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Best Practice in Dementia Communication: Determining the effectiveness of pre-recorded, presentation-based learning for CNAs working in residential care facilities

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Best Practice in Dementia Communication: Determining the effectiveness of pre-recorded, presentation-based learning for CNAs working in residential care facilities

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APPROVAL PAGE

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ABSTRACT

The dramatic increase in the aging population and predicted rise in individuals diagnosed with a dementia-related disorder in the next 30 years has sparked an increase in the exploration of gerontology and best practice in dementia care (Curyto & Vriesman, 2016). Additionally, each person living with dementia spends less than two percent of their day engaging in social communication with a care worker (Ward et al, 2005). With a significant increase in the development of dementia-related disorders and minimal social interaction, understanding the manifestations of dementia and methods of effective communication between individuals with dementia-related disorders and direct care workers will be increasingly important as communication is beneficial and necessary for optimal care. In response to this rise in the aging population and reported lack of communication, the purpose of this study is to investigate the effectiveness of pre-recorded, presentation-based training in improving CNA perceived purpose and knowledge of dementia communication. Intended participants in this study were CNAs employed at residential care facilities deriving from differing demographic backgrounds with various levels of previous knowledge of dementia communication. Participants were asked to complete a virtual learning experience about best practice in dementia care and communication. Outcomes for perceived purpose and knowledge were represented on pre-, post-, and post-post-questionnaires and measured before and after exposure to the intended intervention method of pre-recorded, presentation-based learning. One CNA participated in the study with noted subtle changes to perceived purpose and knowledge of dementia communication following completion of pre-recorded, presentation-based learning. This study was largely limited by the co-occurrence of this study with the global pandemic known as COVID-19 with orders for social distancing and contact restrictions. Therefore, Due to limited responses, little is known about the effectiveness

of this pre-recorded, presentation-based learning for CNAs working in residential care facilities. Further research with a greater number of participants is warranted to further understand the impact of pre-recorded, presentation-based learning on CNAs' perceived purpose and knowledge of dementia communication. If found effective, pre-recorded presentation-based learning has the potential for greater utilization with the collaboration of speech-language pathologists (SLPs) and other medical professionals to develop relevant programs.

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ABBREVIATIONS AND DEFINITION OF TERMINOLOGY

Certified Nursing Assistant (CNA): a person holding proper CNA licensure who provides direct care to individuals at a residential care facility (Michigan Department of Licensing and Regulatory Affairs, 2014).

Dementia-related disorder: a disease or condition that demonstrates a group of progressive symptoms associated with dementia (i.e. impaired memory, judgement, language, motor skills) (Beer, Hutchinson, & Skala-Cordes, 2012).

Residential care facility: an institution where residents receive personal care with staff available at all times along with the provision of nursing and medical care (Eggenberger, Heimer, & Bennett, 2013).

1 INTRODUCTION

Background to Problem

The dramatic increase in the aging population and predicted rise in individuals diagnosed with a dementia-related disorder in the next 30 years has sparked an increase in the exploration of gerontology and best practice in dementia care (Curyto & Vriesman, 2016). According to Curyto and Vriesman (2016), "By the year 2050, it is estimated that between 11 and 16 million persons will be diagnosed with a dementia-related disorder" (pp. 18). Additionally, each person living with dementia spends less than two percent of their day engaging in social communication with a care worker (Ward et al, 2005). With a significant increase in the development of dementia-related disorders and minimal social interaction, understanding the manifestations of dementia and methods of effective communication between individuals with dementia-related disorders and direct care workers will be increasingly important as communication is beneficial and necessary for optimal care. Previous research has explored Certified Nursing Assistant (CNA) education and training formats in relationship to communication with individuals with dementia. However, the primary focus in many research studies has been on the individual with dementia themselves, and not their frequent communication partners (i.e. CNA staff). It has been suggested that CNAs' perceived purpose has an influence on their methods of communication and expression of knowledge pertaining to dementia care and communication (Savundranayagam & Lee, 2017). Effective communication is commonly considered a naturally learned skill; however, communicating with a special population such as those diagnosed with a dementia-related disorder, potentially requires purposed training to acquire additional skills and strategies for successful interaction and improvement in a resident's overall quality of life.

