Montessori-Based Activities as a Trans-Generational Interface for Persons with Dementia and Preschool Children*

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Abstract

Montessori-based activities for persons with dementia have been used to successfully provide opportunities for programming between older adults and preschool children in shared site. intergenerational care programs. Such intergenerational programming allows older adults with dementia to fulfill roles of teacher or mentor to younger children or as collaborative workmates for persons with more advanced dementia while providing children with positive one-on-one interactions with older adults. We review several studies using this approach, describe characteristics of the programs, participants and results obtained and provide recommendations for those interested in extending this line of work.

In this article, we will review results from a series of projects that involved intergenerational programming between older adults with dementia in a shared site program consisting of adult day health care and long-term care on a continuing care retirement campus and a child care center for employees' children on that campus. Programming used Montessori-based activities as its focus with older adult and child dyads interfacing during these activities. While our primary emphasis was on examining the effects of such programming on older adults with dementia, we will also describe our observations and provide recommendations to those who wish to use this approach in the future.

Intergenerational programming for persons with dementia involving young children often takes the form of older adults observing the children from a distance, such as having the children come to perform in front of an audience. One-on-one interactions are not attempted usually because of fear that the older adult may become confused or agitated or that the child will become frightened or frustrated during such interactions. Salari (2002) observed that positive intergenerational programming between normal older adults and young children involves older adults serving as mentors, participation that is voluntary and older adults initiating contact with children. Activities need to be meaningful for both older adults and children. How can this be achieved when the older adults have dementia?

To address this issue, we have been involved in applying Montessori-based programming for dementia as a way to create an effective interface between persons with dementia and young children (Camp et al., 1997; 2004; Lee, Malone, & Camp, 2007). As described more

extensively elsewhere (Camp, 2006; 2010; Malone & Camp, 2007; Skrajner, Malone, Camp, McGowan, & Gorzelle, 2007), Montessori programming for dementia is based on the Montessori method of teaching which includes principles such as use of motor learning in activities, offering freedom of choice in an ordered manner, providing culturally relevant contexts for activities, creating activities that are of interest, providing empathy and high expectations for success, allowing for learning from peers and creating a learning environment that is structured to allow the support needed to facilitate success (Lillard, 2005). These also are elements that apply to best care practices for persons with dementia.

The purposes of developing this intergenerational program, therefore, were to provide meaningful social roles for persons with dementia, to allow these older adults to utilize their experiences and remaining skills and to give both the older adults and young children chances to experience the pleasure and excitement that occurs with the transmission of knowledge and skills from one generation to another. We also wanted to demonstrate that persons with dementia could successfully fulfill the roles of teachers and mentors and could successfully interact with preschool children one-on-one in positive ways.

This work was an extension of the first efforts to use Montessori-based activities for persons with dementia and older adult/young child dyads as the basis for intergenerational programming (Camp et al., 1997), an approach which has been replicated in other settings (e.g., Gigliotti et al., 2005). It is a component of an overall approach to activities programming for persons with dementia utilizing Montessori-based educational approaches, mentioned previously, which also have been replicated in a number of settings (Camp, 2006; Giroux, D., Robichaud, L., & Paradis, M., 2010; Jarrott, Gozali, & Gigliotti, 2008; Lin et al., 2009, 2010). The inspiration for our approach to intergenerational programming came from observing older children in Montessori schools giving lessons to younger children.

In a series of projects, older adults with dementia attending adult day health care or living in special care units in a nursing home on the campus of a continuing care retirement community in Ohio were brought together with preschool children (2.5 years to 5 years of age) from a child care center for employees on the campus. Older adults were prescreened and excluded if they exhibited any socially inappropriate behaviors. Children were told the rules of the program (e.g., no running on the way to the program, use your "inside voice," do not grab something from another person, ask to look at it, be polite, etc.) and if they chose not to follow the rules then they were not allowed to continue with an activity. In addition, both adults and children were prescreened using a set of Montessori-based activities (Camp, Koss, & Judge, 1999) to determine levels of motor and cognitive abilities so that we could match more effectively older adult-child dyads for specific activities.

