

BRINGING ART TO LIFE: THE IMPACT OF AN EXPERIENTIAL ARTS PROGRAM ON
ENGAGEMENT IN PERSONS LIVING WITH ALZHEIMER'S DISEASE AND OTHER
DEMENTIAS

by

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ABSTRACT

Due to the growing numbers of persons living with dementia (PWD), the U.S. Department of Human Services created a National Plan to address dementia care. One of the goals of the National Plan was to optimize the quality of care. Adult day services often provide person-centered care to PWD to increase dignity, engagement, and creative expression. The Bringing Art to Life (BATL) program was created as an art therapy intervention in an adult day service. This thesis is an evaluation of the BATL program measured by engagement through ethnographic observations of art therapy sessions. Using a published and modified behavioral observation tool, engagements were quantified to test the hypothesis that engagements increase through sessions. While there was an increase in engagement by session, that increase was not significant. The second hypothesis that engagements are more prevalent in social interaction than art interaction was supported. A thematic analysis was conducted on the ethnographic field notes to test the hypothesis that social engagement themes were related to reminiscence and dignity and it uncovered five common themes in the field notes: family, social interaction, humor, art interaction, and advice. From both the quantitative engagement data and qualitative data, we hypothesized that social engagements would be related to reminiscence and dignity. The integration of the quantitative and qualitative data answered the overall research question that the BATL program was effective in engaging participants meaningfully both in activities and socially in intergenerational conversations revolving around reminiscence and personhood and in creative expression using art.

DEDICATION

This thesis is dedicated to all of those who helped me in creating this research. In particular, my friends and family who challenged and supported me throughout this process. A special dedication is needed for my daughter, Grace, who has been my biggest supporter and my motivation for continuing with my education.

LIST OF ABBREVIATIONS AND SYMBOLS

AD	Alzheimer's Disease
AT	Art Therapist
<i>b</i>	Beta: Probability associated with accepting the null hypothesis incorrectly
BATL	Bringing Art to Life
<i>d</i>	Cohen's <i>d</i> : an effect size indicating standardized differences in means
<i>df</i>	Degrees of freedom: number of values free to vary after certain restrictions have been placed on the data
<i>M</i>	Mean: the sum of a set of measurements divided by the number of measurements in the set
<i>N</i>	Total sample size
<i>n</i>	Subset of total sample size
<i>p</i>	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
PWD	Person(s) living with dementia
<i>SD</i>	Standard deviation: a quantity calculated to indicate the extent of deviation for a group as a whole
S.E.	Standard error: a measurement of the statistical accuracy of an estimate
<i>t</i>	Computed value of <i>t</i> test
μ	Mean of population of comparison

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INTRODUCTION

Currently, 5.8 million Americans are living with Alzheimer's disease (AD) and related dementias, and that number is projected to increase to 14 million by 2050 (Alzheimer's Association, 2019). Alzheimer's disease is the 6th leading cause of death in the United States. In 2012, an advisory council convened by the National Secretary of the U.S. Department of Health and Human Services created the National Plan to Address Alzheimer's Disease (National Institute on Aging, 2019). The plan has five distinct goals: (1) prevent and effectively treat AD by 2025, (2) optimize the quality of care and efficiency, (3) expand support to persons living with dementia (PWD) and their caregivers, (4) enhance the public's knowledge and engagement, and (5) track progress and drive improvement.

Adult Day Services

Adult day services are one way to help address the National Plan goals by optimizing the quality of care for community dwelling PWD and offering respite support to caregivers. Adult day services provide social activities, recreation, meals, and some health-related services. Adult day services also help address the National Plan goals of expanding support to caregivers. There are more than 16 million Americans who provide unpaid care for AD and related dementias (Alzheimer's Association, 2019). Caregivers who provide care to PWD experience elevated levels of daily care-related stress (Zarit, Kim, Femia, Almeida, & Klein, 2013; Hazzan, et al., 2016; Burnside, Knecht, Hopley, & Logsdon, 2017) and daily pain experience (Ivey, Allen, Liu, Parmelee, & Zarit, 2018). One method of providing support for caregivers is to decrease some of

the care-related stress by offering respite in the form of adult day services. One study found that reducing exposure to care-related daily stress and using adult day services allow caregivers to manage their stress without becoming frustrated (Zarit et al., 2013).

Person-Centered Care

Adult day services strive to provide person-centered care. Person-centered care considers the personhood of an individual by tailoring interventions to accommodate their specific needs (Kitwood, 1997). Central concepts of person-centered care include communication, self-management, dignity, compassion, engagement, and respect (National Quality Foundation, 2014; Hartmann, et al., 2017). A major influence in dementia care is rooted in the theories of personhood and person-centered care (Kitwood, 1997; Windle et al., 2018). The main goal of person-centered dementia care is to maintain a person's personhood and uniqueness while they are losing cognitive capacity (Kitwood, 1997; Mast, Shuse, & Camp, 2015; Sauer, Fopma-Loy, Kinney, & Lokon, 2016). Further, Kitwood (1997) explained that the psychosocial needs of an individual are an important aspect of person-centered dementia care and are dependent on the care environment. There is robust support that interventions are more successful when they are tailored to an individual's needs, background, capabilities, and preferences (Sauer, Fopma-Loy, Kinney, & Lokon, 2016; van der Ploeg et al., 2012).