Purpose

In response to this rise in the aging population and reported lack of communication, the purpose of this study was to investigate the effectiveness of pre-recorded, presentation-based training in improving CNA perceived purpose and knowledge of dementia communication. Additionally, I planned to explore the responsiveness of various CNA demographic profiles (i.e. sex, age, education level, years of certification, current unit, primary shift, relative with a dementia-related disorder) to pre-recorded, lecture-based training for dementia communication in relation to evidence-based strategies for effective dementia communication.

Significance of Problem

In addition to a small number of interactions currently occurring between direct care workers and those with a dementia-related disorder, residential care facilities and specifically CNA positions are known to maintain high turnover rates for employment (Matthews, Carsten, Ayers, and Menachemi, 2018). These two facts combined indicate the necessity for effective, efficient, and informative learning experiences. An increasing aging population suggests a rise in individuals with dementia and a greater need for CNAs with the skills to appropriately facilitate effective communication to those in their care. In addition to skilled workers, the facilitation of effective communication benefits the individual with dementia via an increase in overall quality of life (Eggenberger, Heimer & Bennett, 2013). Anderson, Bird, MacPherson, and Blair (2016) identified a range of factors that contribute to resident quality of life with social interaction being relevant. Therefore, more effective communication learned through intentional training for CNAs is expected to positively impact individuals diagnosed with a dementia-related disorder's perceived quality of life

Research Questions

1. What is the effectiveness of pre-recorded, presentation-based learning on CNAs' perceived purpose regarding their role in dementia communication?
2. What is the effectiveness of pre-recorded, presentation-based learning on CNAs' knowledge of dementia communication?
3. What CNA demographic profiles (i.e. sex, age, education level, years of certification, current unit, primary shift, relative with a dementia-related disorder) indicate change in perceived attitude and acquired knowledge of dementia communication following a pre-recorded, presentation-based learning experience?

2 REVIEW OF LITERATURE

Staff Influence

CNAs are the main communication partners for those living with dementia at residential care facilities. According to Hummert, Garstka, Ryan, and Bonnesen (2004), social partners of older adults with dementia play an important role in shaping interactions. Therefore, it is crucial to understand the influence CNAs have on the communication they initiate, respond to, and maintain with the individuals they care for as they are the main social partners of individuals with a dementia-related disorder. There are many factors that contribute to resident quality of life with social interaction being of primary relevance (Anderson, et al., 2016). Specifically, interaction between CNAs and residents during care has potential to significantly impact a resident's quality of life. A systematic review of 36 studies was conducted by Anderson et al (2016) to investigate various influential factors (knowledge, attitude, perceived purpose) associated with job performance and resident-staff interaction. Studies were assigned a quality rating based on level of predictability related to the goals of the systematic review. Influential factors such as knowledge, attitude, and perceived purpose were considered adjustable with additional education and guidance to indirectly increase the quality of life of individuals with dementia. These factors further include a CNA's approach to communication and ability to facilitate the elicitation of necessary information (i.e. possible pain, immediate needs). Empathetic care and intentional communication have been found to increase resident mood, delay functional dependence, and allow for better food intake (Anderson et al, 2016**).**

A study conducted by Fisher and Wallhagen (2008) aimed to understand interactions between CNAs' views of residents and perceived purpose and their approach to communication with an individual diagnosed with a dementia-related disorder. Twenty-seven CNAs at three

residential care facilities were interviewed and surveyed to explore the construction and meaning of social interaction between CNAs and those in their care based upon CNAs' perception. Findings indicated three major views of residents: fictive kin, a commodity, and an autonomous person. Fictive kin referred to CNAs viewing those in their care as non-relatives adopted into kin-like relationships whereas commodity refers to the belief that residents are depersonalized work objects. When CNAs view those in their care as an autonomous person, both parties participate in a relationship of "sharing, mutuality, and intersubjective give-and-take" (pp. 30). The study then reported differences in the provision of communication based upon the CNA's primary view of residents. Results from this study suggest that the beliefs and views held by CNAs potentially impact care and communication practices with autonomous person heeding optimal outcomes. A study conducted by Medvene and Coleman (2012) heeded similar results in that there were communicative benefits when instructing CNAs to think relationally about residents while remaining neutral with set boundaries against unproductive views (i.e. fictive kin), Overall, these studies suggest there are not only differing views of residents diagnosed with dementia-related disorders and purpose among CNAs, but that these views impact provision of care and communication.