During each session, an older adult and a child worked together in a dyad usually working on several different Montessori activities. In general, within each session, two to five dyads would be working together. Sessions lasted 20–30 minutes. One staff member was assigned to bring children to the room where activities would take place while two or three staff members would bring the older adults and give them practice presenting the activities before the children arrived. The logistics of the program could be daunting at times given that children or adults might be unavailable for particular sessions due to illness, unexpected or unscheduled visits from relatives, physicians or therapists (for older adults). Coordinating the timing of the children's appearance was facilitated with walkie-talkies (in the days before widespread use of cell phones) to communicate among research staff. One to two research staff would collect observational data during sessions while the other research staff members were available to assist dyads with activities on an as-needed basis.

Examples of such activities included academics (teaching phonics or counting), everyday living (how to put clothes on a hanger, how to use tools such as a screwdriver) and motor skills (puzzles, object manipulation). Over the periods of programming, each older adult worked with a number of different children and each child worked with a number of different older adults.

An example of a phonics lesson would be the use of "sandpaper letters." A "t" would be cut out of sandpaper and glued to a square of wood. The older adult would trace the letter using the index and middle fingers and say the phonetic pronunciation of "t" at the same time. The child would then imitate the actions. This would give the child a visual representation of "t," an auditory representation of how the letter is pronounced, a tactile representation of the letter and a kinesthetic representation as well, using muscles and motion that later would be used to write the letter. An extension of the activity would involve finding objects that have names starting with the "t" sound such as a tea bag or a top.

An example of an everyday living activity would involve having the older adult put a template of a table setting in front of the adult-child dyad. The older adult would put a plate on the outline of the plate, a knife on the outline of the knife, a fork on the outline of the fork, etc. Once all of the items had been placed on the template, the adult would remove them one at a time and then invite the child to imitate these actions. When the child had placed all of the items on the appropriate outlines, the adult would ask for the child to put away each item one at a time by naming each item, e.g., "Please put away the plate. Now, please put away the fork." An extension of the activity would involve demonstrating how to place items on the table without the use of the template.

Research staff members were present during intergenerational programming but attempted to provide only minimal assistance. To facilitate mentoring by older adults of the children, the staff might cue the older adults to present the activity to the child though less cuing appeared to be needed over time. In some instances, older adults benefited from practice with an activity by presenting it to staff first or by repeated presentation of the activity to multiple children over time. With practice, older adults became more proficient in presenting specific activities and more confident with presenting activities, in general.

When an older adult was more impaired, he/she could work together with the younger child as a team on an activity. In addition, more impaired, older adults could first simply observe the child working on the activity and eventually be invited to participate in the activity in a more interactive way. For example, three year olds often enjoy, "rock painting," which involves taking a rock from a riverbed that is dull in color when dry and then dipping a small paint brush in water and, "painting," a straight line from top to bottom on the rock. Where the water touches the rock, color emerges. The activity requires that the entire rock be so, "painted," one line at a time from left to right. This gives the child practice at holding the paint brush and making motor action that simulates later use of a pencil when writing letters. Older adults with very advanced dementia could watch a child and then be invited to work side-by-side with the child, doing the activity in parallel.

