Critical Review: Can providing communication training programs for staff in long-term care facilities impact their awareness of elderspeak?

Benstead, K.
M.Cl.Sc. (S-LP) Candidate
University of Western Ontario: School of Communication Sciences and Disorders

This critical review examines the evidence regarding the use of communication training programs designed to impact staff members' awareness of elderspeak in long-term care facilities. It also examines the effectiveness of different parameters of delivery (onsite vs. online). Study designs include three mixed non-randomized clinical trials and two single-group repeated measures. Mixed results provide suggestive evidence that staff identification and use of elderspeak can be reduced by providing communication training to staff and equivocal evidence regarding the parameters of delivery. Limitations, future recommendations, and clinical implications are discussed.

Introduction

For older adults living in long-term care facilities, communication with staff is of high importance as it allows them to develop and maintain interpersonal relationships (Williams, 2006). This is essential as older adults who are more socially engaged live longer than those who are not regardless of other potential risk factors that may increase their likelihood of mortality (Kiely, Simon, Jones, & Morris, 2000). Unfortunately, communication between staff and residents in long-term care facilities is commonly limited to topics of care such as daily hygiene routines and medical treatment and is often delivered using elderspeak, a communication style that has a negative effect on residents (Williams, 2006).

Elderspeak is a patronizing style of communication that is most commonly used by young persons' when communicating with older adults. The use of elderspeak is typically unintentional and occurs as a result of staff attempts to communicate effectively and demonstrate care. It is characterized by several psycholinguistic features including a high pitch, exaggerated intonation, diminutives/inappropriate nicknames (e.g., sweetie), and the use of overinclusive pronouns (e.g., *we* are going to take *our* bath now) (Bradford & End, 2010). Williams, Kemper, & Hummert (2003) reported that the use of elderspeak can have a negative impact on residents' quality of life by perpetuating stereotypes associated with aging (e.g., dependency) and depriving them of meaningful social interactions. This reduction in quality of life can lead to isolation, depression, and an overall decline in residents' cognitive and physical well-being. Therefore, it is important to determine ways in which elderspeak can be reduced in these settings.

Despite evidence revealing the negative effects of elderspeak, there has been limited research to determine how best to reduce its use in long-term care facilities. Determining an effective approach now is important as a large demographic shift is expected to occur in the upcoming decade (Government of Canada, 2019). It is expected that by the year 2030 approximately 23% of Canadians will be aged 65 years or older and that an increasing number of citizens will rely on long-term care facilities. Ensuring that all older adults are provided with opportunities for social engagement without experiencing elderspeak is imperative as it has the potential to increase their quality of life, overall health, and well-being.

Objectives

The primary objective of this paper is to critically review the literature to determine whether communication training programs are effective at increasing staff awareness of elderspeak in long-term care facilities. The secondary objective is to determine which parameters of delivery are most effective (onsite vs. online).

Methods

Search Strategy: Online search engines including Omni, PubMed, and Google Scholar were used to collect relevant journal articles. Keywords used in the database search included ("communication" AND "training" OR "education" OR "intervention" AND "nursing home" OR "long-term care" AND "elderspeak"). The search was limited to articles written in English.

Selection Criteria: Studies selected for inclusion in this critical review were required to conduct their training program through a nursing home or long-term care facility. There were no restrictions on the type of staff who received the training and participated in the study.

<u>Data Collection</u>: Results of this literature search yielded five articles that met selection criteria. The articles included three Level 2a studies with a mixed non-randomized clinical trial design and two Level 3 studies with a single-group repeated measure design.

Results

<u>Single Group Repeated Measure</u>
Single group repeated measure designs are an effective way to assess whether a change has occurred as the result of the intervention program. This type of design is often subject to order effects; however, the educational nature of the interventions in these studies eliminates the negative aspect of this effect.

Williams (2006) evaluated the effect of a communication training program on staff (n = 31) identification and use of elderspeak in long-term care facilities using a single group repeated measure design. The intervention was conducted in three one-hour sessions utilizing lecture-style presentations, video vignettes, and role-playing activities to modify participants' behaviours. Identification of elderspeak was measured by assessing participants' ability to identify psycholinguistic features using video vignettes of inappropriate staff-resident interactions. Use of elderspeak was measured by collecting audio recordings of staff-resident communication and assessing them for the presence of four specific psycholinguistic features (diminutives, collective pronouns, type-token ratio, mean length of utterance) as well as emotional tone (care, control, respect). Investigators collected data before the intervention, one-week post-intervention, and two months post-intervention.

