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Abstract

During a 15-month period between February 2010 and April 2011, video data on ($n = 38$) people with dementia were collected during a person-centered and intergenerational arts activity program called Opening Minds through Art (OMA) at three different long-term care facilities in Ohio. A subsample of the OMA participants ($n = 10$) were also video recorded during traditional visual arts activities (e.g. coloring books, scrapbooking). A modified version of the Greater Cincinnati Chapter Well-Being Observation Tool[©] was used to code the intensity and frequency of observed domains of well-being (i.e. social interest, engagement, and pleasure) and ill-being (i.e. disengagement, negative affect, sadness, and confusion). Descriptive results indicate a high percentage of moderate or high intensities of well-being during OMA sessions with little to no ill-being. Paired-sample t-tests comparing OMA vs. traditional visual arts activities showed significantly higher intensity scores for OMA in the domain of engagement and pleasure, as well as significantly lower intensity scores for disengagement. The findings of this exploratory study contribute to the overall discussion about the impact of person-centered, creative-expressive arts activities on people with dementia.

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Keywords

Alzheimer's disease, arts activities, creativity, creative self-expression, dementia, quality of life, video data analysis, well-being

Introduction

Dementia is a global impairment of intellect, memory, and judgment and can be caused by a number of different diseases, the most common of which is Alzheimer's disease. Dementia is becoming a global health concern, as current estimations indicate that the worldwide number of individuals with dementia will increase from 44 million in 2013 to 76 million by 2030, and 135 million by 2050 (Prince, Guerchet, & Prina, 2013). It is estimated that 5.4 million Americans are currently living with Alzheimer's disease and this number will rise to 16 million by 2050. (Alzheimer's Association, 2012). Alzheimer's disease remains an incurable neurodegenerative disease. Tragically, the cognitive and functional losses characteristic of dementing illnesses are exacerbated by stereotypes and stigma surrounding the disease. "The way the world sees Alzheimer's today is that a person is almost totally lost once he or she receives an Alzheimer's diagnosis – lost both to themselves and to those who love them. An Alzheimer's diagnosis is seen as an Alzheimer's sentence" (Zeisl, 2009, p. 7). Consequently, increasing attention is being given to non-pharmacological interventions that enhance personhood and quality of life for those living with the disease (Lepp, Ringsberg, Holm, & Sellersjo, 2003; Remington, 2002; Skingley & Vella-Burrows, 2010; Witzke, Rhone, Backhaus, & Shaver, 2008).

Theoretical and research perspectives

Kitwood (1997) asserted that "the primary task of dementia care...is to maintain personhood in the face of failing of mental powers" (p. 84). He defines personhood as "a standing or status that is bestowed upon one human being, by others, in the context of relationship and social being. It implies recognition, respect, and trust" (Kitwood, 1997, p. 8). His work suggests that 10 types of positive interactions, or positive person work, support personhood in individuals with dementia. These interactions include recognition, collaboration, play, celebration, validation, facilitation, and creation among others. Interactions characterized by the above elements meet the person's psychological needs for attachment, comfort, identity, inclusion, and occupation, thus promoting well-being.

Lawton's model has been highly influential in conceptualizations of quality of life in dementia. Lawton (1994) proposed that four domains contribute to quality of life: (1) psychological well-being which includes both positive and negative affect; (2) behavioral competence; (3) objective environment; and (4) perceived quality of life. Lawton (1983) observed that "negative affect was more strongly related to inner aspects of the person while positive affect was more strongly related to external, interactive aspects of the person's world" (p. 65). A focus on the impact of interventions on quality of life calls attention to personhood and well-being of people with dementia (PWD). This contrasts with a deficit model of dementia that focuses on cognitive failures or memory impairment (Lawton, 1994). Until we find the cure for Alzheimer's and other dementias, we agree with

Ready and Ott (2003) that “the importance of considering quality of life in dementia cannot be overstated” (p. 7).

According to Basting & Killick (2003), creative expression activities, also referred to as cultural arts interventions (e.g. music, visual arts, storytelling/theater, and dance), are non-pharmacological approaches with the potential to enhance the personhood and quality of life for those living with dementia. Although opportunities for creative expression are important for all elders, this becomes even more important for those with dementia who have seen other opportunities for self-expression and mastery eroded (Basting & Killick, 2003). As McFadden, Frank, and Dysert (2008) reported, “We also noted particular expressions of selfhood in the painting group...perhaps the ‘flow’ (Csikszentmihalyi, 1990) of the moment disinhibited them, allowing them to access the ability to express needs and preferences” (p. 141). Engagement in the arts has the potential to reveal the self and strengths still remaining to family and paid caregivers, and “their artwork is a visual reminder that persons with dementia can still accomplish and learn new things...thus helping others see beyond their limitations to their strengths and beauty” (Johnson & Sullivan-Marx, 2006, p. 316). Participation in creative expression programs also provides opportunities for increased communication and socialization among PWD as they share the art-making process and products (Allan & Killick, 2000; Basting, 2006; Basting & Killick, 2003). This improved quality of interaction as a result of engaging in the arts also happens between PWD and their caregivers (Fritsch et al., 2009).

