

Research Paper

# Associations between Engagement Types, Outcome Behaviors, and Quality of Life for Adults with Dementia Participating in Intergenerational Programs

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## Abstract

Research has suggested that intergenerational interactions have the potential to improve the quality of life for adults with dementia. However, few studies have examined what type of interactions in intergenerational programs may drive well-being. This study examined the outcomes of participation in an intergenerational program (IGP) among adults who reside in a shared site facility with daily IGP activities. The study observed adult participation and engagement in these intergenerational activities and explored the association between engagement patterns and quality of life using the Menorah Park Engagement Scale (MPES) and Quality of Life (QOL) in Dementia Scale (QUALID). Results indicated a significant relationship between some of the engagement types and behavioral outcomes during the IGPs as well as significant correlations between types of engagement and behavioral outcomes and QOL for participants. Implications for recreational therapists working with dementia populations are discussed.

## Keywords

*Alzheimer's disease, engagement, recreational therapy, well-being*

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## Introduction

According to the Alzheimer's Association (2018), 5.7 million Americans are living with this disease, and by 2050 this number is projected to increase to approximately 14 million. People with Alzheimer's or other dementias make up a large percentage of older adults who reside in nursing homes (Alzheimer's Association, 2018), and these are typically individuals who are in the later stages of the disease. It is projected that up to 90% of adults with dementia, and particularly those in the advanced stages of the disease, will exhibit behavioral or psychological symptoms (Trivedi, Goodman, & Dickinson, 2013). Apathy, depression, and agitation are the most common symptoms seen in adults with dementia (Buettner, Fitzsimmons, & Atav, 2006). Research has suggested that emotional affect, particularly depression, as well as the availability of pleasant or meaningful events are two components of quality of life (QOL) for adults with dementia (Logsdon, McCurry, & Teri, 2007).

Behaviors that individuals with dementia exhibit are often viewed and framed through the lens of disease and sickness (Clarke, 1999). Individuals exhibiting behaviors in long-term care facilities often start to be defined by these behaviors, although the cause of them is often misunderstood and their actions are likely appropriate and legitimate given the circumstances (Dupuis, Wiersma, & Loisel, 2012). The Need-Driven Dementia-Compromised Behavior Model (NDB) addresses this root of behavioral problems and conceptualizes behaviors as unmet needs, that if addressed, would enhance a person with dementia's QOL (Algase et al., 1996; Kovach, Noonan, Matovina Schlidt, & Wells, 2005; Starkstein, Mizrahi, & Power, 2008). Behaviors are a way for these individuals to communicate their needs to others, although staff often pathologize behaviors leading to continued misunderstanding of the residents' actions which can affect the QOL of these adults (Dupuis et al., 2012). Apathy and agitation are thought to at least partially stem from a similar trigger for persons with dementia—a lack of appropriate stimulation in the physical and social environment (Kolanowski & Buettner, 2005).

Intergenerational programs (IGPs) may provide one way to engage these adults in meaningful and pleasant activities and provide stimulation in their physical and social environment. Contact theory (Allport, 1954; Pettigrew, 1998) identifies five tenets that promote positive contact between members of disparate groups—such as different generations—that can be applied to foster positive intergroup interactions (Jarrott & Smith, 2011). These tenets include support from authority, common goal, cooperation, equal group status, and opportunity for friendship. Shared site intergenerational programs, or those that simultaneously provide programs and/or services to children and older adults at a single location, might be well suited to provide a stimulating contact environment to adults with dementia that can promote positive engagement and QOL for both generations by incorporating the tenets of contact theory.

### Intergenerational Programs

IGPs provide formal or informal interaction between two or more generations. Prior research has found that IGPs are beneficial for both younger and older generations (Burgman & Mulvaney, 2016; Cook & Bailey, 2013). These activities have the potential to be meaningful to older adults with dementia as interactions between the two generations offer opportunities to provide assistance, promote reminiscence, are likely

not to be perceived as childish or too challenging, and encourage social connections. Studies have indicated the potential of IGPs for adults with dementia, with early studies noting an increase in social responsiveness when these adults engage in IGPs (Newman & Ward, 1993). Researchers (Camp et al. 1997; O'Rourke, 1999) observed that disruptive behaviors improve among adults with dementia while engaged in intergenerational activities. It has also been suggested that intergenerational activities provide adults with the opportunity to contribute to the development and education of younger generations, offering meaningful social roles that benefit adults with dementia receiving care in residential facilities (Camp & Skrajner, 2004; Cook & Bailey, 2013; Jarrott, Gozali, & Gigliotti, 2008; McNair & Moore, 2010). Other positive outcomes associated with IGPs in the literature include increased joy or pleasure (Volicer & Hurley, 2015; Waggoner, 1996), increased active behaviors (McNair & Moore, 2010) and positive affect (Jarrott & Bruno, 2003). George and Whitehouse (2010) examined the effects of structured IGPs on the quality of life of persons with mild to moderate dementia and observed that they had lowered stress and an enhanced sense of purpose and usefulness as a result of this involvement. Jarrott and Bruno (2003) noted that the severity of memory loss or cognitive function is not a barrier to adults' participation in IGPs.

