

# **Group Experiences of Cognitive Stimulation Therapy (CST) in Tanzania: A qualitative study**

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### **Disclaimer**

The views expressed are those of the authors and not necessarily those of the MRC.

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The authors report no conflict of interest.

### **Abstract**

**Background:** Tanzania is a low-income country in which medication for dementia is largely unavailable. Cognitive Stimulation Therapy (CST) is a group-based psychological treatment for people with dementia (PwD), shown to improve cognition and quality of life (QoL). It has previously been culturally adapted and piloted in Tanzania, with findings showing similar benefits. Previous research suggests that processes inherent to the group nature are key to its success. This study sought to gain insight into these group processes occurring within Tanzanian CST and understand their impact on CST principles and outcomes.

**Methodology:** Data collection took place in rural Hai District, Tanzania, through qualitative semi-structured interviews. PwD who recently attended CST groups and group facilitators were asked about their experiences of the

groups. Participants were recruited through convenience sampling.

Interviews were audio-recorded, translated, and transcribed. Transcripts were analysed by thematic analysis.

**Results:** 16 PwD and 4 facilitators were interviewed. Two main themes emerged: 'Positive group experiences' and 'Negative group experiences'.

From this, a number of group processes were identified. Positive processes supported CST principles and participant improvement. Facilitators were influential over group dynamics.

**Conclusions:** The group processes identified in this study impacted upon CST principles and outcomes. These findings support previous studies, explaining how CST improves PwDs' QoL and cognition. Group experiences were influenced by cultural factors, with comparisons made with UK research. Further research into how these processes could be enhanced or reduced could help optimize the efficacy of treatment.

**Keywords:** Cognitive stimulation, Group Therapy, Tanzania, Dementia and Cognitive Disorders, Low-resource Mental Health Interventions

## **Introduction**

The global burden of dementia is rapidly increasing. This is largely attributable to increased cases in low- and middle- income countries (LMICs) as the populations undergo demographic transition with result in increase in the older population (Prince et al., 2008). Some of the largest increases are expected across sub-Saharan Africa (Prince et al., 2015). A

lack of geriatricians, neurologists and psychiatrists in low-resource settings is a major challenge for diagnosis and management (Dotchin et al 2012) renders pharmacological management of dementia inviable (Dotchin et al., 2012).

Cognitive stimulation therapy (CST) is a non-pharmacological, evidence-based intervention for dementia (Spector et al., 2003). A systematic review showed that it significantly improves patients' cognition and quality of life (QoL) (Lobbia et al., 2019). Improvements in language function, including word-finding and comprehension have also been found (Spector et al., 2010). CST is cost-effective and the only non-drug treatment recommended by the UK National Institute of Clinical Excellence (NICE) to treat cognitive symptoms in dementia (Knapp et al., 2006). CST improves patients' cognitive and social functioning, through a broad range of themed activities (Woods et al., 2012). Groups are facilitated by a trained therapist, nurse or carer. Key principles include maximising potential and discussing opinions rather than facts; focussing on individual strengths (Spector et al., 2011).

CST has been successfully adapted for use in sub-Saharan Africa (Mkenda et al., 2016). A study in Hai district, Tanzania showed that CST significantly improved patients' cognition, QoL, anxiety and behavioural symptoms (Paddick et al., 2017). For a four-point cognitive improvement on the adapted Alzheimer's Disease Assessment Scale-Cognitive, the number needed to treat was two (Paddick et al., 2017). Practically and economically CST has proved suitable for use in low-resource countries as it can be

delivered by non-specialist health workers, requiring little specialist equipment (Mkenda et al., 2016).

A recent RCT concluded that Individual CST (iCST), delivered one-to-one by a family member or carer at home, did not improve participants' cognition or QoL (Orrell et al., 2017), suggesting different mechanisms may occur within the two formats. A qualitative study by Orfanos et al. (2020) identified group processes within group CST in the UK through interviews with participants. Positive experiences included the 'importance of companionship', 'togetherness and shared identity' and 'cognitive stimulation through group interactions'. There were also challenges to the group experience, for example in 'feeling unable to express oneself'. The authors suggest the process of working through these challenges may aid skill development, benefitting participants. Lobbia et al. (2019) explained the group format benefits participants through interaction with others, enabling self-expression. A qualitative study by Spector and colleagues (2011) showed factors fundamental to the group format were linked to positive experiences and changes reported by participants, carers and facilitators. Of particular importance was the conversational aspect. Group psychotherapy has been recommended in older patients to alleviate social isolation and loneliness (Cattan et al., 2005).

