

*DECREASING ENTRY INTO A RESTRICTED
AREA USING A VISUAL BARRIER*

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Wandering is a difficult-to-manage behavior problem for individuals with cognitive impairments that can jeopardize safety if an individual enters a hazardous area or becomes lost. This study investigated the effects of a cloth barrier on entry into an unsafe area. The cloth barrier reduced entry into the restricted area and had high treatment acceptability.

DESCRIPTORS: aging, dementia, geriatric patients, wandering

Wandering, in the form of elopement or entry into dangerous or restricted areas, poses safety risks for individuals with cognitive impairments and can be time consuming and difficult to manage for caregivers (Raskind & Peskind, 1992). Caregivers must provide nearly constant monitoring and cannot ignore the behavior if it occurs, regardless of the potential function of the behavior. Researchers such as Namazi, Rosner, and Calkins (1989) have lamented the fact that physical and chemical restraints have commonly been used to decrease wandering, even though restraints may limit an individual's mobility and independence and may cause side effects such as akathisia and postural instability (Fisher & Swingen, 1997).

During the last two decades, low-cost and minimally restrictive environmental manipulations have been used to decrease wandering. Heard and Watson (1999) used differential reinforcement of other behavior to decrease wandering for 4 elderly residents of a nursing home. Hussian and Brown (1987)

used two-dimensional visual barriers to decrease exit seeking for 8 men with dementia using a masking-tape grid pattern placed on the floor in front of exit doors. Namazi et al. (1989) used three-dimensional cloth barriers to conceal door handles. The purpose of this study was to examine the use of a cloth barrier to decrease entry into a restricted area by a developmentally disabled woman with bipolar disorder and probable dementia.

METHOD

Participant and Setting

The participant was a 53-year-old woman with moderate mental retardation, bipolar disorder, and probable dementia who was served at an adult day-care respite facility for older individuals with cognitive disabilities. The participant was unresponsive to all questions asked during administration of the Mini Mental State Exam (e.g., she responded by screaming or by making an irrelevant statement, such as "bathroom") and thus received a score of 0. She walked independently and frequently wandered in all areas of the facility; however, staff were primarily concerned about her frequent entries into a restricted area. The office area had restricted access for all clients because it contained nu-

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merous hazards (e.g., exposed cords, table legs), but the door needed to remain open to allow ready access for staff. Staff could not ignore entries into the office for safety reasons, although attention was suspected to be a potential maintaining variable.

Data Collection

An observer, seated at a table in the office, collected data for the entire period of the participant's attendance each day (range, 3.75 to 5.25 hr). An approach was scored when the participant crossed a piece of masking tape 0.6 m in front of the office door without crossing the threshold of the door. An entry was defined as crossing the threshold. A second observer independently scored each behavior for 33% of all intervals. Point-by-point agreement was calculated by dividing observation periods into 5-min intervals and scoring each interval as an agreement or disagreement. Total agreement was calculated by dividing agreements by agreements plus disagreements and multiplying by 100%. Interobserver agreement was 94% for entries (range, 85% to 100%) and 90% for approaches (range, 85% to 100%).

Procedure

Throughout all conditions, an observer sat at a table in the office that was visible through the door, which was open at all times. Day-care staff often worked in the office as well. When day-care staff were present, they provided the consequences for entries according to protocol. When no day-care staff were present, the observer provided the consequences as described below. There were no consequences for approaches in any condition. During all conditions, a second therapist provided noncontingent attention in the general day-program area in accordance with an ongoing behavioral intervention program for a different problem behavior. The attention interactions did not inter-

fere with wandering, as evidenced by her continued frequent wandering throughout the facility. Some version of redirection was included in all phases because staff refused to ignore the behavior completely, and redirection from the room ensured equal repeated opportunities to enter the office across conditions.

Baseline. A therapist or staff member who worked in the office attended to entries by interacting, conversing and making eye contact, and redirecting the participant out of the office using gentle physical guidance. This condition represented typical procedure for the day-care staff.

