

A Picture is Worth a Thousand Words: Evaluation of the ARTmail Senior Art Project Among Seniors with Cognitive Limitations in North Carolina

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Abstract:

Participating in structured art programs is said to improve physical and mental health and social functioning of older adults including those with dementia. However, research on this subject is fairly new, and awareness of these programs is limited. Feedback for improved program design and delivery is also needed. In a partnership between UNC Greensboro and the Creative Aging Network, NC, we conducted a pilot project in North Carolina (USA) in 2011 to evaluate whether participating in a 10 week art exchange project called ARTmail improved mood and social connectedness among seniors. Although 60 seniors took part in the ARTmail program, most of them with a cognitive limitation, only 31 seniors took part in the evaluation, mostly because the legal representative of many cognitively limited seniors did not give permission for them to participate in the evaluation. We collected baseline and endline information on socio-demographic background, physical health, functional status; and depression, loneliness, and mood / connectedness scales appropriate for dementia and non-dementia groups. We also conducted qualitative interviews with selected site staff, volunteers, and participants, and performed field observations. Our findings suggested that among seniors with cognitive limitations, the mean of mood scores at endline was lower than at baseline, suggesting improved mood (approaching significance at the .10 level). A larger sample would likely have shown significant results. We conclude with a discussion of observations and suggestions from staff, volunteers, and participants, on experiences with the program and suggestions for improved implementation in future.

Keywords: Older adults | dementia | ARTmail evaluation | positive aging development | structured arts program

Article:

INTRODUCTION

As the older population increases in size and proportion worldwide, the numbers of persons diagnosed with dementia or other age-related cognitive impairments is projected to increase rapidly. In the US alone, current estimates show that about 5.4 million Americans of all ages, including about one in eight persons aged 65 and older, and nearly half those aged 85 and above, have been diagnosed with Alzheimer's disease (1). Thus, designing and delivering services for persons living with this condition is emerging as an extremely important priority in public health and human services fields. Though reviews of evidence-based service initiatives to improve quality of life for those with Alzheimer's disease have identified the importance of psychosocial interventions including engaging in pleasant activities as important, there is greater emphasis and evidence on practical issues related to medication, behavior management, caregiver support, care programs, etc. (13). Programs that keep cognitively limited seniors creatively engaged and improve their mood have received comparatively little attention for reasons including preconceptions of the limitations of seniors with cognitive diagnoses, difficulties in finding appropriate programs, and lack of recognition by funding agencies.

Gerontology studies show that participating in professionally conducted multi modal cultural or arts programs improves physical and mental health and social functioning of older adults including those with dementia (2-5). The mechanisms by which such participation improves wellbeing of older adults includes improved sense of control or mastery, positive pathways in psycho-neuro-immunology (mind-body connection and brain plasticity), and social engagement (3). In light of such findings, practitioners and researchers are beginning to design and deliver structured arts and culture programs for seniors with varying levels of physical and cognitive ability. However, these efforts are newly emerging, and more evidence is needed on their feasibility and efficacy across a wide range of settings.

In the present study, we conducted a small scale, pilot evaluation of the ARTmail program, which offers a structured art creation and exchange program for seniors in North Carolina. The ARTmail art exchange project is designed to encourage freedom of expression and creative growth for older adults across a wide range of abilities, skills, and comfort levels. Participants and staff at each site who assist in administering the project learn new visual arts skills, develop relationships, and increase their understanding of the value of the creative process. These activities will, it is hoped, promote psychosocial wellbeing among the participants.

The ARTmail project and evaluation study were conducted by a partnership between faculty and students at the Department of Human Development and Family Studies at the University of North Carolina Greensboro (UNCG), and the Creative Aging Network NC (CAN-NC), a state wide community based network of a national level organization, that designs and delivers creative arts programming for seniors. CAN-NC designed and delivered the ARTmail program, the UNCG faculty designed and conducted the evaluation, and UNCG students served as volunteers to assist in program completion. This partnership addresses an important conjunction of interests in the field of gerontology and that of community programming, emphasizing the collaborative connection that enables better program design and delivery to underserved groups along with exploring and documenting the effect on seniors of participating in structured arts programs.