To the authors' knowledge, no previous studies have explored group mechanisms behind CST in sub-Saharan Africa. Insight into these may help identify therapeutic advantages and/or disadvantages of aspects of the group format, which could subsequently be reinforced or reduced to enhance therapeutic effect. This study aimed to gain understanding into experiences

of group processes and their impact on CST principles and outcomes, through exploring the perspectives and experiences of participants and facilitators of CST in Tanzania.

## **Methods**

### ***Setting***

Data collection was carried out in four villages in Hai District, in the Kilimanjaro region of northern Tanzania. Most inhabitants are subsistence farmers, whilst others produce cash crops including tomatoes and coffee (Paddick et al., 2017). The main language spoken in the area is Swahili, and the Chagga are the largest tribe. In older adults, educational attainment is low, with over two-thirds of older women having received no formal education (Longdon et al., 2013). Each village has a trained enumerator, previously involved in healthcare research collecting census data (Ministry of Health and AMMP Team, 1997). They have knowledge of the local area including residents of each Balozi (a collection of an average of 10 households).

### ***Topic guide development***

One of the authors recently published a study exploring group processes in CST in the UK (Orfanos et al., 2020). The same methodology was used for this present study, enabling cross-cultural comparison. Topic guides for the semi-structured interviews were developed, one for PwD, another for facilitators to enable interviews to contextualise and validate group

members' experiences. These topic guides were adapted for use in Tanzania and translated into Swahili. Whilst topic guides helped structure the interviews, additional questions were used to probe or clarify answers. Throughout data collection, the topic guide was continually revised and modified according to post-interview findings. This improved interpretation accuracy.

### ***Procedure***

Semi-structured interviews took place in March and April 2019. Interviews were carried out in English; interpreted into Swahili by a local translator (ES) experienced in qualitative research. Verbal and written information was given to all participants in their preferred language and read aloud to illiterate participants. PwD recruited to the study had mild-moderate dementia so were deemed as having capacity to consent themselves. Written consent was obtained by signature or thumbprint.

Interviews were recorded using a Dictaphone. Contemporaneous field notes, including observations of body language and environment, were taken during interviews on hard copies of the topic guide.

Interviews with PwD were undertaken in their homes or at the local dispensary. Facilitator interviews took place at Kilimanjaro Christian Medical Centre (KCMC), the main regional hospital. All PwD were interviewed with a caregiver present; some were required to translate from a local dialect into Swahili.

Translation and transcription of interview recordings from Swahili to English were carried out by three experienced local translators, to avoid overwhelming one individual with data. The researcher and translator reviewed each transcript together, ensuring accurate translation of meaning. The translators were unable to transcribe certain local dialects; in these cases, the caregiver's Swahili translation was used in the results.

The study received local ethical approval from Kilimanjaro Christian Medical Centre Research Ethics Committee and national ethical approval from the National Institute for Medical Research, Tanzania.

### ***Inclusion Criteria***

For PwD: (a) Was still attending or has attended CST groups within the last 10 weeks, (b) DSM-IV criteria for dementia confirmed by consultant psychiatrist or geriatrician, (c) diagnosed as mild-to-moderate dementia, (d) had sufficient memory of CST groups as determined by the researchers, (e) had sufficient verbal communication to conduct interview, (f) could give full verbal and written consent. For facilitators: had experience in observing or leading at least one of the recent CST groups.

