Cognitive Stimulation Therapy (CST) for Dementia: Research and Practice

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Overview of talk

• Description of CST, the sessions and key principles.
• Overview of the research evidence base.
• Provision of CST within the NHS and beyond: the challenges.
• Consideration of the possible mechanisms of action in CST.
Background

- In the absence of a cure, a priority is improving the care and quality of life for people with dementia.
- Drug treatments are not suitable for all and can have limited effectiveness and adverse effects.
- In the past 20 years, non-pharmacological treatments have grown increasing popular.
- When our research programme began in 1998, no non-pharmacological interventions were routinely recommended / offered, due to limited evidence-base.
- This led to the development and evaluation of CST.
What is CST?

• A brief group programme, for people with mild to moderate dementia, living in a range of settings.

• 14 themed sessions, typically twice a week for 7 weeks. Includes word association / categorisation, current affairs, food, and number games.

• Key aims: to improve cognitive functioning using techniques that exercise different cognitive skills.

• Achieved through a variety of means including, executive functioning tasks (e.g. categorisation), multi-sensory stimulation, and reminiscence as an aid to orientation.

• Based on concept of ‘use it or lose it’: brain needs to be exercised in order for skills to be retained.

• Improved cognitive functioning is associated with increased quality of life and independent living.

• Can be delivered by a range of health and social care workers, following the manual and ‘with training and supervision’.
CST: The Sessions

Physical games
- Sound
- Childhood
- Food
- Current affairs
- Faces / scenes
- Associated words

Being creative
- Categorising objects
- Orientation
- Using money
- Number games
- Word games
- Team quiz
# CST: Key Principles

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What is the Research Evidence?

• Three large clinical trials and several smaller studies.

• The first trial *included 201 people with dementia living in care homes or attending day centres.

• Significant improvements following 14 sessions of CST compared to ‘usual care’ control group, demonstrated in:

  - Cognition (memory, language, executive functioning, measured by ADAS-Cog ($p = 0.01$) and MMSE ($p = 0.04$)
  - Quality of life, as measured by QoL-AD ($p = 0.03$) using combined person / proxy rating

• CST had similar impact on cognition to Galantamine, Rivastigmine and Donepezil, as well as quality of life benefits

What happens next? Maintenance CST (MCST)

- Developed an intervention involving 24, additional weekly sessions of CST.

- More recent trial * included 237 people, all who initially received 7 weeks of CST.

- Half then randomized to receive MCST, others received treatment as usual.

- Significant improvements in quality of life (QoL-AD) at 6 months ($p = 0.03$) and activities of daily living at ($p = 0.04$).

- Cognition was higher in MCST group but difference not statistically significant.

- Greatest improvements in the MCST + medication group, which showed significant benefits in MMSE at 3 and 6 months ($p = 0.03$).

- Conclusions: Whilst people are still willing and able, CST should be continued.

Trial data supported by qualitative research

- Total of 34 participants (people with dementia, carers and staff) participated in individual interviews and focus groups*.
- Asked about experiences of CST – positive or negative.


**Key themes emerging:**
- Positive experiences of being in the group (e.g. supportive and non-threatening).
- Changes generalised into everyday life: improvement in mood and confidence (finding talking easier), changes in concentration and alertness (wanting to attend more things).
  
  “I noticed people becoming more fluent and you could see people trying to express themselves more”.

  “We just enjoyed ourselves; there’s an awful lot of laughter”.

  “It helped all of us know we were in the same boat”.

Individualised CST (iCST)

- iCST involves one-to-one CST, led by home carers or professionals/volunteers. Similar themes to group CST.
- Recent trial * evaluated 75 structured CST sessions for people with dementia, completed up to three times a week for 25 weeks.
- Family carers supported to deliver sessions at home.
- iCST improved relationship between the person and their carer (rated by the person with dementia, p = 0.02) and carer quality of life (p = 0.01).
- No significant changes in cognition and quality of life for the participants with dementia.
- Uptake was low, with lots of dropouts: people on average only received 33 sessions.
- Aim to re-evaluate in care homes with formal caregivers.

