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**Literature search results**

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**Search details**

Sensory integration/sensory processing disorder

**Resources searched**

NHS Evidence; TRIP Database; Cochrane Library; AMED; BNI; CINAHL; EMBASE; HMIC MEDLINE; PsychINFO; Google Scholar

**Database search terms:** As above plus Social interaction; Social cognition: Awareness; Dementia; Cognitive ability; Treatment; Communication disorders; Intellectual development disorder; Development disabilities

**Evidence search string(s):**

**Google search string(s):**

**Summary**

There is some evidence that Multi Sensory Stimulation/Snoezelen in a Multi Sensory Room reduces apathy in people in the latter phases of dementia. Furthermore, there is scientific evidence, although limited, that Behavior Therapy-Pleasant Events and Behavior Therapy-Problem Solving reduce depression in people with probable Alzheimer's disease who are living at home with their primary caregiver. There is also limited evidence that Psychomotor Therapy Groups reduce aggression in a specific group of nursing home residents diagnosed with probable Alzheimer's disease. For other psychosocial methods there are no or insufficient indications that they
reduce depressive, aggressive or apathetic behaviors in people with
dementia.

Guidelines

1. Practice guideline for the treatment of patients with Alzheimer’s
disease and other dementias.

Bibliographic Source(s)

American Psychiatric Association (APA). Practice guideline for the
treatment of patients with Alzheimer’s disease and other dementias.
85 p. [554 references]

http://guidelines.gov/content.aspx?f=rss&id=11533

2. Occupational Therapy Practice Guidelines for Adults with
Alzheimer's Disease and Related Disorders (Book)
By Patricia Schaber, PhD, OTR/L


Practice guideline are important tools for promoting the highest quality of
care. This practice guideline gives occupational therapy practitioners,
educators, and health care professionals an evidence-based guideline for
providing the best, most appropriate care for adults with Alzheimer’s
disease and related disorders as well as their caregivers. Of the numerous
types of dementia, some are rare, while others are reaching alarming
proportions. The most prevalent is Alzheimer’s disease, with 1 in 85
individuals predicted to have the disease by 2050, for a total of 107 million
people globally. As the disease currently is progressive and ultimately fatal,
there are major challenges not only for the individuals affected but also for
their families and communities. This Practice Guideline reviews the
symptoms, stages, and pharmacology as well as gives a detailed
description of the occupational therapy process for various approaches and
interventions. Appendixes include selected CPTTM and ICD-9-CM codes,
as well as driving and community mobility issues for people with
Alzheimer’s disease.

Evidence-based reviews

Published research

1. Title: Contextual social cognition and the behavioral variant of
frontotemporal dementia.
Citation: Neurology, 04 2012, vol./is. 78/17(1354-1362), 0028-3878;1526-
Abstract: The significance of social situations is commonly context-embedded. Although the role of context has been extensively studied in basic sensory processing or simple stimulus-response settings, its relevance for social cognition is unknown. We propose the social context network model (SCNM), a fronto-insular-temporal network responsible for processing social contextual effects. The SCNM may 1) update the context and use it to make predictions, 2) coordinate internal and external milieus, and 3) consolidate context-target associative learning. We suggest the behavioral variant of frontotemporal dementia (bvFTD) as a specific disorder in which the reported deficits in social cognition (e.g., facial recognition, empathy, decision-making, figurative language, theory of mind) can be described as context impairments due to deficits in the SCNM. Disruption of orbitofrontal-amygdala circuit, as well as the frontal, temporal, and insular atrophy in bvFTD, suggests a relationship between context-sensitive social cognition and SCNM. In considering context as an intrinsic part of social cognition, we highlight the need for a situated cognition approach in social cognition research as opposed to an abstract, universal, and decontextualized approach. The assessment of context-dependent social cognition paradigms, the SCNM, and their possible application to neuropsychiatric disorders may provide new insight into bvFTD and other related frontal disorders.
evidence of central nervous system dysfunction, psychological processing deficits, difficulty in academic and learning tasks, and a discrepancy between aptitude and achievement. The definitions exclude other causes, such as sensory loss, lack of schooling, or intellectual disability. Because this group of disorders represents what is often termed a hidden disability (i.e., a disability that is not evident in the physical appearance of the individual), the person with learning disabilities may be viewed by nondisabled peers as unintelligent or unmotivated. Despite more than 30 years of research supporting the existence of learning disabilities, including current brain research involving spectrography and functional magnetic resonance imaging (Galaburda, 2005), the field continues to be controversial (Elksnin et al., 2001; Fiedorowicz, 1999; Weintraub, 2005). Individuals with learning disabilities face a twofold problem: (a) their innate deficits that can disrupt academic learning and social development and (b) a tendency on the part of those whom they encounter to dismiss their disabilities as nonexistent.

4. Title: Awareness in people with severe dementia: Review and integration.
Citation: Aging & Mental Health, 01 2010, vol./is. 14/1(20-32), 1360-7863;1364-6915 (Jan 2010)
Author(s): Clare, Linda

5. Title: Promoting social interaction for individuals with communicative impairments: Making contact. (Book)
Citation: Promoting social interaction for individuals with communicative impairments: Making contact., 2008 (2008)
Author(s): Zeedyk, M. Suzanne [Ed]

Abstract: (from the jacket) All humans have an innate need and ability to communicate with others, and this book presents successful approaches to nurturing communicative abilities in people who have some type of communicative impairment. The contributors explore a wide range of approaches, including Intensive Interaction, co-creative communication, sensory integration and music therapy, for a variety of impairments, including autism, profound learning disabilities, deafblindness, severe early neglect and dementia. This wide perspective provides insight into what it feels like to struggle with a communicative impairment, and how those who work with and care about such individuals can and should think more creatively about how to make contact with them. Both the theory and practical implementation of different interventions is covered in this book.

