

Impact of an Elderspeak In-Service Training on Resident Well-Being, Self-Esteem, and Communication Satisfaction

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Elderspeak, or “baby talk” directed at older adults, is a patronizing speech pattern believed to reinforce negative stereotypes of aging, deprive older adults of meaningful interactions, and erode their well-being. A brief communication in-service training based on Williams, Kemper, and Hummert (2003) was presented to nursing home staff to replace elderspeak with more helpful communication behaviors. Resident - staff interactions were coded, and impact of the training on the residents’ communication satisfaction, self-esteem, and well-being was assessed across three time periods. A separate unit of untrained staff and residents served as a comparison group. Significant reductions in the proportion of interactions containing features of elderspeak were observed for the trained staff, along with significant increases in resident satisfaction, well-being, and self-esteem.

“Elderspeak,” a term originally coined by Kemper (1994), is an undesirable yet common speech modification directed at older adults. Also known as patronizing speech (Ryan, Giles, Bartolucci, & Henwood, 1986), or secondary baby talk (Caporalet, 1981), elderspeak consists of several characteristic psycholinguistic features, including the use of childish terms (e.g., good girl), over inclusive pronoun modifications (e.g., it’s time for *our* bath), the use of terms of endearment in place of formal names (e.g., sweetie), a higher pitch and slow singsong tone of voice, as well as several other speech adjustments (for a review, see Ryan, Hummert, & Boich, 1995). The primary goal of the present study was to examine if nursing home staff can successfully reduce their use of elderspeak following a brief in-service training, and if so, explore if this reduction will help improve the residents’ quality of life.

According to the Communication Predicament Model of Aging (Ryan et al., 1986), elderspeak is problematic because it reinforces stereotypes of aging and reduces opportunities for older adults to engage in more meaningful communication, undermining their well-being and self-concept (Ryan et al., 1995). Additionally, many components of elderspeak such as reducing sentence length, slowing speech rate, or speaking using a higher pitched voice do not confer communication benefits to older adults, and may actually undermine their confidence in their ability to communicate (Kemper & Harden, 1999). Speech modifications such as increasing pitch and prosody may also be counterproductive, given that the most common form of hearing loss affecting older adults actually reduces

sensitivity to higher-frequency tones (Van-Rooij & Plomp, 1990).

While there is considerable complexity in how older adults actually regard elderspeak (Nelson, 2005) compared to “natural” speech, older adults tend to view elderspeak as irritating and patronizing (Giles, Fox, & Smith, 1993). Further, older adults may rate those who use elderspeak less favorably (Gould & Dixon, 1997; LaTourette & Meeks, 2001). Though it is not clear how these unfavorable perceptions might relate to caregiver outcomes such as job related stress, a case study by Cunningham and Williams (2007) provides preliminary support for the hypothesis that elderspeak may be related to older adults’ resistive behaviors to care.

When considering the negative consequence elderspeak may hold for older adults, seeking to reduce the use of this speech behavior has considerable merit. An intervention to reduce elderspeak has previously been evaluated in nursing home settings. In two separate studies, Williams et al. (2003, 2005) conducted an in-service program to review communication barriers for older adults while sensitizing staff members to the key features of elderspeak. The results of these studies are very encouraging; following the in-service training, significant reductions were observed in staff members’ use of terms of endearment, inappropriate collective pronouns, and shortened sentence length. In addition, in both studies, the experimenters rated the immediate post-training conversations between the staff and the residents as less controlling, and more respectful than the pre-training recordings. Further, Williams et al. (2005) found that staff members’ reduced use of elderspeak was maintained at two-month follow-up. While both of these studies demonstrated that a brief in-service could successfully reduce staff members’ use of elderspeak, neither study addressed the impact their intervention had on the nursing home residents. Considering the complexity of

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ELDERSPEAK IN-SERVICE TRAINING

older adults' views regarding elderspeak, examining resident outcomes following such training would provide a greater understanding of the success and significance of the intervention.

Consistent with previous research by Williams et al. (2003, 2005), the current study sought to evaluate whether a brief communication training can reduce staff member use of elderspeak. Specifically, the present study sought to develop a training program that demanded less staff time, was effective in increasing awareness of elderspeak, and prompted nursing home staff to reduce their use of elderspeak. The other objective of the current study was to evaluate whether the training program conferred any benefits to nursing home residents, specifically in terms of improved communication satisfaction, self-esteem, and well-being.