There is some discrepancy between the findings in these studies related to the outcomes and benefits of IGPs for older adults. While most studies have suggested an improvement in function for adults who engage in these programs (George & Whitehouse, 2010; Jarrott & Bruno, 2003; Lee, Camp, & Malone, 2007; McNair & Moore, 2010; Whitehouse, 2013), some studies suggest the contrary. Doll and Bolender (2010) reported that well-being was negatively affected for adults who participated in IGP, including an increase in medication intake post IGP. George and Singer (2011) observed that adults who participated in IGPs experienced more stress afterward. Gigliotti, Morris, Smock, Jarrott, and Graham (2007) identified that some adults demonstrated higher levels of frustration and impatience when participating in IGPs. Additionally, other research concluded that participation in IGPs had no effect at all on adults with dementia. Isaki and Harmon (2015) reported no improvements in mood or communication post IGP, and Brownell (2008) indicated that participation in the IGP did not affect the frequency of inappropriate behaviors or level of adults' engagement in the activity.

While the outcomes of the IGPs are important, it is also useful to examine how adults with dementia are participating in these interventions, particularly since apathy and low engagement are not uncommon responses to interventions and activities for individuals in later stages of this disease. Lee, Camp, and Malone (2007) examined the engagement of older adults in IGPs in their study of 14 residents in a dementia skilled nursing unit and children from an on-site child care facility using the Myers Research Institute Engagement Scale. Their findings suggested that in comparison to traditional programming, participation in the IGPs promoted successful one-on-one engagement with higher levels of positive engagement (i.e., constructive engagement) and lower levels of non-engagement (i.e., non-focused activity).

As evident from the studies discussed above, the findings related to the efficacy of intergenerational programs as a modality to improve the QOL and well-being (i.e., promote positive emotions/moods and reduce negative emotions) of adults with dementia are mixed. Thus, it has been suggested that only examining whether an individual participated in IGPs is insufficient to determine the effects of IGPs. Many studies—and staff at facilities—do not examine how adults participate during the IGPs, but

rather simply focus on and/or document whether adults attend these programs. More research is needed to examine how adults engage in IGPs to determine their effectiveness in providing a stimulating and positive environment. Successful interventions and programs must start with engagement to initiate positive interactions with other individuals and improve QOL (Volicer & Hurley, 2015).

IGPs may be an appropriate treatment option to maintain or improve QOL in adults with dementia. However, research indicates that there is a need to better examine differences in how adults engage in these programs, and how this is associated with their overall well-being. Thus, the aim of this research study was to explore how adults with dementia at a facility with a shared site intergenerational program engaged in intergenerational activities, and how different engagement styles were associated with their QOL and well-being. Specifically, this study addressed the following research questions.

1. What is the relationship between the type of engagement observed in IGPs and behavioral outcomes among adults with dementia?
2. Are the types of engagement and behavioral outcomes exhibited in IGPs associated with quality of life among adults with dementia?

## **Method**

### **Setting**

A continuing-care retirement community with a shared-site daycare program in Northwest Ohio was the site of data collection in this study. Children attending the daycare are between the ages of two months and six years of age. Adults and children have opportunities to interact formally and informally as part of the IGP. The long-term care facility and child care program provide structured intergenerational activities to all residents in the facility at least twice a day Monday through Friday. For this study, data were only collected during the morning structured programming activities for adults residing in the two secured, memory care units of the facility. Data were collected during five IGP sessions for a one-week period on both units. All individuals involved in this study (e.g., children, staff, and older adults) had signed informed consent forms; in the case of the children and adults with dementia, the informed consents were signed by their legal guardians. The study protocol was reviewed and approved by two separate Institutional Review Boards—the hospital system that oversees the long-term care facility as well as the researchers' university.

