

Barriers to the Success of Recreational Groups for Persons With Dementia

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Abstract

Background: This paper describes barriers to engagement in the context of group activities attended by nursing home residents with dementia. **Objective:** The goal is to clarify the presence and types of barriers to group activities for persons with dementia. **Methods:** Therapeutic recreation staff (TRs) who conducted the group activities, and trained research observers (ROs) independently identified barriers occurring during group activity sessions through ratings and open-ended comments, which were analyzed via a mixed-method approach. **Results:** Barriers were related to specific participant, environmental, and group session characteristics. Most frequently noted barriers were participant-related, pertaining to apathy and challenging behavior. Noise was the most frequent environmental barrier. Overall, ROs reported more barriers than TRs, yet TRs reported the barrier of inappropriate topic more frequently than ROs. **Conclusions:** The study suggests that the number and specific types of barriers are associated with negative engagement outcomes. Insight into these barriers is the first step toward addressing them and minimizing their effects.

Keywords

activity groups, nursing home, dementia, engagement, barriers, apathy

Introduction

Group activities can be effective in engaging individuals with dementia¹ and eliciting positive mood,² particularly when compared to unstructured time.^{3,4} However, the factors that facilitate or hinder engagement and mood in group activities are just beginning to be defined.

Research on engagement of persons with dementia (PwD) in group activities has largely been based on a framework similar to that used with individual activities. Both frameworks^{5,6} proffer that a participant's engagement can be affected by characteristics of the person (e.g., demographics, cognitive and functional level), of the stimulus (e.g., activity content), and of the environment (e.g., ambient noise, time of day, group size, or group composition).

Noise and time of day have been identified as environmental factors affecting engagement and/or mood in nursing home residents with dementia. Specifically, high background noise was associated with significantly less engagement, and mood was more positive during afternoon compared to morning sessions.⁷ The types of stimulus can also affect response to stimuli: exercise, music, and art resulted in higher levels of active participation compared to cognitive and functional household activities.¹ Well-being was higher for reminiscence therapy than for general group activities, such as crafts and games.² In one study, specific activities, including drama, wine/cheese social, gardening, and dancing produced engagement 98–99% of the time.⁸ The same principle follows in group activities, i.e.

different activities also affect different outcome variables.³ For example, games and choral groups resulted in significantly more engagement, active participation, positive attitude, and positive mood, and in significantly less sleepiness than holiday discussion.³ Exercise groups resulted in significantly more active participation, brain games in more positive mood, and baking in more positive mood and active participation thus affecting different outcomes.³

With respect to personal characteristics, level of cognitive and functional impairment, speech impairment, number of medications, and liking group activities in general were highly correlated with engagement in group activities. These personal characteristics explained 46%–62% of the variance in the outcome measures.⁹ Cognitive level, however, was the most consistent predictor of engagement,⁹ and may have a greater impact on engagement than differences in group topic.³

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Barriers to activity implementation and effectiveness were commonly identified as insufficient time by staff and understaffing,¹⁰⁻¹² and lack of skill and training among nursing staff.^{13,14} Effectiveness was enhanced by active engagement of staff and family and the ongoing provision of individualized interventions and support.¹⁵⁻¹⁷

In examining personalized interventions for behavioral symptoms, Cohen-Mansfield, Thein, Marx and Dakheel-Ali¹⁸ provided a categorization of barriers:

1. external barriers, which included those related to staff (e.g., general staff refusal/interruptions), family-related barriers (e.g., lack of availability or cooperation), environmental barriers (e.g., noise), and system process barriers (e.g., unavailability of materials for intervention);
2. resident-related barriers including unwillingness to participate, and resident attribute barriers (e.g. cognitive level); and
3. barriers related to resident unavailability (e.g., resident sleeping or eating).

Drawing on this categorization, we aim to investigate and categorize different types of barriers to *group* activities for PwD and to explore the specific impact of the barriers on the participants' behavior and well-being. To further clarify this relationship, we assess how these barriers affect engagement and mood outcomes. We argue that a categorization of barriers and the clarification of their relationship to participants' behavior and well-being can help plan for, address, and prevent barriers to group activities.