Measuring Engagement

Measuring patient engagement was addressed as one of the priorities of person-centered care (National Quality Foundation, 2014). Most often engagement is measured using self-reports, however, self-reports become less feasible in PWD populations. This is due to cognitive deficiencies that lead to errors in recall involving retrieval and ranking (Morgan-Brown, Brangan, McMahon, & Murphy, 2019). Direct observational tools are considered more accurate

than self-report questionnaires (Morgan-Brown, Brangan, McMahon, & Murphy, 2019). The Windle et al. (2018) meta-analysis found that studies using behavioral observation found changes in well-being and engagement.

Dignity

Dignity is another important aspect of person-centered care. Dignity is increasingly becoming a major focus of dementia care (World Health Organization, 2005). Harvey Chochinov created Dignity Therapy as an intervention for palliative care patients to address existential needs and concerns at the end of life (Chochinov, 2012). In Dignity Therapy, patients are interviewed using semi-structured questions. From the interview, a transcript is created to be shared with the individual and their family. The patient helps to edit the transcript before it is turned into a legacy document. Chochinov et al. (2011) found that dignity therapy as an intervention in palliative care alleviated suffering and distress. Other research into dignity has focused on creating legacy documents, life review interventions, and reminiscence activities (Keall, Clayton, & Butow, 2015; Allen, et al., 2014). Reminiscence is considered to be a vital part of an individual's psychological health and self-acceptance (Pinquart & Forstmeier, 2011).

Creative Expression

Another aspect of person-centered care is creative expression. Artistic self-expression supports healthy living through the lifespan (Burnside et al., 2017). While creative expression is beneficial to most everyone, it is even more significant to PWD since their self-expression may be limited due to cognitive decline (Lokon, Kinney, & Kunkel, 2012; Basting & Killick, 2003). The American Art Therapy Association (AATA) describes an art therapist as a mental health professional who facilitates a creative process that produces an artistic media that further results

in an exploration of feelings, reduction of anxiety, management of negative behaviors, and development of social skills (American Art Therapy Association, 2014).

Impact of Art-Based Interventions

Many studies have focused on the impacts of art-based interventions for PWD. A meta-analysis of art programs with PWD found four common outcomes: social connectedness, well-being (quality of life, pleasure, and enjoyment), changes in cognitive processes, and changes in attitudes and perceptions of PWD (Windle et al., 2018). PWD participants in a person-centered art activity program demonstrated significant increases in well-being, pleasure, and social interest compared to a traditional art program (Sauer, Fopma-Loy, Kinney, & Lokon, 2016). A randomized, controlled study of art therapy used within a dementia population found that there were positive and long-lasting benefits for PWD in sociability, mental alertness, and physical and social engagement (Rusted, Sheppard, & Waller, 2000). In a recent meta-analysis, researchers found that visual arts interventions lead to an increase in sustained attention and improved episodic memory in those with mild to moderate dementia. (Young, Camic, & Tischler, 2016). Overall, the research concludes that art therapy in PWD populations is beneficial at increasing well-being, quality of life, socialization, engagement, and cognitive functioning.

Bringing Art to Life Program

The Bringing Art to Life (BATL) project was created to address the need for person-centered care for PWD that strives to increase engagement, socialization, dignity, and creative expression. Bringing Art to Life is a partnership between Cognitive Dynamics Foundation, the University of Alabama Honors College, LifeBio.com, and Caring Days Adult Day Service. The University of Alabama Honors College offers an experiential seminar called Art to Life, which allows college students a service-learning opportunity to work with PWD.

Together, the students and the PWD create art and engage in intergenerational relationships at an adult day service center. At the end of the semester, the students create a life story project where they collect family photos, the art created during art therapy, and life stories of the PWD they worked with throughout the semester. Using LifeBio.com, they create a life legacy book that they present to the PWD and their families at the end of the semester celebration.

Individuals with mild to moderate Alzheimer's disease, other dementias, or cognitive decline that attend a local adult day service are invited to join the program. Each PWD is matched with two to three students for the semester. Students are selected from the Honor College and are enrolled in UH300 Art to Life class for one semester. Each student is grouped with one or two other students and then matched to a PWD.

The students meet as a group one day each week to learn about Alzheimer's disease and other dementias, caregiving, and life story preservation. Each Friday there are two sessions of art therapy at the adult day service (AM and PM). A trained art therapist leads the group art therapy sessions with the students and PWD. The art therapy sessions include art-making and discussion. Art making consisted of activities that are easy to do like tracing hands onto the paper and painting the handprint or vase painting. The PWD and the students create art together and the students get to know the PWD in the Friday sessions. At the end of the semester, the students present the artwork and the life story project to the PWD and their families.

