

*BRIEF TRAINING TO PROMOTE THE USE OF
LESS INTRUSIVE PROMPTS BY NURSING ASSISTANTS IN
A DEMENTIA CARE UNIT*

KIMBERLY K. ENGELMAN

UNIVERSITY OF KANSAS

DEBORAH E. ALTUS AND MICHAEL C. MOSIER

WASHBURN UNIVERSITY

AND

R. MARK MATHEWS

UNIVERSITY OF KANSAS

We evaluated the efficacy of a brief staff-training procedure to increase the use of graduated prompting by 2 certified nursing assistants (CNAs) while they helped to dress 3 persons with dementia in a seven-bed dementia care unit. The multiple baseline design across participants showed that CNAs dressed residents with minimal resident involvement during baseline observations. Following brief in-service training, CNAs provided graduated prompts and praise appropriately, suggesting that CNAs can promote active involvement in personal care routines by older adults with dementia.

DESCRIPTORS: prompts, staff training, dementia care

Many older adults living in group residential homes rely on staff to assist them in activities of daily living (e.g., eating, dressing, bathing). In some cases, well-meaning staff may increase resident dependence by providing too much assistance. Research has shown the efficacy of the system of least prompts (SLP) in teaching skills to persons with developmental disabilities (Jones-Yaden & Collins, 1997). The SLP involves using less intrusive prompts (e.g., verbal, gestural)

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Correspondence should be addressed to Kimberly K. Engelman, University of Kansas Medical Center, Department of Preventive Medicine and Public Health, 3901 Rainbow Blvd., Mail Stop 1008, Kansas City, Kansas 66160 (e-mail: kengelma@kumc.edu).

before providing physical guidance or complete assistance (e.g., Winborn, Wacker, Richman, Asmus, & Geier, 2002). A few researchers have used staff training to promote the use of graduated prompting procedures (similar to the SLP) specifically during dressing routines by older adults (e.g., Engelman, Mathews, & Altus, 2002). However, these studies included lengthy training sessions, procedures that the staff found cumbersome, or relied on outside help. The current study was designed to evaluate the use of simplified, brief caregiver training to promote the use of the SLP procedure and to help older adults with dementia to maintain independence.

METHOD

Setting and Participants

The study was conducted in a dementia care unit of an assisted living facility with a

capacity for seven residents. Two certified nursing assistants (CNAs) who worked in the unit on alternating mornings participated in the study. Three residents ranging in age from 76 to 80 years ($M = 78$), who had lived in the facility for 13 to 40 months ($M = 25$), also participated. All 3 residents had been diagnosed with dementia.

System of Least Prompts Training

Each CNA participated in an interactive 30-min training workshop to learn how to implement the SLP during morning dressing routines. We began each training workshop by explaining that the primary goal was to help residents be more independent in dressing and that this goal could be achieved by using the SLP. The SLP was taught using the following directive statements adapted from Mathews and Altman (1997): (a) Use at least two less intrusive prompts (e.g., verbal, gestural, modeling) before using physical guidance. (b) Time prompts correctly by waiting at least 5 s before prompting the resident again. (c) Provide a praise statement within 5 s of the resident successfully completing a step (with or without assistance). The researchers first role-played the SLP procedure while the CNA watched. The researchers then provided feedback to the CNA as she conducted three additional role-playing interactions. During the CNA's next regular work shift, the researchers observed the dressing routine and provided immediate feedback on her use of the SLP. On a daily basis, each CNA also was instructed to mark responses on a form posted in each resident's bathroom to report whether she had used the SLP procedure while helping that resident dress (yes or no) and that resident's level of dressing independence (on a scale from 0 for *total assistance* to 100 for *independent*).

Observation

The experimental design used in this study was a multiple baseline design across

participants with CNA use of the SLP as the primary dependent variable. Dressing prompts were coded in four categories: independent (no CNA assistance) (3); minimally intrusive assistance (verbal prompts, gestural prompts, or modeling) (2); intrusive assistance (physical guidance) (1); and complete assistance (0). Any verbal statement of approval of or satisfaction with resident performance made by the CNA was also recorded as praise.

The first two authors used a dressing task analysis to observe the CNAs as they assisted residents. Observers recorded the most intrusive prompt that the CNA used for each of 14 dressing steps and calculated the median level of dressing prompts for each observation session. The observers also recorded the number of minutes it took each resident to dress, from the time that the resident received her first prompt to dress or started performing any dressing step independently to the time the last dressing step was completed. Observations were conducted two to six times each week ($M = 3.9$) for 9 weeks, and ranged from 13 min to 171 min ($M = 61$ min) in duration.

Independent observations of resident and CNA behavior were conducted during 54% of observation sessions for CNA 1 and 24% of observation sessions for CNA 2. Interobserver agreement for dressing prompts and praise was calculated by dividing agreements by the sum of agreements plus disagreements and multiplying by 100%. Agreement for dressing time was calculated by dividing the smaller number of minutes by the larger number of minutes and multiplying by 100%. Mean interobserver agreement across participants was 92% for dressing prompts, 86% for praise, and 96% for dressing time.