Methods

Design

This is an exploratory mixed methods study (i.e., combining both quantitative and qualitative data collection and analysis) to ascertain barriers to group activities as described by therapeutic recreation staff (TRs) and research observers (ROs), and to examine the relationship between the number and types of barriers and outcome variables. Two types of informants are used in order to critically examine and validate findings. While the presence of ROs might have an impact on TR behavior, the benefit of eliciting independent reports is seen as outweighing this potential limitation, particularly since TRs were aware that the role of the ROs was primarily to evaluate resident behavior.

Participants

This study was reviewed and approved by the Research Ethics Board of Baycrest Health Sciences. The sample included 69 older PwD recruited from 6 nursing home units. Informed written consent was obtained from participants' substitute decision makers. Assent of participants was also required, so that the participants' decisions not to participate were respected. The criterion for inclusion was a diagnosis of dementia (derived from the medical chart). Exclusion criteria were: 1) a diagnosis of bipolar disorder;

2) a lifelong diagnosis of schizophrenia; 3) Cognitive Performance Scale (CPS) Score 1 or below — scores of 0 or 1 indicate no, or borderline cognitive impairment, respectively¹⁹; 4) no dexterity movement in either hand; 5) inability to be comfortably seated in a chair or wheelchair, or to be moved to the location of the group activity; and 6) absence of past or present competence in English. By design, we did not exclude participants on level of cognitive function, with the goal of studying the feasibility and outcomes of group activities for persons at all stages of dementia.

Assessment

Background information. Background information was gathered from the electronic health record system, Meditech, and also the Minimum Data Set (MDS) Version 2. This included age, gender, marital status, total number of medications, and total number of medical diagnoses. Cognitive functioning was assessed via the CPS,¹⁹ with the scale of 0 = intact to 6 = severely impaired. Activities of daily living (ADL) performance was assessed via the ADL long form,²⁰ using a scale of 0 = independent to 28 = complete dependence.

Barriers. At the end of each group session, TRs and ROs independently indicated the presence (yes/no) of 5 barriers: lack of space, apathy of participants, challenging behavior of participants causing disruption, noise from outside, and inappropriateness of activity topic. Challenging behaviors are those which seem inappropriate to the occasion. Such behavior is often an expression of unmet needs that are difficult for caregivers to identify or address.²¹ Additionally, raters were asked to elaborate on specific barriers (e.g., why the activity topic was inappropriate) and to provide written comments on any other barriers they identified. These comments were analyzed to clarify the cause of specific barriers and to identify additional barriers.

Engagement. Engagement outcomes were collected using the Group Observation Measurement of Engagement, GOME.⁵ The construct of engagement was measured by 3 variables: **engagement:** "For how much time was the participant engaged in the group activity?" Rated on a scale from 0 = none of the time to 5 = most or all of the time; **active participation:** "To what extent did the participant actively participate in the group?" Rated from 0 = not at all to 4 = very much; and **attitude toward the activity:** ("Most of the time") ranging from 1 = very negative to 7 = very positive. **Positive mood** was measured through observation, with ratings from 0 = not at all to 4 = very much. We have previously examined the validity and reliability of these measures including an examination of the agreement between ROs and TRs, and found good reliability and validity.⁵

Procedure

Participants were invited to 2 sessions of each of 10 group activities. These activities, common in nursing homes and

long-term care settings were: reading aloud with discussion, choral singing, baking, creative storytelling, brain games/fitness, active physical games (e.g., bowling or ring toss), exercise, reminiscence poetry, holiday newsletter, and holiday discussion. TRs conducted the group activities for PwD on their unit using pre-prepared materials.²² One group activity was conducted per session, and each group activity was conducted twice, in random order, so that each unit completed a total of 20 group activities. Sessions lasted approximately 30 minutes. The study lasted approximately 3 to 4 months on each unit and 7 months overall.

Prior to the start of each session, TRs approached each study participant on their unit to describe the activity and to ask if the participant would like to attend. Those who agreed or did not, or otherwise indicated refusal were then escorted to the activity location either by TRs, ROs, or private aides. Participants who could not be asked for assent were informed about the activity and taken to it. Residents who indicated—verbally or nonverbally—that they did not wish to participate were not required to do so.

The assessments were completed by TRs, who were the regular TRs for the units, and by ROs, who were research staff or research volunteers with a degree in the social sciences and were trained for the assessment. At the end of each session, TRs who led the activity and a RO independently completed an assessment of the group, which included — in addition to information about barriers and engagement — attendance, time of day, location of the group, and other group characteristics.