Baseline measures indicated that all staff members spoke to residents using elderspeak demonstrated by the use of specific psycholinguistic features and emotional tone. Data collected one-week post-intervention revealed no significant difference in participants' ability to identify features of elderspeak, a significant improvement in two dimensions of emotional tone (care, respect), and a significant reduction in the use of only one psycholinguistic feature (diminutives). However, a clinically significant improvement in identification of elderspeak was indicated (increase of 28%) and use of the three remaining psycholinguistic features were noted to trend toward reduction. At two-months post-intervention participants demonstrated no significant change from initial post-test results for the use of psycholinguistic features of elderspeak; however, emotional tone ratings returned to baseline.

Intervention methodology was clearly defined, and participant inclusion and demographic information were provided. Research assistants (RAs) responsible for transcribing the data were blinded to the collection period each sample was from and reported good inter-rater reliability. The longitudinal design of the study allowed investigators to determine whether their intervention yielded long-term effects; however, the limited number of participants had a potential impact on the ability to determine statistically significant results. Further, the direct monitoring of staff-resident interactions allowed for potential knowledge of observation effects to impact the validity of the data collected. Therefore, this study provides moderately suggestive evidence that a communication training program can impact staff identification and use of elderspeak in long-term care facilities.

Williams, Kemper, & Hummert (2003) conducted a study to determine whether a communication training program affected staff (n = 20) use of elderspeak using a single group repeated measure design. The training program consisted of three one-hour sessions focused on increasing awareness of barriers to communication, recognizing elderspeak and its negative effects, and practicing effective communication. Information was provided via lectures, group discussions, and role-play activities. Use of elderspeak was measured using audio recordings of staff-resident interactions. The samples were coded for the presence of three psycholinguistic features of elderspeak (mean length of utterance, diminutives, collective pronouns), emotional tone (care, control, respect), and rate of speech. Samples were collected before the intervention, and within one week after intervention.

Pre- and post-test comparisons revealed a significant reduction in the use of diminutives and collective pronouns and a significant increase in participants' mean length of utterance. Communication with staff became significantly more respectful and less controlling; however, no effect was found for care. No significant difference was found for rate of speech.

Study methodology was clearly defined, and participant inclusion and demographic information was available. Participants were provided with their baseline recordings to allow for self-reflection before their post-intervention assessment. Transcription reliability was reportedly high; however, the researchers responsible for coding each sample were not blind to the purpose of the study. Further, the analysis of only three psycholinguistic features provided potential for instances of elderspeak to go unnoticed. Participants were directly monitored via audio recording devices which allowed for potential

knowledge of observation effects. The participants were able to turn their devices on and off to record specific conversations which calls into question how representative the samples collected are. Lastly, the non-longitudinal nature of this study does not indicate whether the intervention has long-term effects. Therefore, this study provides mildly suggestive evidence that a communication training program can reduce staff use of elderspeak in long-term care facilities.

Mixed Non-Randomized Clinical Trail

Mixed non-randomized clinical trial designs are ideal for assessing the efficacy of communication training programs as the use of a control group limits threats to validity, both internal (e.g., temporal trends, regression to the mean, and the learning curve) and external (e.g., generalizability of results).

Bradford & End (2010) assessed the impact of a communication training program on staff (n = 25) identification and use of elderspeak in comparison to a control group (n = 31) using a mixed non-randomized clinical trial design. Participants in the training group attended one 90-minute session where they learned to identify characteristics of elderspeak, distinguish elderspeak from neutral speech, and critique video vignettes of staff-resident communication. Identification of elderspeak was assessed using the Communication Evaluation Tool by rating a vignette of staff-resident communication for effectiveness, appropriateness, and the presence of specific psycholinguistic features (baby talk, shortened sentences, overinclusive pronouns, terms of endearment, high pitch). Both groups were assessed for their use of specific psycholinguistic features of elderspeak (baby talk, high pitch, diminutives, overinclusive pronouns, tag questions) via concealed naturalistic observations of staff-resident communication. The presence of one or more psycholinguistic feature resulted in a 'global' rating of elderspeak. Researchers collected data before the intervention, three-weeks post-intervention, and again three months post-intervention.

Results from measures one-week post-intervention revealed significant reductions in ratings of the effectiveness and appropriateness of elderspeak, a significant increase in identification of psycholinguistic features of elderspeak, and a significant reduction in use of elderspeak. Data collected three months post-intervention revealed a consistent reduction in use of elderspeak over time. Between-group measures revealed no significant difference in use of elderspeak; however, proportions of use for many psycholinguistic features were lower in the trained condition. Further, no significant difference was found in the control group's use of elderspeak at either measure with three psycholinguistic features increasing over time.

