

# Findings from a Pilot Investigation of the Effectiveness of a Snoezelen Room in Residential Care: Should We Be Engaging with Our Residents More?

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There is increasing literature on multisensory therapy or Snoezelen, with some evidence suggesting it promotes positive mood and reduces maladaptive behavior in people with dementia. We undertook a pilot evaluation of a Snoezelen room in residential care and compared effects with a condition in which staff took residents out to a garden. This study was therefore a comparison between a Snoezelen room containing prescriptive, expensive equipment and a more everyday existing location that, inevitably, also contained several sensory stimuli. The study was difficult to implement, with low numbers because some staff failed to attend sessions, and the frequent although rarely reported difficulty of introducing psychosocial interventions and doing research in residential care is one of the main stories of this study. No staff member used the room outside of the study, and we found no significant difference between Snoezelen and garden conditions. Results, although highly equivocal because of low numbers, raised the issue of the implementation of standard therapies in dementia care outpacing the evidence, possibly at the expense of less elaborate practices. (*Geriatr Nurs* 2011;32:166-177)

**S**noezelen\* is a term used to describe multisensory therapeutic activity, most commonly in a specialized room filled with stimuli aimed at engaging all the senses. Recent

\* *Snoezelen* is a registered trademark of ROMPA.

literature has suggested the benefits from Snoezelen for people with dementia in residential aged care facilities (RACF), often based on the argument that sensory deprivation occurs because of a lack of stimulation from the residential environment and routine.<sup>1</sup> Snoezelen has been associated with reductions in challenging behavior<sup>2-6</sup>; short-term increases in enjoyment, happiness, and contentment; and temporary reductions in boredom, fear, sadness, and apathy.<sup>6-8</sup> In almost all studies in which post-Snoezelen benefits were reported, improvements were short lived.<sup>9</sup>

Several studies have suggested Snoezelen may have beneficial outcomes by facilitating greater communication,<sup>10-13</sup> increasing job satisfaction, and enhancing staff–resident relationships.<sup>3,13,14</sup> For example, Bryant<sup>3</sup> reported that staff relationships with the person with dementia became calmer and less hostile, and Hope<sup>13</sup> noted that the sessions allowed for “quality time” with patients. However, other studies have found no effect of Snoezelen on behavior<sup>15-17</sup> or mood and communication<sup>16</sup> over time. A number of studies reporting positive effects described similar effects in control groups,<sup>2,7,12,15</sup> suggesting they may not be attributable to sensory stimulation but to factors common to both conditions.

One obvious potential common factor derives from plentiful evidence that in residential care, few staff engage socially with residents for extended periods. Most social contact, if any, takes place in personal care.<sup>18</sup> Interactions, if they occur at all, are short, often negative, or at best terse,<sup>19,20</sup> and RACF residents, especially those with dementia, spend the majority of their time

doing nothing. For example, in a study by Voelkl and colleagues,<sup>21</sup> 40% of RACF residents with dementia did not participate in any activity other than routine care over a 1-week period. Reasons for the lack of staff engagement with residents included pressures from other staff members not to engage and the absence of time and staff motivation.<sup>20,22</sup> Some Snoezelen studies indirectly illustrated this issue by reporting that barriers impeding its use included the perception that interacting with residents in this way is not real work.<sup>5,7,23,24</sup> Minner and colleagues<sup>5</sup> noted that “When staffing is a problem, the (Snoezelen) room’s facilitator is often pulled away to work as an aide or to administer medications” (p. 347).

In the Snoezelen room, the staff member is usually alone with the resident for the session, which may last up to 30 minutes, and the staff are informed that the purpose is to help the resident engage with and experience the sensory equipment. It is almost impossible for staff not to become socially engaged with the resident during this process; both are working on a mutual endeavor that has nothing to do with personal care. Knowing more about a resident’s life and needs can improve care.<sup>25,26</sup> Accordingly, whatever its overt purpose, any program that gives staff the opportunity to develop a better understanding of a resident could be expected to produce positive effects.

