

Meaning and Impact of Creative Dance and Story Telling in Long Term Care: An Interdisciplinary Perspective



Catherine Sullivan, PhD, OTR, Lisa Dutton, PhD, PT, Kristi Haertl, PhD, OTR., Maria Genné, MEd, Siri Rydholm, MA, OTR., Kelsey Shafer, MA OTR
St. Catherine University, St. Paul, MN
APHA 2012



ST. CATHERINE
UNIVERSITY



KAIROSalive!
enriching lives through movement

Acknowledgments

- ▶ The collection of the quantitative information analyzed in this study was funded by the Minnesota Nursing Facility Performance-Based Incentive Payment Program (PIPP) Grant aimed at improving the positive health outcomes of nursing home residents in Minnesota.
- ▶ The PIPP Grant did not include a research component and no additional funding was received for the research part of this study.
- ▶ The researchers would like to acknowledge community partner, Jonathan Lundberg, Vice President of Operations, Ebenezer Society for providing the blinded chart outcome measurements collected by Ebenezer for the PIPP grant.

Background

- ▶ Improving quality of life for residents in long-term care (LTC) facilities is a recurring challenge
- ▶ Intervention studies have demonstrated the benefits of dance programs on physical performance, balance, depression and quality of life of elders (Eyigor et al., 2009; McKinley et al. 2008).
- ▶ Hokkanen et al. (2008) found improvements in the MMSE and Clock Drawing tests in seniors with dementia who participated in a dance movement therapy program.
- ▶ Few studies have examined the value of artistic expression for the well-being of LTC residents using mixed methodology.

Interdisciplinary Collaboration

- ▶ Research collaboration between St. Catherine University OT and PT faculty and students and Kairos Alive
- ▶ Kairos' Dancing Heart is creative dance group program:
 - Older adults and caregivers
 - Creation of "choreography that draws on their memories and life experiences"
 - Movement improvisations to music incorporate story telling and story-making
 - Either sitting or standing.



<http://www.kairosdance.org/pages/the-dancing-heart>



Purpose

- ▶ The aim of this study was to apply mixed methods to explore the following overall research question: **What is the importance of an arts-based program incorporating creative dance, story-telling, and story-making for long term care residents?**

The research sub-questions addressed:

- Program meaning
- Link to quality of life
- Impact on the culture of the LTC facility



Design

- ▶ **Design:** A mixed methods design study (Creswell & Clark, 2007) was conducted by our interdisciplinary team in two phases:
 - **Quantitative:** Retrospective analysis of outcome measures of cognition, balance and depression collected by facility staff at baseline and then at 12-week intervals up to 36 weeks (9-months)
 - **Qualitative:** Prospective semi-structured interview with staff, volunteers and caregivers at the end of the program on their perception of its importance for the participants and the culture of the facility.

Methods



- **Setting:** 5 long-term care facilities in urban, suburban and rural areas in Minnesota.
- **Population:** Frail elder residents of those LTC facilities, many of them wheelchair bound and suffering from dementia. A total of 119 residents who took part in the baseline testing, enrolled as participants in the same dance group program.
- **Intervention:** Naturalistic intervention. Professional artists from Kairos Dance Theatre designed and implemented a creative dance group program weekly. Average size of each group was 20, and mean attendance was 80.29% over 36 weeks.

Quantitative Phase

- ▶ Quantitative measures of cognition (MMSE), mood (GDS), and balance (Berg Balance Scale) were collected at the beginning of the program and at 3 additional points, 12 weeks apart, by LTC facility staff as part of a quality improvement program.
- ▶ Files were blinded and submitted to researchers for retrospective analysis
- ▶ Repeated measures ANOVA and paired *t*-tests were performed to determine change over time for the program participants with complete data.
- ▶ Measures varied in the completeness of the available retrospective data, explaining the differences in *N*'s across measures

Qualitative Phase

- ▶ Two of the five facilities were selected for the qualitative phase, one urban and the other rural.
- ▶ Following consent, occupational therapy [OT] graduate students and faculty conducted in-depth interviews with 14 participants (11 volunteers and staff and 3 caregivers).
- ▶ Interviews were audiotaped and transcribed. Follow-up interviews were conducted with some, to clarify.
- ▶ Data were coded and analyzed by OT students and faculty using Framework Analysis (Richie & Spencer, 1994; Lacy and Luff, 2001).
- ▶ Dependability of the qualitative data was established through member checking and peer debriefing. Inter-rater agreement on the coding categories was 94%.