RESULTS AND DISCUSSION

Figure 1 shows the median level of prompts used by each CNA during each

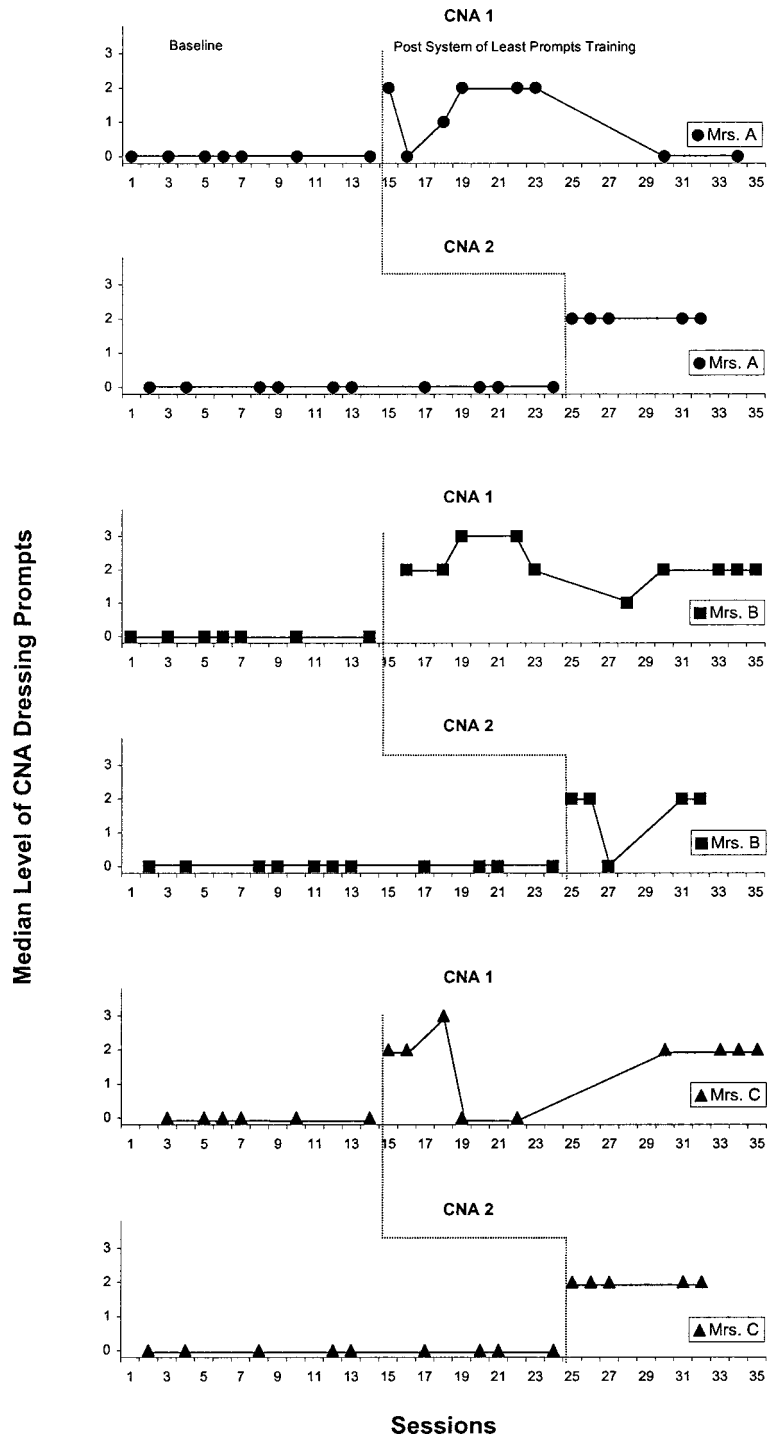


Figure 1. Median level of CNA dressing prompts provided to nursing home residents with dementia.

dressing observation session. The CNAs' median prompting level increased from zero (complete assistance) during baseline to two (minimally intrusive assistance) during the SLP condition. CNAs increased their use of praise after each step from a mean of 0.5% per dressing task during each baseline observation session to a mean of 22% per dressing task during SLP observation sessions.

In long-term care facilities, caregiving is often focused on efficiency rather than on maintaining the cognitively impaired older adult's remaining abilities (Jirovec, 1991). Therefore, it is particularly important to note that the SLP procedure did not extend dressing time. Residents spent a mean of 6.7 min (range, 3 to 16) dressing during baseline compared to 6.5 min (range, 3 to 15) after SLP training.

It is unclear what role observer presence might have played in the potential reactivity by the CNAs. Although we conducted pilot observations prior to the beginning of data collection and our observations continued over a period of 9 weeks, the possibility of reactivity exists. In addition, it is unclear whether the self-recording procedure was associated with the positive outcomes of this study. We believe that the self-recording procedure might have served to prompt and reinforce use of the SLP procedure.

This study demonstrates that with simple, brief CNA training on the SLP procedure, older adults with dementia can become less dependent on CNAs to dress. With environments that support opportunities to be independent, older adults with dementia may be able to maintain independence for longer periods. Future studies might examine ways to maintain CNA performance of procedures that encourage residents' independence and the impact of such procedures on sustaining physical health in the elderly.

REFERENCES

- Engelman, K. K., Mathews, R. M., & Altus, D. E. (2002). Restoring dressing independence in persons with Alzheimer's disease: A pilot study. *American Journal of Alzheimer's Disease & Other Dementias*, *17*, 37-43.
- Jones-Yaden, G., & Collins, B. C. (1997). Teaching microwave skills to adults with disabilities: Acquisition of nutrition and safety facts presented as nontargeted information. *Journal of Developmental and Physical Disabilities*, *9*, 59-78.
- Mathews, R. M., & Altman, H. (1997). Teaching nurse aides to promote independence in people with dementia. *Journal of Clinical Geropsychology*, *3*, 149-156.
- Winborn, L., Wacker, D. P., Richman, D. M., Asmus, J., & Geier, D. (2002). Assessment of mand selection for functional communication training packages. *Journal of Applied Behavior Analysis*, *35*, 295-298.

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