Further, neurophysiological research suggests that engagement in creative work results in hypothalamic stimulation, parasympathetic arousal and the release of endorphins and other neurotransmitters (Lane, 2005). Participation in the arts is hypothesized to impact the immune system through its facilitation of feelings of control, mastery, and empowerment. Lane asserts (2005) that “Art, meditation, and healing...are all associated with similar brainwave patterns and mind-body changes” (p. 123). The cognitive challenges experienced by those participating in creative expression activities also are thought to stimulate the development of new dendrites in the brain, improving communication between brain cells (Cohen, 2006).

While the above literature supports that participation in creative arts activities may positively impact selected aspects of quality of life of those with dementia, two reviews of the research addressing creative arts approaches and dementia (Beard, 2012; de Medeiros & Basting, 2013) note that much of the research has focused on the impact of creative arts programs on reduction of behavioral and psychological symptoms of dementia (BPSD) rather than on their effect on quality of life. Reviews of studies that include quality of life as an outcome found that music interventions (de Medeiros & Basting, 2013) and dance (Beard, 2012) were found to result in increased quality of life although many of these studies were plagued by methodological limitations. Similarly, a Federal Interagency Task Force made up of the National Endowment for the Arts (NEA), the National Institutes of Health (NIH), and the National Academy of Sciences (NAS) in their 2013 review of research articles on creative arts and dementia concluded that most of these studies have samples that are too small, not randomized, poorly defined, and have no control groups. They also found that the arts interventions themselves are not well-defined or documented, in terms of the frequency and intensity of the activity (NEA, 2013).

Several studies have attempted to address some of these methodological limitations of the research. Using a quasi-experimental, two group, repeated measures design Phillips and colleagues found that participation in the TimeSlips storytelling program enhanced

pleasure and communication, but had no effect on well-being of the 28 residents who participated in the program (Phillips, Reid-Arndt, & Pak, 2010).

Two studies (Kinney & Rentz, 2005; Rusted, Sheppard, & Waller, 2006) compared benefits of visual art activities designed for those with dementia to traditional structured or recreational activities offered to participants. Kinney and Rentz (2005) observed 12 participants during an art intervention (Memories in the Making[®]) and traditional activities (e.g. crafts and current events) using the investigator developed Greater Cincinnati Chapter Well-Being Observational Tool[©], derived from Lawton's conceptualization of well-being. The results indicated that participants had significantly higher mean scores for five (i.e. interest, sustained attention, pleasure, self-esteem, and normalcy) out of seven assessed domains of well-being while participating in the art intervention. Rusted, Sheppard, and Waller (2006) followed 21 PWD over a period of 40 weeks and found that the intervention group (art activity led by art therapists) showed an increase in mental acuity, physical competency, calmness, and sociability, compared to the control group (recreational activity) for which the domains decreased over time.

Thus, although theoretical and extant research provides some support for the positive impact of participation in creative arts activities on quality of life, studies on the effect of visual arts participation are often atheoretical, lacking in the use of standardized outcome measures, and focused on improving behaviors viewed as problematic rather than on possible impacts on quality of life (Beard, 2012).

This study aims to address some of these limitations. In this study, quality of life was conceptualized according to Lawton's view (1994) as previously described. Using an adapted version of the Greater Cincinnati Chapter Well-Being Observation Tool[©] (Kinney & Rentz, 2005), we operationalize the notion of quality of life in terms of well- and ill-being. We then assess the well-being and ill-being of PWD during *Opening Minds through Art (OMA)*, an intergenerational visual art program led by practicing artists and compare it to traditional art and crafts activities (e.g. coloring books, scrapbooking). More specifically, this study addresses the following questions:

- To what extent do PWD who participate in OMA demonstrate behaviors of well-being and ill-being?
- To what extent do PWD who participate in traditional art activities demonstrate behaviors of well-being and ill-being?
- Is there a difference in the intensity of well- and ill-being observed during OMA and during traditional art activities?

Methods

The Program

OMA is an intergenerational art program for PWD which was founded in 2007 (www.scrippsoma.org). OMA is based on strength-based psychology (Ronch, 2003) and Kitwood's (1997) person-centered care philosophy. Individuals' psychological needs for attachment, comfort, inclusion, identity, and occupation are met within OMA by creating failure-free, structured, 60 min weekly art-making sessions for approximately 12 weeks. (The actual art-making period lasts approximately 40 min.) Each individual with dementia is partnered with a trained student volunteer (trained in the basics of dementia and OMA

program philosophy at the beginning of each semester) who assists and encourages, but does not complete the artwork for the PWD. Each week there is a different art activity inspired by abstract art and involves different materials (e.g. rice paper, canvas, dyes, paints of all types, ink, mesh, bubble wrap) and painting techniques (e.g. brush, paint roller, pipette) aimed toward stimulating different senses and the curiosity of PWD. The art-making sessions culminate in a public gallery exhibition at the end of each semester. Currently, the program has been implemented at 11 different long-term care facilities and adult day centers and serves over 200 pairs of elders with dementia and student volunteers annually.