In summary, research into Snoezelen for dementia is limited and methodologically weak, and benefits, if any, have been short-lived. In particular, studies asserting the therapeutic benefits for Snoezelen have often utilized small samples and have lacked control groups that were appropriately matched to treatment groups.<sup>8,12,27,28</sup> For example, only 4 participants were included in the study by Spaul and colleagues,<sup>28</sup> and in a study by Dowling,<sup>12</sup> the cognitive capacities of the experimental and control group were not equivalent (as defined by Mini-Mental State Examination scores). That is, findings to date need to be interpreted with caution. According to a Cochrane review of Snoezelen for dementia<sup>29</sup>: “there was no evidence showing the efficacy of Snoezelen for dementia [and] there is a need for more reliable and sound research-based evidences to inform and justify the use of Snoezelen in dementia care.” (p. 1.)

Despite the lack of consistent, sound empirical support, the use of Snoezelen with people with dementia has garnered worldwide momentum.

For example, currently there are more than 700 rooms in the United States<sup>30</sup>, with the numbers for people with dementia increasing rapidly.<sup>30</sup> This growth has persisted despite the fact that the rooms are often costly. For example, a single item designed to stimulate only 1 of the senses can cost in excess of \$1,500.<sup>31</sup> Although dedicated Snoezelen rooms offer objects to talk about and provide mutual territories away from the normal routine, these benefits could also be seen in other environments. Perhaps similar results can be achieved in an existing space within a facility, like a garden, without the need for expensive Snoezelen equipment. If this is the case, instead of spending funds on Snoezelen equipment, facilities could use those funds on things such as allowing staff the time to spend with residents in activities other than personal care.

Given the growing popularity and associated monetary costs, combined with the absence of sufficient research, the overarching aim of our research was to evaluate whether there is therapeutic value in a Snoezelen room. Specific aims were as follows:

1. To examine the feasibility and process of implementing a Snoezelen programme in a long-term RACF (benefits, difficulties, staff experiences).
2. To evaluate the impact of multisensory therapy on behaviors and engagement of people with dementia, during and after sessions and longer term. This includes the possibility that multisensory therapy improves relationships between caregivers and residents.
3. To examine whether the “active ingredient” in Snoezelen is the prescriptive multisensory stimulus provided in the room as suggested in background literature. That is, can the benefits, if any, of the Snoezelen room be replicated in a non-Snoezelen environment, such as a garden, where the multisensory components are freely available.

## Method

### Design

A within-subjects mixed methods design was used. The first independent variable, *Location*, refers to therapy site (Snoezelen room vs. garden). The second independent variable, *Time*, refers to session number. Time 1 represents

sessions from early in the project (week 1 or 2) and time 2 sessions from late in the project (week 4 or 5).

### **Ethics**

The project was approved by the Greater Southern Area Health Service Human Research Ethics Committee.

### **Setting**

Participants were recruited from a 176-bed RACF in Canberra, Australia. This facility, which opened in 1991, has a good reputation for staff support and strong management and has the capacity to care for persons with a diagnosis of dementia.

### **Participants**

The facility was approached by the research team and asked to nominate residents whom they believed would benefit from the program. Criteria for inclusion were that the participant was a permanent resident of the facility, had a diagnosis of dementia, displayed behavioral and psychological symptoms of dementia (BPSD). Potential participants and their caregivers were informed of the Snoezelen program and the accompanying evaluation. Final participants are those for whom family members/guardians gave consent. Of the final 12 participants (M age = 89, SD = 8.19, age range, 81–94), 11 were from a locked dementia specific section, and 1 resided in the low-level section of the facility. All had a diagnosis of dementia. Participants included in analyses demonstrated cognitive capacity suggesting severe dementia, with a mean Mini-Mental State Exam<sup>32</sup> score of 5.7. Individual scores ranged from 0 to 13.

According to staff, each participant displayed challenging behaviors, including aggression (e.g., hitting staff), repetitive questions, calling out, resisting personal care, reduced ability to communicate, anxious behavior (including repetitive comfort seeking), and withdrawn behavior. Frequency ranged from less than once per week (e.g., physically hitting caregivers) to several times per hour (e.g., following staff) and were associated with a moderate degree of stress in staff. That is, the sample included participants with moderate to severe cognitive impairment who

manifested significant challenging behaviors in everyday life.