Staff Outcomes

Knowledge gain, attitude, and the intention to change behavior are variables that have previously been identified as important mediators of behavior change following communication trainings (Francke, Garssen, & Huijjer Abu-Saad, 1995). Knowledge gain, in particular, is commonly assessed in intervention research and is thought to be an important determinant of nurses' behavioral changes in continuing education (Kiener & Hentschel, 1989; Warmuth, 1987). According to reasoned action theory, the intention to demonstrate a particular behavior is closely related to actual behavior (Fishbein & Ajzen, 1975). That is, the greater the intent, the more likely it is that a person will actually change their communication behaviors. Thus, we tested the following hypotheses: 1) nursing home staff will show a significant increase in knowledge and ability to identify elderspeak at the end of the in-service training indicated by positive change between pre and post-test ratings on the Communication Evaluation Tool (Williams, 2001); 2) trained staff will show an increase in behavioral commitment and positive attitude towards training when comparing the sample mean to the midpoint score as measured by the Affective Learning Scale (ALS; Andersen, 1979); nursing home staff in a unit that has undergone training will: 3) reduce their use of elderspeak at both post-training assessments (within group hypothesis), and 4) when compared to staff not receiving the training (between groups hypothesis).

Resident Outcomes

To evaluate the merits of an elderspeak intervention more fully, it is important to understand what impact such training has on the experiences of the nursing home residents. As elderspeak may reduce opportunities for meaningful communication and lead older adults to experience decreased self-esteem and well-being (Ryan et al., 1995), measures were selected to assess these variables.

Thus we tested the following additional hypotheses: 5) Residents will show an increase in older adult well-being as

measured by the Mental Health Inventory-5 (MHI-5; Veit & Ware, 1983), self-esteem as measured by the Rosenberg Self-Esteem Scale (Rosenberg, 1989), and communication satisfaction as measured by the Feelings of Understanding/Misunderstanding Scale (FUM; Cahn & Shulman, 1984) at both post-intervention assessment points; 6) Residents residing in the unit that receives elderspeak training will report significantly higher well-being, communication satisfaction, and self-esteem at both post intervention assessments than the unit that does not receive the training.

Method

Participants

Nursing home staff. The study was conducted at a large retirement community in rural Ohio. Twenty-five staff members participated in the in-service training on a voluntary basis and were compensated with a \$20 dollar gift certificate. Eighty-three percent of staff in the selected unit completed the training. Staff members serving as the control condition ($n = 31$) were taken from a separate unit within the same retirement community. Due to facility concerns over the privacy of the staff, specific demographic data were not collected. In general, the majority of staff that completed the training was certified nursing assistants (81% CNAs), predominantly young adult to middle aged (staff age data not collected), Caucasian (92%), and female (92%).

Residents. All nursing home residents in the selected treatment and control units of the facility were eligible to participate. Of the total number of residents in the selected units, 83 (51%) agreed to participate. The resident attrition rate during the five months of the study was 18.75% for the treatment unit and 17.14% for the control unit, leaving data from 39 residents in the treatment unit, and 29 residents in the control unit in the final analyses ($N = 68$). The two nursing home units were chosen on the basis of similarities in size, level of care, and resident demographics. No significant differences were found between baseline age, gender composition, or mental status (see Table 1). After an in-person briefing on informed consent, each resident was given a short quiz to ensure he or she understood the costs and benefits of participation and that withdrawal could occur at anytime without penalty. For their participation, residents received \$2 each time they completed the questionnaires.

Elderspeak Intervention

The elderspeak in-service training created for this study had a firm basis in the empirically supported Theory of Reasoned Action (TRA; Fishbein & Ajzen, 1975). The focus of the intervention was on the model's three biggest components of behavioral change: 1) intent, with a goal of increasing the individuals' intention to reduce elderspeak; 2) attitude, with a goal of fostering a positive attitude

Table 1

<i>Description of residents (N = 68)</i>			
Resident	Trained Unit (n = 39)	Control Unit (n = 29)	p-value
Demographics			
Age <i>M</i> (SD)	84.87(8.44)	84.21(6.58)	.73
Sex			
Male	9	10	.30
Female	30	19	
Ethnicity			
Caucasian	37	29	.21
Other	2	0	
Mental Status <i>M</i> (SD)	4.01(1.77)	4.48(1.45)	.35

toward the topic and recommendations provided by the training; and 3) subjective norms, that is, creating an atmosphere in the unit that recognized elderspeak as an undesirable speech accommodation. Since knowledge gain has also previously been identified as a salient factor contributing to the actual behavior change of nursing home staff (Francke et al., 1995; Kiener & Hentschel, 1989), it was also assessed.

