



KEY POINT SUMMARY

OBJECTIVES

This study examined the effect of a wall mural painted to disguise an exit door on decreasing door-testing behaviors of residents with dementia.

The Effect of a Wall Mural on Decreasing Four Types of Door-Testing Behaviors.

Kincaid, C., Peacock, J.R., 2003 | *Journal of Applied Gerontology*. Volume 22, Issue 1, Pages 76-88

Key Concepts/Context

Designers of environments for dementia residents should consider the cognitive and behavioral needs of this population. For example, wall murals might provide a distraction for persons with dementia and decrease exit attempts from locked special care units. However, most research on art and wall murals focuses on how it makes facilities more inviting or appealing. Few studies address the behavioral effects of wall murals on residents.

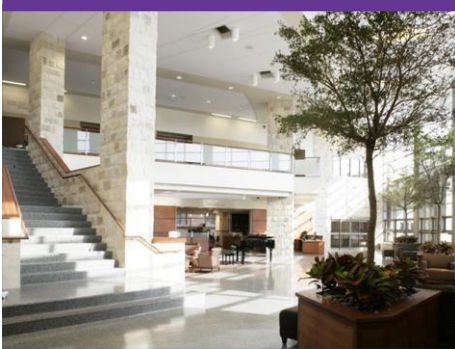
Methods

Researchers conducted this pretest and posttest study in the special care unit of a nursing home. The study participants included 12 dementia residents who were 65 years of age or older, English speaking, and noncomatose. Researchers observed the same residents during both pretest and posttest. The door-testing behavior was the dependent variable, and the physical appearance of the entrance/exit doorway was the independent variable.

The researchers collected data in 2-hour time frames (from 5:30 p.m. to 7:30 p.m.) over 12 weeks (6 weeks before and 6 weeks after the wall mural was installed). They used a paired t-test to analyze the data.

Findings

The authors report four types of door-testing behaviors: Type 1, walking up to the door and pushing or pulling calmly; Type 2, waiting patiently for someone to walk out the door, and then trying to exit through the door; Type 3, using a team effort (i.e., more than one resident working to open the door); and Type 4, door testing with exerted force and exhibiting agitation or hostility.



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The overall mean door-test score of 55.67 at pretest significantly dropped to a mean door-test score of 13.42 at posttest, a decrease of 42.25. Out of the 12 residents who were active at the doors at pretest, only 3 remained active at the doors after the installation of the wall mural. Two types of door-testing behaviors decreased significantly after the installation of the wall mural: calmly pulling at the doors and working in teams. Type 1 behavior had the largest drop in mean door-test scores, which was significant, from pretest to posttest, and Type 3 behavior also showed significant decrease in mean door-test scores from pretest and posttest.

Limitations

The authors identified the following limitations:

- There were very few places for the observer to sit without interacting with the residents, thus, it is possible that the presence of an observer interfered with the door-testing behaviors.
- The observer was not blind to the study's predictions.
- Because there was only one observer, the researchers could not measure the interrater reliability.
- At times a resident's needs became a priority; the research stopped, and staff had to be found.
- No control groups were used in this study.
- The sample size could have been larger.

Design Implications

The study suggests that wall murals can be an effective intervention to decrease door-testing behaviors that may be associated with exit attempts from locked special care units. After the installation of the wall mural, residents interacted with personnel and other residents instead of focusing their attention on the doors. Such positive interactions are known to be associated with the improvement in resident's functioning. Therefore, designers can consider the use of wall murals when designing special care units for dementia residents to not only decrease alarming behaviors (i.e., door-testing behaviors) but also increase positive interactions between caregivers and residents or among residents.