### **Procedure**

**Snoezelen Education and Training.** 14 staff members agreed to attend enhanced Snoezelen training, including a 1-on-1 session with a resident observed by an experienced Snoezelen clinician. Two managers were excluded because they did not have regular contact with residents. The remaining 12 staff members were a mix of registered nurses and personal care assistants/nursing aides, plus an activity coordinator. They had worked in residential care a mean of 7.80 years (range, 3 months to 25 years).

**Multisensory Therapy Program.** The 12 participants were randomly assigned to the 12 staff members, who were required to hold a 1-to-1 multisensory session each week with their nominated resident over 6 weeks. For each dyad, 3 sessions were to be in the Snoezelen room, 3 in the garden. They were scheduled at an agreed time nominated by the staff member so research observers could arrange to attend, with 3 sessions scheduled for Tuesdays, 4 on Wednesdays, and 5 on Thursdays.

### **Types of Multisensory Session**

#### **Snoezelen and Garden Sessions (scheduled).**

The scheduled sessions were either in the Snoezelen room or a garden. For the room, the resident was brought in by the allocated staff member, invited to sit in a recliner chair, and engaged using stimuli provided in the room. The room was approximately 3.5 × 2.5 m (11.5 × 8.2 feet) in size, with an external window. It was furnished with a large, comfortable vibrating chair and footstool. For visual stimulation, the room included a mirror ball and colored light projector, a disc projector and effects wheel, a fiber-optic spray, and a bubble tube set within 2 mirrors. A CD player was available with a selection of music and relaxation CDs (e.g., birds sounds). An aromatherapy atomizer, a range of fragrant oils, and other scented items (e.g., pillows) were available for olfactory stimulation. Finally, a range of items such as soft toys and rubber balls were available for tactile stimulation.

The other location was a garden within the residential facility. The space was large enough for residents to walk freely, with shaded areas and

seats available. The garden was chosen as a control condition because few residential care staff are practiced at interacting socially with residents with dementia other than in personal care,<sup>18</sup> and the garden contained features, including a fish pond, aviary, trees, and flowers, which provided opportunities for the resident and staff member to discuss and respond to sounds, sights, smells, and touch. Clearly, a garden is also a multisensory environment but much less concentrated and comprehensive than a Snoezelen room.

Whether in the garden or the Snoezelen room, staff members were encouraged to continue each session for at least 20 minutes, unless the resident appeared distressed.

**PRN (as needed) Sessions.** The main sessions were scheduled to ensure they would take place and that research personnel could be on hand to observe. However, an important purpose of Snoezelen is not as a regular therapy but to calm people with dementia who are distressed. Accordingly, staff members were encouraged to undertake sessions in the Snoezelen room when a resident was agitated, distressed, or withdrawn, and they were given brief questionnaires about the resident's emotional state before and after these sessions.

## Measures

**Behavior Observation.** Behaviors before, during, and after the Snoezelen and garden sessions were observed using time sampling. Three researchers were involved in observing and rating resident behavior before, during, and after multisensory sessions, although only 1 researcher observed at any one time because of limited space. All observed behaviors, including physical cues and facial expressions, were coded in blocks, using a 5 seconds "on" (watching the participant), 5 seconds "off" (coding the previous 5 seconds) coding method. Behavior was observed and coded for 6 minutes before scheduled session time, with researchers observing the residents' behavior and interactions in the communal living area of the facility. Observations were recorded for 2 minutes, followed by a lapse of 2 minutes, then another 2-minute coding period. During the sessions, researchers sat in the Snoezelen room or garden and directly observed behavior. Observations were broken into blocks of time as follows: behavior was coded for

2 minutes (using 5 second on-off coding); 2-minute lapse; 2-minute coding; 4-minute lapse. Coding then continued with a 2-minute coding-4-minute lapse pattern until the session ended. Once the session had ended, researchers again observed and coded resident behavior for a period of 6 minutes (2 minutes coding, 2 minutes lapse, 2 minutes coding). Table 1 presents examples of behaviors coded.

To assess participant engagement, behaviors were collapsed into 4 broad categories: *disturbed/disengaged* (e.g., calling out; signs of agitation, distress, restlessness; dozing or sleeping; withdrawn; pacing); *neutral* (e.g., eating, drinking); *engaged* (e.g., responding to conversation, interacting with materials, scanning the environment), and *very engaged* (e.g., laughing, smiling, showing affection, initiating conversation, actively describing materials). This method, necessary for statistical analysis, is consistent with other research observing people with dementia,<sup>33</sup> although it means individual richness of behavioral data is lost.