Quantitative Results



Change in Outcome Measures from Baseline to 12 Weeks					
Outcome Measure	<i>n</i>	Baseline <i>M (SD)</i>	12-Wks <i>M (SD)</i>	Change	<i>p</i>
Berg	71	22.55 (16.36)	24.16 (17.47)	1.61	0.03*
MMSE	116	13.39 (8.99)	13.21 (9.19)	-.18	0.04*
GDS	64	2.38 (2.24)	2.31 (1.98)	.07	0.82

**p* ≤ .05 with 1-tailed, paired *t*-test;
n represents participants with complete available data at 12 wks

Quantitative Results (continued)

Time	Berg Balance Scale	MMSE	GDS
Time	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Baseline	23.93 (17.24)	17.96 (7.22)	2.29 (1.90)
12-Weeks	24.67 (17.44)	17.98 (9.95)	1.94 (1.63)
24-Weeks	24.27 (17.37)	18.09 (6.67)	2.26 (1.77)
36-Weeks	22.96 (17.39)	17.67 (6.33)	2.26 (1.98)
	<i>n</i> = 45	<i>n</i> = 54	<i>n</i> = 31

- ▶ *n* represents participants with complete available data for that particular measure over all 36 weeks
- ▶ Repeated measures ANOVA revealed no significant declines or improvements over the 36-week period

Quantitative Results (continued)

- ▶ 18 participants had scores available for all three measures over all 36 weeks.

Week	Berg	MMSE	GDS
Week	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Baseline	20.313 (14.84)	23.875 (3.18)	2.44 (2.25)
12 Weeks	21.125 (15.81)	23.313 (3.24)	2.00 (1.86)
24 Weeks	20.938 (15.80)	23.125 (3.68)	2.00 (2.16)
36 Weeks	21.563 (16.10)	22.938 (3.18)	2.06 (2.41)

N = 18

Repeated-measures ANOVA yielded no significant change

Summary of Quantitative Results

- ▶ Balance showed significant improvements from baseline to 12 weeks. No change over the 36 weeks.
- ▶ Mental status showed a decline from baseline to 12 weeks but remained stable over the 36 weeks
- ▶ Depression remained stable.
- ▶ Quantitative results were unchanged when stratified by cognitive level (mild dementia ≥ 20 ; moderate 10–19; severe 0–9).
- ▶ 18 participants for which all data was available showed similar results, even though their cognition was higher on average.

Qualitative Results

- ▶ Analysis revealed 9 themes related to the three research sub-questions.
- ▶ Themes are presented here, following each research question, with illustrative quotes.



1– What is the Experience of Residents during the Dance Program?

Increased physicality, socialization and reminiscence

“...it’s a great day when you sit and look around the room, and almost everybody is moving in time to the music”

Enhanced sense of personhood: Sessions were participant-centered and stimulated sense of safety and creativity

“...They’re all so willing to really put themselves out there with their own stories and their own experiences, and share their talents really generously”

▶ Experience of sustained and timeless engagement

“... an hour and a half later they’re all happy and smiling and they’ve been totally engaged for that amount of time.”

“...They tell stories about their life and they feel like they’re in another world for an hour or so.”

▶ Facilitation of new memories within and outside the program

“...you can look around and they’re singing along with [the Great Big Love song]. They may not remember all the verses, but they’re singing the chorus”

▶ Sense of healing and sacredness.

“It’s sharing something almost sacred, something from a deep, deep place when they share this stuff.”

▶ Shared meaning promotes bonding

“I feel like I’ve known them [senior Kairos participants] forever because, we share so little time each week, but the time is just loaded with so much meaning.”

“We’re not just someone who works here. I don’t know, we just kind of bond more when we’re in there.”

▶ Dance program generates a sense of fun and excitement

“It just feels like night and day sometimes, seeing residents before and after. It’s really a feeling...you can definitely tell people are happier when they’re in there. They’re more alive.”