Visual barrier and redirection. A strip of turquoise fleece cloth (38 cm by 104 cm) that matched the door color was attached to the entryway with 35-cm strips of Velcro® located at the participant's eye level. An eye-level barrier was used instead of a floor barrier (Hussian & Brown, 1987) because the participant was never observed to glance at the floor. Entry resulted in immediate redirection without delivery of verbal instructions or eye contact and with use of minimal gentle physical guidance. This redirection procedure involved much less social interaction than the baseline condition. Eventually, the day-care staff implemented the procedure daily while data continued to be collected by research staff (indicated in Figure 1 as procedures transferred to staff). Subsequently, stimulus changes (e.g., color change, size change) were made in an effort to begin fading the barrier. The color was changed to white and the terminal size was 25 cm.

Redirection only. Staff continued to redirect entries, but the visual barrier was removed. Redirection continued to involve much less social interaction than in baseline. This condition was conducted as a component analysis of the individual effects of redirection and the barrier.

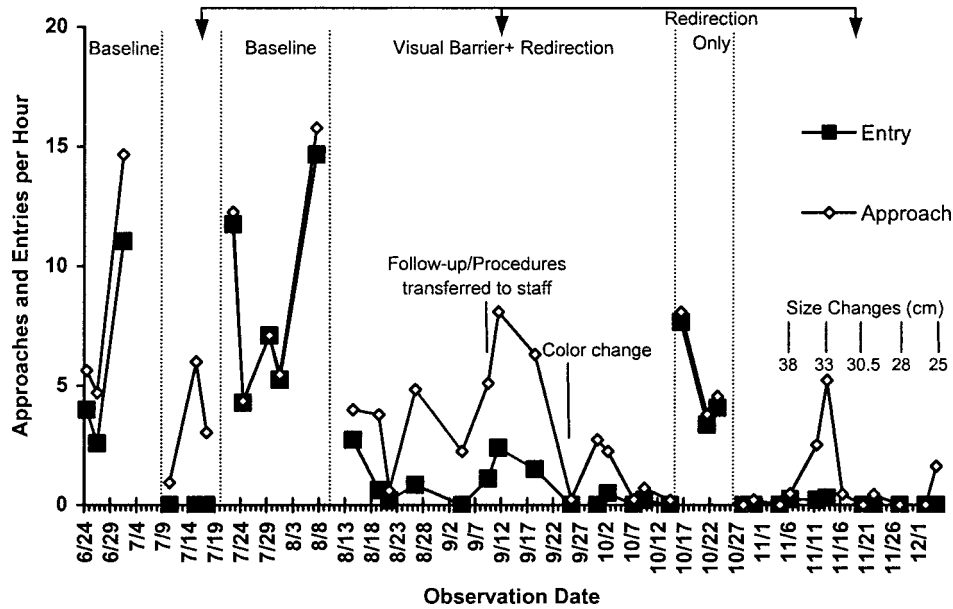


Figure 1. Number of entries per hour are depicted as closed squares, and approaches per hour are depicted as open diamonds.

Social Acceptability Measure

Staff anonymously completed a 5-item yes–no intervention acceptability survey with space for additional comments.

RESULTS AND DISCUSSION

Figure 1 presents the intervention analysis, with an average rate of 7.6 entries per hour across both baseline phases. Entries were eliminated during the first intervention phase and were reduced to an average rate of 0.4 times per hour during all days of intervention and follow-up combined, representing a 95% decrease. The redirection-only phase resulted in a level of entry similar to baseline ($M = 5$ per hour), indicating that the barrier was a critical component. The decrease in entries was maintained for several months. Approaches to the visual barrier continued throughout every phase ($M = 8.8$ per hour in baseline, $M = 2.5$ per hour during intervention and follow-up), as did general wandering. All staff who com-

pleted the social acceptability measure ($N = 4$) had 100% intervention endorsement and intention to continue to use the intervention.

These results support previous literature suggesting that a low-cost environmental procedure can reduce wandering into restricted areas when behaviors cannot be safely ignored. The barrier may have increased the response effort for entry by requiring the participant to duck under the barrier or walk through the barrier with slight resistance. Simultaneously, social interactions were available outside the office with minimal response effort. Contact with decreased social interaction during redirection in the second intervention phase may have established the barrier as a discriminative stimulus for lower quality attention. Although the barrier simultaneously increased staff effort to enter the office, staff social validity ratings were high, perhaps because the effects were highly desirable and staff were not asked to ignore the behavior. We reduced the size of the bar-

rier with minimal effect on entries, but did not investigate whether the barrier could be completely removed via stimulus fading.

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