**Focus Group.** Approximately 2 months after the project, staff members attended an audiotaped focus group, facilitated by a clinical psychologist. This time frame was chosen to determine whether staff members had independently utilized the room following the conclusion of the program and ensuring they could still recall its details. Open questions prompted discussion in a range of areas: recall of the program; benefits of the program; difficulties associated with the program; and participant enjoyment and engagement. Groups were run in a relatively informal manner, allowing conversation to flow naturally among the topics presented, rather than in a strict question-and-answer format.

## Data Analysis

To analyze the quantitative data, the Statistical Package for the Social Sciences (SPSS 15) was used. Repeated-measures *t* tests were used to examine the immediate effects of the Snoezelen room and the immediate effects of the garden on resident behavior. Repeated-measures analysis of variance was used to determine whether there were differences in resident behavior between locations and whether behavior changed over time.

The focus group transcript was independently analyzed by 2 researchers independent of

**Table 1.**  
**Coding Guide for Behaviours**

Behavior	Coded Level of Engagement
Affection	Very engaged
Laughing	Very engaged
Smiling	Very engaged
Initiating conversation	Very engaged
Pointing/gesturing	Very engaged
Responding to conversation initiated by another	Engaged
Describing the materials	Engaged
Interacting with materials by touching them	Engaged
Indicating interest (focused attention, but no conversation)	Engaged
Purposeful walking	Engaged
Scanning the environment (e.g., Following others or noises with eyes, but no conversation)	Neutral
Dozing/sleeping	Neutral
Not classifiable (e.g., eating)	Neutral
Pacing (defined by rate, purposelessness, seeming agitation)	Disturbed/disengaged
Calling/Yelling out	Disturbed/disengaged
Crying/teary/whimpering	Disturbed/disengaged
Other signs of agitation/distress/restlessness (please specify)	Disturbed/disengaged
Verbal aggression	Disturbed/disengaged
Physical aggression	Disturbed/disengaged
Withdrawn	Disturbed/disengaged

interviewer using grounded theory,<sup>34</sup> in which the material is coded to identify core categories (themes) and the properties of those categories (subthemes). That is, themes were not specified before coding. Thus, 2 examiners independently coded transcripts to extract the main themes relating to the program and its effects.

## Results

### Quantitative Results; Scheduled sessions

**Immediate Effects of Multisensory Therapy on Resident Behavior.** A repeated-measure *t* test was used to examine the immediate effect of Snoezelen on resident behavior, by comparing pre- and postsession observed behavior (see Table 2 for means and standard deviations). Because of declining attendance, only data involving 9 residents from a session early in the program (weeks 1 or 2) could be analyzed. The independent variable was Time (pre- vs. postsession), and the dependent variable was proportion of *disturbed/disengaged* observations. The percentage of behaviors indicating the residents were *disturbed/disengaged* in the

common area before the Snoezelen session was 28.21% (SD = .36), dropping to 10.19% in the 6 minutes following the session [SD = .15,  $t(8) = 1.95$ ,  $P = .09$ , confidence interval =  $-.03-.39$ ].

The immediate influence of the garden on resident behavior was also examined using a repeated measure *t* test. Before and after observations for a garden session were only available for 5 residents because of some difficulties observing residents postsession. Before the garden session, 13.3% (SD = .19) of observed behaviors were classified as *disturbed/disengaged*, dropping to 1.43% in the 6 minutes following the garden session [SD = .03,  $t(4) = 1.45$ ,  $P = .22$ , confidence interval =  $-.10$  to  $.35$ ].

### Measuring Change Over Time, and Differences Between Snoezelen and Garden Sessions.

$2 \times 2$  repeated measures analysis of variance was used to determine: 1) whether there were differences between location in level of engagement (*disturbed/disengaged*, *neutral*, *engaged*, *very engaged*) and 2) whether engagement changed over time (early session vs. later in the program). For these analyses, an adequate amount of data (4 sessions) was only available for 7 residents, with an average of 3.75 sessions (range:

**Table 2.****Means and Standard Deviations for Very Engaged, Engaged, Neutral, and Disengaged Observations, Observed Pre-session and Post-session from Early in the Program**

	Pre-session	Post-session
	M (SD)	M (SD)
Snoezelen Room	28.21 (.36)	10.19 (.15)
Garden	Insufficient data to compare pre- and post-session observed behavior	Insufficient data to compare pre- and post-session observed behavior

1–5) of an expected 6 sessions undertaken. All assumptions were satisfied for the 4 separate analyses. See Table 3 for the means and standard deviations.