### **Participants**

A total of 64 adults lived in one of the two memory care units of the facility; adult guardians of all residents were sent informed consent forms six weeks in advance by the facility administrator. An adult with a diagnosis of dementia who participated in the adult day program at the facility was also allowed to participate in the study as he attended the same activity programming as the residents in the memory care units. By the start of the study consent forms had been returned for 30 adults. The day before data collection began, one of the study participants passed away. One adult (age 37) on the unit diagnosed with a head injury was excluded from the study due to a lack of dementia diagnosis. Thus, there was a final sample of 28 adults eligible for this study.

Only 15 of these individuals participated in the IGP program being studied at the facility during the data collection period; these are the individuals included in the analyses. There were 12 female and three male participants who attended the IGPs. The mean age of the participants was approximately 86 years, the mean months of dementia diagnosis was 28.40, and the mean months since admission at this facility was 38.71. All participants identified as White race. One-third of the participants (33.3%) were married, and 66.7% were widowed/divorced. Due to the fact that this is a shared-site IGP, all individuals had the opportunity to participate in the program prior to the start of this study. According to the activity director, all residents in the study had participated in the IGP in some way since coming to the facility, this included both the structured programs examined in this study as well as informal visits by the children to each unit every afternoon (not examined in this study). See Table 1 for more information about the descriptive characteristics of the sample.

**Table 1**

*Descriptive Statistics for the Sample of Adult Participants (N = 15)*

	<i>N</i>	Minimum	Maximum	Mean	Std. Deviation
Age (years)	15	62	96	85.93	8.61
Months diagnosed with dementia	15	2	98	28.40	29.88
Months admitted	14	5	121	38.71	34.63
PHQ-9 Total Severity Score	11	0	7	1.27	2.10
PHQ-9 OV Total Severity Score	4	1	9	5.50	3.32
BIMS Summary Score	11	2	15	8.00	4.45
QUALID Score	15	11	33	19.67	7.65

\**Note.* For the four participants who had the Staff Assessment for Mental Status completed rather than the BIMS, all were noted by staff as having significant short-term and long-term memory problems and scored as a “3” (Severely impaired – never/rarely made decisions).

## Intergenerational Program

The intergenerational program has been offered onsite at this long-term care facility since 2003, and participation in the IGP is voluntary for all residents. Structured intergenerational activities were provided Monday through Friday mornings to the residents in the two memory care units of the facility. These sessions were planned and led by the daycare teachers, and the time they spent on the units varied based on a variety of factors including the needs of the children, other activities and events occurring in the facility, and the responsiveness of all participants to the scheduled activity. The actual activities and the age of the daycare children who interacted with the adults varied daily during the program. See Table 2 for a brief description of the activities on each unit during the five days. The frequency of the older adults' attendance at the structured programs was tracked by the researchers using an attendance roster during the study period. Residents were freely allowed to join and leave the activity, and some adults did not stay for the entire duration of the session each day. The IGPs on the two units were videotaped daily for five days in order to observe the engagement patterns and behavioral responses of the older adults with dementia to the activities. The data from these five days of videotaped sessions were then coded by the researchers to be analyzed in this study.

Each unit was paired with children from a different classroom every morning. Three age groups of children participated in the IGPs—infants, toddlers, and preschoolers. The structured program offered changes in programming daily and depended on the age group of the children. IGPs including the infants always focused on bottle feeding, holding/touching the babies, and watching them play on the floor. Examples of activities with the toddlers included interactive songs and books, tossing large beach balls around the room, and drawing and sharing pictures. The preschool class engaged in activities such as unstructured free play with Legos/toys, interactive songs, and a video conference with a local elementary school class focused on reading stories. The programming for the day depended on the age of the children and the preference of the daycare teacher. A member of the activity staff was present and assisted during the IGPs each morning.

**Table 2**

*Characteristics and Description of the IGP Activities*

	Age of Children	Intergenerational Activity	Length of IGP Program
<b>Memory Care Unit A</b>			
Day 1	Toddlers	Ball toss	47 minutes
Day 2	Infants	Holding babies/feeding & watching them play on the floor	75 minutes
Day 3	Preschoolers	Unstructured free play (e.g., Legos and toys)	44 minutes
Day 4	Infants	Holding babies/feeding & watching them play on the floor	25 minutes
Day 5	Toddlers	Draw & share pictures	30 minutes
<b>Memory Care Unit B</b>			
Day 1	Preschool	Interactive songs & stories	42 minutes
Day 2	Toddlers	Reading books & interactive games	30 minutes
Day 3	Toddlers	Play with building blocks	37 minutes
Day 4	Preschool	Reading books & interactive songs	38 minutes
Day 5	Infants	Holding babies/feeding & watching them play on the floor	30 minutes