Our pilot study presents: a) an evaluation of whether participating in ARTmail improved

mood and social connectedness among seniors and b) lessons ‘from the field’ about improving the design and delivery of this structured arts program and conducting an evaluation in a community setting. Specifically, we examined:

1. whether older adults who participate in a structured art program report improved mood at endline compared to baseline
2. whether older adults who participate in a structured art program report decreased loneliness at endline compared to baseline
3. how practical aspects of the design and delivery of the structured arts program, and the associated monitoring and evaluation, can be improved.

The first two objectives are measured through survey assessments of seniors at baseline and at the conclusion of the project supplemented by field observations and in depth interviews of selected key informants among staff, volunteers, and participants, and the third objective through the field observations and in-depth interviews. We expected that those involved in this weekly participatory art exchange project would express more positive responses on mental health measures, less loneliness, and more engagement with activities and peers at the end of the 10 week project.

ARTmail Art Program

The ARTmail art exchange program uses the inside surface of a cardboard box as the canvas and the postal system as a means of exchanging the art between partners at the participating sites (see Figure 1). The art form used in this project is Abstract Expressionism, which values individuality, spontaneity, and the exploration of the self, with no requirement for ‘correct’ representation of recognizable images. Working in an abstract style enables older adults to connect both with themselves and their partnering artists in a way that words alone cannot (see Figure 2). As an integral part of the ARTmail activity, seniors are encouraged to write a short narrative called a Box Story to accompany their art. The artwork is exchanged back and forth between partners over a 10 week period (see Figure 3). At the end of this period, CAN-NC recommends a public exhibition of the collective artworks and a reception with family and friends to celebrate the senior artists’ achievements (see Figure 4).

Through the ARTmail project, CAN-NC aims to bridge gaps among older adults of diverse cultural and socio-economic backgrounds by providing creative, nonverbal opportunities that can be experienced by all, overcoming language and memory barriers. The role of art is essential in exploring the emotional dimensions of life experiences and in shaping public discourse about critical issues (in this case aging) both for the artists and the audiences. By giving voice through the arts to older adults, the aim is to educate the community about who they are, their past achievements, and what they are still capable of achieving. Exhibitions of the finished artwork showcase the talents and contributions of diverse older adults and educate the public about the rich histories of this population.

The ARTmail program is administered at each senior site by paid staff who provide space and serve as facilitators providing specific instruction for each class, and volunteers (one to two at each site) who assist the site staff. Both provide hands-on assistance as needed. Some sites had more than one staff person or volunteer for additional support.

EVALUATION METHODS

Sample recruitment

We conducted the evaluation in the six senior sites which invited the ARTmail program for their clients. Four of these are adult day care centers, and the majority of their clients have dementia or other cognitive diagnoses. The other two are residential sites serving clients who may or may not have cognitive diagnoses. At each site, a group of about 10 clients participated in ARTmail, and were recruited for the evaluation (a potential total of 60 participants for the evaluation). For those with cognitive limitations, their legally authorized representatives were contacted for informed consent. Unwillingness to participate in the evaluation did not affect eligibility to participate in ARTmail. Those who agreed to participate in the evaluation completed a baseline interview as described below. After the project, they were given an endline interview. Only about 31 ARTmail participants took part in the evaluation, mostly because among seniors with cognitive limitations, their representative did not consent for them to participate in the evaluation.

Study instruments

The baseline interview gathered standard socio-demographic information; measures of physical health and functional status; the Geriatric Depression Scale Short Form (for the non-dementia population) and the Cornell Scale for Depression in Dementia (for the dementia population); the UCLA Loneliness scale (for the non-dementia population) and the observed Engagement, Expression of Emotion, and Indicators of Self Esteem scale for the dementia population (6-8, 12). Most of those who agreed to participate in the evaluation were able to communicate. In most cases, site staff and site supervisors filled out the background demographic information based on patient records, and completed the mood and social connectedness scales by interviewing the seniors or by observing them based on the requirement of the scales. From these quantitative data, we used T-tests to compare mean scores on depression, loneliness, or connectedness measures at baseline and endline.