Across time, no significant differences in observations were found, either in the *very engaged* [ $F(1,6) = .04, P > .05$ ], *engaged* [ $F(1,6) = .04, P > .05$ ], *neutral* [ $F(1,6) = .01, P > .05$ ], or *disengaged* [ $F(1,6) = .05, P > .05$ ] categories. Similarly, no significant disparities were noted in any group: *very engaged* [ $F(1,6) = .13, P > .05$ ], *engaged* [ $F(1,6) = .25, P > .05$ ], *neutral* [ $F(1,6) = .01, P > .05$ ], or *disengaged* [ $F(1,6) = .74, P > .05$ ]. Finally, the interaction between time and location

was also nonsignificant across groups: *very engaged* [ $F(1,6) = 1.51, P > .05, \eta^2 = .20$ ], *engaged* [ $F(1,6) = .04, P > .05$ ], *neutral* [ $F(1,6) = .86, P > .05$ ], or *disengaged* [ $F(1,6) = .06, P > .05, \eta^2 = .01$ ].

In summary, there were no significant main effects for time and location, and there were no significant interactions between these 2 factors.

**Qualitative Results: Focus Group with Staff**

The independent coding of the focus group transcripts were compared, and there was a high level of interrater reliability (Cohen's kappa = .92). Table 4 displays representative quotes.

**Qualitative Themes**

**Implementation Difficulties.** A main theme from the focus group centered on *difficulties*. Some comments were criticisms of the Snoezelen room (e.g., too small) or the way the research was conducted (Quote 1 in Table 4), but the vast majority of comments reflected the influence of time pressure and competing work demands on their capacity to provide therapy. All staff agreed this conflict was a major limitation. They reported that, because of understaffing or work demands, there was often no time for sessions and that it was difficult to leave coworkers under pressure to complete other tasks to attend sessions (Quotes 2 and 3). Staff also reported that competing work demands often took priority over sessions (Quote 4). None of the staff members present at the focus group reported having used the room since the project ended. This finding was attributed to: "We just haven't had time to do it."

**Table 3.****Means and Standard Deviations for Very Engaged, Engaged, Neutral, and Disengaged Observations, Observed within Sessions over Time**

	Time 1	Time 2
	M (SD)	M (SD)
Very Engaged		
Snoezelen room	.30 (.20)	.24 (.19)
Garden	.24 (.22)	.27 (.12)
Engaged		
Snoezelen room	.48 (.27)	.49 (.20)
Garden	.52 (.28)	.53 (.19)
Neutral		
Snoezelen room	.16 (.28)	.21 (.20)
Garden	.20 (.37)	.16 (.19)
Disengaged		
Snoezelen room	.06 (.10)	.08 (.15)
Garden	.04 (.08)	.04 (.09)