## Study Design

Data were collected daily for a five-day period on both memory care units. Video cameras were set-up prior to the start of the IGP session to record the older adults' engagement and behaviors during each of the IGP sessions. Researchers arrived at each unit at least thirty minutes prior to start time to set up the video cameras and to ensure that only individuals with signed consent forms would be captured on camera. The IGP sessions on both units began at approximately 10:30am. As noted in the section above, the session length varied (ranging from 30 minutes to 75 minutes) during the study period due to the needs of the children (e.g., one session ended a bit early because a child needed a change of clothes and only one teacher was present) as well as other events occurring at the facility (e.g., one session ended due to the arrival of a volunteer leading an exercise/stretching activity with the adults on the unit). The video recordings were reviewed and coded by two members of the research team using the Menorah Park En-

gement Scale. The majority of the participants in this study had been attending the IGPs at the facility for over a year (76.7%). All of the adults had prior exposure to the IGPs at this facility, ranging from a few months to a few years. During the week of data collection, the average number of IGP study sessions attended for this sample was 3.50.

## Measures

During the week prior to the study, measures that assessed the cognitive status and psychological well-being of the participants were collected by the social worker at the facility as control variables. This information was drawn from the residents' medical charts based on their most recent Minimum Data Set (MDS) assessment prior to the start of the five-day study period for those adults who received Medicaid. For private pay residents, these instruments were completed by facility staff one week prior to the start of the study. These measures were not used in the analysis for this study, but included to provide a more thorough description of the health status and functioning of the adults in this study. The Brief Interview for Mental Status (BIMS) assessed the participants' cognitive impairment, with higher scores indicating greater cognitive ability. Questions such as requiring the adult to repeat back three words said by the interviewer and asking the resident to correctly identify the year/month/day are used in this measure. The BIMS has both reliable and valid psychometric properties with this population (Mansbach, Mace, & Clark, 2014). The Patient Health Questionnaire (PHQ-9) is used in the MDS to assess mood and depression. Higher PHQ-9 scores indicate greater severity of depression. Items from this measure are scored as yes/no/no response and focus on problems encountered in the past two weeks. Sample questions include "little interest or pleasure in doing things," "feeling tired or having little energy," and "trouble concentrating on things." Previous studies indicate that the PHQ-9 is both valid and reliable and had scores of 88% for sensitivity and specificity (Kroenke, Spitzer, & Williams, 2001).

**Frequency of participation.** Data on the adults' frequency of participation attempted to address one aspect of participants' engagement in the IGPs, as this is often how adults' involvement is assessed in residential facilities (e.g., attendance records). The number of sessions the residents attended during the data collection period was used to provide information about their participation. This was computed by summing the number of sessions the adults participated for at least 5 minutes in the IGP and used to provide information about the frequency of the adults' engagements in the IGPs during the study period (range 1–5).

**Engagement.** The Menorah Park Engagement Scale (MPES; Camp, 2006) was used to assess the type of engagement adults exhibited during the IGPs as well as their affective and behavioral responses during their participation. This tool has been developed to be used by researchers and practitioners. One member of the research team consulted the author of the MPES before the start of the study to clarify understanding of scoring and use of this instrument. In prior studies, the MPES has demonstrated good concurrent validity (e.g., Camp, 2010) and convergent reliability (Lee et al., 2007; Skrajner et al., 2014). Inter-rater reliability has also been established for the MPES (Camp, 2010; Camp & Skrajner, 2004; Volicer & Hurley, 2015). This tool utilizes five-minute observation periods during activity programming for individuals with dementia. An 80% criterion agreement or greater is required (Camp & Skrajner, 2004).

Scoring of the MPES is conducted via direct observation and items are coded as 0 (never seen), 1 (seen up to half of the activity time), or 2 (seen more than half of the ac-

tivity time) in each five-minute observation period (Camp, 2010). Rather than develop a composite score, each variable has a specific and unique score. This feature makes the MPES easy to use in both research and practical settings, allows the measure to be sensitive enough to detect changes, and maintains high inter-rater reliability (Volicer & Hurley, 2015). All scored behaviors must occur for at least three seconds before being recorded to ensure that the behavior is recordable, as opposed to only merely being a momentary gesture. The only exception to this is for the observation of constructive engagement. The five-minute observation periods began when the children arrived and ended when they departed the units each of the five days of the study.