Participants

After obtaining institutional review board (IRB) approval for data collection, consent was sought from primary caregivers and family members of PWD and assent was obtained from the participant directly on the day of data collection. During a 15-month period between February 2010 and April 2011, 38 OMA participants (30 women, 8 men; all with moderate to advanced dementia) assented (and their primary caregiver consented) to participation in OMA and being videotaped during OMA and other organized activities at three different long-term care facilities in Ohio. Throughout this time frame, participants were videotaped during multiple weekly OMA sessions, resulting in a total of 106 videotapes. A subsample of 10 of these OMA participants (8 women; 2 men) were also videotaped while participating in traditional arts and crafts activities, resulting in a total of 16 additional videotapes. Traditional arts sessions were observed biweekly. A maximum of three static video cameras were used to capture a direct frontal view of three different participants from roughly 10 feet away for both OMA and traditional activities.

Instrument and procedures

An adaptation of the Greater Cincinnati Chapter Well-Being Observation Tool© (GCWBT) (Kinney & Rentz, 2005) was used to measure well- and ill-being in participants while participating in OMA and traditional arts and crafts activities. As previously noted, the GCWBT and our modifications are based on Lawton's conceptual framework of well-being (Lawton, 1983, 1994, 1997). For the purpose of this study, we measured both positive and negative components of well-being. Although Lawton's conceptualization of well-being requires the expression of positive and negative components, given the context in which these observations were made, a successful session would be characterized by high intensity levels of well-being and low intensity levels of ill-being.

During a four-week pilot phase, members of the research team were trained to use the GCWBT using videotapes of OMA sessions that were not used in the present research. Coder calibration was deemed successful once the team members achieved an inter-rater agreement of at least 85%. Over time, the modified version of the GCWBT emerged which included 25 item indicators—six more than the 19 in the original tool. To reflect the changed indicators, the domain "interest" was renamed social interest and "sustained attention" was renamed engagement. The domain of "self-esteem" was integrated into pleasure, and the domain of "normalcy" was removed. In addition, we added confusion and disengagement as domains. Although the original scale included all domains in the construct of well-being, we distinguished well-being (i.e. social interest, engagement, and pleasure) from ill-being (i.e. disengagement, negative affect, sadness, and confusion). An overview of the modified

behavioral domains and their respective indicators and operational definitions can be found in Table 1.

Once the coders achieved an average inter-rater reliability of at least 85% during the pilot phase, they began to code each tape together with a trained and calibrated colleague. Each videotape, comprising of a 40-min art-making session, was coded in eight 5-min intervals. Two ratings were made for each 5-min interval: the frequency with which the domain of well- and ill-being was observed (i.e. most of the time = 5, some of the time = 3, infrequently = 1) and the intensity with which the behavior was observed (i.e. high = 5, moderate = 3, low = 1). For example, loud and exuberant laughter would be coded as high intensity, while a quiet smile would be coded as low intensity. If none of the domains of well- and ill-being were observed during a 5-minute interval, a rating of 0 (not observed) was recorded. In the event that a participant was obscured by a program staff member standing in front of the camera or a participant left the activity before it was complete, the affected intervals were treated as missing data and coded as (missing = 9) in data entry and analysis. The coding sheet is included in Appendix 1.

Scoring

Prior to determining the extent to which participants demonstrated behaviors indicative of well-being and ill-being while participating in OMA, a series of data aggregations was undertaken to address the issue that some of the 38 participants were involved in more than one OMA session. Specifically, of the 38 participants, 6 were observed during one session, 14 were observed during two sessions, 6 were observed during three sessions, 8 were observed during four sessions, 2 were observed during five sessions, and 2 were observed during six sessions. For participants who were involved in more than one OMA session, we averaged data for each 5-min observation period for each indicator of well- and ill-being for that participant, resulting in one data record per participant that reflected the average ratings across sessions. The following analysis procedures were performed for both the OMA session and traditional session data. For each participant, we calculated the proportion of observation sessions during which she/he demonstrated each indicator of well- (i.e. social interest, engagement, and pleasure) and ill-being (i.e. disengagement, negative affect, sadness, and confusion) across the 5-min observation intervals for the OMA session. This was accomplished by counting the number of observations periods (for that indicator) during which the participant demonstrated the behavior either with moderate (indicated as “3”) or high (indicated as “5”) intensity. The total number of occurrences was divided by the total number of observation sessions for which data were available (i.e. eight intervals across the session unless an observation was missing due to someone walking in front of the camera or the participant leaving the session, which happened for fewer than 16% of the sessions) at which the OMA participants ($n = 38$) displayed these behaviors for each of the eight 5-min time intervals.