The intervention was conducted by the primary author (graduate student) during a single 90-minute classroom session, offered at either the end of the day shift or prior to the start of the afternoon shift. The objective of the intervention was to assist the nursing home staff in becoming aware of elderspeak, identify the characteristic features of elderspeak, and foster an understanding of how patronizing communication can impair communication and negatively affect the well-being of older adults. In-class exercises included outlining the characteristics of elderspeak, distinguishing elderspeak from neutral speech, and viewing and critiquing written and video vignettes individually and as a group. Short video segments allowed staff participants the opportunity to identify features of elderspeak and affirming communication in videotaped vignettes.

Program Evaluation

Applied knowledge. Knowledge gained from the intervention was measured using the procedure outlined by Williams (2001). At the start of the program, staff participants observed a short videotaped nursing home interaction and then rated the video using the Communication Evaluation Tool (Williams, 2001). The original tool was modified to consist of two items asking staff to describe the effectiveness and appropriateness of the interaction on a five-point scale, and eight items asking them to identify the presence or absence of specific communication behaviors, such as, "Did the aide use a kind of baby talk?" At the end of the program, staff used the same form to rate the videotaped interaction again. Pre-test and post-test ratings for each item were compared to assess

the effectiveness of the intervention in increasing staff knowledge of elderspeak.

Attitude and intention to change behavior. The Affective Learning Scale (ALS; Andersen, 1979). The ALS is a 20-item measure asking staff participants to rate their attitudes towards the intervention content and subject matter. This scale attempts to capture both the attitude towards the training, and the attitude towards the behavioral commitment, by having participants' rate statements such as "Behaviors recommended in the course" on a 7-point Likert-scale along a bipolar continuum with endpoints such as *Valuable* or *Worthless*. Scores on the ALS range from 20 to 140, where a higher number indicates greater behavioral commitment and positive attitude toward the training. Internal consistency reliability for the current study was high ($\alpha = .94$).

Behavioral changes. Concealed naturalistic observation was used to evaluate if staff members reduced their use of elderspeak. Two trained research assistants (RA), who were blind to both the treatment and control conditions, completed the observations. Prior to the in-service program, each RA observed 15 unique interactions between staff and residents occurring in the common areas of the nursing home units. A total of 30 observations were coded for each group of staff (treatment and control). An interaction was operationally defined as the complete verbalizations of the staff member from the beginning to end of the exchange with the resident. All observations took place in the shared public spaces of each unit where any visiting public could potentially overhear the interaction. With IRB and facility approval, staff members were unaware their interactions were observed and coded until completion of the study.

The same procedure was followed for three-week post-training observations, and three-month follow-up. Each observed interaction was rated on a seven-item checklist. Research assistants indicated whether they observed specific communication behaviors in the interactions including baby talk, high pitch voice, shortened sentences, diminutives, over inclusive pronouns, and tag questions.

ELDERSPEAK IN-SERVICE TRAINING

Table 2

Proportion of Staff Identifying Elderspeak Characteristics in a Scripted Video Interaction

Elderspeak Features	Pre-training proportion	Post-training proportion	p-value
Baby Talk	75%	100%	.008*
Shortened Sentences	46%	79%	.039*
Overinclusive Pronouns	54%	83%	.022*
Terms of Endearment	96%	100%	.50
Use of high pitch voice	100%	100%	1.00

Note. To assess knowledge gain, staff members were asked to identify listed features while viewing a scripted elderspeak video.

*McNemar Binomial test indicates significant difference in pre- and post-training proportion at $p < .05$.

If any of the six psycholinguistic features were observed in the interaction, the entire interaction was counted as a “global elderspeak interaction.” Inter-rater reliability estimates were obtained on a sample of 15 staff - resident interactions for each of the coded psycholinguistic features of elderspeak using Cohen’s Kappa statistic. The table of interpretation for categorical data developed by Landis and Koch (1977) was used to interpret the coefficients. The inter-rater reliability for global elderspeak was found to be high, $Kappa = 1.00$ ($p < 0.001$), with 100% agreement. Inter-rater reliability estimates for each of the individual psycholinguistic features ranged from $Kappa = 0.29$ to 1.00 with “almost perfect” agreement for tag questions, terms of endearment, and overinclusive pronouns, “moderate” agreement for baby talk and high pitch, and “slight” agreement for shortened sentences.