### ***Data Analysis***

Transcripts were analysed by thematic analysis; stored and coded on NVivo coding software. Braun and Clarke's guidance (2006) was followed throughout. This was a five-stage process: (1) familiarisation of transcripts, (2) generating recurrent data into codes, (3) collating codes into themes, (4) reviewing of themes and (5) refinement of themes. In line with guidance,

the frequencies of codes within themes have not been included as the research intends to provide deep description of social phenomena rather than quantify empirical material (Ritchie et al., 2013). Furthermore, considering the small sample size, frequencies hold little significance and may be misleading (Ritchie et al., 2013). To increase the trustworthiness of the data, inter-rater credibility checks of codes and themes were undertaken by external qualitative researchers. An inductive approach was used in analysis with codes and themes being data-driven (Silverman, 2010). A realist epistemological approach was used to generate codes, assuming a unidirectional relationship between language, experience and meaning (Orfanos et al., 2020).

## **Results**

With the aim of mirroring the study from which the topic guide was adapted (Orfanos et al., 2020), 15-20 PwD was the intended sample. 21 PwD were recruited through enumerators from four recent CST groups across Hai district. Of these, two had no memory of the sessions and three did not have a formal dementia diagnosis. When screened for cognitive impairment using the IDEA cognitive screen (Paddick et. al, 2015; Gray et al. 2016), they scored in the lowest group and were therefore selected for and attended CST. When formally assessed by a psychiatrist, they did not meet DSM-IV criteria. Of the four facilitators interviewed, one was a senior, and three were recently qualified, Occupational Therapists (OTs). Facilitators all led one or more recent CST group in Hai. Interviews with PwD lasted between

19 and 57 minutes (mean= 36); facilitator interviews lasted between 46 and 70 minutes (mean= 60).

<b>Characteristic</b>	<b>PwD (n=16)</b>
<b>Gender</b>	
Male	6
Female	10
<b>Age</b>	
70-79	4
80-89	8
90-99	3
≥100	1
Mean age in years (standard deviation)	82.3 (7.3)
<b>Religion</b>	
Christian	15
Muslim	1
<b>Tribe</b>	
Chagga	14
Massai	1
Pare	1
<b>Educational Level</b>	
No formal education	15
≥8 years formal education	1

**Table 1- Table summarizing PwD Demographics**

### *Themes*

This study sought to explore participants’ and facilitators’ group experiences of CST in Tanzania. Thematic analysis revealed 2 main themes, each of which contain 3 subthemes, summarised in figure 1:

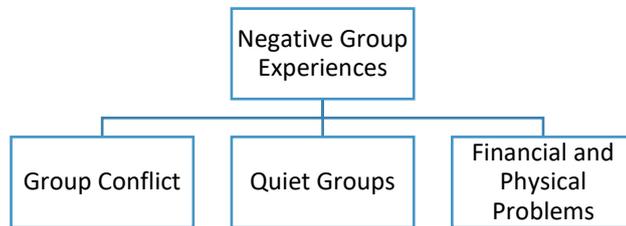
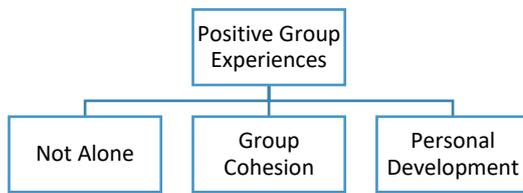


Figure 1- Summary of themes and subthemes

***Theme 1- Positive group Experiences***

***Subtheme- Not alone***

Feelings of social isolation were common among participants, often due to poor physical health. They could not work or visit friends so stayed alone at home. Attending groups alleviated loneliness and participants felt more active during the 7 weeks of CST.

*‘Whilst being at the group I was more active. I walked to the group, now I am able to walk slowly to go visit my neighbours.’ –*

*Participant 12 (P12)*

Being around others provided distraction from physical illness. When the sessions finished, participants became lonely and felt they deteriorated. Other participants reported an increase in physical activity, now walking to visit nearby friends.

*'It (being in the group) helped her a lot because she was very happy, she was very active when she came from the group and her memory was so active, but when the groups ended, she started to be sick again. She is not active again and felt depressed.'* – Caregiver of P12 (C12)

PwD felt similar to other members. Prior to CST, many were unaware other people experienced memory problems, but in groups they felt understood.

*'No, I didn't tell anyone (about my memory problems) because everyone has memory problems and everyone at some point says, "I don't remember this" ... Yes, we laughed, one woman says I don't remember this, then others can say "I even don't remember!"'* - P13

Being around other people of a similar age put participants at ease and enabled them to share memories. Some knew each other from childhood so reminisced together. Talk of the past was used to initiate discussions.