Data analysis

Although the original intent was to videotape each participant an equal number of times over the data collection period, this was not possible because we could not control who participated in the activities. Consistent with person-centered ethics, residents decided each time whether they wanted to participate in a given activity. This resulted in unequal numbers

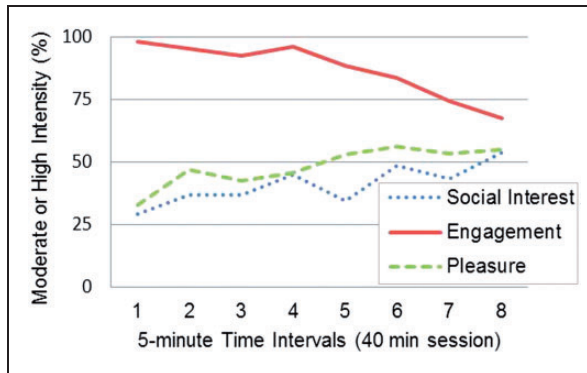
Table 1. Indicators and operational definitions for the domains of well-being and ill-being.

Well-being domains	Indicators	Operational definition
<ul style="list-style-type: none"> Social interest 	<ul style="list-style-type: none"> Interest in others (e.g. eye contact, politely smiling) Without prompts offers support Acknowledges support Seeks approval/affirmation Initiates or engages in conversation Verbal/non-verbal expression of assertiveness 	Participant makes eye contact, eyes following object or person; attempts to socialize by extending hand, pat on shoulder; turning body toward or moving body toward person; chats with others (does not have to have sustained conversation or even intelligible conversation); smiles; offers and receives support from others during session.
<ul style="list-style-type: none"> Engagement 	<ul style="list-style-type: none"> While engaged sustains attention Requires verbal prompting and cueing Seeks task support Engaged in task-related conversation 	Participant is able to attend to project or activity for 5 min at a time; participant stays focused on the task at hand; ideally enters a state of “flow” or total engagement; engages with others for task-related support and initiates in task-related conversations; participant may engage in conversation with facilitator during the activity but major focus is task-related.
<ul style="list-style-type: none"> Pleasure 	<ul style="list-style-type: none"> Smiles, laughs Verbal/non-verbal expression of pleasure/enjoyment Verbal/non-verbal expression of pride Verbal/non-verbal expression of satisfaction 	Verbal expression of pleasure while participating in the actual activity; eyes crinkled, smiles, laughter, relaxed facial expression; nods positively, relaxed body language; participant expresses enjoyment of being creative, pride of his/her piece of art, and satisfaction both verbally and non-verbally.
Ill-being domains	Indicators	Operational definition
<ul style="list-style-type: none"> Disengagement 	<ul style="list-style-type: none"> Neutral passivity Sleeping Staring into space Leaving activity area 	Participant is not engaged in the activity; stares down or into space; falls into a deep sleep; leaves the activity area.
<ul style="list-style-type: none"> Negative affect 	<ul style="list-style-type: none"> Anger Physical signs of agitation Verbal/non-verbal expression of anxiety Verbal/non-verbal expression of frustration 	Closed body language, frown on face, angry verbal outbursts; facial grimacing, or brows furrowed; psychomotor agitation (hand tapping, moving in chair, leg jiggling, wincing); rapid breathing, eyes wide, frightened look.
<ul style="list-style-type: none"> Sadness 	<ul style="list-style-type: none"> Behavioral signs of sadness Verbalizes feeling sad 	Flat affect or weeping quietly; verbalization of feeling sad over situation; eyes drooping; sighing.

(continued)

Table I. Continued.

Ill-being domains	Indicators	Operational definition
• Confusion	• Verbal/non-verbal expression of confusion	Participant shrugs his/her shoulders and does not know what to do with the materials at hand (e.g. paint brush, color palette); verbalizes feeling lost and asks what is happening.

**Figure 1.** Well-being intensity during OMA sessions ($n = 38$ participants).

of videotapes across participants in the two types of activities. Therefore, similar to Kinney and Rentz (2005), we aggregated the data for each participant for whom there was more than one videotaped session by averaging their data across sessions, resulting in one set of scores for each participant for OMA and traditional activities. As a result, we ended up with averaged scores for each participant for all of their eight 5-min intervals of each of their well-being and ill-being domains. In the subsample ($n = 10$), the time lapsed between video data collection for OMA and for the traditional activities did not exceed three months in order to minimize the effect of health changes over time.

