001b)

Building organization

Desirable arrangement of spaces within facilities

- **Orientation**
  - Residents' orientation depends on the physical environment
    - Quiet environments associated with é orientation
    - Improvements for way-finding (e.g. landmarks, signage)
    - Simple building configuration and provision of explicit environment information are associated with é orientation
      - Greater spatial orientation in facilities designed around L-, H-, or square-shaped corridors (Elmsåthl et al., 1997)
    - "cluster" facilities (with small units of resident rooms and associated common spaces) enhance higher levels of orientation (Netten, 1989)

Building organization

- **Example for orientation**
  - *Make important doorways distinctive and three – dimensional when possible*
  - *Offering sight of the destination (e.g. landmarks such as furniture, directional signs and sensory information (music) for common areas*
  - *Help to identify resident rooms by using appropriate signs (large and easy to see, well-placed), personal photos/objects on doors, distinctive interiors and personal furnishings*
  - *Making toilet easy to spot by bright colour door, interesting signs, leave lights on or use night-lights*
  - *Provide tactile opportunities and interesting objects*

(Briller et al., 2001b)

Building organization

- **Provision of outdoor areas**
  - Recommended access to outdoors to
    - Maintain home-likeness
    - Accommodate activities
    - Increase residents' exposure to light and sun
  - Violent episodes among residents ê in facilities with outdoor environments (Mooney and Nicell, 1992)
- **Examples**
  - A well-designed, safe outdoor space (staff can easily see into) adjacent to the unit should be created which allow unrestricted access to this space

Enhancing disease-related self-care management of patients with dementia

CADENZA Training Programme

Dementia: Self Care?

- Self-care is interpreted in many ways in patient with dementia
  - *Detection of early symptoms of dementia*
    - *'Patient' is responsible for self-care and acts as a precautious person*
  - *During development of dementia*
    - *Shifting from self-care to self-care support and then direct care by others*
  - *During advanced-stage of dementia*
    - *Lost self-care abilities resulting in total dependency*
    - *Doing self-care shifts from the individual to others*
- Hence 'self care in patient with dementia end at the moment they enter a stage which is perceived by their societal environment as incapable to act independently'

(Naue, 2008)

Self care in dementia

- Dementia in the early and intermediate stages may be able to live independently at certain extent
  - Maintain daily physical exercise habit
    - help the body and mind functions and maintain a healthy weight
  - Engage in as much mental activity as he or she can handle
    - slow the progress of some types of dementia. Puzzles, games, reading, and safe hobbies and crafts are good choices
  - Maintain social interaction
    - stimulating and enjoyable for most people with dementia

Self care in dementia

- Regular medical check-up
  - Notice any change in mental state or physical condition which may affect independency
- Balance diet and quit smoking
  - Maintain health and reduce the risk of developing/worsening vascular diseases
- Reduce dependency
  - Maximize existing potential, take responsibility to perform tasks which can be performed by oneself independently, e.g. wearing shoes, eating

Maintenance for self-care

- Regular checks by relatives or friends
- Maintaining a familiar and safe environment
- Individuals who require certain level of assistance may need to move to the home of a family caregiver

Special precaution for self care

Falls

- Annual incidence in patient with dementia: about 70-80% (shaw et al., 2003)
- Significantly affect patient independency/self care ability
- é fall risk due to
  - Impairments of gait and balance
  - Effects from medications (e.g. Anxiolytics)
  - Orthostatic hypotension (Passant et al., 1997)
  - Behavioural risk factors like wandering, agitation, etc.
  - Forget to use walking aids

Falls

- Management
  - Multifaceted interventions
    - Risk factors assessment
    - Diagnosis
    - Care planning
    - Medications review
    - Environmental modification
    - Education programme
    - Exercise

Suggestions for reducing fall risk in patient with dementia

- Review of medication
  - Psychotropic medication
  - Cardiovascular medication
- Orthostatic hypotension
  - Frequent monitoring
- Physical training
  - Improve gait, balance , mobility and flexibility
- Environmental
  - Familiar and safe environment
- Fall alarm
  - *One small study supports its use but this study was poorly controlled*

(Shaw, 2007)

Suggestions for reducing fall risk in patient with dementia

- Calcium and Vitamin D replacement
  - Reducing falls in two care home studies (Chapuy et al., 1992; Flicker et al., 2005)
- Assistive device
  - Walking aids
- Transfer training
  - Staff and carer
- Avoid restraints
  - Functional decline
  - Increase fall risk (van Doorn et al., 2003)

Summary

- Multidisciplinary and patient centered care approach
- Non-pharmacological treatment
  - Psychosocial interventions
  - Behavioural approaches
  - Alternative therapies
- Factors to be consider in environmental modification
  - General attributes
  - Building organization
- Dementia in the early and intermediate stages are capable for certain degree of self care
- Fall prevention is an important issue in dementia which require multifaceted interventions

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