Data Analysis

Barrier frequencies were determined separately for ROs and TRs and presented as means, as percent of sessions, and as percent of all barriers. Differences between raters were calculated using chi-square (for nominal level variables) and *t*-tests (for ordinal and interval level variables). In order to validate the information concerning barriers, we used Pearson correlations to examine relationships between number of different types of barriers and group and session characteristics (i.e., background noise level, group size, and group mean CPS and ADL). To understand the potential impact of barriers, Pearson correlations were calculated to examine the relationship between number of different types of barriers and outcome variables of engagement with the group activities.

Categories for different types of barriers resulted from a thematic analysis²³ of ROs and TRs' responses. Following this method, the ROs and TRs' open-ended comments were coded and recoded independently by research staff in multiple sessions. After discussing the codes and reaching agreement, we organized the codes into the themes presented below.

Given the likelihood that pre-identified barriers would be checked more often than those identified through analysis of open-ended responses, we differentiated between the 2 types of data.

Results

Participants

Of the 69 participants, 43 were female (62.3%), and age averaged 86.58 years (SD = 7.93, range 63–100). Most were widowed (42.0%) or married (42.0%). Participants had an average of 5.52 medical diagnoses (SD = 2.32, range 2–12). CPS averaged 4.19 (SD = 1.35, range 2–6); ADL performance averaged 20.52 (SD = 6.34, range 3–28).

Frequency of Reported Barriers

The correlation between number of barriers by the 2 types of raters was significant ($r = 0.36, p < .0001$). Overall, ROs reported more barriers than did TRs. ROs reported at least one barrier in over 3-quarters (76.7%) of the sessions; TRs reported barriers in just over half of the sessions (53.3%; $X^2_{(1)} = 14.36, p = .0002$). Similarly, average number of barriers per session for ROs (mean = 1.61, SD = 1.29, range = 0–5) was significantly higher than that for TRs (mean = 0.98, SD = .16, range = 0–5; $t(119) = 5.01, p < .0001$).

Barrier Categories

Barriers could be divided into 3 categories: 1) Related to participants, 2) Related to the environment, 3) Related to group or activity characteristics. Barriers related to participants included apathy, challenging behavior, presence of non-verbal participants, and language difficulties. Environmental barriers included noise from the outside, lack of space, schedule conflict, and uncomfortable environment due to smells, heat, etc. Barriers attributed to characteristics of the group activity included inappropriate topic, size of group, either too small or too large, “difficult” group (see description below), issues with materials/resources, deviation from protocol, and sad memories raised by discussion. Table 1 presents frequencies for the different types of barriers identified by ROs and TRs, along with percentages, both per session and per total barriers.

Both TRs and ROs reported participant-related barriers most frequently — they formed 43.0% of all barriers reported by ROs and half (50.4%) of all barriers reported by TRs. Environment-related barriers constituted 37.3% of barriers for ROs and 23.9% for TRs; Barriers pertaining to group and activity issues were 19.7% for ROs and 25.6% for TRs. The mean number of barriers per session differed significantly between raters for participant-related (0.69 vs. 0.49, $t(119) = 2.40, p = .0181$) and environment-related (0.60 vs. 0.23, $t(119) = 6.33, p < .0001$) barriers, the number being lower for TRs in both cases. The number of environmental barriers also formed a significantly lower proportion of all barriers for TRs (23.9%) than for ROs (37.3%; $X^2_{(1)} = 5.96, p = .0146$). No significant differences occurred between raters for group/activity barriers.

Table 1. Barrier Frequencies as Noted by ROs and TRs.