We used SPSS 20 (IBM Corp., 2011) for conducting all statistical analyses. After aggregating all the data for individuals with multiple observations, four different analysis steps were undertaken. First, we calculated the total percentages for the OMA group across each 5-min time interval and domain in regard to the percentage occurrence of moderate or high intensity scores (cf. Figures 1 and 2). Second, in order to get a general idea of the two groups in regard to intensity score differences, we ran a paired-sample *t*-test after creating a composite group mean score for total well-being and total ill-being for the subsample participants ($n = 10$) who participated both in OMA and traditional activities, by adding all their individual, domain-specific well-being and ill-being mean scores across each 5-min time interval together, and then calculating the mean of the means for the three well-being domains and for the four ill-being domains. Third, in order to understand the difference between OMA and traditional art activities for each domain intensity level, paired-sample *t*-tests were computed on the subsample participants ($n = 10$) who participated in both OMA

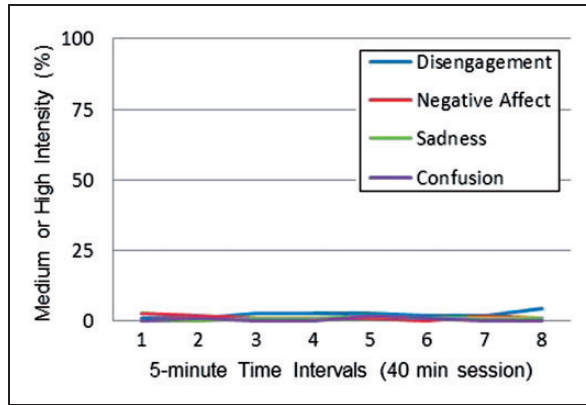


Figure 2. Ill-being intensity during OMA sessions ($n = 38$ participants).

Table 2. Comparison of intensity scores of well-being and ill-being domains for ($n = 10$) participants during OMA and traditional art activities.

Domain	Mean normalized score		<i>t</i>	<i>df</i>	<i>p</i>
	OMA	Traditional			
Social interest	2.5560	1.4568	1.969	9	0.080
Engagement	4.1536	2.8313	2.977	9	0.016
Pleasure	2.1018	1.1728	2.736	9	0.023
Disengagement	0.0583	0.7922	-2.496	9	0.034
Negative affect	0.1583	0.0063	1.520	9	0.163
Sadness	0.00000	0.0094	-1.406	9	0.193
Confusion	0.0321	0.0475	-0.428	9	0.679

and traditional activities (cf. Table 2). Fourth, we calculated the total percentage occurrence of moderate or high intensity scores for both groups (cf. Figures 3–5), according to the domains that were found to be significant in the paired-sample *t*-test. The level of acceptable statistical significance for all *t*-tests was set at $p < 0.05$.

Reliability and validity

Two-thirds of the OMA tapes (71 tapes) and all the traditional activities tapes (16 tapes) were coded by one rater, a third of the OMA tapes (35 tapes) were coded simultaneously by two raters. The inter-rater reliability was estimated by calculating the Kappa coefficient (Cohen, 1960). The mean Kappa coefficient was 0.799, which indicates substantial agreement between the two raters (Viera & Garrett, 2005). Test-retest reliability was not considered for this exploratory study. Furthermore, claims cannot be made about the generalizability of these findings. Further studies will be needed to support generalizability. Information about potential confounding variables (e.g. psychoactive medication) was not accessible to us.

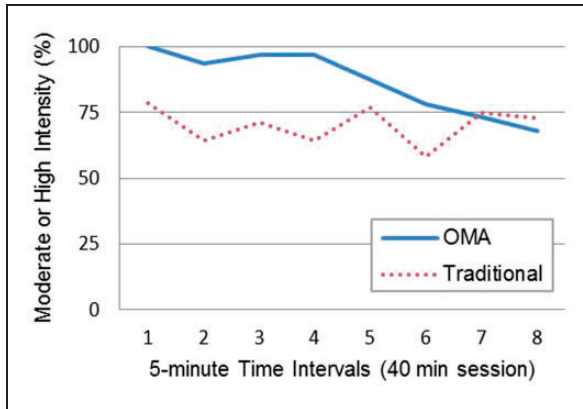


Figure 3. Engagement intensity during OMA and traditional activities ($n = 10$ participants).

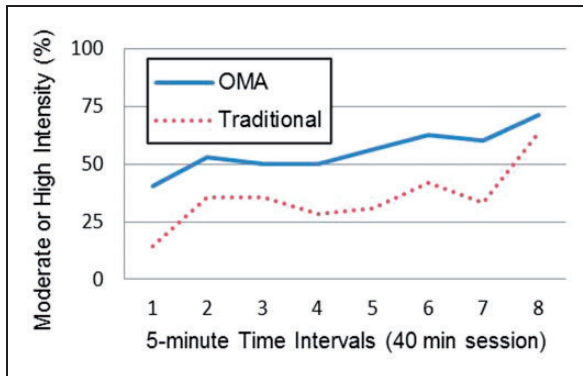


Figure 4. Pleasure intensity during OMA and traditional activities ($n = 10$ participants).