**Type of engagement.** The MPES measures four areas of engagement: constructive engagement (CE), passive engagement (PE), other forms of engagement (OE), and non-engagement (NE). The items from the MPES that assessed these included the following items, “Did the target activity and/or commented on the activity” (CE), “Listened to and/or watched the target activity” (PE), “Did or attended to things other than the target activity” (OE), and “Slept/kept eyes closed/stared into space” (NE). Average scores were computed for each of the variables assessing type of engagement (CE, PE, OE, NE) based on all observed measurements from each participant. These scores were used in the data analysis.

**Behaviors.** Pleasure, anxiety/sadness, helping others, and inappropriate behaviors are also assessed in the MPES. The specific items measuring these included, “Expressed pleasure (laugh or smile) during the observation”; “Displayed anxiety or sadness during the observation”; “Helped another player during the observation”; and “Did something inappropriate, disruptive, or aggressive during the observation.” These variables were used to measure the behaviors demonstrated by adults during the IGPs. When scoring for pleasure and anxiety/sadness, only blatant observations and obvious displays of the emotions are coded. How the researcher assumes the participant feels are not to be recorded. Similar to the measures of engagement type, an average score for each of these variables was computed across all the observed data recorded for each individual participant and used in the analyses. No participants engaged in inappropriate behaviors during the observed interactions of the study period; thus, this variable was not examined in this study.

**Inter-rater reliability and coding.** In this study, two study researchers independently coded or scored all of the observational data. The video recordings of IGPs were used to accomplish this task; each session was divided up into five-minute observation periods, and the engagement and behaviors of each study participant were coded for each observation period the adults were present. For example, a 30-minute IGP session would include a potential of six coded observation periods for each participant. A total of 47 five-minute observation periods (225 minutes total) were recorded and analyzed during the five-day study period. The researchers both coded the first 15 observations periods simultaneously (75 minutes) and achieved an inter-rater reliability (i.e., agreement between raters) of 87% for each of the 11 observed items (i.e., engagement types and behavioral outcomes) across all participants present in the IGP sessions. Discrepancies were discussed and researchers agreed upon prior to coding the remaining data for the study to ensure consistency.

**Quality of life.** The Quality of Life in Dementia Scale (QUALID; Weiner, Martin-Cook, Svetlik, Saine, Foster, & Fontaine, 2000) was used to assess the adults’ QOL in this study. The QUALID is an 11-item scale developed to rate the quality of life for

persons in the late stages of Alzheimer's disease and other dementia-related illnesses (Weiner et al., 2000). It conceptualizes QOL using positive and negative dimensions of observable and concrete mood and performance that are thought to be indicative of QOL in later stages of dementia. The instrument assesses the resident's behaviors during the past week and was completed for the study participants by facility staff the week following the study IGP sessions. This measure was developed to be completed by proxy respondents and questions are scored on a scale from 1 (spontaneously once or more each day) to 5 (rarely, if at all). Items include questions such as "Smiles," "Appears sad," "Cries," and "Makes statements or sounds that suggest discontent, unhappiness, or discomfort." A sum score was computed to depict the resident's overall quality of life, with lower scores indicating a higher quality of life. The QUALID has been found to be both reliable and valid (Cronbach's  $\alpha = .81$ ), have good inter-rater agreement ( $\kappa = .76$ ), and have acceptable test-retest reliability (ICC = .85) when used to determine QOL in persons with late-stage dementia and other unspecified, dementia-related illnesses (Bužgová, Kozáková, Sikorová, & Jarošová, 2017). It has also been validated for use with adults with dementia in residential care facilities (Barca, Engedal, Laks, & Selbaek, 2011; Garre-Olmo et al., 2010).

### Data Analysis

SPSS 24 was used to analyze all of the data in this study. Descriptive statistics were conducted for all study variables. Bivariate correlation analyses were examined between computed averages for all engagement variables—types (i.e., constructive, passive, other engagement, and non-engagement) and affect and behaviors (i.e., pleasure, anxiety/sadness, and helping behaviors). Given that some of the variables were not normally distributed, Spearman's Rho correlations were used for the analysis. Correlation analyses were also used to explore the relationship between the residents' QOL scores and overall averages for all engagement variables as well as the frequency of their participation in the IGP.

