



## KEY POINT SUMMARY

### OBJECTIVES

The purpose of this study is to identify the influence of specific elements of the physical environment on wandering behaviors in elders with dementia.

### DESIGN IMPLICATIONS

Providing cues that clearly define the purpose of a room may help to reduce wandering in that space

If reducing wandering is a therapeutic goal, then modifying environmental conditions or directing wanderers to environments that have lower light levels, reduced variation in sound levels and a soothing quality may be beneficial

If the goal is to attract or contain wanderers, without reducing the amount of wandering, effective design strategies include providing access to brightly lit spaces with engaging materials or activities

## Wandering and the Physical Environment

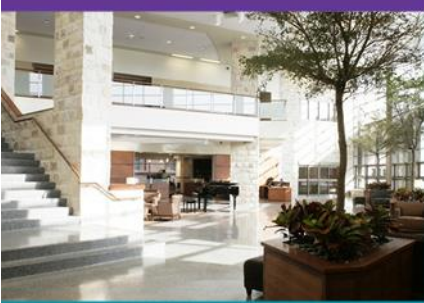
Algase, D., Beattie, E.R.A., Antonakos, C., Beel-Bates, C.A., Yao, L.  
 2010 | *American Journal of Alzheimer's Disease and Other Dementia*  
 Volume 25, Issue 4, Pages 340-346

### Key Concepts/Context

Wandering is one of the most challenging and potentially dangerous behavior seen among individuals with Alzheimer's Disease. Wandering is often associated with negative consequences such as getting lost, fatigue, injury and even death. The physical environment has been identified as a key component in addressing wandering and other dementia-related behavior and . However, there is very little research that clearly identifies the role of specific physical environmental features either singly or in combination with other features in promoting or reducing dementia-related behaviors such as wandering.

### Methods

122 elderly residents diagnosed with dementia from 28 long term care facilities (22 nursing homes and six assisted living facilities with dementia units) were included in the study. All participants were videotaped for 10 to 12 20-minute observation periods on two consecutive days. A total of 1060 wandering periods were recorded. Wandering behavior was coded for rate and duration based on the videotape from each observation period. Based on the videotapes, each observation period was designated as positive or negative for occurrence of wandering. Environmental variables measured included location of participant; ambient sound, light, temperature and humidity levels; environmental ambiance and crowding. All measurements were taken at three points during the observation by the videographer. Location of the participant was documented based on direct observation. Sound light temperature and humidity were measured using established tools and inter and intra rater reliability between researchers was established. The presence or absence of people within 8 feet of the participant was documented as a measure of crowding. Environmental ambiance was measured using a 9-item instrument called the Ambiance Scale (AS) that measures the observers subjective perceptions of the nursing home. Statistical analysis was



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conducted to examine relationships between wandering during an observation period and environmental characteristics during that observation period.

## Findings

- During 80% of the wandering periods residents were found in 1 of 4 locations - their own rooms, dayrooms, hallways and dining rooms.
- Locations in which wanderers were less likely to wander were also those where the likelihood of social interaction was greater (activities room, dayroom, staff area), where the environment was more soothing (e.g. their own room) or where rooms had a designated purpose.
- Brighter light, more variation in sound level and a higher engaging quality of the environment were associated with wandering.
- When the environment was recorded as have a soothing quality, wandering events did not occur in those observations periods
- When wandering occurred most environmental variables measured (e.g. sound level, light level, engaging ambience, number of people within 8') were close to the higher end of obtained values
- Variations in temperature and humidity were not associated with wandering

## Limitations

- Authors have not identified any study limitations
- The authors have not addressed the potential role played by the videographer/researcher in this study. The presence of an individual with videotaping equipment could possibly serve to stimulate individuals with tendency to wander.