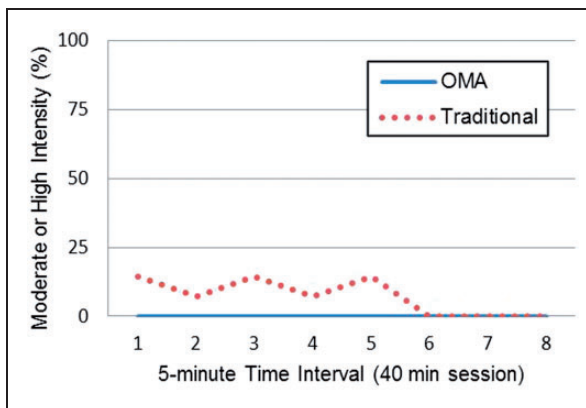


Figure 5. Disengagement intensity during OMA and traditional activities ($n = 10$ participants).

Results

This section is divided into three parts. First, the descriptive data for OMA session data ($n=38$) will be presented. Second, the results of the paired-sample t -test that compare OMA to traditional art activities will be presented. Third, the descriptive data for the subsample ($n=10$) that participated both in OMA and traditional activities will be presented.

Figure 1 shows the proportions of observation intervals during which participants demonstrated moderate or high intensity scores for each of the three well-being domains across the eight time intervals. Across the OMA sessions, participants demonstrated more engagement than social interest or pleasure. Interestingly, the percentage of participants who were moderately or highly engaged was very high at the beginning of the sessions, and decreased as time progressed, with noticeable decline beginning during approximately 30 min into the sessions. In contrast, the proportions for moderate and high engagement intensity scores for social interest and pleasure are lower at the beginning but increase slightly throughout the OMA activity.

Figure 2 reports the proportions of medium or high intensity for ill-being behaviors. All four domains of ill-being are close to zero throughout the entire OMA sessions. Disengagement is the only behavior that deviates from that trend in the eighth interval by rising to 5%.

In order to address the second research question (i.e. how do these experiences in OMA compare to a traditional art activity?), the observed behaviors of well- and ill-being of OMA participants who also took part in traditional arts activities were analyzed. To determine whether there was a difference in the intensity of well- and ill-being observed during OMA and the traditional activities, composite well- and ill-being scores during the two types of activities were compared using a paired-sample t -test. This analysis indicated that the total combined well-being (i.e. social interest, engagement, and pleasure) mean intensity score was significantly higher during OMA ($M=8.81$, $SD=1.62$) than during traditional art activities ($M=5.46$, $SD=2.56$); $t(9)=4.05$, $p=0.003$. There was no significant difference in the total combined ill-being (i.e. disengagement, negative affect, sadness, and confusion) mean intensity scores between OMA and traditional art activities. To further break it down, we first present the results of the t -tests for each of the intensity indicator aggregates during OMA sessions, followed by the t -test results comparing the subsample that participated in both OMA and traditional activities.

We ran a series of t -tests to compare the group means. In order to understand the difference between OMA and traditional art activities in regard to their intensity levels of each domain, paired-sample t -tests were computed on the subsample participants ($n=10$) who participated in both OMA and traditional activities. The same aggregation procedure was applied to this subsample as with the OMA sample ($n=38$), in that participants' observation scores across multiple sessions were averaged. The resulting t -tests (see Table 2) demonstrate that the participants had significantly higher intensity scores for the domains of engagement, pleasure, and significantly lower intensity scores for disengagement during OMA than during the traditional art activities.

OMA participants ($M=4.15$, $SD=0.78$) showed significantly higher engagement intensity scores than during traditional art activities ($M=2.83$, $SD=1.53$); $t(9)=2.98$, $p=0.016$. In addition, OMA participants ($M=2.10$, $SD=1.04$) showed significantly higher pleasure intensity scores than during traditional art activities ($M=1.17$, $SD=0.82$); $t(9)=2.74$, $p=0.023$. Furthermore, OMA participants ($M=0.06$, $SD=0.06$)

showed significantly lower intensity scores on disengagement than during traditional art activities ($M=0.79$, $SD=0.93$); $t(9)=-2.50$, $p=0.034$. Moreover, no significant differences were found between participants in OMA and traditional art activities for the domains of social interest, negative affect, sadness, and confusion.

The following figures represent the proportional intensity scores of the subsample participants ($n=10$) during OMA and traditional art activities across all time intervals and observations. Figures 3 through 5 only present those domains that were found to be significantly different in the t -tests (i.e. engagement, pleasure, and disengagement). Figure 3 shows the proportion of the engagement intensity at moderate or high levels throughout the duration of both OMA and traditional art activities. The proportion of engagement intensity scores at moderate or high intensity levels gradually declines from 100% to just over 75% in the sixth interval for OMA. Throughout the last two intervals no large differences are found between the two groups. For the observations of the traditional group, the proportions fluctuate between 78% for the first interval and 58% on the sixth interval.