Supplementary individual qualitative interviews and field observations

A supplementary series of in-depth qualitative interviews was also conducted by the UNCG senior undergraduate student with selected key informants. Two senior site supervisors and site staff were selected based on convenience and availability, and two senior participants based on their ability and willingness to communicate. The question guides for these individual in-depth interviews were drafted jointly by UNCG faculty and CAN-NC senior staff. The questions focused on asking how the ARTmail process was experienced and how it could be improved; how the evaluation process had been conducted and how that could be improved; and what impact participating in ARTmail may have had on mood and social connectedness among the participants. The interviews were brief, usually lasting about half an hour each. The transcripts were read by the senior author, and emerging themes on the experience of participating in ARTmail and recommendations for improved program design and delivery were identified and explored.

Field observation of the process of ARTmail and the evaluation study was conducted by the senior undergraduate member of the research team, who was also a key volunteer with the ARTmail project. She volunteered at one site over the 10 week project period, assisting the group with creating art, observing and recording her impressions after each session. She also observed the evaluation process. Her field observations form part of the evidence presented in this study.

Research team

The research team comprised CAN-NC staff, and UNCG faculty and students. There were two parallel sets of activities that the research team was involved in: a) the ARTmail art project, and b) the evaluation process.

a) For the ARTmail art project, the CAN-NC staff co-ordinated senior site volunteers and staff conducted all activities related to the administration of the ARTmail project over the 10 week period February-May 2011. This included developing the training materials for ARTmail, communicating among multiple sites, and scheduling the 10 week project timeline. They provided an orientation for site staff and volunteers at each participating site. The CAN-NC staff provided assistance throughout the project as needed and documented segments of the project using photography and video, for promotional and archival needs (ARTmail participants signed waivers allowing their photographs to be taken and used). UNCG students formed part of the group of volunteers.

b) The UNCG faculty applied for IRB approval for the evaluation data collection, designed evaluation research plans and data collection instruments, and oversaw data entry and the research, analyses, and dissemination process. UNCG student activities included volunteering at the sites to facilitate ARTmail, assisting in co-ordinating data collection, data entry for the evaluation, and one student conducted the key informant in-depth interviews and field observations. UNCG faculty, the CAN-NC director, and one UNCG senior undergraduate student and one graduate student participated in data analyses, report writing, and dissemination of the findings. The senior site staff also played an important role in completing the evaluation questionnaires. The Institutional Review Board of UNC Greensboro reviewed and approved the project.

RESULTS

Results from the evaluation survey

Baseline and endline interviews among participants assessed their mood and social connectedness, including information on basic demographic, socioeconomic, and health status. Our initial target sample had been 60 older adults (10 participants at each of six sites) who took part in the ARTmail activity. However, only about 31 seniors participated in the evaluation study, mainly because the legally authorized representatives of the seniors with cognitive limitations did not allow them to take part. Four participants agreed to take part in the evaluation but dropped out of the activity and the study due to ill health.

Table 1 shows that most participants were aged 76 and above, a little over half were male, more than one-third were African American, almost two-thirds had completed High School or more. Almost three-quarters had some cognitive limitation. Most were evenly divided between widowed and married. Most lived in a private home at baseline.

Table 1 presents information on some basic characteristics of the seniors.