Author(s) Caldwell, Phoebe, Horwood, Jane [Col]
Publication Date: 2008

7. Title: The Effectiveness of Sensory Integration Therapy to Improve Functional Behaviour in Adults with Learning Disabilities: Five Single-Case Experimental Designs.
Abstract: This paper describes a research project using a single-case experimental design (A-B-A), which aimed to explore the impact of sensory integration therapy (SIT) on level of engagement and maladaptive behaviour (measured through timed scores) and function (using Goal Attainment Scaling, GAS) for five learning disabled adults with tactile sensory modulation disorder. Each phase lasted 4 weeks and consisted of 24 measurements in total. Individually tailored SIT was given twice weekly for 4 weeks during the intervention phase (B), immediately prior to each individual's participation in his or her prescribed horticulture task. The changes between phases in engagement, maladaptive behaviours and function scores, measured as the difference between baselines and intervention, were analysed visually and statistically for each participant. The intervention produced significant improvements in engagement for participant four, with a highly significant deterioration in scores for all five participants on withdrawal of SIT. All the participants’ maladaptive behaviour decreased significantly on the introduction of SIT. Although there was no significant change to GAS scores for four participants, participant four's score improved significantly with SIT. The withdrawal of SIT resulted in a highly significant deterioration in GAS scores for participants one, two, four and five. This study may be the first to suggest that SIT is effective in improving functional performance in adults with a learning disability with a tactile sensory modulation disorder.

8. Title: Clinical Incidence of Sensory Integration Difficulties in Adults with Learning Disabilities and Illustration of Management.
Citation: The British Journal of Occupational Therapy, 10 2003, vol./is. 66/10(454-463), 0308-0226 (Oct 2003)

Author(s): Green, Dido, Beaton, Lindsay, Moore, Denise, Warren, Lin, Wick, Vanessa, Sanford, J. Ellen, Santosh, Paramala

Abstract: This project investigated the prevalence of sensory processing problems in a clinical group and also examined the clinical effectiveness of a specialised therapeutic technique, sensory integrative therapy (SIT), in the treatment of maladaptive behaviours in two adults with learning disabilities. The Sensory Integration Inventory-Revised for Individuals with Developmental Disabilities (SII-R, Reisman and Hanschu 1992) was used to identify two clients suspected of having poor sensory processing. A single-subject experimental design (ABAB) was used to assist the objective measurement of the effects of SIT. The results suggest that the SII-R has some limitations in identifying clients who would benefit from SIT. One client (Ms D) was seen to instigate more positive interactions with her environment during and following the treatment phases; however, the overhabituated behaviours of the other client (Mr K) showed little response to SIT. These results are discussed in the form of a practitioner's update, with respect to the indicators of sensory processing dysfunction and the potential therapeutic benefits of SIT as an adjunct to therapeutic
interventions for individuals with learning disabilities.

9. The effects of psychosocial methods on depressed, aggressive and apathetic behaviors of people with dementia: a systematic review

Renate Verkaik, Julia C. M. van Weert, Anneke L. Francke

Article first published online: 29 MAR 2005
DOI: 10.1002/gps.1279
International Journal of Geriatric Psychiatry
Volume 20, Issue 4, pages 301–314, April 2005

10. Australasian Journal of Special Education
Volume 32, Issue 1, 2008, p83 - 99

Special Issue: A Scientific Approach to Special Education

Research on the Efficacy of Sensory Integration Therapy: Past, Present and Future

Han M. Leong & Mark Carter

Abstract: Research on the efficacy of sensory integration therapy (SIT) is addressed in this article. Initially, past key reviews of intervention studies until 1994 are considered. Subsequently, more recent studies from 1994 until 2007 are examined. Consistent with numerous previous reviews, no robust evidence supporting the efficacy of SIT was found. Alternative and more parsimonious explanations for purported effects of SIT are considered. In light of the accumulated lack of evidence for the effectiveness of SIT, continued use of the technique outside of research contexts. Behavioural and psychological symptoms of dementia: clinical aspects

Angelo Bianchetti, Marco Trabucchi

Article first published online: 24 MAR 2005
DOI: 10.1002/nrc.20031

11. Neuroscience Research Communications

Abstract: Non cognitive symptoms are almost always present in dementia with important consequences for patients and caregivers quality of life. Behavioural and Psychological Symptoms of Dementia (BPSD) are heterogeneous and varied in relation to the stage of the dementia and to the aetiology. Treatment of behavioral and psychological symptoms of dementia
represent an important challenge, and non pharmacological and pharmacological approach needs. Antidepressant and neuroleptics are the most frequently used drugs in the treatment of BPSD, even if the number of well designed controlled studies are limited. A variety of different forms of environmental and rehabilitative interventions showed efficacy on BPSD.


Karan S. Kverno, Betty S. Black, Marie T. Nolan, and Peter V. Rabins

... for moderately severe to severe dementia (MMSE 0–17), the breakdown was as follows: four examined emotion-oriented approaches, three examined behavioral/environmental approaches, and 15 examined sensory-stimulation (including sensory-integration) approaches. ...

13. Bundy A C, Lane S J, Fisher AG, Murray E A
Sensory integration: Theory and practice
2nd edn, Pub 2002, Philadelphia: F A Davis


http://eprints.soton.ac.uk/165511/