The primary aim of the BATL program is to improve the quality of life for persons living with dementia and their families. The BATL program provides an art therapy intervention to clients of the adult day service from a person-centered approach that focuses on the dignity of the individual and strives to initiate creative expression and meaningful social interaction that increases engagement in PWD.

Engagement

For this program evaluation, engagement was used to evaluate the success of the BATL program. Engagement is considered to be a behavior associated with well-being (McFadden & Basting, 2010). Engagement is made up of participation in socialization and meaningful activities. There are many advantages to PWD being engaged. Active engagement in expressive and social activities is associated with greater well-being and quality of life (Hartmann, et al., 2018; Perugia et al., 2018). Engagement in novel and stimulating activities can help older adults with organic brain disorders (Kolanowski et al., 2016). Activity engagement is associated with greater self-esteem and self-efficacy in dementia populations and activities that are meaningful have an even higher clinical significance (Perugia et al., 2018). Camic et al. (2014) found that enjoyment was a major theme in arts engagement programs. Another significant benefit found in art programs with PWD was socialization and engaging in informal conversations with others (Burnside, Knecht, Hopley, & Logsdon, 2017).

Present Study

The purpose of this thesis is to evaluate the Bringing Art to Life program on meaningful social and activity engagements and to address the current gap in knowledge about why and how art therapy interventions for PWD lead to positive social and activity engagement. The first aim of this evaluation was to quantify PWD activity or social engagements in the BATL program with students and art activities. We hypothesized that there would be quantitatively more engagement over time in the sessions while controlling for time of day differences. We also hypothesized that there would be significantly more social engagement than activity engagement. Lastly, from the qualitative data, we expected that meaningful engagements will be related to

reminiscence conversations and dignity. Overall, it was the goal to analyze if the BATL program is successful in creating meaningful engagements among PWDs. With the quantitative and qualitative methods taken together as a fully integrated mixed methods study, we hypothesized that the BATL program would be successful in creating meaningful engagement through an intergenerational art therapy intervention.

METHOD

Setting

Caring Days is an adult day service center located in Tuscaloosa, Alabama that opened in March 1997. Caring Days is one of nineteen adult day services in the United States to be recognized as a Dementia Care Program of Distinction by the Alzheimer's Foundation of America. They aim to provide a secure and happy environment for adults experiencing memory loss. Thus, although the majority of participants are older adults, younger individuals with other types of cognitive impairment may also participate. They offer planned activities for PWD that utilize cognitive, social, language, and motor skills. The BATL art therapy class meets in a large private room in the facility with two large tables and chairs all around the tables. The room is well lit with natural light from the windows and is decorated with artwork from previous art therapy classes. A list of art therapy interventions used in the program is found in Figure 1 below. Over the five years the BATL program has been offered, there have been a total of three art therapists.

- Vase painting and collage
- Shaving cream and food coloring art
- Tissue lanterns
- Birdhouse painting
- Tracing hands life story art
- Shoebox and marble painting
- Abstract imagery
- Pumpkin painting
- Self-portrait
- Flower pot painting
- India Ink art
- Clay sculptures
- Bubble drop art
- String painting

Figure 1. List of art therapy interventions used in the Art to Life program

Participants

For this evaluation of the BATL program, observational data were collected over nine semesters and seventeen groups of participants, usually with two or three participants involved in any given session. Forty-nine participants were part of the BATL program; however, three participants did not finish the program and one new participant was added mid-program to replace one of the participants who discontinued. The final participant count was forty-seven in this study. All participants were screened by a neurologist and were confirmed to have mild to moderate Alzheimer’s disease, other dementias, or cognitive impairment.

Program Evaluation Design

A convergent mixed-methods design was used to evaluate the impact of the BATL program on meaningful engagement for persons living with Alzheimer’s disease and other kinds of dementia (Creswell, Clark, Gutmann, & Hanson, 2003; Klassen, Creswell, Plano Clark, Clegg Smith, & Meissner, 2012). Below, Figure 2 outlines the design to be used. The intent of this design is to collect both quantitative and qualitative data at the same time and then integrate the

two forms to better understand the research questions. Mixed-method research can provide more rich data with methodologically sound studies (Creswell, Fetters, & Ivankova, 2004).

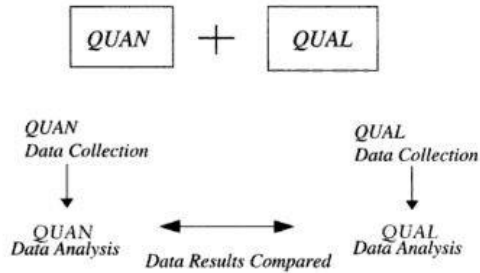


Figure 2. Concurrent Triangulation Design for mixed methods research. (Creswell, Clark, Gutmann, & Hanson, 2003)

Perugia et al. (2018) explained that engagement could be measured by behavior observational rating scales and coding schemes. Observational rating scales can identify engagement at a global level but do not address the detail of the engagement. Qualitative coding schemes often provide a deeper understanding of behavior and engagement because they collect the characteristics of observed behaviors. These coding schemes can look at engagement in an activity, interacting with objects, and verbal communication. A recent study used a qualitative and grounded theory analysis of an arts program for PWDs and their caregivers and identified emergent themes of engagement, personhood, and socialization from the transcriptions (Burnside, Knecht, Hopley, & Logsdon, 2017). In another qualitative study of art with PWD, themes of validation of personhood, and opportunities to share thoughts and feelings were uncovered (Hazzan, et al., 2016).

