Cognitive Stimulation Therapy (CST): Exploring Perspectives of Trained Practitioners on Barriers and Facilitators to the Implementation of CST for People Living with Dementia

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Article

Cognitive Stimulation Therapy (CST): Exploring perspectives of trained practitioners on barriers and facilitators to the implementation of CST for people living with dementia

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Abstract: Dementia is recognized as a disability under the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD). People with disabilities like dementia have the right to access specialized health and social care services, including interventions that support independence and community participation. Cognitive Stimulation Therapy (CST) is an evidence-based psychosocial intervention that improves cognition, communication, confidence and quality of life for people living with dementia (PLwD), but an implementation gap means that CST is often not available. We recruited trained CST practitioners (n=62; 91.9% female) to a mixed methods study to examine facilitators and barriers to the implementation of CST in Ireland. Statistical analysis showed that 54.8% of practitioners had run CST following training; ratings of intervention efficacy predicted the likelihood of running CST groups (p=0.006); and seeing the benefits of CST first-hand predicted that practitioners would run a greater number of CST groups (p=0.01). Thematic analysis of qualitative data identified three key themes of 'resources', 'awareness and education', and 'acceptability of CST'. Overall, the results show that while CST is acceptable and deemed highly effective, resources and staffing often impede implementation. The results are discussed in the context of prioritising the rights of people with disabilities and recommendations are made around improving access to evidence-based supports.

Keywords: evidence-based; interventions; dementia; disability rights; barriers

1. Introduction

Dementia is a condition that affects the brain, leading to difficulties with memory, thinking, language, and daily tasks [1]. It is recognized as a disability under equality laws, including in Ireland and by the United Nations Convention on the Rights of Persons with Disabilities [2, 3]. Cognitive Stimulation Therapy (CST) is a well-established psychosocial intervention that improves language [4], cognition, and quality of life [5] for people with mild to moderate dementia [6]. CST has been recommended by the National Institute for Health and Care Excellence (NICE) Guidelines in 2006 [7] and 2018 [8], the World Alzheimer Report [9], the Centre for Economic and Social Research in Dementia [10], and the Health Service Executive (HSE) Model of Care for Dementia [11]. CST is also cost effective [12, 13] and consistently reported as enjoyable and impactful by people with dementia and their families [14].

There are four different versions of CST. The original 14 session programme is designed to be delivered to groups of approximately 5-8 participants twice per week for seven weeks [4]. Maintenance CST includes an additional 24 themed sessions designed to be delivered once per week after the original 14-sessions [15]. Individual CST (iCST) was subsequently developed to facilitate CST to be delivered on a 1:1 basis [16] and virtual CST (vCST) was developed to meet the demand for CST during lockdown [17]. Practitioners who deliver CST are usually health or social care professionals that have completed a 1-day training course designed by Dr Aimee Spector and colleagues at the CST-International centre in University College London. CST now offered in more than 38 countries and there are around twelve accredited international trainers who deliver the 1-day

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training to practitioners interested in delivering CST (https://www.ucl.ac.uk/international-cognitive-stimulation-therapy/international-cst-training).

As CST was developed and evaluated in the UK back in 2003 [4], it is perhaps unsurprising that CST is widely implemented in memory clinics [18] and other community-based services in the UK (ageuk.org.uk) [19]. Although CST was also offered in Ireland as far back as 2011 [20], the pace of implementation is much slower than in the UK. Currently we estimate[1] that there are approximately 450 people trained to deliver CST in Ireland, yet CST is not routinely offered in memory clinics [21] or other memory services across the country (Alzheimer.ie). There is a clear implementation gap where those trained often do not deliver CST [22]. Issues with the implementation of evidence-based psychosocial supports are more common in low and middle-income countries LMICs [23], but it is not clear why this treatment gap is arising in an Irish context. We aim to build on the implementation by CST-International [23, 24] LMICs. Stoner and colleagues provide a template for CST implementation studies. Stoner and al. [24] stipulate that exploring barriers and facilitators to implementation is an important initial step. We are especially interested in the perspectives of trained facilitators to examine why interest in CST and access to training does not translate to widespread routine delivery.

The dementia literature suggests that the implementation of interventions or supports may be impacted by factors such as stigma [25], public awareness [26, 27], the level of training or education of carers or healthcare practitioners [28] or opinions about the overall acceptability [29, 30] and perceived efficacy of an intervention [31]. Similar challenges have been identified in the context of assessment and diagnosis [32], with Bernstein et al. reiterating the necessity to examine such factors with a view to strengthening dementia care initiatives.