Participants' Characteristics (N=31)	Percentage
Age Group	
% Less than 55	12.9%
% 55-75	29.0%
% 76+	51.6%
% Did not Answer	6.5%
Gender	
% Male	51.6%
% Female	45.2%
% Did not Answer	3.2%
Race	
% White	54.8%
% Black	38.7%
% Other	3.2%
% Did not Answer	3.3%
Education Level	
% Completing High School	61.3%
% With less than High School	19.4%
% Did not Answer	19.3%
Population Member	
% with Cognitive Disabilities	71.0%
Baseline Marital Status	
% Single	16.1%
% Married	29.0%
% Divorced	16.1%
% Widowed	35.5%
% Did not Answer	3.3%
Living Arrangements	
% In a Private Home	71.0%
% In a Living Facility	25.8%
% Did not Answer	3.2%

In results not shown in tables, when participants were asked to rate their own physical health during baseline interviews, about three-quarters of them rated their health as good or better, with endline interviews showing an increase in the number of persons rating their health as good or better. When participants were asked if they received help or supervision with personal care or getting around the house, over half answered "yes," with a decrease in needing this type of assistance at endline. Over three-quarters of persons received help or supervision

using the telephone, paying bills, taking medications, preparing light meals, doing laundry, going shopping, or managing money at the time of baseline interviews, with again a slight drop in the number of persons needing this type of assistance at endline. These figures are suggestive of a trend toward improved well-being, though the sample size was too small to yield a statistically significant result. Additionally, baseline numbers showed that approximately one-quarter of interviewees had been to an Emergency Room or Urgent Care in the last six months, while only one-tenth had visited these places in the ten weeks before the endline interviews. The majority of participants answered all questions on their questionnaires, although an increase in unanswered questions was noted in the endline data.

Since the majority of the group who participated in the evaluation (22 out of 31) had a cognitive limitation, we report the results only for this subgroup. We report changes in the mean of the Cornell Scale for Depression in Dementia to assess mood, and Engagement, Expression of emotion, and Indicators of Self Esteem scale to assess social connectedness. Table 2 presents changes in mood and social connectedness between baseline and endline (assessed by ANOVA techniques). Mean scores on both measures went down (indicating a lessening of symptoms, i.e. an improvement in status), though only the difference between the two means on the Cornell Score approached significance at the .10 level. Though our limited sample size did not provide sufficient statistical power, the results suggest a trend toward improvement (see Table 2).

Table 2: Change in mood and social connectedness between baseline and endline

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Round 1 Cornell score*	22	.00	21.00	5.55	5.50
Round 2 Cornell score*	22	.00	15.00	4.18	4.87
Round 1 Domains score	22	21.00	42.00	31.40	5.52
Round 2 Domains score	22	17.00	37.00	30.68	5.08
*means significantly different between round 1 and round 2 at the .10 level					

Results from the qualitative interviews

Our original research plan was to use a qualitative technique called Photovoice with the seniors' art and accompanying box stories. Photovoice is a tool for participatory research in studies where participants are from marginalized or vulnerable populations (9-11), and is a process by which people can use a photographic technique to present rich descriptive information about their community based on their unique perspective (9,10). In addition to photographs, data can include interview and discussion transcripts (9). The box stories were intended in this vein. However, due to limited capacity of seniors with cognitive diagnoses to express themselves in writing, and structural difficulties administering the project among participants with cognitive limitations and with overburdened site staff, the Box Stories component did not get created. These issues are addressed in the recommendations and discussion section.

In depth interviews were conducted with selected key site staff, volunteers, and participants. Responses revealed that site staff and volunteers felt that improvements could be made in the structure and process of the ARTmail activity and the evaluation. Regarding the ARTmail project, site staff felt that there was not sufficient introduction to the project. One supervisor said "There was the intro meeting where we talked about the project ... then boom, here's the project and one volunteer, then done". Regarding process, they also felt that the demands of the project were great, on the cognitively limited participants and on the staff. "Next time, maybe have smaller boxes ... I would like to see some more volunteers come to help maybe some actual art students ... maybe break it down into tasks, one day practice, and next time glue the practice paper onto the box. ... I also was not able to do any box stories because I never had time to do them". Regarding outcomes, we asked if they had observed how participating in the project changed mood and social connectedness among participating seniors. The site staff indicated mixed results including difficulties and achievements. One staff member reported: "I think in the moment the majority of the participants were happy but some were frustrated ... some yelled and cried because they felt overwhelmed ... anyone who went on the field trip to see their art loved it. They did feel special". Regarding the ARTmail evaluation, the staff felt the process was overwhelming. One staff member noted that: "I also was very overwhelmed with the assessment forms. It would have been nice to have either been taught how to use them properly or had a student come in and do them". However, they were willing to do the project again.