Data collection

Researchers recorded field notes of ethnographic observations of 100 one-hour art therapy sessions at Caring Days Adult Daycare between Spring 2015 and Spring 2019. At each session, there were between one and three researchers collecting field notes of their observations.

Whitehead's (2005) article described ethnographic observations as an iterative process of continued observations while making inferences to answer questions. The ethnographer moves between observing and interpreting the social setting they are viewing (Whitehead, 2005). Because of these inferences and to maximize the believability and trustworthiness of their coding, each coder created a subjectivity statement to examine their reflexivity, or their individual experiences and biases, that shape their interpretation of the observations (Russell & Gregory, 2003). Researchers were instructed to observe one participant for five seconds and describe their interactions with the artwork activity, interactions with others in the room, and events that took place. Then they were instructed to move to another participant and repeat. The observations are de-identified using only initials for the participants. The study data are securely stored using a General Data Protection Regulation compliant cloud content management platform, Box, that is password protected.

Engage Research Instrument

For this study, we used a modified Engage research instrument to measure engagement retrospectively from the field notes. The Engage instrument was developed from the Resident-centered Assessment of Interactions with Staff and Engagement as a tool to be used by nursing home staff to quantify engagements with nursing home residents (Hartmann, et al., 2017; Snow, et al., 2016). This modified tool was named Engage and it measured resident engagement in meaningful activities (Hartmann, et al., 2017). For this study, the Engage tool was slightly modified for an adult day service facility and measured engagement of the PWD as reflected in the ethnographic field notes with the art activities and social interactions. The modified Engage tool is shown in Figure 3 below. The original Engage instrument has four categories measuring

engagement: actively engaged, only receiving input, not engaged, and can't see or hear. For this study, the Engage modification uses six categories to measure engagement: activity engagement, verbal engagement, nonverbal engagement, only receiving, no engagement, and can't see or can't hear. For the analysis, the verbal and nonverbal engagements were combined creating a variable of social engagement. By distinguishing between social and activity engagement researchers were able to analyze engagement differences within the adult day service facility.

Categories for the "Participant engagement" checkboxes are listed below. Check one. For participants you can't see or hear, just check "can't see/hear."

Participant is ACTIVELY engaged in Art project

- Participant is engaged in a purposive activity and demonstrates physical or mental effort
 - Examples: Deciding color choices, picking up paint brush or marker, gathering materials, cutting papers, molding clay

Participant is VERBALLY engaged in communication with student or anyone in the room

- Participant is engaged in a conversation with a student or anyone in the room and demonstrates communication verbally
 - Examples: Talking with student, answering questions, laughing

Participant is NON-VERBALLY engaged in communication with student or anyone in the room

- Participant is engaged with a student or another person in the room and demonstrates communication non-verbally
 - Examples: Nodding to student, making eye contact, hugging, smiling, dancing, intentional facial expression, shaking head, or shrugging

Participant is ONLY RECEIVING input

- Participant is listening to/watching people or events, but is not participating or trying to communicate
 - Examples: watching other individuals, looking at others' artwork

Resident is NOT engaged

- Examples: Closed eyes; Staring into space (with no indication that resident is listening to music/radio/others); Talking to self or talking to others who are not there; using repetitive words/sounds; Interacting through touch or gesture with the environment/self without engaging in a purposive activity (Examples: tapping table repetitively, rubbing head repetitively); Talking to self or talking to others who are not there; using repetitive words/sounds; Fidgeting with clothes/objects, body parts, hands, feet, etc.

1	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
2	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
3	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
4	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
5	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
6	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
7	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
8	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
9	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
10	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
11	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
12	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
13	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
14	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
15	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
16	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
17	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear
18	<input type="checkbox"/> ACTIVE	<input type="checkbox"/> VERBAL	<input type="checkbox"/> NONVERBAL	<input type="checkbox"/> ONLY RECEIVING	<input type="checkbox"/> NOT Engaged	<input type="checkbox"/> Can't see/hear

Figure 3. Modified Engage research instrument for measuring engagement. Adapted from: (Hartmann, et al., 2017)

Coding Team

The coding team (CDR, RSA, BL, SS, MCY) analyzed the interrater reliability of the quantitative data by assessing percent agreement (# agreements/ #agreements + disagreements).

In Figure 4, the interrater reliability percent agreements are presented showing an overall percent agreement of 89.4%. Of the 143 field notes, 25% of sessions (N = 35) were analyzed for interrater reliability. Of the selected field notes for establishing reliability: SS and CDR with 87% agreement on nine field notes, BL and CDR with 90% agreement on eight field notes, MCY and CDR with 87% agreement on eight field notes, RSA and CDR with 87% agreement on five field notes, and MCY, BL, and CDR with 96% agreement on five field notes.