This aim of this study is to examine the characteristics, experiences and opinions of practitioners who have attended CST training or have delivered CST to people with dementia. We hope that by gathering information from trained practitioners, we can further elucidate possible facilitators and barriers to CST implementation after training. We hope to clarify the conditions under which CST is most likely to be offered after training and provide insights into how barriers may be overcome. Overall, we hope to contribute to a knowledge base which can ultimately facilitate greater availability of evidence-based psychosocial supports for people with dementia. Our study may also serve as a guide for countries experiencing similar implementation issues.

We used a mixed methods survey design to examine the following research questions (RQs): (1) what are the demographic characteristics of practitioners who were trained in CST and/or delivered CST to people with dementia; (2) what is the level of engagement with CST training and implementation of CST by participants; (3) do participants perceive CST to be an acceptable and effective intervention; (4) do participants' opinions about the acceptability and perceived efficacy of CST predict whether or not they ran CST groups; and (5) what are the participant's opinions on the barriers and facilitators to the implementation of CST, and how might identified barriers be overcome.

2. Materials and Methods

Participants

Recruitment was conducted via social media (Twitter, LinkedIn), and was supported by two voluntary organisations who shared the study information on their newsletters. Inclusion criteria stipulated that participants must be over the age of 18, have previously or be currently working with people with dementia, and have either: (i) attended CST training; or (ii) learned how to deliver CST by working with a colleague who has attended CST training or by using the CST manuals; or (iii) delivered CST to groups of people with dementia. G*Power was used to calculate the required sample size for the study. For a regression with two predictors (RQ4), a minimum sample size of 68 was required for a statistical power of at least 0.80 with a medium effect size (f2=0.15) and an alpha level

[1] Based on figures provided by Engaging Dementia who offer training CST for practitioners.

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of 0.05. A total of 70 participants ('CST practitioners') completed the online survey but data from eight participants were excluded as they did not meet the inclusion criteria. The final sample of n=62 participants included 57 females (91.9%), 4 males (6.5%) and 1 other (1.6%). Additional demographic information is presented below (results).

Design

The study was designed as mixed methods, cross-sectional research. RQ1 and RQ2 included a within-participants quantitative design and were assessed using descriptive statistics. RQ3 included a within-participants correlational design with two continuous predictor variables (acceptability and perceived efficacy of CST) and two categorical criterion variables (whether participants ran CST groups, and the number of CST groups run). RQ4 and RQ5 included a qualitative survey design [33] with data examined using a thematic analysis [34].

Materials/Measures

The survey was presented on Google Forms and was divided into five sections. Section 1 included three demographic questions with multiple choice response options, including "what is your current occupation?", "tick the description that best describes your role", and "what is your gender?".

Section 2 included seven questions with multiple choice response options to assess participant's level of engagement with CST training (four questions) and implementation of CST groups (three questions). For level of engagement with CST training, the first question determined whether participants had attended training in Ireland, outside of Ireland or had not attended any formal training; the second question asked if those who had attended CST training had been trained by an accredited trainer; the third question asked how long ago the training was for those who had attended training; and the fourth question asked were those who did not attend training trained to deliver CST by a colleague or by following the CST manual (see supplementary material). For implementation of CST groups, questions included "have you ever facilitated or co-facilitated any CST groups in Ireland" (Yes/No); "if yes how many CST groups have you facilitated/co-facilitated" and "If you have run CST groups, approximately how many people (in total) have you delivered CST to".

Section 3 measured the acceptability of CST using the Theoretical Framework of Acceptability (TFA) questionnaire [35]. Prior research shows that the TFA is a reliable and valid measure of intervention acceptability [36]. The TFA included eight questions; sample TFA items were "CST is an acceptable intervention for people with dementia" and "CST is likely to improve patient care/ likely to improve the lives of those with dementia". Responses were measured on a 5-point Likert scale from 1-strongly disagree to 5-strongly agree. Items 3, 4, and 6 were reverse scored. Higher scores indicated a greater level of acceptability of CST. Cronbach's alpha for the current sample was .636.