Resident Measures

Communication satisfaction. Feelings of Understanding /Misunderstanding Scale. (FUM; Cahn & Shulman, 1984). The FUM is a 16-item measure on a 5-point Likert-scale ranging from *Never* to *Always* representing the degree to which each adjective reflects how a person felt after attempting to communicate with a specific target. The FUM includes eight adjectives to measure the perception of being understood and eight adjectives to measure feelings of being misunderstood. A single dissatisfaction item was changed from “uninterested” to “talked down to” to increase relevance to the current study. A composite score was calculated with a range from -32 to +32, where higher scores indicate a greater degree of perceived understanding. A high degree of internal consistency reliability was found in the current study ($alpha = .89$).

Self-esteem. The Rosenberg Self-Esteem Scale – State Version (Rosenberg, 1989). This 10-item measure asks participants to indicate their degree of agreement on a 4-point scale where higher scores indicate higher self-esteem. This instrument has been used widely in the literature and has a high reliability, and correlates with a number of self-

esteem related constructs. Internal consistency reliability for the current study was good ($alpha = .81$).

Well-being. Mental Health Inventory – 5 (MHI-5; Veit & Ware, 1983). The MHI-5 is a 5-item measure of psychological well-being that requires participants to respond to questions regarding the frequency of their experiences such as “During the past month, how much of the time were you a happy person?” on a 6-point scale. To increase clarity and ease of use for the residents and for the measure to correspond with the other dependent measures, item scoring was reversed so that it ranged from 1 (*None of the time*) to 6 (*All of the time*). Higher scores indicate the experience of psychological well-being and the absence of psychological distress. This scale has well-established reliability and validity (Berwick et al., 1991). Internal consistency reliability for the current study was good ($alpha = .84$) with a test-retest reliability over a three-month period in the control group of 0.73.

Baseline mental status. Six-Item Screener (SIS, Callahan, Unverzagt, Hui, Perkins, & Hendrie, 2002). The SIS, a brief six-item screener, was used to compare the mental status of the resident groups. It is composed of three orientation items (year, month, and day) and a three-item word recall task. Scores range from zero to six where lower scores are suggestive of greater cognitive impairment.

Procedure

Pre-training stage. After receiving a brief explanation of the study and providing consent, residents in both the intervention and control units completed a demographics sheet, a short mental status exam (SIS), along with baseline outcome measures of communication satisfaction (FUM), self-esteem (Rosenberg Self-Esteem Scale), and well-being (MHI-5). All questionnaires were read to the participating residents. Residents in both groups were told that “We are interested in studying communication between residents and staff in long-term care facilities” and were unaware the unit staff would be completing any type of communication training. Trained research assistants, also blind to the study

hypotheses, conducted the pre-training field observations a week prior to the start of the in-service training.

Post- training stage. After staff members completed the in-service training, the residents completed the measures of self-esteem, well-being and communication satisfaction within three weeks of the conclusion of the training, and again at a three month follow up to assess for change over time. Research assistants began the first post-training field observation three weeks following the training, and performed field observations again at a three month follow-up.

Results

Staff Knowledge Gain and Ability to Identify Elderspeak in Videos (Hypothesis One)

In order to examine if the training significantly increased the staff members ability to identify elderspeak in videos, a paired sample *t*-test was used to compare the staff member's pre- and post-interval data on two items from the Communication Evaluation Tool ("Was the aid's communication effective?" and "Was the aid's communication appropriate?"). The results indicated that perception of elderspeak being "effective" before the training ($M = 4.17$, $SD = 1.77$) was significantly reduced post-training ($M = 3.20$, $SD = 1.70$), $t(24) = 2.83$, $p < 0.01$. Further, the pre-training perception of the "appropriateness" of elderspeak ($M = 2.33$, $SD = 1.89$) was also significantly reduced post-training ($M = 1.75$, $SD = 1.36$), $t(24) = 2.07$, $p < 0.05$.

To assess knowledge gain, McNemar proportions tests were conducted on each of the dichotomous pre-test and post-test responses of the Communication Evaluation Tool (Williams, 2003). Results indicated that post training, staff

members significantly improved in their ability to identify several key features of elderspeak in videos including baby talk, overinclusive pronouns, and shortened sentences (see Table 2).