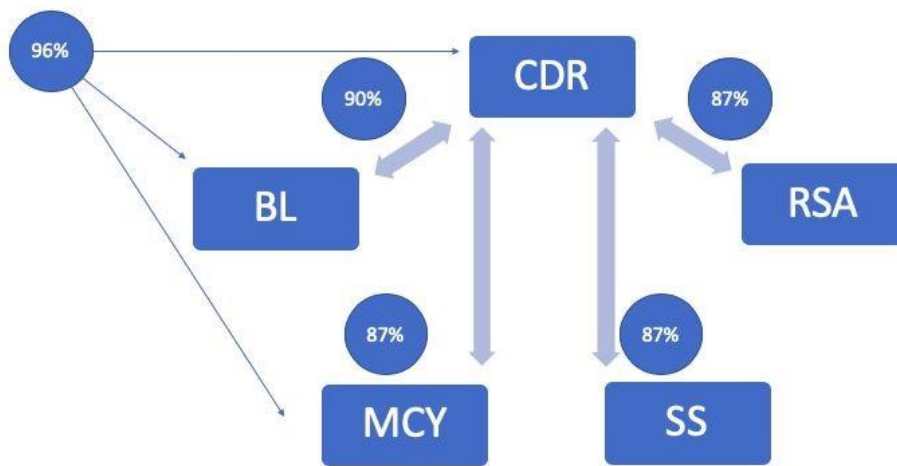


Figure 4. Interrater reliability percent agreements.

Data Analysis

Quantitative. For the analysis, there were a total of 143 field notes over the 100 sessions. After meeting initially to calculate interrater reliability, it was apparent that there was a need to differentiate the exact time samples within the fieldnotes, due to different styles of recording ethnographic fieldnotes by each observer. Therefore, CDR separated the field notes into distinct time samples for observations of the behavior of each PWD, following the observational procedure previously described

Coders were randomly assigned the 143 field notes as such: SS coded 30, BL coded 30, MCY coded 30, RSA coded 16, and CDR coded 37. When sessions had multiple field notes,

each note was coded, and an average was computed from the two for the session. From the ethnographic observation field notes, researchers used the modified Engage tool to quantify meaningful engagements in each of the six categories. All engagements in a session were divided by the number of PWD participants in the session to calculate the amount of engagement per participant. Statistical analyses were conducted using IBM SPSS Version 26 and are presented in the following order: 1) basic demographics of the PWD participants and the sessions; 2) a two level (year/semester) and (session) multilevel mixed models exploring the engagements by sessions and the impact of time of day differences; 3) *t*-tests that investigate the differences between activity and social engagement; and 4) results of the thematic analysis of the field notes.

Qualitative. The main goal of the qualitative analysis of ethnographic field notes is to describe what discussion themes emerged among PWDs and students in their social engagement. A team of five researchers independently performed a thematic content analysis, on a random selection of field notes ($n = 35$), using a constant comparison approach to identify key themes of discussion, memoing any additional impressions the observers had regarding these engagements. The qualitative coding team met to review the open coding themes and discuss discrepancies, achieve consistent agreement, and create a codebook. The overarching themes, derived by a consensus and included in the codebook were: social interaction, art interaction, negative interaction, humor, family, career, hometown/travel, holidays, and advice. Also collected in the codebook were memos related to impressions observed within the sessions, the overall effectiveness of BATL, art therapist effectiveness, and art project effectiveness. To

quantify the qualitative data, the number of occurrences of any of the themes (i.e., counts) are included to provide a sense of the level of saturation of the themes (Sandelowski, 2000). Quotations are presented in the results section to assist the reader in understanding the rich qualitative data.

RESULTS

Descriptive

Participant demographics can be seen in Table 1. Participants were mostly female (57%) and predominantly non-Hispanic white (63.2%). Participants mean age was 74 years old and ages ranged from 25 to 94. Of the participants, 52.5% were diagnosed with Alzheimer’s disease ($n = 26$), 12.5% with vascular dementia ($n = 9$), and the two young adults (25 & 28 years old) were diagnosed with Traumatic brain injuries.

Table 1.

Demographics of Participant Sample

Mean(SD)	Age	Gender	Race/Ethnicity
Participants N = 47	74.26 (14.39)	Female: 57.4% Male: 42.6%	Non-Hispanic white: 63.2% African American: 21.1% Hispanic 5.3% Other: 10.5%

Session demographics can be seen in Table 2. There were five years of weekly art therapy sessions (2015 – 2019), each year having a fall or spring semester for a total of 10 semesters of data. Each semester there were AM and PM art therapy sessions across roughly eight art therapy weekly meetings each semester. Taken together, there were a total of 100 sessions for this nested analysis.

Table 2.