**Table 4.**  
**Illustrative Quotes from the Staff Focus Group**

Theme	Illustrative Quotes
Difficulties in Implementation	<ol style="list-style-type: none"> <li>1. I guess we can't really relate to whether a different time of the day would be different 'cause we had to stick to a certain times each day. But I thought if we had tried it over different times . . . and therefore I couldn't say how he act if it was say 7 o'clock at night or 8 o'clock in the morning.</li> <li>2. Sometimes it's just hard because you're busy. So you try to do the best by everyone.</li> <li>3. It's very hard to say to your partner, "Oh I'm just going to go off for 15 minutes with this person."</li> <li>4. I found that I had other duties that I have to be called away from or I had another course that I had to go to ... I couldn't focus in on the project.</li> <li>5. I think that if you are on the floor and you have someone that is obviously distressed and you think that the Snoezelen room might benefit, taking them in would be a priority but it is kind of hard when you are doing the [research] and ... you have to make time to go and get the resident in when they might not necessarily have been distressed</li> </ol>
Benefits of the Program	<ol style="list-style-type: none"> <li>6. One day brings her happy memories, and the next day we have bad memories. She remembered her sister.</li> <li>7. It was a good way to get to know residents and spend time with them, 'cause I don't actually do that much in my role.</li> <li>8. I found it good because the resident that I took in didn't really say much to me. Once I started doing the sensory, she was very verbal. You know I could never get anything out of her before that. I felt she got comfortable with me.</li> <li>9. I've noticed that just even passing the resident that I was with, she does recognize me and is happy to see me. I think as a result of us spending that time together.</li> </ol>
Snoezelen Room Versus Garden	<ol style="list-style-type: none"> <li>10. I think it probably helped me get a better relationship with him cause I can walk up to him now and shake hands with him.</li> <li>11. I took the resident into the garden. They were really interested. They wanted to stay there. In the room they just sitting around [and said]: "I've had enough." He seemed to focus better in the Snoezelen room ... whereas in the garden he tended to wander a bit more and become less interested.</li> <li>12. He seemed to really focus better in the Snoezelen room. Especially on certain objects. Whereas out in the garden he tended to wander a bit more and become less interested.</li> <li>13. I found the Snoezelen room was easier for me 'cause there was more to talk about. When I was in the garden I found it really hard to know what to talk about.</li> </ol>

One staff member thought the program may have been more beneficial if sessions had not been scheduled, and they may have been given sessions a higher priority if residents were distressed and sessions were impromptu (Quote 5).

**Benefits of the Program.** The next theme was *benefits* of the program (both Snoezelen and garden sessions), with a number of subthemes. Initially, staff recognized that 1-to-1 time with residents was a “good,” “different,” “enjoyable,” and “relaxing” experience for residents, with 1 resident displaying the stimulation of memories (Quote 6), sharing previously undiscussed aspects of her life.

Second, the most frequent staff comment was that by ensuring social time with a resident, the program changed their relationship. This time enabled them to get to know each other (Quote 7) and improve social interaction between them (Quote 8). However, most staff agreed that effects had not persisted beyond the project. Only 1 staff member reported the resident’s behavior change lasted longer than the project (Quote 9). Conversely, another staff member noted lasting change in herself; her reaction to the resident had improved since starting the project (Quote 10).

**Comparison of Snoezelen Room and Garden.** The final theme concerned the comparison of locations. Staff reported differing resident preferences. One resident refused to go into the Snoezelen room after her first session, and another showed no interest in the outdoors sessions, stating “I want to go inside.” Conversely, another staff member reported that her resident had clear preferences for the garden (Quote 11).

Several staff described a preference for the Snoezelen sessions over the garden sessions, mainly because they found the sessions easier to run because of the number of items available to maintain the attention of the person with dementia (Quote 12) and because there were more objects to talk about (Quote 13).

## Discussion

### Implementation Difficulties

Implementation difficulties are a major story of this project. There was considerable enthusiasm for this project from the director of nursing who had approved construction of the Snoezelen room and, apparently, from staff who

volunteered for Snoezelen training. Despite this, the low attendance for the multisensory sessions is one of the key findings of this study. This finding supports prior work demonstrating the challenges of introducing psychosocial interventions and doing research in residential care.<sup>35</sup> In the current study, during the first 2 weeks of the program, an average of 9 of 12 scheduled sessions took place. Over time, staff missed an increasing number of sessions because they reportedly forgot, did not have time, or had competing commitments. On some days, toward the end of the project, only 2 of 5 scheduled sessions took place. This was despite the research team extending the project from 6 to 8 weeks, giving frequent reminders and being flexible about session times.

The focus groups suggested the primary problem was time pressure, competing work commitments (e.g., meetings), or being understaffed and therefore unable to leave the floor. These problems are no doubt key factors; staff members in residential facilities often face workloads that exceed their resources.<sup>22</sup> Some staff members also clearly felt uncomfortable engaging socially with residents, some improved over time, and some were relaxed from the start.

The problem of what is effectively social isolation of residents from staff who, in many cases, form the most important feature of their lives<sup>36</sup> has more complex causes than simple lack of time, including skills in conversing with people suffering cognitive impairments. Burgio and colleagues<sup>19</sup> increased social interaction with residents during morning care, without increasing the time spent on care, by training staff in how to converse with residents with dementia. A particular benefit of both conditions in the current study, as commented in the focus groups, was that there were conversational aids readily available—for example, the pond and aviary in the garden and sensory items in the Snoezelen room.