Section 4 of the survey examined the perceived efficacy of CST. This section included six questions measuring participants' opinions on whether CST improved cognition, confidence, interest/engagement, communication, enjoyment and mood of their service-users. The questionnaire was adapted from the "Monitoring Progress Form" of the official CST manual, Making a Difference 2 [37] and included key outcomes identified in a systematic review of qualitative CST studies [14]. Sample questions included "As a result of CST, participant's Confidence levels were generally…" and "As a result of CST, participant's Interest/Engagement was generally…". Responses were measured on a 5-point Likert scale ranging from 1-not improved to 5-significantly improved. Higher scores indicated greater perceived efficacy. Cronbach's alpha for the current sample was .886. Participants only completed this section if they had run CST groups. If they had not run groups, they skipped to the final section.

Section 5 included three open ended qualitative questions that asked participants "what do you think are the key barriers to running CST groups?", "in your opinion, how might these barriers be overcome?" and "what are the most important factors that make CST easy to run – either in the community or to embed within a service?"

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Procedure

Ethical approval was granted by the lead authors' institution on the 10th February 2023 (Approval Number 1002202303). Participants accessed the survey via Google Forms & all participated online. Once participants clicked on the link to take part, a separate browser opened, and they were presented with the study information sheet. Once the study information was read, participants clicked 'Next' and were presented with the consent form. If participants consented to participate in the study, they clicked 'Next' to access the survey. Participation took approximately 15 minutes. There was no time limit for completion of the survey and participants could end participation at any point by exiting their browser. Once the survey was complete, participants were presented with the debriefing form.

Analytic Approach

Descriptive statistics of continuous and categorical variables provided an overview of participants' responses to address RQs 1 and 2. Inferential analysis included two binary logistic regression analyses to address RQ 3 and 4. For RQ5, qualitative survey data were analysed using a thematic analysis [38]. The first and second authors analysed the data, and we took a realist approach to examine the entire dataset. An inductive, data-driven approach was suitable as we had no pre-existing coding frame and aimed to understand participants' responses at face value. Responses were read multiple times, and coding and analysis followed the recommendations of Braun and & Clarke [38]. Analysis incorporated both semantic and latent themes, focusing both on the meaning of what participants wrote while also identifying underlying ideas and assumptions that informed the semantic content of the data. Like Braun et al. [34], we applied initial codes to all data using general/broad coding such as "time" and "suitability of participants". We subsequently collapsed code-names that were similar (e.g., "staffing" and "availability of staff") and expanded those remaining codes to be more explanatory. Those expanded codes were collated in a meaningful way to contribute to potential themes. The final two steps involved identifying and refining themes to provide a concise yet informative account of the data.

3. Results

Demographic information provided insights into the characteristics of participants who were trained in CST and/or delivered CST to people with dementia (RQ1). Variables included gender, occupation, and role description. The final sample of n=62 participants included 57 females (91.9%), 4 males (6.5%) and 1 person with another gender identity (1.6%). Most participants were either dementia advisors/dementia specialists (n=27) or SLTs/OTs (n=15). Other occupations included care assistants/home care coordinators, psychologists, and nurses (see Table 1). Participants predominantly worked with people with dementia on a daily or weekly basis (n=42) or worked with carers/families (n=15). Other participants worked with both people with dementia and families, conducted staff training, engaged in advocacy, or cared for a family member with dementia.

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Table 1. Demographics table showing the gender, occupation and role description of participants.

	N	Frequency
Gender		
Female	57	91.9%
Male	4	6.5%
Other	1	1.6%
Occupation		
Dementia Advisor/Dementia Specialist	27	43.5%
SLT/OT	15	24.2%
Care Assistant / Home Care Coordinator	6	9.7%
Psychologist	4	6.5%
Nurse	2	3.2%
Geriatrician/Psychiatrist	1	1.6%
Other (incl. health care coordinator for religious service; family member; training facilitator; principal of a primary school; assistant coordinator of services; activities assistant; advocate and former primary carer for PwD)	7	11.3%
Role Description	*N*	**Frequency**
Work directly with people with dementia on a daily or weekly basis	42	67.7%
Work more with carers and families than with people with dementia	15	24.2%
Assessment, training & intervention via staff teams	1	1.6%
Staff training	1	1.6%
Work both with people with dementia and families	1	1.6%
Community awareness and advocate for supports	1	1.6%
Principal, family carer	1	1.6%

Descriptive statistics in Table 2 show the level of engagement with CST training and implementation of CST by participants (RQ2). Most participants (95.1%) attended CST training and most of the training courses were delivered by accredited trainers (87.1%). Although 95% of participants were trained to deliver CST, 45.2% of participants reported that they had not facilitated or co-facilitated any CST groups. Regarding intentions for future CST groups, 16.1% of participants reported that they did not intend to deliver CST at any point in future while 29% stated that although they had not yet delivered CST, that they intended to do so in future. The number of CST groups delivered varied, with 25.8% of participants reported having facilitated or co-facilitated one to two groups, followed by 22.6% who have led more than seven groups. These data illustrate that while CST groups are being implemented, availability is not dependent on training.