Throughout the 40-min observation period, the proportions of a moderate or high intensity level for the well-being domain of pleasure were significantly larger during OMA than during traditional art activities. Figure 4 shows that for 7 out of 8 time intervals, pleasure of moderate or high intensity was observed at least 50% of the time, compared to only 1 out of 8 time intervals for traditional art activities. The proportion of observations for moderate or high intensity on pleasure ranges from 41% to 71% for OMA, and 14% to 63% for traditional art activities.

The only ill-being domain that proved to be significantly different for intensity scores was disengagement. Figure 5 shows that for OMA, disengagement was never observed at moderate or high levels during 40-min sessions. For the traditional art activities, however, the proportions fluctuate between 15% and 7% for the first 25 min of the sessions, and then join OMA at 0% for the remaining 15 min of the sessions.

Discussion

The purpose of this study was to understand the extent to which PWD express behaviors of well- and ill-being during OMA alone and in comparison to traditional arts and crafts activities at three long-term care facilities. The results from these data show that the 38 participants demonstrated considerable well-being (i.e. engagement, social interest, and pleasure) with little to no ill-being (i.e. disengagement, negative affect, sadness, and confusion) during OMA. These findings suggest that OMA activities offer PWD a stimulating environment that enhances their well-being throughout the duration of the session. The finding of greater intensity of engagement in comparison to social interest and pleasure may be a reflection of the features of the OMA program and the training of the volunteers. The OMA process involves carefully staged phases aimed at maximizing the possibility of “flow” (Csikszentmihalyi, 1990). In order to experience “flow,” the artists (individuals with dementia) must be able to concentrate and act with deep involvement. Volunteers are trained to facilitate the experience of “flow” through non-verbal presence, only speaking and assisting as necessary to facilitate the creative process for the artist. In the OMA process, artwork is shared following completion of the art project; this is when there is more conversation and mutual enjoyment of the finished pieces. Consequently, the increase in social interest and pleasure intensity toward the end of the OMA sessions may also reflect the staged OMA process.

Results on behaviors observed in the subsample ($n = 10$) who participated both in OMA and traditional arts activities yielded some interesting findings. Most importantly, little to no ill-being was observed during OMA or the traditional arts activities which suggests that these creative activities are not triggering ill-being behaviors in the participants. However, the significantly higher intensity scores for the engagement and pleasure domains, as well as the significantly lower intensity scores for disengagement during OMA sessions, suggest that OMA may offer greater opportunities for engagement and pleasure than traditional arts and crafts activities. This finding is consistent with those of prior studies comparing responses of PWD during visual arts interventions and traditionally used non-creative activities, such as crosswords, bingo, social interaction, and current events (Kinney & Rentz, 2005; Pepin, Holley, Moore, & Kosloski, 2006; Rowe, Fowell, & Montgomery, 2006). The greater engagement and pleasure demonstrated by participants while engaging in the visual arts activities in these studies could be explained, in part, by the “pleasure obtained from sensory awareness, appreciation of beauty, and creativity/artistic expression and appreciation” (Kinney & Rentz, 2005, p. 226). Possible explanations for the higher intensity of engagement and pleasure demonstrated during OMA may also lie in the person-centered processes that provide the foundation for OMA. OMA always has a one-to-one person with dementia to volunteer ratio in order to: (1) encourage and assist/support participants so that they can feel in control of the art-making process; and (2) give participants ample opportunities for relationship building with the assisting staff and volunteers. In the OMA program, all assisting staff/volunteers attend training during which an understanding of Kitwood’s (1997) positive person work is fostered experientially. Throughout the program, volunteers are coached in ways of effectively promoting the autonomy and selfhood of their elder partner. This explanation would be consistent with Kelly’s (2010) study in which residents with dementia who participated in creative sessions demonstrated consistently higher average well-being values than non-participating residents. Analysis of videotapes, as well as qualitative evidence from participant observation, led Kelly to conclude that supportive interactions with the occupational therapy staff leading the sessions facilitated “robust expression” (2010, p. 112) of self, a reclaiming of past valued or desired attributes, and co-construction of desired public roles and behaviors. Kitwood and Bredin (1992) asserted that personhood is maintained and sustained through relationships with others. It is possible that the consistent partnership between one volunteer and one elder over a period of one semester at a minimum facilitates the development of a mutual relationship in which the volunteer is able to interact in ways sustaining of the selfhood of the elder. As in Kelly’s study, our observations of OMA sessions are that interactions are “both facilitative and celebratory” (2010, p. 119) and that this is seen in “increased wellbeing, the emergence of humor, and increased self-confidence. This way of viewing and interacting with PWD has the potential to fuel a transactional flow of positive interactions” (2010, p. 119). Analysis of student volunteer journal entries is consistent with this idea of a positive transactional flow, revealing that students experience a genuine, pleasurable mutual relationship or friendship with the OMA artists with whom they are working (Lokon, Kinney, & Kunkel, 2012). Finally, a working group on Dementia Quality of Life found that residents with dementia considered self-determination/freedom and being useful/giving meaning to life particularly important to their quality of life (Scholzel-Dorenbos et al., 2007). The OMA structure and processes promote autonomy of the individual with dementia and perhaps being a friend and teacher (of life and aging), as well as making art for a culminating art exhibit contribute to feelings of being useful.