Staff Attitude Toward Training (Hypothesis Two)

To determine whether nursing home staff trained in the intervention had a positive commitment and attitude toward the training, a one-sample *t*-test was used to compare the sample mean to the midpoint score (80) on the Affective Learning Scale. The one-sample *t* test indicated that the training group had a positive attitude toward the training ($M = 130.25$, $SD = 12.91$), $t(23) = 19.06$, $p < .001$.

Staff Reduction of Elderspeak

To compare the proportion of elderspeak observed in staff-resident interactions after completion of the training with the proportion of elderspeak observed in staff-resident interactions before the training (hypothesis three), two-sample chi-square tests were performed on the observational data. The proportion of elderspeak features observed out of 30 interactions for the trained staff group is reported in Table 3. Results of the analysis indicated that the proportion of observed interactions containing "elderspeak (global)" in the trained staff group was significantly reduced between the baseline and the Time 1 post-training observations, $\chi^2(1, N = 60) = 4.34$, $p < .05$ and baseline and Time 2 post-training observations, $\chi^2(1, N = 60) = 4.34$, $p < .05$.

Two-sample chi-square tests were also used to evaluate whether there were differences between the trained group and control group in the proportion of elderspeak over time (hypothesis four). While the proportions of many of the psycholinguistic characteristics, including "global

Table 3

Percentage of interactions containing elderspeak characteristics for trained and untrained staff.

Features	Trained Staff			Untrained Staff		
	Baseline	Time 1	Time 2	Baseline	Time 1	Time 2
Elderspeak (Global) ^a	57% (17) _a	30% (9) _b	30% (6) _b	53% (16)	47% (14)	46% (13)
Shortened Sentences	13% (4) _a	0% (0) _b	0% (0) _b	13% (4)	13% (4)	6% (2)
Baby Talk	7% (2)	3% (1)	0% (0)	10% (3)	17% (5)	13% (4)
Terms of Endearment	20% (6) _a	13% (4) _a	0% (0) _b	7% (2)	10% (3)	10% (3)
Overinclusive Pronouns	17% (5) _a	3% (1) _{a,b}	0% (0) _b	20% (6) _a	13% (4) _{a,b}	3% (1) _b
Tag Questions	13% (4)	3% (1)	6% (2)	0% (0)	7% (2)	3% (1)
High Pitch Voice	33% (10) _a	10% (3) _b	13% (4) _{a,b}	33% (10)	23% (7)	27% (8)

Note. Values indicate the percentage of times the elderspeak marker was observed across 30 interactions. Values in parentheses are the actual number of times the elderspeak characteristic was observed. Percentages in the same row and under the same group heading (Trained or Untrained) that do not share the same subscript are statistically different at $p < .05$. ^a Elderspeak (Global) was coded when staff used any of the target features of elderspeak in an interaction in addition to the specific feature.

ELDERSPEAK IN-SERVICE TRAINING

elderspeak,” were lower in the trained condition than in the control condition at Time 1 and Time 2, results indicated these differences were not significant.

Resident Outcome Variables

To determine whether there was an impact of the elderspeak training on resident outcomes (hypotheses five and six), specifically, well-being, self-esteem, and communication satisfaction, a 2x3 repeated measures MANOVA was conducted. The first factor was “group” (treatment or control) and the second factor was “time” (baseline, post-training Time 1, or post-training Time 2), while the dependent variables were the total scores of the self-esteem, communication satisfaction, and well-being scales. The mean and standard deviation of each outcome variable for each group are presented in Table 4. Results of the MANOVA indicated a significant within-subjects main effect for time, Wilks’ $\Lambda = .74$, $F(6, 61) = 3.50$, $p < .001$, multivariate $\eta^2 = .26$; a significant between-subjects main effect for group, Wilks’ $\Lambda = .89$, $F(3, 64) = 2.77$, $p < .05$, multivariate $\eta^2 = .12$; and a significant Time X Group interaction effect, Wilks’ $\Lambda = .64$, $F(6, 61) = 5.82$, $p < .05$, multivariate $\eta^2 = .36$.