The cost of CST

• Led by Professor Knapp at the London School of Economics (LSE). Analysis looked at the use of health and social care costs within each group and the cost of CST, contrasted with the benefits.

• CST and MCST are more cost-effective than usual care*, **.

• NHS Institute of Innovations and Improvements conducted: “An economic evaluation of alternatives to antipsychotic drugs for individuals living with dementia”.

• Analysis focused on cost of providing CST.

• Conclusion: “By combining health care cost savings and quality of life improvements, behavioural interventions generate a net benefit of nearly £54.9 million per year”.

• Behavioural interventions are a much more efficient use of public money than antipsychotic drugs.


People with mild / moderate dementia of all types should participate in a structured group cognitive stimulation programme.

Provided by a range of health and social care workers with training and supervision.

Should be delivered irrespective of any anti-dementia drug prescribed for the cognitive symptoms of dementia.
Use of CST in the UK

• Three published training manuals: [www.careinfo.org/books](http://www.careinfo.org/books)

• National Memory Services Accreditation programme (NMSAP) audit (2015): CST used in 85% of accredited UK memory clinics.

• CST: type 1 standard (failure to meet would result in significant threat to safety, rights, dignity...including providing evidence-based treatment)

• MCST: type 2 standard (criteria that service is expected to meet)

• iCST: type 3 standard (aspirational / not direct responsibility of service).

• CST training: around 175 courses, mainly commissioned by NHS trusts, around 3900 people trained in CST.
Challenges of CST provision

• Services vary greatly in inclusion criteria, referral process and ‘dose’ of CST.

• Limited opportunity for maintenance CST / ongoing CST care.

• No database / freely available information about CST services, referral routes, voluntary and private sector CST.

• CST not part of CQC guidelines and rarely used in care homes.

• Developing a big dataset of CST provision and outcomes.

*
CST Internationally

- World Alzheimer’s Report (2012), stated that CST should routinely be given to people with early stage dementia.

- CST manual has been translated into several languages including Japanese, Spanish, Italian, German, Portuguese, Dutch, Danish and Swahili.

- CST is being used in countries including Australia, USA, South Africa, New Zealand, Germany, Canada, Chile, Italy, Japan, Nepal, the Philippines, the Netherlands, Tanzania, Brazil, China, Hong Kong, Indonesia, India, Nigeria, Portugal, Singapore, South Korea and Turkey.

- ‘International research centre at UCL’.

- [https://www.ucl.ac.uk/international-cognitive-stimulation-therapy](https://www.ucl.ac.uk/international-cognitive-stimulation-therapy)
What does CST do?

- Aims to be mentally stimulating, yet for people to feel empowered rather than de-skilled
- Always encouraging new ideas / new thoughts / new associations.

**Stimulate memory through:**
- Using reminiscence as an aid to the here and now.
- Providing triggers to aid recall, e.g. multi-sensory cues, RO board
- Continuity and consistency between sessions helps support memory
- Implicit (rather than explicit) recall, e.g. famous faces
- Using orientation, but sensitively and implicitly
- Opinion rather than facts (which supports idea of validation)
What does CST do?

Stimulates language through:
- Naming of people and objects (e.g. in categorisation) done in implicit way
- Thinking about word construction and word association

Stimulates executive functioning through:
- Discussion of similarities and differences
- Planning and executing stages of a task (e.g. making a cake)
- Word association, categorising objects

- Can be understood in the context of a Biopsychosocial model of dementia (Spector and Orrell, 2010), particularly when considering group factors influencing mood, QoL, social factors, person-centred care, working against a ‘Malignant Social Psychology’ (Kitwood, 1993)
Getting involved

• CST groups to be offered at SweetTree headquarters, South Hampstead. Please direct referrals to Aimee.Spector@sweettree.co.uk

• A) iCST in care home study and b) observational study, looking at impact of group climate on change in group CST. Sites needed! Please contact a.spector@ucl.ac.uk

• See www.cstdementia.com for references and further details.