Study methodology was comprehensive and appropriate participant inclusion data was provided. The short duration of the training program likely yielded a greater number of participants, and the longitudinal design allowed researchers to determine the presence of long-term improvements. The use of concealed naturalistic observations eliminated the potential for knowledge of observation effects. RAs who collected samples were blinded to the treatment and control conditions and reported good reliability for ratings of global elderspeak; however, some psycholinguistic features are subjective, and reliability was low (i.e., high pitch, inappropriate terms of endearment). Further, not all staff participated in the intervention but may have been observed by blinded RAs potentially skewing the data. The use of a 'global' elderspeak rating determined by the presence of one or more features of elderspeak limited the researchers' ability to measure smaller changes and the small sample size provides a potential explanation for the lack of a statistically significant difference between groups. However, despite the limitations and broad definition of elderspeak, researchers were still able to determine statistically significant results for the trained group. Therefore, this study provides compelling evidence that a communication training program can impact staff identification and use of elderspeak in long-term care facilities.

Coleman, Fanning, & Williams (2015) determined whether a communication training program could increase staff identification of elderspeak in both onsite (n = 327) and online (n = 211) formats using a mixed non-randomized clinical trial design. An intervention program called Changing Talk (CHAT) was implemented. Both groups were provided with the same presentations, presenters, and handouts. Onsite participants completed their training in three sessions over one week and online participants in three sessions over three weeks. CHAT utilized an interactive approach with limited didactic information. Participants observed video vignettes of staff-resident communication to critique, discuss, and role-play. The interactive aspect of this program was maintained in the online group. Identification of elderspeak was measured using the Communication Evaluation Tool which assessed participants' ratings of the effectiveness and appropriateness of elderspeak, and presence of certain psycholinguistic features using video vignettes of inappropriate staff-resident communication. Investigators collected data before

the intervention and immediately following intervention.

Post-intervention measures revealed a significant within-group increase in participants' ability to identify elderspeak in the onsite group only. No significant difference was found in pre-test scores between the onsite and online participants ratings; however, post-test results revealed a significant difference between groups with the onsite participants yielding greater improvements.

Intervention methodology was well controlled between groups and has reportedly proven to be effective in previous studies. Limited participant data were available as researchers failed to collect demographic information. No information was provided regarding which psycholinguistic features of elderspeak were chosen for analysis, and the timeline of delivery for each format differed by two weeks. Some onsite participants were involved in additional research with related outcome measures and not all participants attended each training session onsite or online; however, researchers failed to remove their data from analysis. Therefore, this study provides equivocal evidence that CHAT can impact staff identification of elderspeak and equivocal evidence regarding which parameters of delivery are most effective.

Williams, Abd-Hamid, & Perkhounkova (2017) assessed the effectiveness of an online communication training program on staff (n = 9) identification of elderspeak compared to a historical control group (n = 196) who received the same training program in an onsite format using a mixed non-randomized clinical trial design. Investigators implemented an intervention program called Changing Talk (CHAT). The intervention was delivered in three online sessions and aimed to increase staff awareness of elderspeak and its negative effects on residents, teach staff to take on perspectives of residents, and implement self-evaluation practices using limited didactic lectures and video vignettes. Time spent completing each session ranged depending on the participant. Identification of elderspeak was measured using video vignettes to collect scenario-based assessments with 13 items reflecting learning objectives. A communication rating scale was also used to determine the effectiveness and appropriateness of the interaction and to assess the presence of five psycholinguistic features of elderspeak (baby talk, diminutives, volume, rate of speech, overinclusive pronouns). Data were collected before the intervention and within one to seven days post-intervention.

Within-group comparisons revealed improved knowledge of appropriate communication and improved awareness of the effectiveness and appropriateness of elderspeak for both formats. However, significant improvement in identification of psycholinguistic features of elderspeak was only found for the onsite group. Between-group comparisons revealed that the onsite group saw significant improvement in identifying psycholinguistic features of elderspeak compared to the online group. Despite the lack of statistically significant results, clinical implications can be drawn from the online group's data as it showed some improvement in identification of psycholinguistic features.

Study methodology was well-defined, and participants' demographic data was provided. Participants who currently or previously worked at a long-term care facility were recruited though an affiliated university. However, as not all participants were currently employed at the long-term care facility there are limitations to the generalizability of the results. The online format of the program allowed participants to log-out and complete each session in chunks, which limited the control researchers had in the program delivery. Participants who failed the scenario-based post-assessment were able to retake the test; however, it was not reported how many/if any failed. Lastly, the very small sample size makes it difficult to draw statistically significant conclusions in comparison to such a large control group. Therefore, this study provides equivocal evidence that staff identification of elderspeak can be impacted by CHAT and equivocal evidence in support of online delivery.

Discussion

This critical review revealed mixed results, providing suggestive evidence that communication training programs can positively impact staff awareness of elderspeak in long-term care facilities and equivocal evidence regarding the parameters of delivery. As a result, caution must be taken when drawing conclusions and assessing clinical implications while taking into consideration the limitations in the evidence.