The Time X Group interaction effect was analyzed using two-way (2x3) mixed ANOVA for each dependent variable. All follow-ups were adjusted using the Bonferroni correction. Inferential statistics were only reported for tests yielding significant results. For communication satisfaction, a significant interaction was observed between Group and Time ($F(2, 132) = 11.62$, $p < .001$, partial $\eta^2 = .08$), along with significant main effects for both Group ($F(1, 66) = 8.93$, $p < .01$, partial $\eta^2 = .11$) and Time ($F(2, 132) = 5.89$, $p < .01$, partial $\eta^2 = .08$). The simple main effect for group indicated that the treatment and control groups’ communication satisfaction significantly differed at post-training Time 1 ($F(1, 66) = 17.41$, $p < .001$, partial $\eta^2 = .21$) and post-training Time 2 ($F(1, 66) = 13.44$, $p < .001$, partial $\eta^2 = .17$), and did not differ significantly at baseline. The simple main effect of time was significant for only the treatment group ($F(2, 65) = 17.41$, $p < .001$, partial $\eta^2 = .21$). Simple comparisons examining the treatment group’s communication

satisfaction over time indicated a significant increase in communication satisfaction from baseline to Time 1 ($p < .001$) and baseline to Time 2 ($p < .001$).

Following the same procedure for self-esteem, there was a significant interaction between Group and Time ($F(2, 132) = 7.97$, $p < .001$, partial $\eta^2 = .11$), and a significant main effect for Time ($F(2, 132) = 4.32$, $p > .01$, partial $\eta^2 = .06$). The main effect for Group was not significant. Simple main effects analysis of the interaction indicated that while there were no significant differences between the two groups on self-esteem at baseline or post-training Time 1, the treatment group reported significantly higher self-esteem than the control group at post-training Time 2 ($F(1, 66) = 8.98$, $p < .005$, partial $\eta^2 = .12$). The simple main effect of Time was significant for only the treatment group ($F(2, 65) = 9.88$, $p < .001$, partial $\eta^2 = .23$). Simple comparisons examining the treatment group over time indicated a significant increase in self-esteem from baseline to Time 1 ($p < .005$) and baseline to Time 2 ($p < .001$).

Follow-up analysis for well-being also revealed a significant Group x Time interaction effect, $F(2, 132) = 4.60$, $p < .05$, partial $\eta^2 = .07$. The main effects for Group and Time were not significant. Simple main effects analysis of the interaction demonstrated no significant differences between the groups at baseline or post-training Time 2; however, the treatment group showed significantly higher well-being than the control group at post-training Time 1 ($F(1, 66) = 8.98$, $p < .005$, partial $\eta^2 = .12$). The simple main effect of Time was significant only for the treatment group ($F(2, 65) = 3.65$, $p < .05$, partial $\eta^2 = .10$) with simple comparisons indicating significant increase in well-being from baseline to Time 1 ($p < .05$).

Discussion

Staff Improvements

Consistent with previous research (Williams et al., 2003, 2005), the present study indicates that a brief educational intervention can reduce nursing home staff use of elderspeak. Following the in-service training, there were significant reductions found in the proportion of interactions coded for the global presence of elderspeak

Table 4

Mean and standard deviation for the PUI, RSE, MHI-5 for intervention and control.

DV	Intervention Group Residents			Control Group Residents		
	Baseline	Time 1	Time 2	Baseline	Time 1	Time 2
Communication Satisfaction	14.44 (12.01) _a	21.90 (9.56) _b	20.46 (10.37) _b	13.14 (11.3)	12.31 (9.10)	11.41 (9.65)
Self-esteem	29.31 (4.26) _a	31.18 (3.69) _b	31.90 (3.61) _b	29.69 (5.03)	29.93 (4.82)	29.01 (4.09)
Well-being	22.41 (5.58) _a	24.33 (4.60) _b	23.77 (4.65) _a	22.83 (21.51)	21.41 (19.15)	22.03 (13.67)

Note. Values indicate means and (standard deviations). Means in the same row and under the same group heading (Intervention or Control) that do not share the same subscript are statistically different at $p < .05$.

with trends toward reductions on many of the specific psycholinguistic features. Specifically, significant reductions in the component psycholinguistic features of elderspeak were observed in both the short term (i.e., shortened sentences and high-pitched voice), and long term follow up assessments (i.e., shortened sentences, terms of endearment, and overinclusive pronouns). Moreover, the reductions in elderspeak observed immediately in the three weeks following the training program were maintained over three months. As expected, the untrained staff's global use of elderspeak did not change significantly over time with only a single psycholinguistic feature indicating a significant reduction (overinclusive pronouns) over the three months of the study. The success of the program in prompting staff members to make behavioral changes is notable, considering the relatively short length of the in-service training (90-minutes) and the limited success of similar communication programs (Kruijver et al., 2000). Several factors likely contributed to the overall success of the present program. The shorter, focused, single session trainings provided flexibility in which training session staff could attend, and fit the facility's parameters for the amount of time typically dedicated to staff trainings and meetings.