Barriers	Research observers			Therapeutic recreation staff		
	Count	% Of sessions	% Of all barriers	Count	% Of sessions	% Of all barriers
Related to the Participants	83		43.0%	59		50.4%
Apathy of participants ^a	41	34.2%	21.2%	31	25.8%	26.5%
Challenging behavior of participants ^a	39	32.5%	20.2%	20	16.7%	17.1%
Many non-verbal participants	3	2.5%	1.6%	6	5.0%	5.1%
Language barrier (lack of fluency in English)	0	0.0%	0.0%	2	1.7%	1.7%
Related to the Environment	72		37.3%	28		23.9%
Noise from outside ^a	40	33.3%	20.7%	20	16.7%	17.1%
Lack of space ^a	25	20.8%	13.0%	8	6.7%	6.8%
Schedule conflict	5	4.2%	2.6%	0	0.0%	0.0%
Uncomfortable environment (smells, heat)	2	1.7%	1.0%	0	0.0%	0.0%
Related to Group Session Characteristics	38		19.7%	30		25.6%
Group topic not appropriate ^a	8	6.7%	4.1%	20	16.7%	17.1%
Deviations from protocol	10	8.3%	5.2%	0	0.0%	0.0%
Group size too small	6	5.0%	3.1%	4	3.3%	3.4%
Issues with the materials/resources	6	5.0%	3.1%	0	0.0%	0.0%
Difficult group	5	4.2%	2.6%	4	3.3%	3.4%
Sad memories raised by discussion	2	1.7%	1.0%	1	0.8%	0.9%
Group size too large	1	0.8%	0.5%	1	0.8%	0.9%

^aRefers to barriers listed on the questionnaire; remaining barriers were derived from open-ended comments.

Individual Barriers

Apathy, challenging behavior, and noise were the barriers identified most frequently by both raters, followed by lack of space and inappropriate topic (Table 1).

Participant-related barriers. *Apathy* was the most frequent barrier reported by both raters — in 34.2% of the sessions according to ROs, and in 25.8% of the sessions according to TRs. Apathy was manifested as lack of interest in the activity, refusal to engage in conversation or respond to questions, or falling asleep during sessions, as found in raters' comments. ROs noted, "People weren't interested; It was a dull group." and "Only a few people said something about the topic, and discussion doesn't seem like something they were interested in." and "It didn't seem like they wanted to contribute much." According to TRs, "Only one resident was fully engaged in conversing." Falling asleep seemed to be a common occurrence during some sessions. According to ROs, "Many were not as engaged in activity; They were asleep." and "It seemed like everyone was very sleepy, even those who were actively participating would drift off." Similarly, TRs stated, "One resident participating only, 4 of 5 residents sleeping." Apathy, at times, interfered with inclusion in the activity, e.g. "Some participants did not get poems as they were asleep." and "TRs didn't address those who are nonverbal, those that cannot even be engaged; It's difficult to engage these people." As to the physical aspect of activity, "They were good with hand movements, but they didn't want to do the feet movements, so I stopped; One participant was getting tired and another was falling asleep, so I stopped." For the most part, however, activities continued despite participants' apathy. According to a RO, "Group may have been apathetic, except for 2 participants, who

seemed to like some of the songs and were trying to sing." Attempts were made to engage apathetic individuals, e.g. "TRs did a great job addressing every person, even those who were asleep the entire time, and always thanked everyone." and "TRs approached each person separately because they ended up participating when they would have stayed quiet if the question was posed to the group as a whole." It seems that the reports of the barrier of apathy were a function of the participants' ability or willingness to take part, especially during discussions. But even in these cases, TRs often tried to keep everyone involved.

Challenging behaviors were present during 32.5% and 16.75% of sessions according to ROs and TRs, respectively ($X^2_{(1)} = 8.11, p = .0044$). Such behaviors included negative interactions between participants (e.g., yelling, fighting) and interruption of TRs. As described by ROs, "Was impossible to control one of the residents who kept yelling at another participant." and "A very noisy group that was hard to handle at times...did not stop talking/interrupting, a lot of bickering..." Challenging behavior sometimes posed a significant problem for TRs, as one RO wrote, "Some residents were causing problems, TRs seemed to get impatient..." However, on other occasions the activity proceeded as planned after the cause of the interruption was dealt with. One RO reported, "There were some negative interactions, but the caregiver intervened." At other times, the person causing disruption was removed. Challenging behaviors could also resolve on their own, as in "at the beginning it seemed very chaotic; Then it settled down and they focused."

The remaining participant-related barriers, derived from rater comments, involved verbal abilities of participants. Presence of *non-verbal participants* was considered a barrier in

2.5% and 5.0% of sessions by ROs and TRs, respectively. As described by observers “People who were present are non-verbal, so not much was said” and by TRs “Only one resident in group participated verbally from beginning to end.” While lack of competence in English was one of the exclusion criteria, a “*language barrier*” due to lack of language competency was recorded by TRs in 2 (1.7%) sessions, as noted, “One of the participants does not speak English.” Language barriers became an issue particularly with activities that required basic verbal skills. As described by TRs “Some of the group members did not speak English and one group member is not really verbal. This group [brain games] would have worked better with other residents involved” and “This group [reading with discussion] could be very engaging if you selected residents capable of participating verbally—I will use this program again in the future with a more vocal group.” Music activities seem better suited for nonverbal residents: “People seemed to be making hand movements to the tune of the songs and enjoyed it.”