The inability or unwillingness of staff to engage in the program is further reflected by the fact that no PRN sessions were run throughout the project nor for 2 months thereafter. Difficulties involved in implementing Snoezelen programs are reported in other studies<sup>5</sup> and are likely to be observed in other aged care facilities. Although the facility used in this study has a good reputation for staff support and the management was supportive of the project, some scheduled sessions were not completed because of staff perceptions that Snoezelen was not a priority.

Comments by staff members during the project, some not directly involved, suggested they did not think multisensory therapy constituted “real” work. This suggests that physical and medical care is often given precedence over social and psychological care.

Given the issues with staff attendance at Snoezelen sessions, a trained Snoezelen therapist could have been engaged to run the sessions, with higher compliance, but this was beyond our resources. It is also beyond the resources of many aged care facilities, where diversional therapists are often able to deliver only group programs. We considered that engaging staff in the process would be a more realistic means in many residential care facilities of making Snoezelen available to all residents. However, as a result of our experience, we now suggest that, at this stage of the research enterprise, future trials such as this, with genuine control conditions, endeavor to gain the funds for Snoezelen therapists to deliver the interventions.

If unequivocal evidence is gained that Snoezelen room sessions are superior in inducing well-being and reducing disturbed behavior than matched conditions in which the possibility of social interaction being the active factor is controlled for, much greater thought should be given to establishing cost-effective programs using existing staff. Introducing further strategies aimed at improving the uptake and maintenance of the sessions would be critical to the usefulness of the rooms, particularly if the rooms are to be used directly to calm people with dementia when distressed. A culture in which psychosocial interventions are continually given equal consideration to medication responses would need to be fostered and seen as a priority through every level of the facility, from the staff directly involved in the care of the residents to the director of nursing. This could be promoted through, for example, staff education and the facilitation of case reviews focusing on the ways of responding to challenging behaviors, as well as senior staff providing frequent reminders of the importance of psychological and social well-being. If, because of time constraints, staff members are unable to take residents into a specially built room, perhaps staff could use some multisensory items with residents outside of the room, such as when undertaking personal care activities. Furthermore, when considering the long-term feasibility of such a program, the well-documented

issue of high staff turnover in the nursing home industry<sup>37</sup> must be taken into account. Careful thought would need to be given to the development of strategies for reducing the negative influence of high staff turnover on the use of multisensory therapy, such as integrating Snoezelen training into staff orientation or allocating the coordination of the training and continued use of the Snoezelen room to a staff member from the facility. Staff members commented that they were considering training resident family members in the use of the Snoezelen room. This may be a creative alternative that allows residents to explore multisensory environments.

### **The Influence of Snoezelen on Behavior and Engagement**

For Snoezelen room sessions, when there were sufficient observations available to undertake an analysis, the proportion of *disturbed/disengaged* behaviors dropped from 28.12% in the period before sessions to 10.19% postsession. Although this effect did not reach statistical significance ( $P = .09$ ), the trend is worth noting given the small sample size and consequent low power to find effects. That is, consistent with other studies, there is weak evidence that Snoezelen room sessions may produce short-term benefits. Short-term effects could be of clinical significance if the room is calming for residents who are distressed or disruptive.

We were unable to test whether residents who are distressed may benefit from multisensory therapy because, over the 2 months of the project and 2 months thereafter, no staff member used the Snoezelen room for this purpose (i.e., the PRN sessions). We are unable to comment definitely on longer-term effects on behavior, although most staff thought there was no change.

It might have been anticipated that, as staff members and residents became more familiar with the process, participants would appear increasingly engaged in the sessions (i.e., show more positive behaviors over time), but we did not find evidence for this change. The proportion of behaviors indicating participants were engaged or even very engaged was relatively high from early in the program. Difficulty engaging the residents is not, therefore, an explanation for poor staff compliance.

We cannot report on the long-term effects of the program. Although pre- and post-program

behavioral measures outlining characteristic difficult behavior and associated staff stress were sought from 2 caregivers for each resident, complete data were available for only 1 resident.