Demographics of Sessions

Weekly Session	Number of sessions	Percent	Time of Day
1	15	15%	AM: 51%
2	17	17%	PM: 49%
3	15	15%	
4	14	14%	
5	6	6%	
6	14	14%	
7	15	15%	
8	4	4%	

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Quantitative

All quantitative data were analyzed at the art therapy session level and not participant level. Year and semester were combined into a new variable allowing for a nested model looking at the art therapy sessions (N = 100) as level one. The first multilevel model looked at whether engagement increased by session while controlling for time of day differences and found that there was not a significant difference in engagements by session ($t(93.8) = 1.17, p = 0.25, S.E. = 0.43$), indicating no time effect or change in engagement by PWD across time. The second multilevel model removed the time of day differences since the previous model showed no time effect and looked at engagement differences in the sessions. This model also showed no significant difference in engagement by session but did better predict the effect of session ($t(94.1) = 1.42, p = 0.16$). These results show that time of day did not better predict the model

and while engagement increases by session across years ($b = .43$, $SE = .71$), the increase is not significant.

For the second hypothesis of social engagement being more prevalent than art engagement, results of the one sample t -test are found below in Table 3. The results indicated that there were significantly more social (verbal and nonverbal) engagements per participant ($M = 9.61$, $SD = 4.6$) than art engagements per participant ($M = 5.23$, $SD = 3.1$) in each session ($t(99) = 9.52$, $p < 0.01$).

Table 3.

Two-Tailed One Sample t-Test for the Difference between Social Engagement by Participant and Activity Engagement by Participant

Variable	M	SD	μ	t	p	d
Social Engagement	9.61	4.60	5.23	9.52	< .001	0.95

Note. Degrees of Freedom for the t -statistic = 99. d represents Cohen's d .

Qualitative

From the qualitative data the most common themes uncovered in the ethnographic field notes were family ($n = 103$), social connection ($n = 102$), humor ($n = 97$), and art interaction ($n = 81$).

Family (N = 103). The most common theme in the observational field notes was related to conversations about family. Many conversations involved talking about PWDs children. One participant told a student, “My favorite thing about having children is how attached they are to their mother, even when they get older.” Further, one participant said, “I had six sons and was surrounded by boys, I also grew up with brothers.”

Other family conversations were related to parents and how the participant was raised: “I was born and bred a hippie, and my mom sent me to Catholic schools!” Another participant told

the group, “I was the middle child and I had to fight my brothers to hold my own in the house.” One particular participant jokingly talked about her father, “My dad was strict; he always wanted a son, so my husband became his son when we got married.”

There were many conversations related to marriage and partners in the field notes. Specifically, one participant said, “I met my husband when we used to ride bikes together in grade school.” Another lady recalled her late husband, “My husband is gone, but he was handsome and my favorite thing about him was he was very sweet and humble.” One man proclaimed, “I have a lot of love for my wife. She is a sweet lady and I have a lot of love for her. She is so beautiful.”

Social Connection (N = 102). One of the unique parts of the BATL program is the addition of the intergenerational experience between the older adults and the college students together with the art therapy. Often there were discussions where the participants talk about their pleasure of having the young adults in the session with them. One woman said to the whole room, “I am so happy to be with you all today. Thank you for having me!” Another female participant hugged the students in her group saying, “Hugs to help you know you are loved.” One man who was a former school administrator would praise the students and say, “You are all smiling and good people, and you all could be good teachers if you want to be because you can be so nice while staying on top of your students.”

Humor (N = 97). One theme that was very apparent in the field notes and in the memos is the reliance on humor so often in the art therapy sessions. There were jokes about the artwork and art projects. One participant jokingly named his artwork ‘Beyoncé’ and did a hair flip when he said ‘Beyoncé to get a laugh out of the college students. Another participant joked with the

group, “My art here is just very complex,” while another man joked about a student’s art, “That brick she drew looks like a sorry attempt at a Christmas tree.”

Other humorous conversations focused on the PWD, often with self-deprecating humor. One participant introduced himself each session as “The King,” and another woman admitted, “I flirted with a cop and got emotional to get out of a ticket.” When asked if she liked the project she was working on, she said, “Personally, I like big cash bonuses coming my way.” There were other instances when the participants joked with the students. One woman joked with the students in her group, “you are messing up my nap today.” Another female participant had glitter in her hair and paint all over her. She told the group jokingly, “You did this to me, and you all need to be put in jail!”

Engagement with Art (N = 81). While the social connection was more apparent in the field notes, there were many engagements related to the art project and art in general. One woman finished up her painting and said, “This looks good!” Many times, the students were interacting with the participant while they were engaged in the artwork. For example, in the field notes an interaction is described, “The students are helping her trace her hand onto the sheet of paper,” or another example, “She refers to the artwork as ‘our art’ and likes that idea of the students working with her.” Many times, the participants were proud of the artwork they completed and named it and gave it a description when sharing at the end of the session. One participant named his globe painting, “The Whole Wide World” and another woman said of her art, “This looks like a kite and it reminds me of being a little girl and flying a kite.”

Hometown/Travel (N = 69). There were many discussions about where people come from, favorite places to travel, and growing up. One participant talked about what it was like for

her to grow up in her town, “I would play baseball, and when I was really little all of us kids would get together and play in the field at school.” One lady told her students, “I am proud to say that I have traveled to every single state in the United States.” Another woman described her favorite trip, “We took our motorhome out west with the family and saw incredible mountains and geysers.” One participant was born in Cuba and she told the students, “My experience of Cuba is very different than living here, I definitely do not like the cold in Alabama.”