Table 2. Frequency table showing participants responses to questions on the level of engagement with CST training and the implementation of CST groups.

Level of Engagement with CST Training		
Did you attend CST training in Ireland or elsewhere?	**N**	**Frequency**
Attended in Ireland	57	91.9%
Attended outside of Ireland	2	3.2%
Never attended CST training	3	4.8%
If attended CST training, was training delivered by an accredited/approved CST Trainer		
Yes	54	87.1%
No	1	1.6%
I don't know/Prefer not to say	5	8.1%
If attended CST training, how long ago did you attend		

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1-6 months ago	9	14.5%
7-12 months ago	17	27.4%
1-2 years ago	18	29.0%
2+ years ago	15	24.2%
N/A	3	4.8%
If you did not attend CST training, were you trained to deliver CST by a colleague who had attended training OR by following the CST manual		
Trained to deliver CST by a colleague who had attended training	5	8.1%
Trained to deliver CST by following the official CST manual	15	24.2%
I have never received any training in CST or used the CST manual	1	1.6%
NA/ Attended training	41	66%
Implementation of CST Groups		
Have you ever facilitated/co-facilitated CST groups in Ireland	**N**	**Frequency**
Yes	34	54.8%
No	28	45.2%
Number of Groups		
1-2	16	25.8%
3-4	1	1.6%
5-6	3	4.8%
7+	14	22.6%
NA- I have not run any CST groups and am unlikely to do so	10	16.1%
NA- I have not run any CST groups yet but aim to do so in future	18	29.0%
Approximately how many participants have you delivered CST to?		
None	29	46.8%
4-10	16	25.8%
12-20	7	11.2%
35-50	4	6.4%
56-75	3	4.8%
80-100	2	3.2%
150	1	1.6%

Descriptive statistics on continuous outcomes demonstrated the extent to which CST facilitators perceive CST to be an acceptable and effective intervention for individuals with dementia (RQ3). In terms of acceptability as measured by the TFA, participants (n=62) responded with primarily positive ratings (TFA mean total= 3.99, SD = 0.471 on a Likert scale of 1-5 with higher scores indicating greater acceptability), with the highest ratings on questions such as "CST is an acceptable intervention for people with dementia" (mean rating = 4.66, SD= 0.54) and "CST is likely to improve patient care/ likely to improve the lives of those with dementia" (mean rating = 4.47, SD= 0.67). Interestingly, the questions that participants scored lower on acceptability were those querying how CST might impact day-to-day duties. Responses were more negative for questions "it required or would require effort for me to deliver CST" (mean rating = 2.19, SD= 1.05) and "delivering CST interfered with (or would interfere with) my other priorities" (mean rating = 3.19, SD= 1.25). This indicates that participants agreed that CST is an acceptable, interesting and beneficial intervention, but they had concerns about their capacity to be able to deliver it alongside their existing workload.

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For perceived efficacy, as questions pertained to observations of behavioural change during CST, participants that did not run CST groups did not respond to those survey items. Participants who had run CST groups and responded to those survey items (n=34) had high Likert scale ratings when asked about the perceived efficacy of CST (Perceived Efficacy total, mean rating = 4.27, SD = 0.51 on a Likert scale of 1-5 with higher scores being more positive). The highest mean score was for the item "overall I found CST to be an effective intervention at making a difference" (mean rating = 4.56, SD = 0.59). See Table 3.

Table 3. Descriptive statistics for scores on individual questions for measures assessing the acceptability (TFA) and perceived efficacy of CST.