## Results

Results from the correlation analyses indicated a significant relationship between the type of engagement observed in IGPs and behaviors among adults with dementia. The significant, positive correlation ( $r_s = .74, p \leq .01$ ) between constructive engagement and pleasure suggests that adults who engaged more constructively, or actively, in the IGP also exhibited more pleasure. There was a significant correlation ( $r_s = .76, p \leq .001$ ) between constructive engagement and helping behaviors – indicating that those who constructively engaged were more likely to exhibit helping behaviors during the sessions. A significant, negative correlation ( $r_s = -.84, p \leq .001$ ) between non-engagement and pleasure was also noted, suggesting that adults who did not engage (i.e., slept, had eyes closed) during the IGPs displayed less pleasure. A negative correlation was found between constructive engagement and non-engagement ( $r_s = -.76, p \leq .001$ ), indicating that individuals who were more constructively engaged in the IGP were less likely to demonstrate non-engagement behaviors during the observational periods in this study. Helping behaviors were also significantly associated with non-engagement ( $r_s = -.67, p \leq .01$ ), such that the more individuals non-engaged in the programs the less likely they were to exhibit helping behaviors. Additionally, those individuals who

showed more signs of pleasure during the IGP were also more likely to engage in helping behaviors during the programs ( $r_s = .64, p \leq .01$ ).

The correlation analysis between study variables also assessed the relationship between the types of engagement outcomes and residents' QOL. There was a positive correlation between non-engagement and QOL, ( $r_s = .58, p \leq .05$ ). An increase in non-engagement was correlated with an increase in QUALID scores, which indicates that those adults who were not engaged during the IGPs had a lower QOL. There was also a negative correlation between pleasure and QOL, ( $r_s = -.68, p \leq .01$ ), suggesting that increased pleasure was associated with a decrease in QUALID scores, or a higher QOL.

Based on the correlation analysis, the associations between the frequency of the adults' engagements in IGPs, their engagement behaviors and affect, and their quality of life were also examined. The frequency of participation during the study period was significantly correlated with their quality of life scores ( $r_s = .57, p \leq .05$ ). Interestingly, attending a greater number of the IGPs during the study period, was associated with a poorer quality of life. Frequency of participation was also significantly correlated with demonstrations of pleasure, with those who attended more frequently showing less signs of pleasure ( $r_s = -.55, p \leq .05$ ). The only type of engagement that frequency of participation was significantly correlated with was non-engagement ( $r_s = .61, p \leq .05$ ). Thus, many of the adults in attendance each day were sleeping or otherwise non-engaged in the IGP. Table 3 reports the results from these correlation analyses.

**Table 3**

*Spearman's Rho Correlations between Study Variables (N = 15)*

	Constructive Engagement (CE)	Passive Engagement (PE)	Other/Self Engagement (OE)	Non Engagement (NE)	Pleasure	Anxiety/Sadness	Helping Others	Participation Frequency	QUALID
CE	--								
PE	-.05	--							
OE	-.18	-.35	--						
NE	-.76***	-.36	-.21	--					
Pleasure	-.74**	.11	-.01	-.84***	--				
Anxiety/Sadness	.06	-.06	-.23	-.00	-.03	--			
Helping others	-.76***	-.23	-.22	-.67**	-.75***	-.19	--		
Participation Freq	-.17	-.24	-.14	-.61*	-.59*	-.07	-.23	--	
QUALID	-.39	-.29	-.29	-.58*	-.61*	-.19	-.15	.57*	--

Note. \* $p \leq .05$ , \*\* $p \leq .01$ , \*\*\* $p \leq .001$ .

## Discussion

Many of the results from this research supported findings from prior studies. Greater levels of constructive engagement during the IGP sessions were associated with greater pleasure/more positive affect in these residents. Other studies have noted similar findings, suggesting that engagement levels likely have an influence on affect (Camp and Skrajner, 2004; Camp, 2010; Jarrott & Bruno, 2003; Volicer & Hurley, 2015; Waggoner, 1996). McNair and Moore (2010) found that participation in IGPs resulted in increased active behaviors. Results from this study indicated that constructive engagement was associated with more 'hands-on' involvement with the children, particularly in the form of helping behaviors. As expected, older adults who were con-

structurally engaged in the IGPs during this study were less likely to be inattentive (i.e., sleeping/non-engagement, self-engaged) while attending the activity.

Experiencing more pleasure during the IGPs in this study was associated with greater QOL the following week as assessed by the QUALID for these persons with dementia. This is also consistent with the findings from other studies (Chung, 2009; George & Singer, 2011; George & Whitehouse, 2010) where adult participants noted an improved quality of life. Individuals will likely experience more pleasure in activities that they find meaningful, and research has even noted that everyday activities—such as the IGPs at this shared-site facility—can be important in promoting quality of life for residents (Edvardsson, Petersson, Sjogren, Lindkvist, & Sandman, 2014). Findings in this study also indicated that adults who were more engaged in the IGP had better quality of life. It is possible that these IGPs provided adults with the opportunity to feel productive and encouraged purposeful involvement which research has shown can help maintain sense of self and quality of life for adults with dementia (Moyle et al., 2011; Roach & Drummond, 2014).