*'She went there and met with other women, they were the same age, they sang the songs they used to sing in the past in circumcision celebrations. They asked her "can you sing the songs for us?" and she sang the song and other women sang back up.'* – C16

*'They talked a lot about the past... They were able to recall a lot of things they used to do when they were young and compare with current things.'* – Facilitator 1 (F1)

Subtheme- Group Cohesion

The groups were described as a safe space. Participants trusted other members over those outside the group. This was supported by facilitator observations.

*'If I mix with people from inside the group my memory will continue to improve but mixing with other people with memory problems outside the group might make my memory worse because they don't have the same skills we gained...'* – P1

*'It seems like there are things she could not say to anyone else, but she was kind of free to talk in the group.'* – F1

Overall, participants enjoyed attending groups, expressing positive feelings for other members. They felt respected, included and a sense of belonging. Laughter, particularly during activities, was often reported.

*'I think they felt like they belong somewhere... for them having that badge and sitting in the group, having the group name and the song made them feel more part of the group.'* – F4

*'We laughed, we were doing different activities. We made mats, pot mats and we danced the traditional songs. We played like kids.'* –

P13

Participants worked together in activities- those more able helped and encouraged the involvement of others. In discussions, they reminded each other of past memories. Many led group activities, encouraged by facilitators. Participants physically assisted others, helping those less able to walk to the sessions, rather than taking the transport provided.

*'Each one knew to make different things, so they (the other group members) helped her to hold some material and she made a pot mat.'* - C16 (P16 visually impaired)

*'There was this one who couldn't see, in the first times we used to fetch them (by car), but there were other ones who could just walk her home, and she was like "okay, I won't take a car, I just walk home."'* – F1

In rural Tanzania, although the majority speak Swahili, many older people speak only their tribal language. Facilitators could not speak local dialects. As participants lived in close proximity, they generally spoke the same dialect. Those who spoke both translated for others.

*'There was someone who could understand Swahili and translate it to their language. That means the group work together more closely. So, when they were interacting in their local language, you could see the participation was higher.'* – F4

#### Subtheme- Personal development

Isolated participants lacked interaction at home- families automatically attended their needs. Groups were a safe space to practice social interaction.

The activities enabled this. Participants and facilitators saw improvements in communication skills, behaviour and self-control.

*'Sure, there are changes, very big changes. The way I used to speak in an uncontrolled way, shouting abuse, being rude... and now I have more control over what I say, where I was not listening well- for sure it has helped.'* – P1

*'At the beginning... they were not communicating, came silent. But as time goes on, we find them trying to express words, trying to socialize with each other.'* – F3

Attending the groups structured participants' weeks, giving them something to look forward to. On the morning of the group, participants prepared themselves early. Some started walking to groups themselves.

*'The changes are as if he remembers today that the car is coming, he prepares himself, showering well, dressing well, he has changed.'* – C6

Through activities, participants were reminded of previous household roles. There was an increase in home activities undertaken and participants contributed to family discussions by talking about the groups. The programme also increased understanding and acceptance of dementia by the wider community.

*'I've started to do more of my home activities slowly, one by one.'* – P1

*'She was happy before; she was talking about the group every time with her grandsons and they laughed about it, saying she was 'graduating' from school.'* – C12

## ***Theme 2- Negative Group Experiences***

### *Subtheme- Group Conflict*

Individuals' challenging behaviour sometimes upset others and caused distraction. Certain members pointed out others' incorrect answers and made hurtful remarks. Whilst some dominated conversation, others required persuasion to participate in activities that they initially felt were too childish.

*'...one of the members dominates others, all the time speaking. And if another wants to speak, they say "stop! You don't know about that."'* – F3

Differences in religious beliefs caused friction and limited conversation topics. Facilitators intervened if tensions arose. Each session was opened with a group song. A church song was once chosen, which upset individuals of other beliefs. It also limited locations where groups could be held as churches were unsuitable.