### **Snoezelen Room versus Garden Sessions**

We wanted to determine whether social interaction connected with objects freely available in a garden produced similar results to those observed in the Snoezelen room. Residents were highly engaged in the garden sessions from the outset. Similar to the Snoezelen room, following a garden session, there was a reduction in *disengaged/disturbed* behaviors; however, given the small sample size, our results are too methodologically compromised to draw definitive conclusions. Similar studies with credible control conditions are required to determine whether the current atmosphere of enthusiastic spending on Snoezelen equipment may not be necessary, with similar results being attained in an environment such as a garden. Because most facilities already have access to areas such as a garden, this would significantly reduce any additional costs and would mean that funds could be spent directly on ensuring that enough staff members are actually available to spend the time with the residents.

It is important to make the point that garden sessions consisted of staff walking around with the resident, perhaps smelling a few blossoms and discussing the plants. Although this environment is consistent with the principles of Snoezelen, we think it is misleading and overstated to give what could be regarded as a normal social activity a proprietary label such as “multisensory therapy.”

The finding that the Snoezelen room had no advantage over visiting the garden may reflect that there is no difference, or it may be due to the small sample size. We cannot conclude definitively based on these results alone. Nevertheless, this question is an important theme for future research, which must include a credible control group. That is, if convincing benefits are eventually found for Snoezelen therapy, what are the active ingredients? Is it the dedicated sensory stimulation provided by the materials in the room itself (as suggested in Snoezelen theory), or are benefits the result of some common factor, such as social contact between caregivers and residents in a situation in which there are neutral

objects to talk about that have nothing to do with personal care? This point is strengthened from staff comments about both appreciating the Snoezelen room because of the number of objects to assist conversation and their obvious surprise about the benefits of spending social time with residents, suggesting it is a rarity.

### **Improved Relationships between Staff and Residents**

The staff reports of improved relationships between staff and residents are consistent with previous studies.<sup>14</sup> Although we do not have supporting quantitative data, this finding points to a potentially important benefit of such programs. However, again, we cannot distinguish whether this effect is because of factors specific to Snoezelen or because the research project encouraged and gave staff permission to spend time interacting socially with residents. It is clear this behavior did not happen in routine care.

### **Conclusion**

Because of implementation difficulties, this project joins a long line of similar studies producing weak evidence. Definitive findings about multisensory therapy and the role of Snoezelen rooms require much larger scale trials, with credible control conditions, such as observing residents when they are undertaking typical activities provided in the facility (e.g., while playing bingo), during mealtimes, and while in a common area. We therefore make no definitive conclusions about Snoezelen therapy, although the implementation difficulties themselves in this and other studies suggest that facilities should avoid investing in costly installations if staff members are not able to use them. The Snoezelen room in this study cost AU\$10,000 to install. The potential benefits outlined in this and other research (e.g., improved staff relationships with residents or short-term improvements in difficult behaviors), could only be achieved if staff members have the time and resources to undertake multisensory therapy.

Our implementation problems, and the consequent fact that our findings, like other studies, are hedged with methodological qualifiers, means that it remains unknown whether Snoezelen rooms have any therapeutic benefit per se, other than providing a setting in which staff or

therapists engage the person with dementia in exploring objects, resulting in a social interaction which may improve their relationships. Whether there is an active factor over and above social interaction remains unknown. Staff comments suggested extended social interactions rarely occur because time is taken with other tasks that are considered more important, but lack of skills or inclination to converse with people suffering dementia also merits attention. Failure of staff to establish relationships other than those concerning physical care is concerning because it affects quality of care. Our findings in this respect are consistent with many other studies.

With regard to Snoezelen, the uptake of which is expanding rapidly in residential care, we suggest that any potential endorsements should wait until a number of avenues have been explored. There is a clear need to ascertain the effectiveness of the rooms through well-funded trials using therapists trained in Snoezelen, as well as a need for studies involving credible comparison conditions that will control at least for the social interaction taking place. Furthermore, improving the mechanisms, as well as reducing any impediments, for introducing and maintaining a Snoezelen program in residential care remains essential to any recommendations for its use. Until these investigations take place, Snoezelen is yet another psychosocial intervention for which adoption is outpacing evidence.

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