However, it was also noted that a higher frequency of participation was significantly predictive of poorer QOL and fewer demonstrations of pleasure in this sample. Literature from previous studies also proposes discrepancies when attempting to address the relationship between IGP engagement and QOL (Brooker et al., 2007). Frequency of participation in this study was assessed as the number of sessions that the resident attended—it did not measure whether these individuals were actually awake or sleeping during the IGP. Thus, these findings suggest that it is not participation per se that is important (or whether an adult was marked as attending the activity); rather, it is how they engage that needs to be assessed in IGP programs. This highlights the importance of measuring the type of engagement that adults demonstrate during interventions such as IGPs to assess their effectiveness promoting positive outcomes.

In this study, none of the residents demonstrated inappropriate behaviors during the IGP session. Therefore, the association between these behaviors and engagement type or quality of life was not examined. Brownell (2008) indicated no statistically significant changes regarding frequency of inappropriate behaviors or level of engagement in his study. On the contrary, O'Rourke (1999) and Camp et al. (1997), indicated behaviors (e.g., aggression, disruption) of adults with dementia improved while being engaged in intergenerational activities. It is possible that the IGP actually encouraged more positive behaviors in the adults, and that is why no inappropriate behaviors were observed. However, it is also possible that adults who typically respond poorly to intergenerational activities were not encouraged to attend the daily IGPs in this facility given that these activities are integrated into the daily routines and the staff are aware of the residents' preferences.

### Implications for Practice

This study reinforces what many practitioners working with people with dementia know—that it might be more beneficial to measure engagement than attendance per se. Given the high rates of depression, passivity, and other behaviors (e.g., agitation) with this population, it is important to find activities and opportunities for this population to engage and interact in positive and meaningful ways. The duration of their engagement (e.g., 10 minutes versus 30 minutes) may not be as important based on the difficulty these adults have with concentration and attention; however, how they en-

gage and respond during these interactions is important. Unfortunately, much research and even documentation of the involvement of adults with dementia in activities is based on measures of attendance. In doing so, practitioners and researchers may not document or gain a clear picture of which programs have the greatest benefits for these individuals. In addition, many measures only attempt to account for distal, or long-term, findings related to outcomes. However, proximal effects, such as those assessed in the MPES in this study (i.e., pleasure, anxiety/sadness, helping behaviors, inappropriate behaviors) should be accounted for as well, because these immediate outcomes are also critical in these adults' daily routines and experiences.

Research has suggested that nonpharmacological approaches, such as IGPs, are critical to address psychosocial well-being and quality of life for individuals with dementia. Yet, they are not always the first approach used in clinical settings, despite the fact that effective non-pharmacological interventions could help improve quality of life and reduce the inappropriate use of antipsychotics in patients with dementia (Agency for Healthcare Research and Quality, 2016). Research has identified several reasons why these interventions are not initially used including lack of time by staff, lack of support by family/staff, limited facility resources, lack of standards to facilitate integration, discouragement of innovative practices by a regulatory environment, and resident refusal (Cohen-Mansfield, Thein, Marx, & Dakheel-Ali, 2012). However, the *Dementia Practice Guidelines for Recreational Therapy: Treatment of Disturbing Behaviors* (Buettner & Fitzsimmons, 2003; Buettner & Fitzsimmons, 2009) recognizes the importance of recreational therapists (RTs) in providing nonpharmacological interventions for this population and includes over 80 protocols aimed at reducing behavioral symptoms of dementia. This study suggests that IGPs might be useful to address the needs and concerns of some individuals. Other research has indicated that IGPs have the ability to promote engagement, improve QOL, and increase overall well-being (Camp & Skrajner, 2004; George & Whitehouse, 2010; Power, Eheart, Karnik, & Karnik, 2007). However, it is critical that staff provide person-centered care, particularly in residential facilities for adults with dementia. RTs should use assessments with residents as well as observations during programmed activities and interventions to ensure that individuals with dementia are benefitting from their involvement in IGPs and have a desire to attend these interventions. Individuals who demonstrate signs of anxiety or agitation should be removed from these activities, as it is likely a sign that particular activities are not providing them with an appropriate physical and/or social environment.