The primary focus of these studies was to examine whether interacting with children produced greater engagement with intergenerational Montessori-based activities in persons with dementia than was seen in standard activities programming and whether results seen when interacting with children might carry over to standard activities programming. To establish engagement we used the Menorah Park Engagement Scale (Skrajner & Camp, 2007) which includes: 1) non-engagement: a blank stare or engagement with something other than the caregiver; 2) self-engagement: engagement with the self including engagement displayed when a person shows agitated behaviors, e.g. wandering, repetitious

behavior; 3) passive engagement: the person is watching or listening to his/her caregiver; 4) constructive engagement: the person is actively involved with the caregiver or activity, e.g. by speaking to the facilitator or handling materials used in the activity. Results from three studies are shown in Table 1. Depicted in the table are demographics including the mental status scores for persons with dementia (MMSE; Folstein, Folstein, & McHugh, 1975). Our major findings are that such intergenerational Montessori-based programming produces high levels of constructive engagement among our older adults with dementia but that such levels of engagement are not sustained when these individuals go back to standard programming. The major message from these studies and our work with Montessori-based activities in general is that rather than concluding that such activities produce short-lived effects, we should focus on ways to provide better activity programming for longer time frames to persons with dementia who can greatly benefit from this approach if it is available.

Recommendations for the Future

Here are some ideas for those who wish to pursue and extend this line of work:

- Pair a child and an older adult as a team and have teams participate in group activities. We tried this approach using compound words (e.g., "tree–house" "snow–ball"). The older adult had one part of each compound word set of the team and the child had the other part of each compound word. Each word segment was represented with text and a picture or drawing. An activity leader would call out a compound word and each team would check to see if they had the called word. If so, they could put the word away in a shoe box with a slot. Whichever team got rid of all of their words first was the, "winner," though we often would keep playing until all the words were found so that everyone was a winner. We pilot tested this approach and did so with some success but it needs to be refined.

- Explore how to set up such programming in home settings, such as between children and grandparents or great-grandparents. One approach involves having grandparents dictate (to their adult children) stories of events that happened to them when the older adults were young children. These stories could then be read by the older adults to their grandchildren.

- Investigate how to create such programming for older adults and children from different cultural backgrounds. For example, children from western cultures could be shown how to use chopsticks by older adults from Asian cultures. We have seen older, Jewish nursing home residents show African-American children from the inner city how to use a dreidel.

- Determine if this approach would generalize to older adults with dementia working with older children, adolescents and younger or middle-aged adults. For example, middle school students worked with older adults with dementia at our facility with older adults dictating autobiographical reminiscences. These were then put into story formats by the students, printed on cloth and made into quilts.

- Investigate if children who participate in Montessori-based intergenerational programming have more positive attitudes towards older adults with dementia (in the short-term and long-term).

In conclusion, Montessori-based activities offer a promising way to initiate intergenerational programming for older adults with dementia and pre-school children. We hope that further extension of our preliminary work helps improve the quality of life for loved ones across generations. In addition, we hope that such programming will become part of a larger activities curriculum available to persons with dementia which focuses on their abilities, encourages positive engagement and allows these persons to fill meaningful social roles.

Acknowledgments

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Table 1

Results from studies involving persons with dementia interacting with preschool children using Montessori-based activities

STUDY	Older Adults with Dementia	Children	IG Sessions	Significant Outcomes
Camp et al., 1997	n=12 ADC & SCU MMSE= 9 – 23	n=14 ages = 2.5–4 yrs	30–45 min Twice a week 6 months	Reduction in apathy in older adults during IG activities compared to standard activities
Camp et al., 2004	n=15 ADC MMSE=10 – 25	n=13 age = 2.5–5 yrs	20 min Twice a week 6 months	• Increased CE • Decreased PE, NE and engagement with other environmental distracters • Increased positive affect in older adults during IG activities compared to standard activities Regression to baseline levels after IG activities
Lee, Camp, & Malone, 2007	n=14 SCU MMSE= 5 – 25	n=15 age = 2.5–5 yrs	20 min Twice a week 6 months	• Increased CE • Decreased PE, NE, SE and engagement with other environmental distracters in older adults during IG activities compared to standard activities • Regression to baseline levels after IG activities

ADC = adult day health care clients

SCU= residents of a special care unit for dementia in a nursing home

MMSE = Mini Mental State Exam

IG = Intergenerational

CE= constructive engagement

PE= passive engagement

NE= non-engagement

SE= self-engagement