Limitations

A major limitation of this study is its small sample size. The sample size as well as the inability to observe all participants across both OMA and a traditional art activity made aggregation of the data necessary. The sample size as well as our inability to access demographic and health-related descriptors for the sample (e.g. age, severity of dementia, type of dementia) limit the generalizability of results. Non-randomization of residents to the OMA intervention and the inability to randomly select those residents who were observed across both OMA and traditional art activities are additional limitations. However, it is important to note that researchers have to be sensitive to the cultural environment of the long-term care setting. In the case of this study, the partnering long-term care facilities did not permit exclusion of residents from OMA participation in order to create a randomized control design. Moreover, de Medeiros and Basting (2013) raise important questions about the appropriateness of randomized control trials (RCTs) in understanding the efficacy of cultural arts interventions. They note that

The quality of a study should not be judged on its adherence to a RCT design but rather to the appropriateness of what is being measured and how... Studies in which a cultural art intervention is assessed in the same way as pharmacologic intervention therefore makes little sense (p. 350).

Future research on OMA and other creative arts interventions for PWD should address this issue by introducing innovative non-randomized study designs that can better address measurement goals in non-pharmacological interventions. Also, because the traditional arts activities did not include a one-on-one partner component we cannot determine whether differences are due to the interactions of residents and volunteers or to the type of arts activities presented in OMA. Future studies could include volunteer partners in traditional arts programming to determine whether the differences observed here would continue. Finally, participants' subjective experiences of well-being and ill-being during OMA and traditional arts activities should be elicited directly from the PWD in future research.

Conclusion

The results from this study show that the Opening Minds through Art (OMA) program, which is designed to facilitate the creative self-expression in PWD, offers participants many opportunities to express behaviors of well-being (i.e. social interest, engagement, and pleasure). Results from a small comparative study suggest that OMA offers more opportunities for participants to be engaged and show pleasure than traditional arts and crafts activities. Study of the impact of the OMA program on quality of life of the participating artists is ongoing. We continue to develop a better understanding of ways to facilitate and engage in experiences with persons with dementia that emphasize the "potential of people with dementia, not only artistic or creative, but also human in general" (Ullán et al., 2013, p. 19).

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Appendix I

Scripps Modified Greater Cincinnati Chapter Well-Being Observation Tool

Domains	Indicators	(Time/ interval)	5/1	10/2	15/3	20/4	25/5	30/6	35/7	40/8
Social interest	<ul style="list-style-type: none"> • Interest in others (e.g. eye contact, politely smiling.) • Without prompts offers support • Acknowledges support • Seeks approval/ affirmation • Initiates or engages in conversation • Verbal/non-verbal expression of assertiveness 	Intensity Frequency								
Engagement	<ul style="list-style-type: none"> • While engaged sustains attention • Responds to verbal prompting or cueing • Seeks support to do activity • Engaged in activity-related conversation 	Intensity Frequency								
Pleasure	<ul style="list-style-type: none"> • Smiles, laughs • Verbal/non-verbal expression of pleasure/enjoyment • Verbal/non-verbal expression of pride • Verbal/nonverbal expression of satisfaction 	Intensity Frequency								
Disengagement	<ul style="list-style-type: none"> • Sleeping/nodding off • Staring into space 	Intensity Frequency								
Negative affect	<ul style="list-style-type: none"> • Anger • Physical signs of agitation • Verbal/non-verbal expression of anxiety • Verbal/non-verbal expression of frustration. 	Intensity Frequency								

(continued)

Continued.

Domains	Indicators	(Time/ interval)	5/1	10/2	15/3	20/4	25/5	30/6	35/7	40/8
Sadness	<ul style="list-style-type: none"> Behavioral signs of sadness Verbalizes feeling sad 	Intensity Frequency								
Confusion	<ul style="list-style-type: none"> Verbal/non-verbal expression of confusion 	Intensity Frequency								

Intensity: 5 = High; 3 = Moderate; 1 = Low; 0 = None.

Frequency: 5 = Most of the time; 3 = Sometimes; 1 = Infrequently; 0 = Never.

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