3– What is the Impact of Music and Dance on the Culture of the LTC Environment?

▶ The dance program elicited inquisitiveness about arts-based programming.

“I just know that whenever I see anyone walk by, whether it’s a visitor or a nurse, or a staff person, or a custodial person, they always stop and watch, every single time.”

▶ Signs of improved communication and enhanced feeling of community among residents and staff.

“Staff members were talking about how hard it was to get this person dressed. She was very slow. And I heard another staff member say: ‘Well, I just asked her to sing me a song and the next thing you know, we’re all dressed and she’s singing away and she’s so happy’.”

Discussion

- ▶ **Dance and music improve quality of life in elders.**
 - Our results support the still scarce studies on the benefits of dance and music on cognition, physical performance, mood and quality of life of elders (i.e. Cohen 2006; Eyigor et al., 2009).
- ▶ **Art-based programming benefit LTC residents.**
 - A majority of past research has focused on community-dwelling elders
 - Our study demonstrates that an arts-based dance and creative story-telling group such as the Kairos dance program can have a positive impact on the function and participation of frail LTC residents.
 - Balance did improve and memory and depression did not worsen. Increased physicality and positive emotions were observed.

Discussion (cont.)

- ▶ **LTC sense of community can be enhanced by arts-based programming.**
 - Shared artistic expression and the sense of being valued as individuals in the dance groups can promote bonding and a sense of community in LTC facilities.
 - Future outcome tools might include socialization measures.
- ▶ **Mixed methodology is helpful in capturing multiple dimension of function and quality of life.**
 - Allows to combine objective data with information about participants' lived experience, including, sense of flow, meaning, creativity, enjoyment and spirituality
 - Those outcomes are difficult to capture with quantitative tools alone.

Conclusion and Limitations

- ▶ **Interdisciplinary collaboration** in the intervention, data collection and analysis phases was key in conducting an outcome study in a complex naturalistic setting.
- ▶ **Limitations** to this naturalistic study included:
 - Challenges associated with incomplete data due to lack of uniformity in testing procedures between sites
 - Had to rely on pre-collected measurements which may not have been the most appropriate for all participants
 - Interviewing participant-observers bypassed the cognitive limitations but missed the insights the residents themselves.
- ▶ **Future directions:** We are currently undertaking the next phase of prospective study using a quasi-experimental mixed-methods design with higher-functioning elders

References

- Cohen, G.D., Perlstein, S., Chapline, J., et al. (2006). The impact of professionally conducted cultural programs on the physical health, mental health, and social functioning of older adults. *The Gerontologist*, 6, 726-734
- Creswell, J. & Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks: Sage Publications.
- Eyigor, S., Karapolat, H., Durmaz, B., et al. (2009). A randomized controlled trial of Turkish folklore dance on the physical performance, balance depression, and quality of life in older women. *Archives of Gerontology and Geriatrics*, 48, 84-88.
- Hokkanen, L., Rantala, L., Remes, A.M., et al. (2008). Dance and movement therapeutic methods in management of dementia: a randomized, controlled study. *JAGS*, 56, 771-772.

References (cont.)

- Lacey, A. & Luff, D. (2001). Trent focus for research and development in primary health care: An introduction to qualitative analysis. *Trent Focus Group*. Retrieved February 2006, from <http://www.trentntrdsu.org.uk/cms/uploads/Qualitative%20Data%20Analysis.pdf>
- McKinley, P., Jacobson, A., Leroux, A., et al. (2008). Effect of a community-based Argentine tango dance program. *Journal of Aging and Physical Activity*, 16, on functional balance and confidence in older adults. 435-453.
- Richie, J. & Spencer, L. (1994). Qualitative data analysis for applied policy research. In Bryman and Burgess (Eds.). *Analyzing Qualitative Data*, 173-194. London: Routledge.

Thank You

Catherine Sullivan: cnsullivan@stkate.edu

Maria Genné : maria@kairosdance.org

Kairos' Dancing Heart website:

<http://www.kairosdance.org/pages/the-dancing-heart>



ST. CATHERINE
UNIVERSITY