Two senior ARTmail participants (one male and one female) were interviewed separately. Both of them were in the group that had cognitive diagnoses. Each is identified here by a pseudonymous initial (KL for the woman, and TM for the man). To probe the impact on mood, participants were asked how they felt while participating in ARTmail. KL said at first "I got pretty anxious about doing it". When probed by the interviewer why she felt anxious, she clarified "Just wanting to get back to it." Later she elaborated on her feelings: "Like I was doing something constructive ... I was happier". The man, TM answered "I felt good ... it gave me something to do", and "I was calm". Examining social connectedness required more probing, however, the participants did provide valuable insights in their replies. For example, when asked about how creating the ARTmail box had changed her as a person, KL replied "Well, I'm usually a shy person ... and it didn't bring me out of my shyness ... but it made me a less shy person". When asked whether she felt closer or more connected to the other participants, KL said "I looked at her [another participant's] box and wondered what it was going to look like". When probed further, she added that "I felt closer to ... what's that crazy man ... he's red-headed ... a famous artist ... they even had a half hour show on his artwork on public television the other day

... he's dead now" who turned out to be Van Gogh. TM was much less forthcoming about whether the experience made him feel closer to the other participants, because he responded that "we ain't ever talk about it, you know". When asked about what suggestions they would have for improving the process of ARTmail, KL replied "having different materials ... different kinds of materials". TM said "more time ... more than once a week", which KL concurred with.

Results of the field observations

The senior undergraduate student author assisted in the fieldwork for the ARTmail project, and was actively involved at one site in the process of helping elder participants to begin their creative project each day and providing them with materials and emotional support. She documented her observations on the ARTmail and evaluation process from this site. During the course of ARTmail, she noticed a variation in attitudes toward the ARTmail project. At the beginning of the project, some seniors were excited to begin, while others were more hesitant - sometimes warming up to the process and displaying self-motivated creativity and concentration. In some cases, participants were proud of the art they created, while others never achieved this sense of pride. In most cases, participants were calm and appeared to enjoy making their art; their mood seemed positive. Most participants created their art in silence and with a great deal of concentration. Conversation between participants was limited and discussions were usually between participants and staff members about supplies such as paint and glue.

Staff at the care center experienced some obstacles and stress during the course of the project, particularly regarding the administering of evaluation interviews or the recording of box stories. Staff members noted that they were understaffed and it appeared that their lack of time to conduct uninterrupted interviews was due to a shortage of human resources needed to complete other tasks simultaneously. She also noted that in many ways, the staff members found the recording of participants' demographic and other information necessary for the evaluation to be burdensome. The staff members seem to recognize the value of the art project portion, but some expressed a reluctance to assist with the evaluation in the future due to the frustrations and complications of the non-art portions of the evaluation data collection. Overall, staff members enjoyed the ARTmail project and some participated in painting a box of their own, but they also appeared to be stretched thin by the requirements of the project.

DISCUSSION

The older age group is the most rapidly growing demographic segment across the world. While the needs of this group are rapidly growing, and the incidence and prevalence of dementia and other age-related disorders is likely to rise, programs that improve the psychosocial wellbeing and quality of life of this group are lacking, because of a greater focus on medical management and physical health needs. Participating in structured arts programs is argued to improve psychosocial wellbeing of older adults, e.g. improved mood and social connectedness, which in turn has a positive impact on care givers. Improved quality of life, mood, and social connectedness may play a role in allowing seniors to delay institutionalization.