Environment-related barriers. *Noise* was the most frequent environmental barrier — noted during 33.3% of sessions by ROs, and 16.7% by TRs ($X^2_{(1)} = 8.89, p = .0029$). Loud background noises sometimes originated from inside or outside the activity room, often creating a distraction. As ROs described, “I could hear the dish washer on constantly at the beginning.” and “Construction occurring on the 5th floor below, making some noisy outbursts, [was] quite annoying.” Similarly, TRs noted “PA system was on, [announcing] practice code yellow.” Although the questionnaire item specifically inquired as to “Noise from outside,” a few comments suggest that ROs may have included noise from the group itself as such a barrier, as in the following: “a very noisy group”, “Some of the residents were loud.” and “lots of noise . . . resident screaming.” Behavior barriers were noted in all of these cases in addition to noise barriers.

Lack of space in the activity room was another environmental barrier noted significantly more frequently by ROs (20.8%) than by TRs (6.7%; $X^2_{(1)} = 10.15, p = .0014$). Some of the comments were: “Should take place in a bigger area” and “not enough space for everyone.” Sometimes lack of space was due to unavoidable circumstances, as when “Space was an issue, but the rec room has a mini flood so there was no other option.” Insufficient space could also create some difficulty for the TRs, as described: “Difficult to move around one of the participants in his chair,” and “Usually, the unit sitting area had sofas and armchairs, but most residents came in wheelchairs, so space to accommodate them, might not be sufficient.”

Schedule conflict was noted only in comments of ROs, and in only 4.2% of sessions. Schedule conflict was indicated when concurrent activity distracted participants, for example, “snack time toward end” and “Participants seemed to have gotten distracted by the food.” or “Time of day probably was an issue; People were either still in bed or eating.”

Uncomfortable environment was also reported only by ROs, in 1.7% of sessions. This was attributed to conditions

such as unpleasant odors (i.e., “The room smelled of a burn.”) or to excessive heat (i.e., “I think it was hot all throughout [the facility] that day.”)

Barriers related to group session characteristics. *Inappropriateness of the scheduled activity* for a specific group was the one barrier TRs noted significantly more frequently than ROs (16.7% vs. 6.7%, $X^2_{(1)} = 5.82, p = .0158$). ROs considered topics inappropriate when participants could not relate to them, “They just weren’t interested in talking about holidays, can’t relate to it in May,” or when the topic is presented too frequently, “The topic was Shabbat [the Sabbath], and I feel like this topic is done way too frequently . . . and it seems that participants are getting tired of this topic.” In contrast, TRs considered topics inappropriate when they appeared too difficult for a particular group, “was not a good idea, was too abstract for them” and “Physical tasks [are] too difficult for many.” and “Not a lot of people could participate (they didn’t know the body parts, couldn’t lift arm, etc.)” or when group composition interfered with participation, “challenging to successfully run this group given the residents who attended” and “This group would have worked better with other residents involved.” All topics were considered inappropriate by either rater in at least one session. In particular, storytelling (in 5 of 12 presentations), followed by holiday news (4 of 12) were the topics most frequently described as inappropriate by TRs. Holiday news (3 of 12) was the activity ROs most frequently rated as inappropriate.

Comments of both ROs and TRs described *group size* as a barrier, with too small a group (5.0% and 3.3%, respectively) being noted more frequently than too large a group (0.8% for both). Too few people attending could interfere with participation for some tasks: “There were only 3 people in the group for the majority of the session, so it was very difficult to facilitate [a] discussion.” A group that was considered to be too small formed a barrier most frequently for the holiday news activity. Alternatively, a group being too large was also reported as a barrier. In reference to a baking group with 17 participants, “Group size was a bit too large. This type of activity requires a lot of 1:1 attention and a large group is difficult to facilitate.” Nevertheless, other groups with 17 participants — choral singing, holiday discussion, and storytelling — were not considered too large.

