

# The Individualized Music Program for the people living with Dementia: a feasibility study for Indian population

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#### Introduction

- Music-based non-pharmacological interventions has demonstrated positive effects on the overall quality of life in persons living with dementia.
- MUSIC & MEMORY® is a USA based organization that helps individuals with cognitive and physical conditions to deal with their impairment through the use of personalized music playlist.
- The idea behind this intervention that emotional connections associated with music will aid the recall of memories that were formed before the dementia set in.
- Within the USA, the program has helped a large number of individuals (>1000) to reduce their dipresson related to dementia through the individualized music program. (www.musicandmemory.org)
- The objective of this study is to demonstrate the feasibility of an adapted version of the individualized music program for the people living with dementia in India.

### **Rationale for the Study**

- To show evidence for the positive effect of Music-based non-pharmacological interventions for the Indian population living with dementia
- Adapt the Individualized music based intervention for persons with Dementia in India.

### Aim of the Study

Demonstrate the feasibility of an adapted version of the individualized music program for the people living with dementia in India.

#### Method

- Adapted the Music Assessment Questionnaires and Playlist Impact Assessment Questionnaire from MUSIC & MEMORY®
- Modified the questionnaires for the Indian version
- Recruited clinically diagnosed dementia patients from Dept. of Neurology, NIMHANS, India (n=14)
- Assessed cognitive domains through the Addenbrooke's Cognitive Examination (ACE)-III, Clinical Dementia Rating (CDR) scale
- Assessed depression through the Cornell Scale of Depression in Dementia (CSDD), and the Geriatric Depression Scale (GDS)
- Prepared personalized playlists for individual patients based on the Music Assessment Questionnaire
- Weekly telephonic follow-up to monitor the progress
- Final 3 month follow-up along with Playlist Impact Assessment Questionnaire and re-assessment of ACE-III, CDR, CSDD, GDS to understand the effect of the Individual Music Intervention (n=7)

	BROOKE'S CO	American Version A		
Narve Dato of Birth: Age Place of Testing		Date of Testing// Tester's Name: Disastery Coccupation Handedness	_	
ATTENTION			Balancia and and	Scor
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	a did I ask you to repeat a	diamenter?	Newary	B. B
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could give me wants the Do you understand? An	e "sall, ony, check" and so on it you ready? You have one m	kil, you can't give me words like Catherine inuts. The latter I want you to use is the latt	er Ginalia.	3
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	1		totar correct	C. P
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			210 7	4
			1416 S 1110 L 517 2	3
			510 2 74 2 54 1 45 8 902 Unit	

					Geriatric Depression Scale: Short Form
ale f	for				Choose the best answer for how you have felt over the past week:
SDI					1. Are you basically satisfied with your life? YES / NO
	~,				2. Have you dropped many of your activities and interests? YES / NO
					3. Do you feel that your life is empty? YES / NO
					4. Do you often get bored? YES / NO
					5. Are you in good spirits most of the time? YES / NO
ig the w			o inte	rview.	6. Are you afraid that something bad is going to harpen to you? YES / NO
					7. Do you feel harpy most of the time? YES / NO
		0	1	2	8. Do you often feel helplens? YES / NO
				-	9. Do you contribut inspirate risks r No
	2	0	1	2	10. Do you feel you have more problems with memory than most? YES / NO
	a	0	1	2	
	a	0	1	2	11. Do you think it is wonderful to be alive now? YES / NO
					12. Do you feel pretty worthless the way you are now? YES / NO
					13. Do you feel full of energy? YES / NO
		0	1	2	14. Do you feel that your situation is hopeless? YES / NO
		0	1	2	15. Do you think that most people are better off than you are? YES / NO
	a	0	1	2	Answers in <b>bold</b> indicate depression. Score 1 point for each bolded answer.
	a	0	1	2	A score > 5 points is suggestive of depression.
(dtnc					A score a 10 points is almost always indicative of depression.
					A score > 5 points should warrant a follow-up comprehensive assessment.
		0	1	2	Source: http://www.stanford.edu/~vesavage/GDS.html
		0	1	2	This scale is in the public domain.
		0	1	2	
onth)					The Hentbord Inshitute for Geriatric Narsing would like to acknowledge the original eather of this Try This, Lenore Kar PAD, RN, CS, FAAN, who made significant contributions in the field of geropsychiatric nursing and passed away in 20
					try this:

Requires much help with personal care; frequent montinence	Requires assistance in descaing, highere, keeping of personal effects	Needs prompting	a of self-care	Fully capable of self-care	Personal Care
No significant function in home	Only simple chores preserved, very restricted interests, poorly maintained	Mid but definite impairment of function at home: more difficult others abandoned, more complicated hobbies and interests abandoned	Life at horne, hobbies, and intellectual interests slightly impained	Life at horne, hobbies, and intellectual interests well maintained	Horse and Hobbies
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		Inpairment			
	3	1 2	0 0.5	CLANCAL DEMENTIA	

#### Fig.1 Cognitive Assessments Questionnaires

- There was a significant difference in pre and post depression scores after the intervention: CSDD, p=0.010, and GDS, p=0.047
- The patients spend a good part of their leisure time listening to the suggested playlists.
- The majority of the patients showed a reduction in agitation and restlessness while listening to the music.
- In addition, the patients have self-reported that they feel less sad or bored overall.

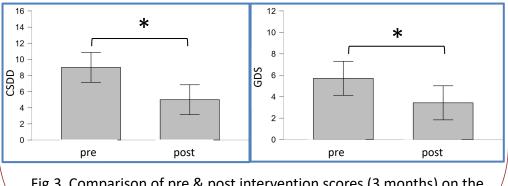


Fig.3 Comparison of pre & post intervention scores (3 months) on the CSDD & GDS

## Results

One (out of 7) reported that they felt simply more relaxed during listening times.

Playlist Impact Evaluat	ion assessment	Did you sing at religious services and festivals?
		Favourite figmns or other religious music?
Putiest Name		Did you enjoy going to Film, music concert, music shows, theaters?
Patiest ID		Do you remember when was the last time you went for such programs?
Administrator Name		
During Dysteen		Did you have favourite TV shows or movies? (theme songs from shows or mo soundtracks can elicit responses)
Dv No Response: 1 - Yory Less Response: 2 - Less I Savdhiard Response: 5 - Mah Response	Isaponos; 3 - Moderate Response; 4 -	
Facial Responses		Name some of your favourite musicians:
The Context - methodeset initiates are contact due		
to implementation of matric: Smile - marticizant responds with a smile due to	0 1 2 3 4 3	Name some of your favourite movies:
basis - participal repeats will a case due to applementation of same:	0 1 2 3 4 5	
Face relaxation - participant's face relaxes due to implementation of maria:	0 1 2 3 4 5	What songs did you dance to at the social functions?
Vieral Rangement		
Participant sings along with music	0 1 2 3 4 5	Do you still have any records, tapes, CDs that were favourites?
Participant loans along with sancar	0 1 2 3 4 5	Where can I find them?
Budy Movement		Can you hum any favourite songs?
Participant follows shythan of namic through hand trapping, front trapping or clapping (cards responde).		Other Notes:
Participant rocks back and forth to shorthan of the		
ERCIC:	0 1 2 3 4 5	
Rehavioural Responses		
Reduced agitation distorted behaviour	0 1 2 3 4 5	
Joy Supplement	0 1 2 3 4 5	Reading of the Market & Market
Radacal resistance to care	0 1 2 3 4 5	
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Fig. 2 Music Assessment Questionnaires

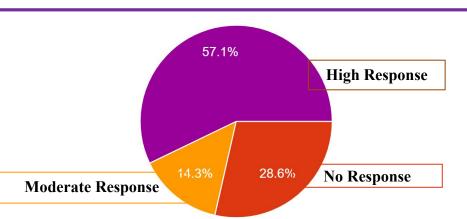


Fig.4 Playlist Impact Assessment Questionnaire: Responses for the degree to which patients recall early childhood, school & college age memories while listening to songs from that time in their individual playlists.

(Scoring: 0-1, No Response; 2-3, Moderate Response; 4-5, High Response)

## Discussion

- Music and Memory program has showed a positive impact on the patients' life as well as caregivers'.
- There is a significant decline is depression level after the personalized music intervention.
- Patient remembering their Teenage, School Life and College Life memories.
- Patients' agitation and restlessness has reduced, which has supported the previous research work on Music and Memory at the USA population.
- Whilst the study is still on-going, the findings so far clearly demonstrate that the individualized music program is feasible and useful in Indian populations with dementia and thus likely cross-culturally in the wider sense.

## Acknowledgement

- We would like to thank all our research participants and caregivers for their cooperation and time during the study.
- We would like to acknowledge the MUSIC & MEMORY® organization for helping us conducting the study and for providing the required materials and training.