However, design and delivery of such programs too often exclude seniors, because of lack of awareness and documentation, and more resources being targeted toward youth. Thus, further

exploration and documentation of benefits of structured arts programs for seniors, and improvements in their design and delivery, are needed. The University-community organization pilot partnership for evaluating the ARTmail program described in the present study aimed to address this gap. The partnership represents a significant collaboration between the community partner and the University, where the former designed and delivered the art activity, and the latter designed the evaluation and facilitated student volunteers to assist with the art project and the evaluation. The results of the project assist in building the capacity of the partner organization to improve design and delivery of the activity, and also document its beneficial effects on participants which may strengthen applications for funding support.

While the pilot quantitative evaluation was under powered and thus could not generate statistically significant results, the findings did suggest a trend toward improvement. The overall effort yielded rich insights which can be used to improve all aspects (design and delivery of the program, and the accompanying evaluation) of the effort in subsequent endeavors. The suggestions and recommendations for building capacity to improve the program include the following:

1. Art activities such as ARTmail are enjoyed by seniors, including those with cognitive limitations. Site staff and seniors said they would like to be involved again.
2. Structural issues with program design and delivery:
 - a. To make it easier for staff to successfully administer the activity, there needs to be increased volunteer support: at least 3 volunteers per site who remain consistently throughout the project, to support a group of ten participants.
 - b. For seniors with cognitive limitations and for the staff assisting them, the art activity needs to be broken down into smaller steps. The ARTmail manual needs to be revised to simplify the activity.
 - c. To successfully complete key aspects of the art project, such as the Box Stories, staff and volunteers are needed to specifically solicit descriptions from seniors and record what they say. This is specifically needed for seniors with dementia or other cognitive diagnoses, who may have difficulty with written communication, but who nonetheless have much to communicate. Their direct input is not often incorporated into research that is conducted “on” them, rather than “with” them.
3. Structural issues related to senior site staff and workload:
 - a. To successfully complete art activities, senior sites need to budget one and a half hours per session. Many sites’ time is structured so that only one hour blocks are available for activities, thus each ARTmail session was limited to one hour, which seemed to limit participants’ creativity.
 - b. Staff needs to be involved in the art activity planning process so that their recommendations can be taken into account from the start.
 - c. The site staff who are asked to provide hands-on assistance with the ARTmail project or evaluation activities, including filling evaluation forms and recording Box Stories, must be appropriately compensated since they are being asked to undertake additional complex work. These staff are already over worked and under paid, and their investment in the project is key to success. This implies that funding support for ARTmail and evaluation activities need to budget for this.
4. Evaluation design and implementation

- a. Sample recruitment is key to a successful monitoring and evaluation component. The quantitative component of the current evaluation study was statistically under powered because many legally authorized representatives of the participating seniors gave consent for them to participate in ARTmail, but not in the evaluation component. Future efforts should make outreach and awareness raising among family members of cognitively impaired seniors a high priority.
- b. The evaluation process itself needs a higher level of planning and support, that incorporates senior site staff perspectives from the outset. There needs to be enough trained volunteers (perhaps through collaboration with area Universities and Colleges) to assist with completing the baseline and endline assessment forms.
- c. There needs to be more time spent on training, and on support throughout the project, which would promote staff understanding the various aspects of the project and lowering the rate of unanswered questions on the assessment form. Time needs to be devoted to promoting the understanding of the value of creative programming for seniors.

In conclusion, our pilot evaluation partnership results indicated that ARTmail is an activity that is enjoyed by seniors with cognitive limitations, and may improve their mood. The pilot partnership also yielded significant lessons to promote successful implementation and evaluation of this program in future: including the need for additional training, volunteers, and budget to compensate site staff. Creative programming is an under-explored activity that can improve the enjoyment and quality of life of seniors with cognitive limitations through non-pharmacological methods. As the population with dementia and related conditions is likely to expand greatly in the coming decades, programs and activities that improve seniors' quality of life beyond the needs of medical management, and that do not rely on pharmacological interventions, are vitally necessary. The ARTmail activity and its ongoing monitoring and evaluation are efforts toward increasing community capacity to meet that goal.

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FIGURES

Figure 1: Group creating art boxes



Figure 2: A participant creating art



Figure 3: Participant receiving and opening a box



Figure 4: Exhibition at the end of the project period