Acceptability (TFA)	***Mean***	***SD***	***N***	**Min Score**	**Max Score**
CST is an acceptable intervention for dementia	4.66	0.54	62	3	5
CST was (or would be) interesting to deliver	4.66	0.60	62	3	5
It required (or would require) effort for me to deliver CST*	2.19	1.05	62	1	5
There are negative moral or ethical consequences to the delivery of CST*	4.13	1.05	62	1	5
CST is likely to improve patient care/ likely to improve the lives of those with dementia	4.47	0.67	62	2	5
Delivering CST interfered with (or would interfere with) my other priorities*	3.19	1.25	62	1	5
I am confident that I can perform the necessary steps to deliver CST effectively	4.06	1.02	62	1	5
It makes sense to me how CST would result in improved patient care/improved outcomes for those with dementia	4.56	0.61	62	3	5
TFA Total	3.99	0.47	62	1	5
Perceived Efficacy	***Mean***	***SD***	***N***	**Min Score**	**Max Score**
As a result of CST participants confidence levels were generally:	4.13	0.73	39	2	5
As a result of CST participants interest/engagement was generally:	4.13	0.57	39	3	5
As a result of CST participants communication ability was generally:	3.95	0.69	39	3	5
As a result of CST participants level of enjoyment was generally:	4.49	0.64	39	3	5
As a result of CST participants mood was generally:	4.34	0.63	38	3	5

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Overall I found CST to be an effective intervention at Making a Difference	4.56	0.59	39	3	5
Efficacy Total	4.28	0.52	38	2	5

* Items were reverse scored

Inferential Analysis

A binary logistic regression was conducted to examine whether the acceptability of CST (predictor variable, PV) predicted the likelihood that participants had implemented CST groups (RQ4). The criterion variable (CV), implementation of CST, was measured based on whether participants had ever facilitated or co-facilitated a CST group (Yes, n= 34; No, n= 28). The model was statistically significant X2 (1) = 9.165, p=0.002; explained 18% of the variance (Nagelkerke R2) in CST implementation; and correctly classified 66.1% of cases. Higher levels of acceptability were associated with an increased likelihood of implementing CST (Wald = 7.65, p=0.0¬¬¬¬06). The odds ratio for acceptability of CST was 1.25, suggesting that for each one-unit increase in acceptability, the odds of implementing CST increased by a factor of 1.25.

To facilitate the regression analysis and to determine whether perceived efficacy (PV) predicted implementation of CST for those that ran groups then (n=34), the number of groups run (CV) was recoded as a binary categorical variable where participants either ran 1-4 CST groups (n=17) or 5-7+ CST groups (n=17). A binary logistic regression demonstrated that higher levels of perceived efficacy was associated with an increased likelihood of running a greater number of CST groups (Wald = 6.716, p=0.0¬¬¬¬10). The model overall was statistically significant X2 (1) = 9.164, p=0.002; explained 31.5% of the variance (Nagelkerke R2) in the CV; and correctly classified 76.5% of cases. The odds ratio for perceived efficacy was 1.676, suggesting that for each one-unit increase in acceptability, the odds of running a greater number of CST groups (5-7+ compared to 1-4) increased by a factor of 1.676.

Qualitative Thematic Analysis

Data from the survey included 231 excerpts of text for which initial codes were generated by the first and second authors. Data from question one was coded independently with data from subsequent questions coded collaboratively. When initial similar codes were collapsed, a set of sixteen codes remained which we expanded to improve informativeness (e.g. “time” became “time to deliver the intervention with an already busy schedule”). We initially identified eight emergent themes and subthemes which were then refined to the final set of three themes including Resources, Awareness and Education, and Acceptability of CST.

Table 4. Table showing emergent and refined themes identified from the qualitative survey data.

Emergent Themes/Subthemes	Refined Themes
Workloads and capacity of staff	Resources
Funding (increased staffing and other tangible resources)	
Logistics	
Accessible venue at a suitable location with transport provided	
Accessing suitable participants	Awareness and Education
Awareness, education and buy-in for CST translating to supported delivery	
Communication within and amongst stakeholders	
Acceptability of CST	Acceptability of CST

Theme 1: Resources

Participants described resources that as barriers or facilitators to the implementation of CST, including staff time, funding, suitable venues and transport. In relation to staffing, participants

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suggested that due to already busy schedules, they may not have time to deliver CST, and that capacity to fit CST into current workloads was a key barrier. For example, responses to question 1 ("what do you think are the key barriers to running CST groups") included "*Limitations on people's time who might be expected to deliver this training i.e. daycare managers, DAs etc*"; "*It would be extra work and I have a full workload*"; "*… the main barriers were being short staffed and having to cancel the group at short notice… not having a helper… and finding time to prepare for the groups, most of the preparation was done in my own time*." Participants identified the need for local services and management to prioritise CST and ensure protected time to deliver groups and plan appropriately. "*Time and resources that the planning and setting up of the group requires*"; "*space, time, caseload demands*"; "*support from managers*"; "*support from other services; "Support from other health professionals*". Some stated that additional trained staff were required to support greater capacity and alleviate workload to facilitate CST "*Not enough CST Trainers in the country; "Sufficient staff trained in CST*".