### Study Limitations and Directions for Future Research

It is important to note that this study did not attempt to address causality. The focus of this study was solely to explore how adults with dementia engaged in IGPs, the behaviors and affect that they exhibit during IGPs, and how these were associated with their QOL. To truly explore whether engagement in IGPs improves the QOL of adults with dementia, a longer study period with a larger, more diverse sample would be necessary. This would be possible using an observational measure of engagement, such as the MPES, to record interactions once or twice a week for a longer duration (e.g., 4-6 months). Related to this, the measure used to assess QOL was completed by proxy rather than the adults. While the QUALID has demonstrated reliability and validity, future studies should consider utilizing adults' own assessment of their QOL when possible as research suggests caregiver assessments may be biased (Arons, Krab-

be, Schölzel-Dorenbos, van der Wilt, & Rikkert, 2013). In addition, research suggests that the QUALID correlates with measures of behavior and affect at single time points, but it does not appear to be appropriate for longitudinal studies exploring changes over time with intervention treatment (Benhabib, Lanctôt, Eryavec, Li, & Herrman, 2013).

Another limitation to this study was the fact that this shared-site program in the facility has been in place since 2003 and all participants had been exposed to the IGP prior to the start of the study. Intergenerational interactions take place regularly in this facility, and not just through the structured program that was observed in this study. Some of the residents at this facility who did not attend the structured IGP sessions in the morning either regularly visit the day-care facility onsite and/or often interact with the children informally during afternoon visits. This makes it more difficult to assess how the IGP is specifically associated with residents' QOL. The MPES is unable to measure interactions of durations shorter than a five-minute period, which is the way that most informal interactions occur in this particular facility. Future research should examine whether there are differences in the effects of these short, informal interactions on the adults' well-being and affect/behavior compared to a more structured program.

The small sample size and use of a convenience sample at one facility also limited this study. Only a small number of legal guardians returned the informed consents for residents on these two units. The facility controlled all contact with the guardians, and their initial notice to the guardians was sent out with a monthly statement. The week before the study, the social worker at the facility did personally follow up with the guardians by phone or email, and this did result in several more consents being returned prior to the start date. However, the small sample size resulted in low statistical power for the analyses and affects the generalizability of the findings to all residents in these units or to adults with dementia in other facilities. There were also large standard deviations in some of the variables of interest in this study, demonstrating high variability within these measures for this small sample. In addition, there was not much diversity in the sample population – particularly regarding race since all residents identified as White. This facility also serves adults with a higher socioeconomic status, and thus findings might not be similar with diverse populations of older adults with dementia.

Finally, while participation in this study was voluntary, the fact remains that in the sessions many of the participants were either non-engaged (i.e., sleeping) or were focusing on other things (i.e., self/other engaged). While these individuals were also likely in the later stages of dementia and less likely to be alert, it was difficult to determine whether they found the IGP to be a source of meaningful activity. When asked, staff noted that the individuals were brought down to the activity based on their interests and activity preferences. If so, it is positive that the staff made efforts to include these individuals in programming, because they believed that it would be meaningful and purposeful for those residents. The adults who were constructively and passively engaged typically often only did so for brief durations throughout the activities, which is not unexpected given the length of some of these programs and the adults' cognitive functioning. During the observations of the participants, it was evident that different groups of children and activities resulted in different types of engagement for each resident. For example, in general the adults were more engaged and responsive to the babies than they were to the preschoolers. They also appeared to be more responsive

during “active” games (e.g., ball toss, interactive songs) than the activities that did not encourage as much interaction between the generations (e.g., free play with blocks/Legos). Thus, future research should examine the association between program characteristics (i.e., age of the children, type of activity, program length) and participant engagement patterns and behaviors during the IGP as well as their QOL.

### Overall Summary

Our findings suggest that how adults with dementia engage in IGPs may be a more effective way to measure outcomes and potential benefits than whether they participate in the programs. This helps to explain why the results from prior studies may have been mixed, as not all adults may enjoy or actively engage in these activities. Volicer and Hurley (2015) suggested that engaging older adults with dementia is key to establishing positive interactions and successful non-pharmacological treatment for symptoms of dementia. Engagement outcomes provide details on how adults participate in IGP. Even the short-term benefits (i.e., pleasure, helping behaviors) observed during the week of the interactions were positive and important for adults with dementia. Whether the outcomes of IGPs occur during the immediate activity or whether they have the ability to be sustained over a longer duration was not evident from this research. However, any constructive engagement in meaningful and purposeful activities with this population should be considered positive in terms of programming and providing treatment.

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