Both raters also noted *sad memories raised by discussion* in 1 or 2 sessions — 1.7% by ROs and 0.8% by TRs. This occurred specifically in reminiscence poetry groups when discussions turned to the Holocaust: “This activity brought up a lot of negative events that occurred in the participants’ past. A few residents were upset and fixated on the sad events in their lives (specifically the Holocaust).”

Issues with materials/resources were indicated by ROs in a few sessions (5.0%). These involved equipment malfunction or absence, for example, “oven not working, they had a flood” or “CD player not working, no music” or “didn’t bring the musical instrument, which would have been good.”

Difficult group was indicated in 4.2% of sessions by observers and 3.3% by TRs. A group was considered difficult when

Table 2. Barrier Associations for Total Number of Barriers as Well as Number of Barriers in the Participant, Environment and Group Categories.

	Total barriers	Barrier categories (number of barriers per session)		
		Participant barriers	Environmental barriers	Group barriers
Research Observer				
A. Outcomes: Engagement and mood variables				
Engagement	-.28**	-.28**		-.22*
Active participation	-.29**	-.34****		
Attitude	-.24**	-.34****		
Positive mood	-.25**	-.30**		
B. Group participants and session characteristics				
Noise level	.43****	.23*	.53****	
Group size				
CPS ¹				.21*
ADL ¹	.31***	.19*	.19*	.21*
Recreational Therapist				
A. Outcomes: Engagement and mood variables				
Engagement	-.27**	-.23*		-.29**
Active participation	-.20*	-.20*		
Attitude				-.34****
Positive mood	-.23*			-.29**
B. Group participant and session characteristics				
Noise levels	.43****	.33***	.59****	
Group size				
CPS ¹				.26**
ADL ¹	.19*			

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$, **** $p \leq .0001$.

¹Higher values indicate greater impairment.

other barriers were present, e.g. participants did not want to contribute, were non-verbal or asleep, exhibited challenging behavior, or the number of participants was too large. Comments noted: "It looked like a hard group for the TR; She had to run around a lot, making sure people don't eat, cut themselves, create a mess, etc." and "This group was very difficult to facilitate, due to 4 of 5 residents sleeping and 3 of 5 residents being completely non-verbal."

Only ROs reported *deviations from protocol* during the activities, and this was in 8.3% of sessions. One instance involved the TR making her own materials, and another concerned insufficient reinforcement. The most common deviation from protocol involved TRs not including sleeping or non-verbal participants in the group activity, as seen in comments like, "participants who were sleeping did not get paper", "felt TRs ignored those sleeping, didn't address them or didn't give them paper", or "gave an opportunity to all participants to participate, but there is one non-verbal participant who always sleeps; therefore, he wasn't handed a piece of paper or shown the picture."

Relationship of Barriers With Engagement and Mood Outcomes

Number of barriers. The total number of barriers was significantly associated with the outcomes of decreased engagement and less positive mood in both RO and TR ratings (Table 2). The same trend was found for participant-based barriers and for group barriers, though the number of correlations that were

significant varied between TRs and ROs for specific outcomes. The number of environmental barriers was not significantly related to outcome variables for either rater (Table 2).

Individual barriers. The designation of apathy as a barrier was significantly associated with outcome variables for both raters (ROs: active participation $r = -.30$, $p < .001$; attitude $r = -.23$, $p < .05$; positive mood $r = -.22$, $p < .05$; TRs: engagement $r = -.20$, $p < .05$; active participation $r = -.20$, $p < .05$).

Although behavior barriers occurred at a rate close to that of apathy, at least for ROs, such barriers had less of an effect on activity outcomes. RO ratings of behavior barriers were the only ones significantly correlated with a reduction in an outcome variable, that of engagement ($r = -.18$, $p < .05$).

Inappropriate topic as a barrier, noted by TRs, was significantly negatively associated with levels of engagement, attitude, and positive mood ($r = -.24$, $p < .01$; $r = -.30$, $p < .001$; $r = -.25$, $p < .01$, respectively). Inappropriate topic as rated by ROs was not associated with the outcome variables.

Noise and space barriers were not significantly associated with any outcome measure.

Relationship of Barriers With Group Activity and Participant Characteristics

Total number of barriers, participant barriers, and environmental barriers increased significantly with level of background

noise for both raters (Table 2). Not surprisingly, for both raters, background noise level was higher when a noise barrier was indicated, but behavior barriers were also associated with background noise.