Funding was described as a necessity, not only to hire additional staff but also to resource the running of groups "*No funding for materials/supplies - only able to plan sessions within our resources*"; "*lack of resources, both financial and personnel to run a CST group*", while other logistical resources like adequate space, an accessible venue and providing transport for participants were also seen as priorities "*Space, finding an appropriate location. Transport… rural Ireland, no public transport available*". "*Lack of transport for those who don't drive, families can't consistently take them, or they can't safely navigate public transport*".

To overcome barriers, participants suggested that coordination with other multi-disciplinary teams as well as support from managers would be crucial. Some also suggested that having a network or team of CST facilitators would be helpful in planning/managing groups. Staff considerations included staff numbers/time but also having a set service or team that would deliver CST; and having CST as part of defined staff roles. To support this, participants suggested that CST should be offered as a standard or stand-alone service "*CST could be delivered through MTRR, memory clinics*", "*HSE funded as a standard service using a national coordinated approach*", and that CST might be considered as a community-based service "*HSE funded and not diluted by other services (e.g., not taken out of day room in day care service) but proper community locations identified*"; "*CST not only in health environment setting but run in the community by groups with support/assistance from health care professional*". Participants identified the need to identify and link-in with already existing community initiatives around the country to support implementation of CST, such as community volunteers "*I have facilitated a successful CST group for 15 months. We are in a local Community Centre with local people as Volunteers. There is no reason why we shouldn't have CST in every town in Ireland*" or local transport initiatives "*linking in with local council services to see if flexibus can accommodate any PLwD to attend the group*".

Theme 2: Awareness and Education

Participants wrote about a "*lack of awareness of CST in general and potential benefits*" as a barrier to implementation, and that education and awareness raising would be key facilitators. Specifically, there was a desire to educate PLwD and their families, as well as health and social care professionals about what CST is, its benefits and the evidence-base. Some suggested that access to suitable participants might be a barrier to CST implementation, but if PLwD and their families were informed about the benefits of CST this might encourage greater participation when CST is available "*Communication to families with a diagnosis of dementia the importance of CST*"; "*Inform and support both clients and family members*". Responses highlighted the necessity for appropriate/informed referral processes to ensure that suitable participants are recruited, and that knowledge of CST could support appropriate referrals "*Access to the right cohort of patients is ideal - we gain referrals from our outpatient care of the older persons team which all of 3 of us running the [CST] groups work in, so we can target the right population for the group*".

The data also showed that awareness raising for healthcare professionals should include good communication within and between teams about what CST is, the evidence base, what is required to run groups, and ideally a roadmap for standardised implementation. Many participants suggested that increased awareness about CST could contribute to overcoming barriers and promote greater

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implementation and buy-in: "*Increased promotion of CST as an evidence-based intervention for dementia care to facilitate OTs to prioritize this work and facilitate protected time … CST*" and "*Better understanding of value of CST by Management …will then filter down and help get CST programs prioritized, and funding/staff/ etc. made available to run the programs*". At times, participants described how they took the responsibility to inform and educate others- and how helpful information provision was "*After I did the flyer and explained to everyone what the group entailed things were much better. I contacted relatives and told them about CST and would they have any objections to their family member being involved. I spoke with my manager and told them I needed to commit to two weekly sessions for eight weeks at a time and things went really well then*". Overall, raising awareness of CST was seen as important, and the inclusion of CST as a recommended post diagnostic support in the HSE Model of Care for Dementia is seen as very beneficial in this regard.

