

26th Annual Alzheimer Day

Musical Bridges to Memory (MBM): exploring the effects of a dyadic music-based group intervention on social engagement and neuropsychiatric symptoms in persons with dementia.

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Background. Previous research has indicated that music-based interventions can reduce the severity of neuropsychiatric symptoms in persons with dementia (PWD), subsequently reducing the need for pharmacological intervention. However, there is a paucity of literature on the effect that a dyadic group approach can have on the success of such interventions, as well as on PWD social engagement. Musical Bridges to Memory (MBM) uses both perceptive and expressive forms of music-based intervention, administered in dyadic group setting, to mediate PWD neuropsychiatric symptoms and improve social interaction between dyads (PWD and their caregivers).

Methods. Twenty-nine dyads were recruited from memory care facilities; twenty-one received the MBM intervention, eight were controls; groups were comparable in age and level of education. All were assessed at baseline and post-intervention. Behavioral symptoms were assessed using the Neuropsychiatric Inventory (NPI), a caregiver self-report measure. The Verbal and Nonverbal Interaction Scale (VNVIS) was used to rate 10min video recordings of conversations within dyads on sociable, unsociable, verbal and nonverbal behaviors of the PWD. The intervention took place weekly for 12 weeks, and included caregiver training(30m), live concerts(45m), and breakout groups(30m). Music was chosen based on PWDs' assessed preferences.

Results. Sociable interactions (e.g. positive affect, eye-contact, apparent interest/focus), significantly increased ($p=0.044$) in those who underwent the MBM program as compared to the control group. Caregivers reported a decrease in severity of PWD neuropsychiatric symptoms ($p=0.089$, indicating a trend) as well as a decrease in the distress those symptoms cause ($p=0.005$). All reported p-values are controlled for gender and Mini Mental State Exam score at baseline.

Conclusion. Our preliminary results indicate that a dyadic music-based group intervention approach administered in a memory care facility is effective at improving social engagement and mediating negative behavioral symptoms in PWD, as well as reducing caregiver distress associated with those symptoms. These results complement previous literature, highlighting that music-based interventions can reduce the need for pharmacological interventions in managing neuropsychiatric interventions for PWD. In addition, our use of a dyadic group-based approach and our reported increase in sociable engagement highlights the benefits of including caregiver participation in music-based interventions.

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GRAPHS/FIGURES:

TABLE 1. Demographics and Measures of Dementia Severity

Measure (Max Score)	Intervention (n=21)	Control (n=8)
Age (y)	82.8 ± 8.4	86.8 ± 5.9
Education (y)	14.9 ± 2.2	14.9 ± 2.3
Sex	10 M, 11 F	2 M, 6 F
Mini Mental State Exam (30)	10.2 ± 7.2	5.4 ± 6.9
NPI Severity (144)	26.6 ± 14.0	27.3 ± 10.9

Mini Mental State Exam: An assessment of overall dementia severity collected at onset. Participants with MMSE scores of 20 or more were excluded from the sample.

NPI Severity: A caregiver self-report assessment of PWD behavioral symptoms collected at onset, where 0 is no symptoms present.

Figure 1. PWD sociable behaviors observed during video recorded conversations with their caregivers, as assessed by the Verbal and Nonverbal Interaction Scale (VNVIS), at baseline and after 12 weeks of intervention.