Additionally, the current training program was anchored in the TRA (Fishbein & Ajzen, 1975), a specific theoretical framework of behavior change. Following the training, staff members significantly improved their knowledge and ability to identify characteristics of elderspeak, harbored generally favorable attitudes toward the in-service recommendations, and reported intentions to change their behavior. While the subjective norms component of the TRA model was not formally assessed, a sense that the treatment unit was to become an "elderspeak free environment" was fostered. This was facilitated by gaining strong support from the facility administrators, department directors, and other professionals in leadership positions who attended the trainings alongside the CNAs, and ultimately having the training written into the treatment unit's "best practices" (of note, elderspeak became a buzz word around the trained unit). While results are resoundingly positive, the study had several limitations. As both the trained and the untrained staff members worked within the same facility, this opens the possibility of a contamination effect wherein staff in the control group could have adopted some of the in-service training practices through communication with their coworkers. However, while there was a significant reduction in overinclusive pronouns observed in the untrained staff at Time 2, several factors make this constraint less likely: 1) each unit was geographically separate within the facility with its own common areas, dedicated staff, and director of nursing; 2) untrained staff showed no significant difference in their global use of elderspeak over the three months of the study; 3) three of the psycholinguistic features observed in the untrained staff group actually trended toward increased use while all six features in the trained group trended downward; and 4) any speech adjustments the untrained

staff might have made did not seem to be reflected on resident outcome measures.

While staff members in the trained condition reduced their use of elderspeak across time, the difference in proportions between the trained staff and comparison group did not differ to a statistically significant degree. Given the improvements of the residents on the outcome measures following the training though, these findings may have been related to limitations inherent in the method used to code elderspeak. As the trained coders were blind to the conditions (trained unit vs. untrained unit) they were also blind to which individual staff members had participated in the training. While the vast majority, 83% of the treatment unit staff, completed the training, almost a fifth of the treatment staff did not (17%). The inclusion of interactions between residents and staff members that worked regularly in the treatment unit but never attended the in-service training may have masked a larger reduction in elderspeak. An additional limitation is simply coding for the global "absence" or "presence" of elderspeak. The entire interaction was coded as an "elderspeak interaction" if any of the six target psycholinguistic features were observed in the interaction. Coding in this manner left the potential to ignore decreases in the use of multiple characteristics of elderspeak during a single interaction. A final limitation of the observation coding method was the relative infrequency of some of the psycholinguistic features such as "inappropriate terms of endearment" and the more subjective nature of others (e.g., high pitch tone). As terms of endearment such as "sweetie" and "hun" and baby talk occurred with relatively low frequency at baseline, it was difficult to demonstrate that there was a significant reduction across only 30 sampled interactions even though the trained staff no longer used any of these characteristics at Time 2. While recordings were not used in the current study due to facility request, video and audio recordings of interactions could have addressed many of the aforementioned limitations; however, one advantage of using the covert naturalistic observations is a reduction in staff member reactivity.

Resident Outcome and Improvements

Previous elderspeak intervention studies have not directly examined the residents' perspective. Thus, our goal was to address the impact of the intervention on nursing home resident outcomes, specifically communication satisfaction, self-esteem, and well-being. Residents of the unit which received the training showed a significant increase in their communication satisfaction as well as small but significant increases in their self-esteem and psychological well-being. These changes corresponded with staff reductions in elderspeak, and were observed three weeks after conclusion of the training, and for communication satisfaction and self-esteem, were maintained at the three-month post assessment. While there were no baseline differences between the resident treatment

ELDERSPEAK IN-SERVICE TRAINING

and comparison groups on the dependent variables, the resident communication satisfaction observed in the treatment group was significantly higher than the comparison group at both post-training assessments. Additionally, the treatment group reported significantly higher well-being three weeks after the training, and significantly higher self-esteem than the comparison group three months later.