*'It can affect the socialization because many people... discuss religion, if not religious it's politics, if not politics it's gossips. If you cannot discuss politics because you don't read newspapers or you don't watch television, you don't have much to talk about. So the only thing many people talk much, here is religion. We sit in a*

*group and you are feeling 'I can't talk frankly because of the Muslim people' or Muslim people think 'I don't want to hear what Christians are going to say about me.'"* – F4

Tribal differences presented issues. One group mostly contained members from the Maasai Tribe, in which men are deemed more powerful than women. The facilitator noticed another predominantly female group spoke more openly, about their experiences as women. Many participants said a gap was left between everyone's chairs. In one group, men and women sat separately.

*'Sometimes there is this issue of gender balance, maybe in the communities, men are more powerful than women... They tell other people to be quiet "because I am a man". So, it is also observed that in the Maasai area... "I am speaking, why are you speaking? Wait until I finish.'* – F3

*'He said "when they were together with my wife here, if there is anything I want, I want something, I tell her speak, do this and that.'"* – Wife of P6

Participants of higher social status were more respected and recommended to lead tasks. Those from lower educational or financial backgrounds were less trusted. Illiteracy was common; some struggled to understand questions and activities. Intertribal differences in education existed- the Maasai tribe generally had less formal education than others. The inability to undertake an activity deterred from participation.

*'I find someone saying "ah... this person doesn't know anything... because, (they're) not able even to go to school." ... By seeing the*

*person maybe has worn clothes and the way he is speaking ... also can bring the poor trust to others.’ – F3*

Living within small communities, participants already knew each other; some families had unresolved conflicts, for example over land. Facilitators were mindful of this when leading discussions. Individuals avoided sharing personal problems due to fears of gossip.

*‘If I quarrelled with my husband or my son, why would I tell anyone?... Because there are people who gossip a lot.’ – P9*

*‘She didn’t tell them her secrets, like ‘I slept without having eaten’ or ‘I woke up without eating anything.’’ – C12*

#### Subtheme- Quiet Groups

Some groups contained less talkative members than others; participation was lower in quiet groups. Facilitators encouraged involvement, however in particularly quiet groups relatives were asked to attend. Active participation was lower in afternoon groups than the morning as participants were tired.

*‘It was challenging because it was done in that group, which was not so active, it didn’t have an active person to get it going unless the facilitator would prompt people.’ – F1*

Groups were run in Swahili. Members who spoke only their tribal language found it hard to contribute in discussions. Although bilingual individuals translated, a language barrier existed making it difficult for leaders to include everyone. Facilitators also found it hard to navigate cultural

intricacies. When participants spoke in their local dialect, interaction increased.

*'We facilitators were not familiar with things like language... and also their culture... I am a Chagga from Kilimanjaro, but I come from Marangu not Masama... they speak very different local languages, their culture is also different... So, sometimes it makes it difficult to bring in... examples which relate to their culture.'* – F2

Although many participants said it was easy to speak in groups, facilitators noticed concerns over answering incorrectly. When participants did not understand, they remained quiet. Although members were reassured there were no wrong answers, these were often laughed at. Participants waited for facilitators' instructions, even when given a choice over activities.

Facilitators thought this may have stemmed from a paternalistic healthcare professional-participant relationship.

*'There are some activities maybe they find difficult to do... for those ones who have never been to school they are afraid it is like a test, we are testing their intelligence.'* – F4

#### Subtheme- Financial and Physical Problems

Poor physical health reduced participants' abilities during activities, leaving them discouraged. Physical ability varied; those with poor health became frustrated, feeling they gained less from the sessions. Facilitators used alternative, time-consuming means of communication to include those with sensory impairments and other members became impatient.

*'One thing which made her feel bad is where others can stand up and dance, but she was not able to do that due to her weakness.'* –

*C12*

*'In the group she felt like her memory was worse than others because other people were more active than her, so she felt a lot of pressure.'* – *C15*

Talk of physical illness often distracted participants. Many complained, expecting treatment in tablet form. Facilitators had to re-explain the purpose of CST and redirect the focus to activities.