Career and Hobbies (N = 53). Many participants enjoyed sharing with the students about their former careers and hobbies. One participant said, “I played college football and I wish I hadn’t because of the head injuries I sustained.” While another participant shared with the students, “When I was your age, I wanted to be an architect. I would draw plans for buildings.” Others talked about their time in the service or in different wars. One participant talked about being stationed during WW2 and another talked about his service in Vietnam.

Advice (N = 28). One of the other themes collected in the observational field notes was related to participants giving life advice to the college students. One lady told her group of students, “Life is too short to not have a fun time. If I can make somebody smile, that’s what I do. Everybody is not going to do what I want to do, but you need to do what’s best for yourself.” One man warned, “Getting old ain’t a whole lot a fun. You can’t do things and you forget.” One participant advised, “No matter what you do, you should always do it boldly!” The advice also covered practical advice on cooking, “The first thing in a bride’s cookbook should be how to boil water. The secret... you don’t watch it or else it will never boil. You can take a can of spam and a can of peaches and mix them together, then bake.” There were discussions about health, “Eat

an apple every day to avoid going to the doctor” and “Stop biting your nails, if you don’t, your liver will stop working because it is full of nails.”

Negative Interaction (N = 27). There were other instances that the PWDs had a negative interaction with the art or a student. One woman was confused by what the project entailed and her own ability and told the art therapist through tears, “I don’t want to draw because I am nervous that it won’t look perfect.” In another instance, a man is painting his family and says, “I love my wife, but I feel like a burden on her and it makes me so frustrated that my memory is getting worse.”

Sometimes the interaction between the PWD and the student can be uncomfortable. One instance involved a student pushing the male participant to finish working with the clay and the man said, “I will do what I want to do.” Other times the participant was not comfortable in the session and wanted to leave. For example, one woman said, “I think my children do not know where I am, and they are probably worrying about me. I must go check on them.”

Holidays (N = 15). Because many of the art activities were themed on holidays, there were many conversations related to holidays and traditions. One man started laughing at a picture of people dressed up and said, “I used to dress up for Halloween when I was younger, but I can’t really remember what I dressed up as.” Another man described Easter at his home growing up, “We would hunt for painted boiled eggs under the hens.” One lady joked with the students, “I’m not too old for an Easter basket or an Easter egg hunt!”

General memos. In the field notes, there were many memos added to express the observers’ impression of engagements, whether positive or negative. Some memos gave a rich description of the participants’ understanding of the art project, “It seems to me that both

participants understand the experiential aspect of this art directive. They do not hesitate to add and change their paintings, knowing that the end result does not matter, but the process does.” At times, issues of race/ethnicity were discussed. One memo talked about the sentiment in the room between the participants and the students, “The participant made a comment that she was glad the students are good people because some people don’t want to be around black people.”

Other memos described negative impressions of the interactions between participants and students, “The students are talking to him like he is a child. I can’t tell if he is annoyed or just can’t hear well.” Another memo focused on one participant who was not working on his art, “When multiple conversations were occurring at the table, he would get very distracted and unable to finish his train of thought.”

BATL overall effectiveness. The field notes also had many memos related to observers’ impressions of the effectiveness of the BATL program. Most of the memos were positive about effectiveness. One observer noted, “All of the participants and students are engaged and enjoying the activity and are all interacting well with each other.”

There were also many observations of the participants commenting on the effectiveness of the BATL program. One participant said, “I didn’t know what to expect when coming to art therapy but now I know it is like a little family and it is a good place to be.” Another participant said, “I appreciate everyone for coming today and talking to me. It was nice to meet everyone, and I think doing this every Friday sounds fun!”

Art Therapist (AT) Effectiveness. Many of the field notes had memos about how participants interacted with the art therapists. In particular, one memo noted, “The AT engaged

in conversations and encouraged participants when they doubted their abilities.” There were a few negative memos related to the AT’s effectiveness. One memo noted, “The AT talked about the PWD and his condition to the students when she was sitting next to him and he could hear.”

Participants also had opinions on the effectiveness of the AT. One participant said about the AT, “I learned as much from you as you learned from me! I am thankful you called and told me this was happening today.”

Art Project Effectiveness. Also, in the field notes, there were memos related to the effectiveness of the art projects. One observer noted, “There is a lot of laughter and all of the participants seem to enjoy the ease of the activity.” Another observer noticed, “He appears to be really enjoying the painting and looks very happy with his work.”

Other activities seemed to be less effective in engaging participants, “She seems very reluctant to make any decisions about the art project without input from the students.” One observer noted, “He does not seem interested in completing the activity and he said that he didn’t want to do the art collage.”

