

Appendix 2 – Typology of Modes and Methods for Dementia Interventions – Detailed description

1. Cognitive Enhancement Therapies (Choi & Twamley, 2013; Clare & Woods, 2004)

A. Cognitive Stimulation, Training and Rehabilitation

- **CSPR** = Cognitive stimulation and physical rehabilitation
- **CST** = Cognitive Stimulation Therapy - the psychological approach with the strongest evidence for improving cognition. It stems from reality orientation and is usually group-based. It consists of group sessions led by a trained coordinator incorporating social activity, reminiscence, and simple cognitive exercises. The aim of cognitive stimulation therapy is to actively mentally stimulate participants through cognitive activities and reminiscence, multisensory stimulation, and group social contact.
- **CR** = Cognitive rehabilitation - aims to improve everyday function by helping the patient set individual goals and devising strategies to achieve these, and might be useful for patients with mild-to-moderate AZD, for whom individualised goals to improve specific functions could improve function and quality of life.
- **CT** or **BT** = Cognitive training or Brain training - involves theoretically driven strategies or exercises targeting specific cognitive domains, usually with an adaptive level of difficulty.
- **DT** = Dual task activity – (physical/motor and cognitive tasks) simultaneously the exercises stimulate cognitive function plus functional capacity/exercise. (Duration/frequency of DT activity = 1hr or more per week) DT activity must increase in both cognitive complexity (to prevent adaptation by the participant to the stimuli) and physical intensity (to maintain heart beat at a pre-determined rate) (Cadore et al., 2014; Coelho et al., 2013)
- **GRT** = Global Reactivation Therapy - training memory, attention, language as well as reasoning and acquiring strategies to train and preserve temporal orientation.
- **MT** = Memory Training - techniques to train as well as maintain memory, attention, and linguistic ability.
- **ROT** = Reality Orientation - presenting information about time, place or person in order to help a person understand their surroundings and situation; includes a board displaying information.
- **RT** = Reminiscence Therapy - involves the discussion of past activities, events and experiences with another person or group of people, usually with the aid of tangible prompts such as photographs, household and other familiar items from the past, music and archive sound recordings.

B. Non-invasive Brain Stimulation

- **rTMS** = repetitive transcranial Magnetic Stimulation; **rTMS-COG** = repetitive transcranial Magnetic Stimulation interlaced with cognitive training
- **atDCS** = anodal Transcranial Direct Current Stimulation
- **Brain stimulation**, mapping and imaging seeks to understand how the brain works; develop new ways to treat disease that augment or replace current psychopharmacological paradigm

2. Physical

A. Physical Exercise

- **HIIT** = High Intensity Interval Training
- **AE** = Aerobics
- **ST** = Strength training
- **DT** = Dual task activity - (physical/motor and cognitive tasks) simultaneously the exercises stimulate cognitive function plus functional capacity/exercise. (Duration/frequency of DT activity = 1hr or more per week; to prevent adaptation to stimuli, DT activity must increase in cognitive complexity; maintain intensity of heart rate)
- **Sports & Exercise** – Walking, running, ball play, etc.
- **Mind-body exercise*** – Yoga, Tai-Chi, Dance, etc.

B. Physical and Occupational Rehabilitation (if provided or instructed by a trained practitioner)

- **OT** = Occupational Therapy - assesses and treats people who have a physical, mental or cognitive disorder that inhibits their ability to maintain necessary activities of daily living (ADLs)
- **PT** = Physical Therapy or Physiotherapy - improving a client's ability to perform movement of the human body, decrease swelling and pain, restore function and prevent disability
- **KT** = Kinesiotherapy or kinesiotherapeutic exercises
- **IPP** = Integrated Psychostimulation Program to enhance, preserve, and promote the independence of the patient in their basic ADLs and thus, reduce caregiver burden; developed at Fundació ACE.
- **PE** = Physical Education
- **PR** = Psychomotor rehabilitation - psychomotricity integrates cognitive, emotional, symbolic, sensorial and motor interactions expressed through the interaction of individuals with each other and with their environment.

3. Psychological and Psychosocial Therapies (if provided or instructed by a trained therapist)

- **CBT** = Cognitive-behavioral therapy - psycho-social intervention that is a widely used evidence-based practice for improving mental health; helps you manage your problems by changing the way you think and behave.
- **Art, Music, Drama and Expressive Therapies**
- **EMDR** = Eye Movement Desensitisation and Reprocessing
- **HT** = Horticultural Therapy, **STH** = Social and Therapeutic Horticulture
- **PMT** = Psychomotor Therapy – based on a holistic view of the human being (unity of body and mind); integrates the cognitive, emotional and physical aspects and the capacity of being and acting in a psychosocial context; mainly considered a psychological treatment (Probst, Knapen, Poot, & Vancampfort, 2010); a method of treatment that uses body awareness and physical activities; a physical and cognitive exercise
- **Psychotherapy, Counselling, Support** for person with dementia or family carer
- **Arts & Crafts, Tailored activities, Activity therapy, Recreational activities**
- **Community activity, volunteering**
- **Spiritual element**

4. Nutrition and Diet

- Vitamins, supplements, GI health, herbs, antioxidants, amino acids, microelements, nutritional adjustment, fasting

5. Sleep hygiene = resolve sleep apnea, etc.

6. Stress reduction = Meditation, etc.

7. Detoxification = Sauna, etc.

8. Hormonal health

9. Oxygen therapy = Hyperbaric, Intermittent Hypoxic Training (IHT), Oxygen inhalation

10. Traditional Chinese Medicine = Acupuncture, Herbs

* Mind-body interventions are a special category in which the activity cannot be any further separated. If the intervention can be divided into at least two activities whereby one could be assigned to a control group to carry out separately from the other, then it is two modes and falls within the category of multimodal. If it cannot be separated then it is an enhanced intervention, but only one mode. Dual-task interventions can be separated into the cognitive and the physical activities, therefore they are 2 modes/multimodal.

Dancing (Dhami, Moreno, & DeSouza, 2015), dance-movement therapy (Goldstein-Levitas, 2016), movement-music therapy with percussion (Shimizu, Umemura, Matsunaga, & Hirai, 2017), movement to music (Cheung, Lai, Wong, & Leung, 2016; Satoh et al., 2017), integrative exercise (Barnes et al., 2015), enhanced gymnastics (Han et al., 2016) or enhanced care practice, that combined therapeutic techniques (Yamagami, Takayama, Maki, & Yamaguchi, 2012) were single enhanced activities, and therefore not included.

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