*'They would think that even they met there for their other physical problems not even for dementia, so we had to remind them over and over because they'll be like "Ooh my eye really hurts, ooh my blood pressure is very high." So, we have to keep on telling them "now this group is for memory... Because they kept on pushing like "we really want medication."'* – *F1*

Financial hardships were common. Participants asked facilitators for financial help, inciting others to ask. Some struggled to afford food, affecting their physical health and concentration. Participants were given a fizzy drink and donut at the end of each session which, for many, was an important aspect of the sessions.

*'There were some elderly who were telling us that "you know I am not only having memory problems" ... "This problem at home, I don't have food." ... They were thinking that we can offer them money to cover some problems they were facing.'* – *F2*

Financial difficulties and physical illness were barriers to socialising outside groups. Although they formed friendships and noticed improvements in themselves, most returned to feeling isolated and inactive after the last session. Participants expressed wishes for the groups to continue and were sad they had finished.

*'We were telling them "you know after this session the next week will be our last session," they were complaining: "So after next week, how are we going to meet again?" ...it was really so frustrating to them.'* – F3

*'When she was with other women in the group, she was very happy... For a short time.'* – C15

## **Discussion**

This study sought to explore participants' and facilitators' experiences of CST in Tanzania to identify group processes and understand their effects on CST principles and outcomes. The results showed the group format offered positive experiences for participants. Interaction with others alleviated loneliness through socialising, sharing ideas and building relationships. The UK study by Orfanos et al. (2020) highlighted the benefits of company for those living alone. Chronic loneliness may predict cognitive decline in older adults, suggesting one mechanism by which CST benefits cognitive function (Zhong et al., 2016).

Participants found it helpful meeting older people with similar memory problems, normalising forgetfulness. They also felt they belonged within the

group. These results mirror the UK study in which ‘shared identity’ was described by participants, distinguished from the sense of ‘belonging and unity’ also experienced (Orfanos et al., 2020).

Overall, good cohesion was described, aligning with findings of Orfanos et al. (2020). Participants felt accepted and they trusted others, which both positively correlate with group cohesiveness (Roark & Alsharah, 1989). There is a general consensus in the literature that cohesion is strongly positively related to patient improvement (Burlingame et al., 2001). Also common to both studies was talk of fun, laughter, and enjoyment of being with the group.

Working together produced physical benefits, encouraging inclusion and mobilization of individuals. Participants felt more active after the groups and undertook more activities at home, both of which could improve QoL (Woods et al., 2006). In both studies, activities and facilitators encouraged working together. ‘Group support’ is a theme identified by Orfanos et al. (2020), with specific reference to participants helping and feeling helped by the group. Mason et al. (2005) found PwDs’ self-esteem improved through helping others. In this study, helping behaviours aided reminiscence. Reminiscence therapy is a key component of CST, found to increase cerebral blood flow (particularly in the frontal lobe) in individuals with mild-moderate dementia (Tanaka et al., 2007).

Social interaction in a non-judgemental environment produced improvements in communication and cognition. In line with Swaab’s “use it or lose it” hypothesis, participants could rediscover “present, yet under-

rehearsed cognitive skills” (Swaab, 1991). The UK study reported similar findings (Orfanos et al., 2020). Improvements in behaviour and self-control can also be explained by group norms. Over time normative social influence occurs, in which participants comply with group norms to gain acceptance (Kelman, 2005). They eventually internalize group values, such as listening to and respecting others; group control develops into self-control (Kelman, 2005).

One facilitator described how in Tanzanian culture it is usual for family to do everything for older relatives out of respect. This is an example of unintentionally produced “malignant social psychology”- the interaction style resulting in devaluation and loss of personhood (Kitwood, 2002). Groups counteracted this, providing a forum for participants to express ideas and opinions and complete tasks themselves through *person-centred care*.