Theme 3: Acceptability of CST

Response to all three open-ended questions on the survey demonstrated that participants have positive opinions about CST and indicate that CST is a valued and highly acceptable intervention. Participants wrote about their positive experiences of implementing CST and its impact on PLwD and families: "*Lots of family members commented on the change in mood and more communication from their relatives and I could definitely see the benefits*"; "*It's simple and easy to run and very enjoyable and its rewarding to see enjoyment residents got from CST*"; "*it can be a very cost efficient service but one that gives hope to so many people, particularly newly diagnosed and early onset when so little suitable supports are on offer*". Also highlighted was the acceptability of CST across disciplines "*It is fun, so people enjoying coming and it makes the group a positive event…. The consultants and multidisciplinary teams I have worked with in psychiatry and neurology are positive and supportive of me providing this intervention.*"

Participants described the ease at which they felt CST could be incorporated into current service-provision, the cost-effectiveness of CST and how useful the CST manuals are "*The making a difference manual provides an excellent framework to guide and plan each session, and the outcomes/benefits to those attending CST*"; "*It is a fun group; manual is clear; flexibility within manual allows bespoke adaptations to match the needs of the people taking part in the group*"; "*Once you have the equipment and the manual makes everything easy! I found there was very little expense and a lot of materials I used were donated. I had access to the same room for eight weeks, some residents used to comment on entering that they had been there before, and they really liked the room which to me was great to hear because they enjoyed being there*".

Where participants did not have an opportunity to offer CST, they wrote about their disappointment that CST was not available "*CST is a valuable resource for PLwD and a service we have missed to offer people as an early intervention*"; "*These groups need to be out in the community*" or about their desire to do whatever possible to support implementation "*It was hoped that [an existing dementia service] would deliver CST. The service is currently not operating and there is difficulty around recruitment of staff, etc which makes delivery of CST extremely difficult. As DAs [dementia advisors] we would be willing to assist in any way we can.*" Overall, the data clearly demonstrate high levels of acceptability for CST, and aside from concerns around resource implications of running CST, there was no negative feedback about CST identified across any of the data.

4. Discussion

Summary of Key Findings

The aim of this study was to examine the characteristics, experiences and opinions of practitioners who have attended CST training and/or have delivered CST to people with dementia in Ireland. Despite receiving extensive training, a sizable proportion of participants did not facilitate or co-facilitate CST after training, indicating a considerable implementation gap. The data from the TFA showed that even though participants evaluated the intervention as acceptable, they also revealed challenges to the successful adoption of CST, specifically that it would conflict with their current priorities and workload, in accordance with prior findings [39]. The qualitative data supplemented the TFA scores by further explaining that barriers to the implementation of CST related to resource

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constraints. The data underscore the pivotal role of resources and organisational support in the implementation of CST. Practitioners frequently mentioned the shortage of time, funding, a suitable venue and staffing as substantial barriers. These findings align with previous research indicating that lack of resources is a common barrier to the implementation of psychosocial interventions in dementia care [23]. To alleviate these barriers, participants advised that services and management should prioritise CST by guaranteeing staff time to organise and plan CST sessions. Moreover, the need for investment to hire extra staff and provide resources for conducting CST groups was highlighted. The qualitative data also suggests that awareness and understanding of CST, the recruitment of suitable participants for CST, and logistical difficulties are barriers faced by practitioners in the implementation of CST in community settings.

Participants not only reported that CST was acceptable (TFA) but also that it was deemed effective (perceived efficacy scale). Specifically, participants reported that PLwD were likely to experience positive outcomes through engaging with CST across multiple domains, with high mean scores for improvements in confidence, self-esteem, communication ability, quality of life and mood, consistent with prior research findings [5]. The qualitative data further support that CST is perceived as a valuable and acceptable intervention (theme 3). The logistic regression analysis revealed that practitioners perceived acceptability of CST was a strong predictor of whether they facilitated or co-facilitated CST groups; and that higher levels of perceived efficacy were significantly associated with an increased likelihood of running a greater number of CST groups. These findings are consistent with existing literature, which has shown that the perceived value and appropriateness of an intervention can significantly influence its adoption into routine practice [30]. This also strengthens the idea that when practitioners perceive an intervention to be effective, they may be more motivated for its integration into care plans [5, 23]. Future research could focus on exploring specific factors that contribute to high levels of acceptability of CST by practitioners, such as format, content or facilitator characteristics. Additionally investigating how these factors may impact the successful implementation of CST in specific settings or diverse populations could provide valuable insights into intervention outcomes [29]. Given identified barriers related to resource constraints, future research could focus on strategies to overcome implementation gaps in low-resourced settings [23].