Group size was not significantly associated with any barriers in TR data. However, for RO data, as group size increased, space barriers were more frequently noted ($r = .37, p < .001$).

Functional impairment correlated with both total barriers and almost all types of barrier categories for ROs, with some similar correlations also manifested in TR data and some in relationship with cognitive impairment (Table 2). TR designation of inappropriate topic as a barrier was significantly correlated to participants' cognitive impairment (CPS) ($r = .24, p < .05$). The barrier of apathy was related to ADL impairment (TR: $r = .23, p < .05$) as was the barrier of behavior (RO: $r = .26, p < .01$).

Discussion

As with individual activities, barriers are prevalent in group activity sessions for PwD. At least one barrier was reported in half (TRs) to 3-quarters (ROs) of the group sessions, pointing to the importance of monitoring barriers as an important tool for improving group activities for PwD. We classified barriers as those related to participants, to the environment, and to group and activity characteristics, finding participant-related barriers to be the most frequent, with apathy being the most frequently reported individual barrier by both raters. Barriers, both collectively and individually, were related to engagement and mood in participants.

The results show that the 2 types of informants, TRs and ROs, while differing in their perceptions and biases, provided results that converged in terms of the main research questions: what are the barriers to group activities? And, what is the impact of such barriers?

From the comments, it appears that barriers may have had little direct effect on the conduct of the groups and, in most cases, groups continued as planned. There is only one mention of negative reaction on part of TRs (to challenging behavior), and only one mention of a group being cut short or terminated (due to apathy), even though a number of groups were characterized as difficult. Yet, the data show that barriers may affect, or be reflected in group outcomes, as mean engagement and mood levels for the groups significantly decreased with increases in the number of barriers. Nevertheless, although barriers may decrease activity engagement outcomes, they do not eliminate them altogether. We have shown in other work that engagement and mood levels during group activities are higher than engagement observed during a control no-group-activity condition.³

Apathy, challenging behavior, and inappropriate topic were the individual barriers that were most often significantly correlated with engagement in group activities. Apathy is the principal barrier in this regard, as significant effects were seen in the data from both raters, both of whom reported it more frequently than other barriers. Countering apathy and its effect on

older adults is one of the leading reasons for presenting group activities. Engagement in activities can reduce symptoms of apathy,^{24,25} and without such participation, an increase in apathy²⁶ or further cognitive deterioration²⁵ may occur. Yet, residents who displayed apathetic behaviors, such as being asleep, or residents who were nonverbal, were, at times, left out of the group activity, neither given activity materials, nor approached by the TRs. Such residents were described as difficult to engage, and sessions with apathetic participants were often considered difficult groups. It may be that TRs are insufficiently exposed to such persons in a group activity environment, as staff-led activities tend to be geared to higher functioning individuals who are alert and oriented and therefore deemed most likely to benefit.²⁷ Nevertheless, just being in a group situation, even without active participation, can be of benefit by satisfying needs for belonging and social connectedness.^{28,29} TRs may benefit from additional training on how to encourage engagement with strategies aimed at helping PwD feel valued and part of the group. When planning and leading group activities, TRs should anticipate a certain degree of apathy, recognizing it as one of the manifestations of cognitive decline, rather than as a barrier, and regarding it as a condition that can be somewhat alleviated by group activity.

Although ROs noted barriers due to challenging behavior at a rate equal to that of apathy, TRs were less likely to report a behavior barrier under conditions where an observer felt one was present. Generally, TRs seem better able to deal with challenging behavior than with apathy. When challenging behaviors did occur, they were mostly overcome by TRs, and TRs may not have felt it necessary to report a barrier in these cases. This may be due to their experience with such challenges, their acceptance of behavior issues as part of the norm in this population, or their sense of efficacy in handling such behaviors. In only a very few instances did participants need to be removed for challenging behavior.³⁰ The effect of behavior barriers on engagement was limited and seen only in RO data.