### ***Challenges of the group format***

Specific to this study were challenges presented by previous conflicts (i.e. over land ownership) and fears of gossip spreading around small local communities. This may have reduced cohesion through tensions between individuals and non-disclosure of personal issues. In a study on UK dementia support groups by Mason et al. (2005), PwD found sharing emotions particularly aversive. Conversely, in the Tanzanian adaptation study, caution was required in childhood discussions to avoid individuals oversharing personal information (Mkenda et al., 2016). Orfanos et al. (2020) found some participants felt there were no opportunities to discuss the past, but they did disclose personal feelings. Although participants in

this study said it was easy to speak in groups, they often required prompting and were afraid of answering incorrectly. Facilitators attributed this to the paternalistic relationship, exacerbated by the facilitator-participant language barrier as interaction increased when speaking local dialects. This differs from Spector and colleagues' findings (2011), in which participants interacted and engaged unprompted. Forsyth (2010) suggests recognition of the leader's authority can be beneficial as it increases compliance with therapeutic directives. Orfanos et al. (2020) suggest some challenges of the group format may be beneficial, acting as a "catalyst for learning and therapeutic change". For instance, the facilitator-participant language barrier may enable helping behaviours as members translated for one another.

Tribal and religious differences caused conflict as culturally these significantly contribute to one's identity. Regarding religion, this limited the scope and depth of conversations, however the Tanzanian adaptation study found participants engaged well with church songs (Mkenda et al., 2016). Although the majority of group members came from one tribe, a minority were from other tribes, resulting in differing levels of education and views on gender roles.

Other influencers of group experiences were participants' adverse financial situations and physical health. This prevented them from meeting up and sustaining acquired skills and relationships after groups ended. These issues caused distraction and participants felt their expectations of treatment were unmet. In Nigeria, participants' blood pressure was taken with appropriate referral by nursing staff, to help meet expectations of treatment (Mkenda et

al 2016). Most cases of non-completion in both Tanzania and Nigeria were due to unmet expectations of medication and failure to understand non-pharmacological treatment (Mkenda et al. 2016). Participants arriving hungry highlighted the importance of refreshments. According to Maslow's hierarchy of needs (1943), humans must satisfy basic needs before they can pursue those higher up, i.e. relationships and self-esteem. These unmet needs likely reduced concentration and interaction, thereby affecting CST outcomes.

### *CST structure and group processes*

Whilst the group processes identified here are likely to exist in other psychosocial group interventions for dementia, how they are elicited in CST is unique to the structure of the sessions and themed activities. Each activity draws out multiple group processes, enhanced by weekly variation. Continuity and consistency are achieved through weekly repetition of certain activities.

### *Strengths and Limitations*

Strengths of this study include the sample size which provides a rich data set. Another strength is the exploration of facilitators' experiences alongside PwD. Consensus from multiple researchers improved the reliability and trustworthiness of the data. One limitation was that some group members had no formal dementia diagnosis. Although they were not interviewed, or included in this sample, this could have contributed to the group challenges identified. The potential impact is limited, as the screening process for

cognitive impairment still scored them within the lowest group. Another limitation was the issue of asking PwD to remember their experiences in detail. This could explain why participants shared more general emotional memories over specific examples.

Measures were taken to ensure correct translation of transcripts. Interviews were conducted by a non-native (JM) through an interpreter (ES), creating potential for misinterpretation. Linguistic nuances and subtle cues may have gone undetected. To limit this, a discussion was held after each interview to clarify intended meanings behind questions and answers.

### ***Implications for Future Research***

Future research may involve a full RCT on CST in Tanzania. In light of suggestions by Orfanos et al. (2020), development of a questionnaire exploring the relationship between identified group processes and patient outcomes in Tanzania may be beneficial. Specific processes could then be enhanced or reduced to optimize the efficacy of CST.

### ***Implications for Future Practice***

Grouping people of the same religion or tribe and achieving a gender balance may improve cohesion and widen the scope of suitable venues. Running groups in the mornings may increase participation. Refreshments were an important aspect for attendees. If feasible, continuation of this would be beneficial. Finally, people living locally with understanding of cultural nuances and the local dialect could be trained as facilitators. This

may improve PwDs' understanding and acceptance of CST, manage expectations and benefit implementation strategies.

### **Conclusions**

Exploration of participants' and facilitators' experiences of CST in Tanzania helped to identify several group processes. Overall, the group format offered many positive experiences which supported CST principles. Facilitators played an important role in eliciting specific group processes. The variation in weekly activities was also key. Challenging group experiences often arose from cultural sources specific to rural Tanzania. The findings support previous studies on CST, offering insight into how it improves patients' QoL and cognitive function.

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