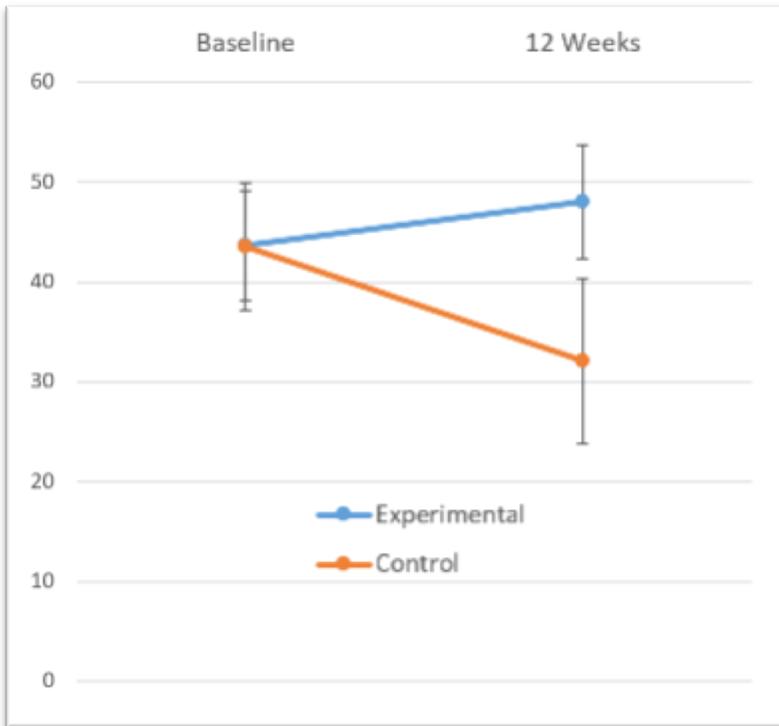


Figure 2. Severity of PWD neuropsychiatric symptoms as assessed by a caregiver self-report measure, the Neuropsychiatric Inventory (NPI), at baseline and after 12 weeks of intervention.

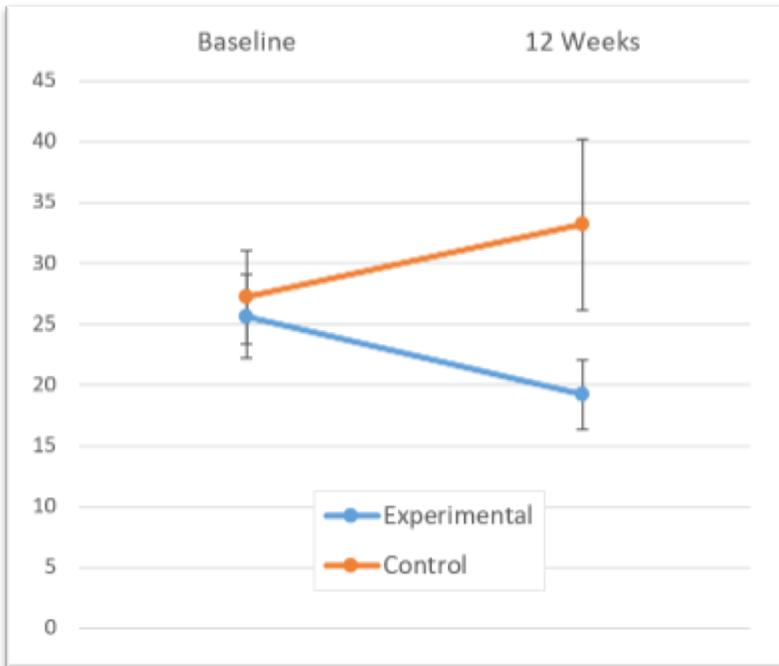
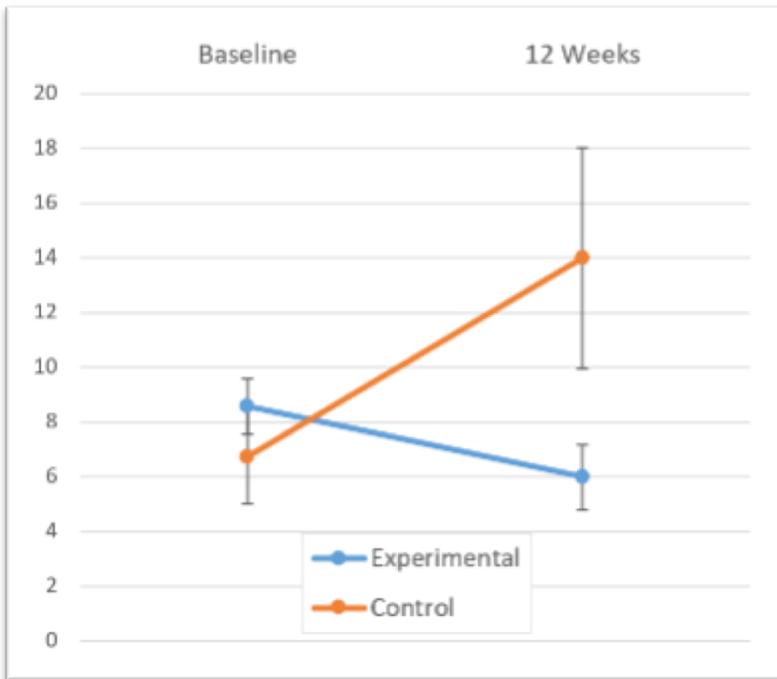


Figure 3. Level of caregiver distress caused by PWD neuropsychiatric symptoms, as assessed by a caregiver self-report measure, the Neuropsychiatric Inventory (NPI), at baseline and after 12 weeks of intervention. Baseline values between groups were not significant ($p>0.05$).



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