

Reminiscence with Soundscapes for Persons Living with Dementia: Participants with Limited Verbal Speech Benefit from Group Sessions

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Introduction

When dementia progresses to the moderate to advance stages, individuals may become limited or lose their ability to communicate verbally. As their communicative skills decline, persons living with dementia (PWDs) may have decreased opportunities for social engagement and face increased risk of isolation (Devos et al., 2019). This creates an impetus to think beyond the usual approach of communication and engagement.

At Apex Harmony Lodge, a residential care home in Singapore purpose built for PWDs, we piloted a new initiative to enable social engagement through the adoption of a therapeutic instrument named Cradle (CRDL).

CRDL is an innovative technology that produces pre-set soundscapes when skin contact is made between two or more individuals. It is able to distinguish between different forms of touch (e.g., holding, tapping) between individuals to produce different types of sounds as a way of non-verbal communication and interaction.

Its inclusive and accessible design therefore provides users with the opportunity to engage in social connection regardless of their cognitive or communicative abilities. Its soundscapes are carefully selected to evoke pleasant memories and positive emotions associated with past experiences which allows PWDs to concurrently engage in reminiscence therapy in addition to multisensory stimulation.



Photo by <https://www.crdl.com/>

Objectives

In this pilot study, we sought to understand how CRDL affects the mood and engagement of PWDs with verbal (V) and limited verbal speech (LVS) in both individual and group settings.

Methodology



The pilot was held weekly over a period of 10 weeks, consisting of 5 individual and 5 group sessions.



The pilot involved a total of 6 PWDs, consisting of 3 V participants and 3 LVS participants. While staff were the main facilitators of the sessions, V participants took on the role of co-facilitators in group sessions where they guided LVS participants in using CRDL and co-facilitated conversation.



After each session, observational data was collected using Menorah Park Engagement Scale (MPES) which measures positive and negative mood and engagement. Raters may score 0 (never), 1 (up to half the observation), or 2 (more than half the observation).

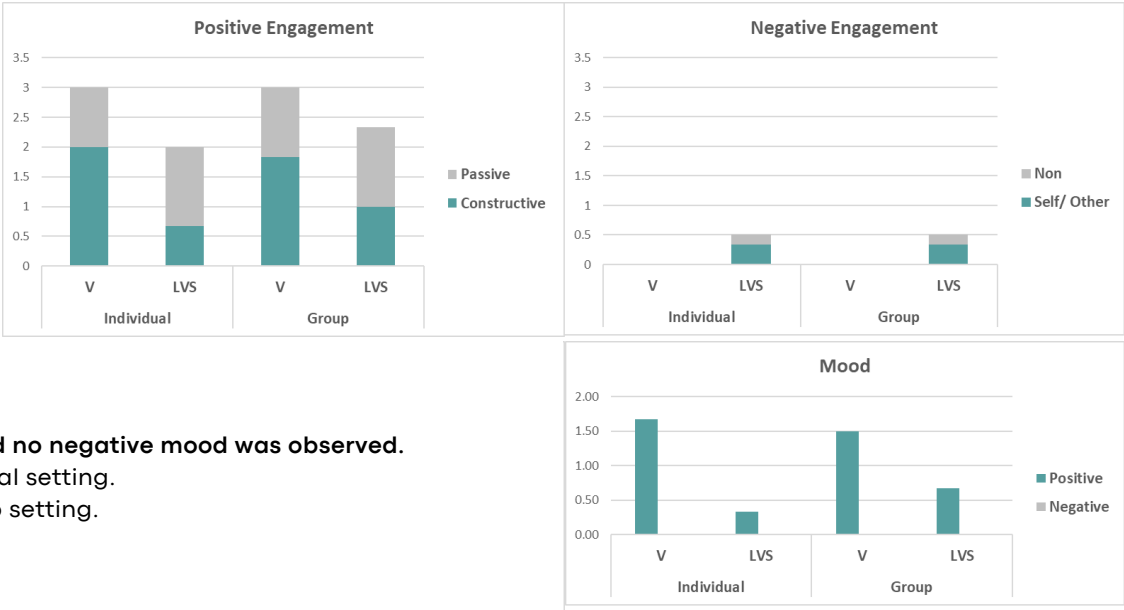
Table 1. Description of mood and engagement in MPES

Positive Engagement	=	Constructive Engagement	→	Any motor or verbal behaviour exhibited in response to the activity
		+		
		Passive Engagement	→	Listening and/or looking behavior exhibited in response to the activity
Negative Engagement	=	Self/ Other Engagement	→	Motor, verbal, listening and/or looking behavior when the client chose not to participate in the activity
		+		
		Non Engagement	→	Staring off into space or another direction away from the activity, or sleeping
Positive Mood	→	Pleasure		
Negative Mood	→	Anxiety/ Sadness		

Findings

Engagement

- **Positive engagement was consistently higher than negative engagement across all participants and settings.**
- **V:** No changes in overall positive and negative engagement regardless of individual or group setting.
 - However, passive engagement increased slightly and constructive engagement decreased slightly in group setting.
- **LVS:** Positive engagement was observed to be higher in group setting compared to individual setting.
 - Increase in positive engagement was due to an increase in constructive engagement.



Mood

- **Participants experienced positive mood while engaging with CRDL and no negative mood was observed.**
- **V:** Positive mood was observed for a slightly longer duration in individual setting.
- **LVS:** Positive mood was observed for a slightly longer duration in group setting.

Discussion

Overall, our findings suggest that CRDL successfully facilitated engagement and social connection for participants regardless of their verbal ability.

We observed that group sessions were preferable for LVS participants, which is contrary to common practices of one-to-one activity facilitation for PWDs with lower functioning. This goes to show that CRDL, as a therapeutic instrument, is able to bridge the communication gap for LVS participants. With appropriate facilitation, LVS participants can enjoy group socialization, enabling them to be socially connected beyond the usual one-to-one interactions with care staff. Conversely, V participants exhibited similar levels of mood and engagement in both individual and group settings. The only notable differences were slightly lower levels of constructive engagement and positive mood in group settings. This could be explained by their role as a co-facilitator in group settings which involved turn taking and listening. Given that the decrease was not accompanied by increased levels of negative mood and engagement, we stand that group sessions are beneficial for V participants as co-facilitation enables opportunities to exercise their cognitive and social skills while potentially meeting their transcendence needs. From our observations, the soundscapes emitted from CRDL helped to stimulate the senses of participants and elicited reminiscence effects.

Notably, this study has its limitations. Apart from a small sample size, all participants were males because this program was piloted in a male-only ward. Further study with a more representative sample would be beneficial to provide more accurate insights about the effectiveness of the program.

References

Devos, P., Aletta, F., Vander Mynsbrugge, T., Thomas, P., Filipan, K., Petrovic, M., ... & Botteldooren, D. (2018, December). Soundscape design for management of behavioral disorders: a pilot study among nursing home residents with dementia. In INTER-NOISE and NOISE-CON congress and conference proceedings (Vol. 258, No. 5, pp. 2104-2111). Institute of Noise Control Engineering.

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