

Therapeutic Alternatives for Persons with Dementia: A Comparison Between Music Therapy and Horticulture Therapy in Institutional Care Programs

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ABSTRACT

Horticulture therapy (HT) represents a valuable opportunity for dementia care staff to engage clients in meaningful, stimulating activities that promote physical, cognitive, and social skills. HT programs are conducted with participants with multiple needs by providing adaptable activities that are productive, familiar to many elderly participants, and provide opportunities for socialization and reminiscence. Prior research revealed that HT activities elicit more positive engagement and affect than traditional activities; however, research comparing HT to other therapeutic approaches, such as music therapy (MT), has not been conducted with persons with dementia. In the current study, the authors compared responses of persons with dementia during HT to MT. HT was conducted twice weekly for six weeks at one VA residential care facility, while MT was conducted twice weekly at a different VA residential care facility, and traditional activities were facilitated at a third site. Participants did not demonstrate significant differences in active and passive engagement during the two types of therapeutic activities. Affective responses to the HT and MT programming were similar between the groups. Given these similarities, we combined responses to HT and MT into a therapeutic programming group, which we compared to a group of individuals participating in more traditional programming. Therapeutic programming elicited higher levels of pleasure and lower levels of self-engagement than traditional programming. Persons with dementia, representing a wide range of abilities, can successfully engage in both HT and MT activities and achieve positive outcomes. Dementia care programs should consider the specialized programming that trained therapists can provide.

INTRODUCTION

- Therapeutic programs such as HT and MT can successfully maximize the social, emotional, communicative, and physical functioning for individuals with dementia.
- MT can reduce agitation and situational anxiety, enhance mood, facilitate communication, stimulate memory and emotion expression, improve mobility, and promote eating during mealtime.
- HT has facilitated higher levels of social & productive engagement as well as higher levels of positive affect than traditional activities among ADS clients with dementia.
- The current study was part of a larger project examining HT programming at eight different dementia care programs
- Previous research has not compared HT to MT programming in persons with dementia.

SAMPLE

Characteristic	HT	MT	Traditional
Percent Male	95.0	92.3	5.9
Mean Age	81.65	76.17	81.65
S.D (Range)	4.68 (74-92)	10.04 (50-90)	6.40 (69-91)
Percent White	85.0	92.3	100.0
Mean Barthel	68.56	46.25	75.59
S.D (Range)	18.02 (45-100)	27.73 (0-85)	13.91 (55-100)
Mean MMSE	14.20	4.08	6.0
S.D (Range)	21.01 (0-99)	4.93 (0-15)	7.37 (0-24)

METHODS

- N = 50, (20 in HT; 13 in MT; 17 in traditional)
- Participants were persons enrolled at one of two Veterans Affairs (VA) residential care programs or a private nursing home and had a diagnosis of dementia.
- Data from the HT, MT, & traditional programming were collected at different sites.
- Trained students with HT or dementia-care background facilitated HT activities twice weekly, using both plant and plant related materials.
- A licensed Music Therapist on staff facilitated the MT activities twice weekly.
- An activity director led programming (e.g. active & cognitive games) at the third site.
- Three trained researchers used observational scales to capture participants' behaviors & affective responses to programming, recording scores every five-minutes for up to 6 participants for the duration of the activity. Data were collected twice over a 6-week period and averaged for each person.

MEASURES

An ordinal scale was used to indicate the duration of each timeframe (0: not at all, 1: $\leq 1/2$ observation, 2: $> 1/2$ observation) characterized by each type of engagement & affect.

Menorah Park Engagement Scale	
Active	Active Engagement in presented activity
Passive	Passive engagement in presented activity
Self	Repetitive or self-stimulating behaviors
Non	Asleep or disengaged from an activity: "zoned out"
Other	Doing or attending to an activity other than the target activity presented

Apparent Affect Rating Scale	
Pleasure	Laughing, singing, smiling, kissing, clapping, sparkling of the eyes
Interest	Participating in task, maintaining eye contact, looking around, responding to cues, turning body or moving towards person or object
Anxiety/Sadness	Repetitive calling out, restlessness, agitated movement, crying, moaning, head in hand, overt statements of anxiety or sadness

ACKNOWLEDGEMENT

This research was supported in part by Award No. 04-3 from the Commonwealth of Virginia's Alzheimer's and Related Diseases Research Award Fund, administered by the Virginia Center on Aging, Virginia Commonwealth University.

RESULTS

The HT and MT groups were significantly different from one another on age and cognitive (MMSE) & functional (Barthel) indicators. We controlled for these using Analysis of Covariance (ANCOVA) analyses ($*p \leq .05$, $**p \leq .005$).

ENGAGEMENT (Max=2)	HT	MT
Average active engagement (SD)	1.50 (.47)	.98 (.68)
Average passive engagement (SD)	1.12 (.45)	1.13 (.67)
Average non engagement (SD)	.19 (.45)	.49 (.58)
Average self engagement (SD)	.00 (.00)	.09 (.21)
Average other engagement (SD)	.31 (.41)*	.01 (.02)*

AFFECT (Max=2)	HT	MT
Average interest (SD)	1.11 (.54)	1.05 (.62)
Average pleasure (SD)	.79 (.56)	.63 (.56)
Average anxiety/sadness (SD)	.00 (.00)	.04 (.12)

The groups receiving specialized treatment (HT & MT) demonstrated similar outcomes, so we combined them (therapeutic group) and compared them to a group receiving traditional activity programming, controlling for MMSE and Barthel. Significant differences are presented below ($*p \leq .05$, $**p \leq .005$).

Group	Therapeutic	Traditional
Average self engagement (SD)	.04* (.15)	.16* (.16)
Average interest (SD)	1.08* (.55)	1.49* (.63)
Average pleasure (SD)	.72** (.54)	.44** (.43)

CONCLUSIONS

- Our work represents an advance of the HT literature because we compared two therapeutic conditions. While previous research by the authors using different scales indicated that HT was more engaging and/or more supportive of positive affect than traditional programming, HT and MT were similarly engaging and supportive of positive affect in the current study.
- Given the acceptance of MT as a reimbursable service, our findings are encouraging as horticulture therapists seek validation and sources of reimbursement to provide individuals with targeted benefits.
- Therapeutic programs fostered greater pleasure and less self-engagement but were otherwise comparable to the traditional programming observed.
- Anecdotal observations suggest that future research must consider the context in which programming is presented to older adults with dementia. Whether an activity is HT, MT, or "traditional" may matter less than how the facilitator presents an activity and supports the success of clients.
- At a time when many nursing home residents idle without meaningful activity, our findings encourage activity directors to seek varied & therapeutic programming options.