DISCUSSION

The overall aims and goals of this thesis were to evaluate the BATL program on meaningful social and activity engagements and how the engagements are related to reminiscence and personhood. Program evaluations can provide evidence for whether interventions implemented in the community have beneficial, no, or even harmful effects. The findings for the first hypothesis that engagements increase across sessions was not supported in this study, as the data showed that engagements increased only by .44 engagements per session. Other studies have shown positive and durable increases over time when looking at social engagement in art therapy interventions (Slayton, D'Archer, & Kaplan, 2010; Rusted, Sheppard, & Waller, 2006). It is likely the same results were not found in this study due to not using pre and post outcomes as measures, such as found in a study on the efficacy of art therapy (Rusted, Sheppard, & Waller, 2006). They found that mental acuity, physical involvement, calmness, and sociability measured using the observational Bond Lader Mood Scale all increased significantly over time.

Interestingly, this study also found no time of day differences that have been shown to be common in PWD behavior in prior research (Burgio, Scilley, Hardin, & Hsu, 2001; Paillard, Noe, Bru, Courdec, & Debove, 2016). However, the data showed that there were no significant differences in social or activity engagement between AM and PM sessions. One possible reason may be because the PM BATL sessions were still early in the afternoon rather than late afternoon or evening when increases in disruptive behavior more commonly occur (Alzheimer's Association, 2017). A recent study also found similar results with no significant differences in

time of day on engagement when using early afternoon times (Boyden, Miltenberger, & Novotny, 2019). To fully examine differences in diurnal patterns of behavioral engagement in future studies, the PM time would likely need to be late afternoon or early evening.

We also hypothesized that there would be significantly more social engagements than activity engagements in the overall sample of field notes. This hypothesis was supported, as the results showed that social engagement was significantly more prevalent than art engagement in BATL ethnographic field notes. This suggests that having the college students in the room interacting socially with the PWD seems to be a meaningful and crucial part of the BATL program. Although the intergenerational aspect of the program contributes to social engagement, the art projects themselves add to social engagement as they are often the topic of conversation and themes related to holidays, favorite memories of childhood, and families.

This study also looked at what qualitative themes in meaningful engagement were uncovered in the ethnographic field notes, and how they related to social or activity engagement, reminiscence, and personhood. Based on previous research, we hypothesized that social engagement themes would be related to reminiscence and personhood (Burnside et al., 2017; Hazzan et al., 2016). The results showed that the most common themes of intergenerational communication in order of frequency were: family, social interaction, humor, art interaction, and advice. The family, social interaction, and art interaction themes replicate findings of other studies (Brooker & Duce, 2000; Allen et al., 2014). However, the results of this study have expanded on other studies by uncovering two other important themes, humor, and advice.

From the memos of the field notes, this study also revealed that from the observers' view there were many positive aspects of the sessions, but also some negative aspects. The memos conveyed that overall the art therapists were effective in leading the art therapy class, choosing

suitable art projects, and facilitating social interaction with the participants and the students. However, there were memos that noted some important points that could be addressed in the sessions. Such memos noted that students were talking to participants like children and some memos that described students seeming uncomfortable conversing with the participants. One way that these negative aspects can be improved is by implementing more education and training in the BATL class on communicating with older adults and PWD. There were also some memos in the field notes that focused on the art therapists and the art projects. Specifically, there was a memo describing the art therapist pressing the participant to engage in the activity more than socializing with the students. Other notes found that some of the art projects were difficult for the participants to engage in or the instructions of the art project were unclear. It is important that the art therapists are thoroughly trained in working with PWD and that the art projects they choose are suitable for this population.

Overall, the integration of quantitative and qualitative findings from this study suggest that contrary to expectation, the frequency of social and activity engagements did not increase across sessions. Nevertheless, ethnographic field notes revealed that the BATL program is an effective, replicable community intervention that facilitates meaningful activity-based and social engagement in community-dwelling PWD participating in an intergenerational art therapy intervention conducted within an adult day services program. The socialization between the PWD and the college students adds another level of engagement for the PWD, where they can offer advice and use humor to socialize and connect with young adults. The PWD are also able to reminisce memories with the students, helping the PWD increase their sense of personhood.

Limitations

Program evaluations are by definition not controlled; therefore, it is not possible to evaluate the efficacy of the BATL program relative to a control group. In other words, program evaluations are not randomized, controlled trial studies. Given the specificity of goals and setting, it is not possible to generalize the findings of this research to other settings such as skilled nursing facilities or home-based settings. Despite these limitations, however, this study expands the growing evidence that there is value to interventions that incorporate art making, dignity, person-centered care, intergenerational engagement and service learning within adult day services for PWD by suggesting intergenerational service learning programs may incorporate specific elements that promote sustained social and activity engagement. Moreover, this engagement provides PWDs the opportunity to provide advice to college students, and these interactions are often steeped in humor.

Implications

This study adds to the literature by suggesting that the BATL program is successful at creating social and activity engagement through intergenerational interaction, reminiscence, and the creation of art. These activities support the personhood of PWDs and have positive effects on college students (Carden et al., 2016). Program evaluations of art and legacy interventions can uncover best practices for implementing new interventions and programs in real world settings. Future studies may investigate different interventions that can have a positive impact on the quality of life for PWD while also considering the impact of having an intergenerational component.

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