Inappropriate topic is the one barrier that TRs reported with greater frequency than observers, and it is the barrier with the greatest impact on engagement according to TR data. According to their narrative explanations, TRs were most likely to designate a topic as inappropriate when it was perceived as beyond the capabilities of the participants, or when there was apathetic behavior. Such barriers appear to be a function of the cognitive abilities of group participants, as mean cognitive levels of the group were significantly lower for topics considered inappropriate. Cognitive impairment itself explains some of the effects on engagement, as cognitive function is the most potent factor affecting the engagement response to group activities.³ And, indeed, 2 of the 3 significant associations with inappropriate topic were no longer significant when controlling for cognitive function. The presence of these barriers requires TRs to be flexible and prepared to select activities and/or modify materials to match the needs and abilities of participants. This tailoring is especially crucial when persons with advanced dementia attend group activities.^{31,32} PwD prefer activities that

do not reveal their weaknesses, but rather allow them to participate equally with others in the group.²⁸

Some of the common nursing home activities presented here were considered inappropriate more frequently than others, and some were better than others in fostering engagement in participants.³ For example, TRs labeled storytelling inappropriate 40% of the time, and storytelling resulted in significantly lower levels of engagement, active participation, and positive attitude compared to a reference activity of holiday discussion. In contrast, choral singing was not considered inappropriate by TRs in any session, and choral singing was associated with significantly higher levels of engagement.³ This type of information provides useful guidance in the selection and presentation of group activities. However, existing data should be considered preliminary. More work is needed on characterizing the appropriateness and potential for success of various activities across different stages of dementia, and on how to structure groups in order to include persons at all functional levels.

The 2 environmental barriers of noise and lack of space were noticed primarily by ROs, but neither barrier correlated with engagement outcomes. Although high background noise has been associated with lower engagement during group activities,⁷ noise as a barrier did not have similar effects. Comments suggest that, in addition to background noise, designation of noise as a barrier may include noise from the group itself.

Lack of space was related to group size in RO data, and was more likely to be noted as a barrier when groups were larger and the space was insufficient for the number attending the group. Space could be a problem in the sitting areas on the units where furniture did not leave sufficient room for wheelchairs. However, as with group size,⁷ space barriers had no effect on engagement.

By design we opted not to exclude potential participants based on level of cognitive function as we aimed to examine the feasibility of group activities for persons at all stages of dementia. This, in conjunction with personal invitations by TRs, escort to the activity location, and a relationship between cognitive level and refusal to attend,³⁰ appears to have contributed to relatively high attendance at the sessions of persons with more advanced dementia. In fact, 52% of the sample could be classified as having at least moderately severe cognitive impairment (i.e., CPS scores of 4, 5, or 6), with 29% being very severely impaired. Thus, the sample is unique in its large percentage of persons with advanced dementia. Since such persons are least likely to attend staff-led activities,³¹⁻³³ they may not be representative of residents who choose to attend group activities on their own. Yet, as seen in our sample, it is possible to get them to attend group activities under supportive conditions. Such highly-impaired persons do benefit from involvement in activities, albeit at a lower level than those less severely impaired.^{3,24} The mere participation in an activity may be more important than the type of activity.^{3,34} Keeping these individuals involved is especially important³² to help maintain existing abilities and to prevent or slow further decline.

Despite predominant agreement on ratings of outcomes, the 2 types of raters provided some differing perspectives on barriers, both in number and type of barriers reported and in criteria underlying reports. One of the reasons for the differences might be that the primary task of ROs was specifically to observe and note what occurred during the sessions. This mission would have encouraged a greater frequency of reports. Features that can readily be seen, such as functional impairment, appeared to influence RO reports. ROs, unfamiliar with the environment, also reported more barriers for noise and space, features to which TRs were likely to be habituated as normal conditions of work. Given their experience in conducting activities, TRs may not have noticed certain barriers or might have overcome those that occurred, not reporting them unless they substantially impacted the sessions. Demand characteristics also could have limited TRs barrier reports, as reports of more barriers might be considered negative reflections on their work.

Conclusion

This paper provides information on the barriers associated with group activities common in nursing homes from the perspective of outside ROs and TRs. More research is needed to determine factors that facilitate or inhibit activity participation and outcomes among nursing home residents, particularly those in the later stages of dementia. Relevant studies have often been limited to those with mild to moderate dementia. The current work on barriers provides initial information on impediments to the success of group activities for persons with more severe dementia, and points the way to what may need to be improved, architecturally, programmatically, or in terms of staff training. Awareness of what the barriers are, and understanding the factors which contribute to them are the first steps in trying to address and minimize their effects in long-term care settings.

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