Despite strong perceived acceptability and efficacy of CST among practitioners, the broader implementation of CST is hindered by a significant lack of awareness and education about the intervention among healthcare professionals, PLwD and their families or companions. This lack of awareness can have a direct effect in limiting appropriate referrals and uptake of CST. Participants noted the importance of educating all stakeholders about the benefits and scientific evidence supporting CST. This is in accordance with the literature, which reports that increasing knowledge and awareness of dementia interventions is a facilitating factor in adoption and implementation [26]. To address this gap and enhance awareness and understanding of CST, future studies could identify the barriers to public and professional awareness of CST to further understand why CST is not widely known among healthcare professionals and families of PLwD in Ireland. Developing and assessing the impact of public awareness campaigns for increasing knowledge and acceptance of CST among healthcare professionals, PLwD and their families is another important avenue of future research.

Implications for Practice and Policy

To address the implementation gap, our research suggests the importance of providing ongoing support and training for CST practitioners. Establishing a network or team of CST facilitators could improve collaboration and resource sharing. In addition, embedding CST training as a standard part of professional development of those working in dementia care could enable more practitioners to be prepared to deliver CST. Policy initiatives should prioritise funding and supports for implementation of CST, recognising it as an important evidence-based service within dementia care. The inclusion of CST in the HSE Model of Care for Dementia is a positive step, but further work is needed to secure dedicated funding and resources. A coordinated national approach to the implementation of CST could ensure more consistent availability across different regions. The mobilisation of community resources and volunteers can also play a vital role in the delivery of CST implementation, particularly

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in rural areas where access to services is limited. Local councils and community organisations should be encouraged to support CST initiatives, possibly by providing additional venues, transport, and volunteers.

Limitations and Future Research

Recruitment was difficult, and although over 450 people are trained to deliver CST, only 70 responded to the survey. This is likely suggestive of the limited time staff have to engage in research on top of busy workloads but may also suggest that our recruitment efforts did not reach all trained facilitators. Our final sample of n=62 was slightly below the minimum required for a regression analysis (n=68), potentially reducing the statistical power of the analysis. This may increase the risk of Type II errors and make it more difficult to detect significant differences. Despite the lower-than-expected sample size, targeted sampling meant that we did access a variety of relevant professionals trained to deliver CST, and those participants provided valuable insights into CST implementation in Ireland. The current study utilised the TFA to assess acceptability; while the TFA questionnaire is useful for understanding acceptability of healthcare interventions, future studies should use it in conjunction with other methods to gain a more comprehensive understanding of acceptability of CST. That said, we did consider response effort and aimed to keep this low, with a view to reducing burden and increasing engagement for busy staff. Balancing response effort and informativeness is always a consideration for this type of research.

Despite limitations, a key strength of this study is the mixed methods approach. The benefit of using mixed methods in implementation research is well recognized [40, 41]. Palinkas and colleagues explain that while quantitative methods can test hypotheses regarding predictors of successful implementation, qualitative methods provide additional important insights into specific reasons for implement gaps in evidence-based care [40]. The combination of both approaches provides a superior exploration of the research topic compared to what either qualitative or quantitative methods can offer in isolation. Although this research is an important first step in analysing the barriers and facilitators to CST implementation, the data only represent the views of one group of stakeholders. Stoner et al. [24] outlined a more comprehensive three-phase methodology, based on the Consolidated Framework for Implementation Research (CFIR), which resulted in standardized plans to successfully translate CST research to practice. An important next step for our research team is to examine diverse stakeholder perspectives as suggested by Stoner et al., and to use the methodological template provided by CST-International to advance implementation efforts in Ireland.

5. Conclusions

Overall, participants affirmed their positive perceptions of CST and indicated a strong collective belief in its sustainability as an intervention for individuals affected by dementia in Ireland. CST is a valued intervention among practitioners, and this study has positively demonstrated its treatment acceptability and implementation. Staff, time and capacity were inextricably interlinked as staff need structured defined time to be able to deliver CST and require workload balance and training to ensure capacity to offer CST. Addressing these barriers through enhanced training, funding, and community involvement can facilitate wider adoption of CST, ensuring supports for people with hidden disabilities such as dementia have equitable access to evidence-based interventions. Future research should seek input from other relevant stakeholder groups on the barriers and facilitators to CST implementation and should refer to the CFIR and the ongoing implementation research by the CST-International group. Our collective research endeavours should not only improve the quality of care for people with dementia but may also serve as a model for other countries facing similar challenges offering evidence-based supports.

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