The Communication Enhancement Model (CEM; Ryan, Meredith, Mclean, & Orange, 1995) posits that better communication in the form of an individualized approach to older adults' actual needs will lead to a greater sense of empowerment, well-being, and satisfaction with care providers. According to the CEM, the well-being of older adults is enhanced when their ability to express themselves is maximized. Findings from the present study are supportive of CEM's central tenets, specifically in regard to elderspeak. While there were no significant changes in the untrained staff members' use of elderspeak, and correspondingly, the comparison group's residents' scores on outcome measures, a significant reduction in staff member use of elderspeak in the trained condition was associated with increases in self-esteem, communication satisfaction, and at least shortly following the training (i.e., 3 weeks), well-being. In short, as the communication environment improved in the trained unit, so too did the resident's scores on outcome measures.

It seems plausible that residents improved on these variables because of a reduction in communication that older adults typically find aversive (elderspeak). Educating staff members about elderspeak may have disrupted the cycle of the Communication Predicament Model of Aging, allowing residents to achieve more neutral or satisfying types of interactions. Additionally, prompting staff members to reduce their use of elderspeak may have necessitated that staff rely on alternative methods of communication that actually enhanced communication with the residents.

As previously noted, while significant increases were observed in resident communication satisfaction and self-esteem at both the three-week and three-month post-training assessments, interestingly, significant changes were observed for well-being only in the short term (three weeks later). This may reflect limitations in the mental health inventory – five (Veit & Ware, 1983) which is relatively brief, and not an encompassing measure of well-being. Additionally, it may reflect the observations of Williams et al. (2005) that while the staff in their study continued to use fewer of the concrete features of elderspeak at the two month mark, their interactions were rated as more controlling, less respectful, and less caring than immediately following the training. This suggests that changing specific speech behaviors may be only one part of the equation in teaching nursing staff to interact consistently in a way that will convey respect and foster well-being for older adults.

Methodological Limitations

While the present study replicated and extended existing elderspeak research, it is important to acknowledge the limitations of the findings. It should be noted that the resident participants of the study resided in a single large long term care facility, and therefore the nursing home environment and the residents themselves may not be representative of the larger population. The present study also employed a quasi-experimental design, as random assignment was not possible. While the use of both a pretest and a comparison group makes it easier to avoid certain threats to internal validity, because the two groups were not randomly assigned, selection bias may have been present. In addition, while it is notable that there were no significant differences between the two conditions in age, gender, and mental status, data on a number of other potentially important resident characteristics were not collected for comparison. Further, while the study outcomes varied statistically with the intervention the observed changes in resident satisfaction and self-concept may be the result of alternative explanations. One alternative is that simply offering training to one group of staff and not to the other could have led to changes in the trained group's perception of their work, leading to satisfaction benefits in the residents (Mayo, 1933).

Another limitation of the study was the relatively small sample size, with only 51% of eligible residents agreeing to participate, and the high attrition rate (18%) of residents who participated in the study. This opens the possibility of selection or attrition bias. Further, the turnover rate for the trained staff was not available, which may be an important factor with regard to the long-term benefits of the training, especially when considering the national annual turnover rate for CNAs has been previously reported at 71% (AAHSA, 2008). As a result of turnover, efforts to create a better communication environment for residents may have start at the level of initial care provider training, such as including discussions of elderspeak in CNA training programs, and be revisited through facility in-services post-training.

Directions for Future Research

Replication of these results is necessary to increase support for the study's findings and the underlying theory of the CPA model. Future studies may consider including additional resident outcome measures that correspond to the predictions of the Communication Enhancement Model (Ryan et al., 1995), such as older adults' perceived health, self-efficacy, and feelings related to the quality of interactions and competence of the staff. Qualitative interviews may also provide insight into how explicitly aware residents are of staff behavioral changes. As research indicates that staff elderspeak use is associated with increases in residents disruptive behaviors (Cunningham & Williams, 2007), future elderspeak programs may want to evaluate the staff's perception of the

benefits of their effectiveness and work related stress following the training. Additionally, while MANOVA analysis makes it possible to observe a variety of main effects and interactions, it does not allow for as strong assertions of causality as a regression model which controls for confounding variables. Future research may benefit from using a more complex model with regression analysis.

Overall, the training program described in this study indicated that nursing home staff can improve their style of communication to promote resident quality of life. It is hoped that future research will validate these findings and continue to underscore the potentially negative effects of elderspeak have for nursing home residents.

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