All five studies assessed the impact of their intervention on participants' awareness of elderspeak and all saw an improvement in at least one measure related to elderspeak following intervention; however, the method in which investigators measured this varied across studies. One study singularly assessed awareness by measuring participants' use of elderspeak, two studies assessed awareness by

measuring identification of elderspeak, and two studies assessed awareness using both identification and use of elderspeak. This makes it difficult to draw conclusions comparing overall results as the measures used to determine the effectiveness of an intervention varied across studies. All studies that assessed identification used a variation of the same tool (i.e., the Communication Evaluation Tool); however, the methodology used to assess use of elderspeak varied greatly from non-blinded analyses of audio recordings to blinded assessments of concealed naturalistic observations, further limiting the potential to draw valid conclusions from comparisons.

Studies comparing onsite and online delivery of communication training programs require stronger methodologies to allow for compelling evidence to be collected. Currently, the collective data is not sufficient to draw conclusions as to which parameters of delivery are most effective. Only two studies in this review collected data to compare outcomes from onsite and online delivery. In both studies, researchers failed to control for many participant variables including attendance at all sessions and involvement in related research, which greatly limited the validity of any conclusions drawn from the data.

Further, the specific psycholinguistic features used to assess identification and use of elderspeak varied between each study with no explanation provided as to why each investigator chose to include the selected features. The number of psycholinguistic features assessed varied from three to five; however, Coleman et al. (2015) provided no details regarding the psycholinguistic features they assessed. Some psycholinguistic features (type-token ratio, mean length of utterance, rate of speech, tag questions, baby talk, high pitch, and volume) were assessed in two or fewer studies with only two features (diminutives and overinclusive/collective pronouns) assessed across all studies. The lack of consistency in the psycholinguistic features measured makes it difficult to determine whether a specific intervention was ineffective or if the features chosen to be measured were not appropriate. Further, Bradford & End (2010) noted that some psycholinguistic features are more subjective (pitch, baby talk), making them more difficult to accurately measure. Future research should consider determining which psycholinguistic features have the greatest negative impact on residents' well-being and targeted communication training programs should be developed to reduce the use of those features. For a comprehensive list of psycholinguistic features of elderspeak, see Ryan, Hummert, & Boich (1995).

An additional issue common in research regarding elderspeak is the heterogeneity of older adults included in these studies. Within long-term care facilities, residents may have drastic differences in their abilities which could have an impact on their communication requirements. Older adults diagnosed with dementia have additional neuropsychiatric symptoms which may negatively affect their behaviours (Khachiyants, Trinkle, Son, & Kim, 2011) resulting in greater communicative difficulty and resistance to care (Williams, Herman, Gajewski, & Wilson, 2009). However, only one of three studies assessing use of elderspeak looked at the effects of dementia on communication. Williams (2006) found that participant use of elderspeak increased with residents with dementia; however, this may not be problematic as previous research has shown that some psycholinguistic features of elderspeak are helpful when communicating with this population (e.g., exaggerated pitch and simplified vocabulary and grammar) (Orange, Ryan, Meredith, & MacLean, 1995). This indicates that an additional need for education regarding communication with adults with dementia should be included in the interventions.

Lastly, as research regarding communication training programs is still emerging, the limited data we do have may be affected by experimenter bias. Three of the five studies included in this review shared a primary researcher and only one of those three studies utilized an experimenter-blind procedure. This effect could bias the results toward the researcher's expectation.

Despite the presence of only a few research studies and additional limitations, all five studies reported an improvement in at least one measure related to elderspeak following intervention. For each study, enough detail was provided to allow for replication. At times when small sample sizes impacted investigators' ability to determine statistically significant results, clinically significant implications could be drawn from the data to support the positive effect of an intervention. Further, both longitudinal studies reported that results were maintained over time. No negative outcomes on residents' well-being were found with some studies reporting positive resident outcomes as a result of their intervention.

Conclusion

The studies included in this critical review provide suggestive evidence that communication training programs can improve staff awareness of elderspeak in long-term care facilities by increasing identification and decreasing use. Studies assessing the long-term effects of these interventions have yielded positive

results. Conclusive statements regarding the most effective parameters of delivery cannot be made due to stark methodologic limitations in the studies comparing onsite and online delivery. Future research is required to determine which intervention is most effective at impacting awareness of elderspeak and which psycholinguistic features should be targeted.

Clinical Implications

Due to the variability in the levels of evidence reported, communication training programs should be implemented with caution as there is a lack of compelling evidence to support their overall effectiveness. Until further data can be collected, onsite delivery methods should be used. Several communication training programs were investigated, and long-term care facilities should carefully consider which intervention is most appropriate for their workplace considering a number of variables (e.g., time, cost) before implementation.

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