An additional study conducted by Squires, et al. (2015) focused on job satisfaction for those employed at residential care facilities and how their perceived satisfaction impacts their work. Results based on a systematic review of 42 studies indicated that important factors to consider when determining job satisfaction include empowerment and autonomy. When these factors were considered with strategies for improvement, CNAs were found more likely to recall and implement recommended strategies and skills associated with their assigned responsibilities. On the reverse side, it was found that when CNAs felt greater competence in their abilities, they

were more likely to experience greater job satisfaction. Therefore, it is suggested that it would be beneficial to consider CNA job satisfaction and methods for improved job satisfaction when creating and implementing educational experiences for CNAs. Similarly, Yeatts and Cready (2007) discussed the importance of empowering CNA staff to promote patient-centered care in residential care facilities. Staff members were empowered with regular staff meetings and training associated with job-specific skills. Both empowered and non-empowered employees were observed when interacting with resident-CNA interactions to compare their regularity in implementing patient-centered care with individuals who have a dementia related disorder. Overall, results indicated that empowered staff implemented patient-centered care more effectively than their counterparts. These findings suggest that empowered CNAs with a more positive perceived purpose are more likely to utilize effective communication and patient-centered care when working alongside individuals with a dementia-related disorder.

In addition to perceived purpose, CNA knowledge has contributed to CNA influence on dementia communication. Specifically, Savundranayagam and Lee (2017) identified a relationship between staff knowledge of dementia-related communication difficulties and strategies were discussed in relation to quality of care, including effective repair (mending communication breakdown and misunderstanding) and encouraging residents to complete tasks independently. CNAs were required to complete questionnaires (similar to those that will be utilized in this study) to gain an understanding of current staff knowledge and explore how that knowledge was implemented in dementia communication. Generally, this article suggests that a breakdown in communication can affect overall quality of care and caregiver job satisfaction. Savundranayagam and Lee (2017) suggest that knowledge of effective communication strategies is essential in "enhancing staff-resident relationships" (pp. 121).

Demographics

When employed at residential care facilities, CNAs exhibit a variety of demographic backgrounds and beliefs about the purpose and practice of their position. Kusmaul and Sahoo (2019) discuss the impact of varying demographics on CNA beliefs and corresponding job performance. Examined demographics included primary shift, type of unit within the facility, and number of years working as a CNA. Results indicated that CNAs working first shift in a rehabilitation unit or a general skilled nursing unit were significantly more likely to demonstrate knowledge and compliance with facility procedures than their second/third shift or memory care unit counterparts. With these discrepancies in compliance, the authors predict that there is a discrepancy in CNAs' beliefs about the purpose and practice of their position. Therefore, the quality of care is indirectly impacted by demographic variability via CNA beliefs.

Brooks, Renvall, Bulow, and Ramsdell (2000) conducted a similar study focused on determining the impact of demographics on training and staff education effectiveness. Knowledge retention of presented information was measured by administering questionnaires one- and four-months post-training. Demographic information such as age, primary language and presence of family members diagnosed with a dementia-related disorder, were collected and paired with the questionnaires for analysis. Results indicated that those with a family member diagnosed with a dementia-related disorder were more likely to demonstrate greater knowledge retention potentially due to a personal investment in the information included in the training. This suggests that individuals are more likely to retain knowledge presented to them when they believe the information is relevant to their personal life. For the purposes of this study, sex, age, education level, years of certification, current unit, primary shift, relative with a dementia-related disorder will be investigated. Previous studies have indicated the relevance of each demographic

component in determining their impact on perceived purpose and knowledge for CNAs employed at residential care facilities.

Need for Education

It is well-known that employment in long-term care facilities is a demanding task and efficiency is often prioritized in these settings. It has been shown that staff knowledge directly impacts quality of care and efficiency during care. Yeatts and Cready (2010) investigated the role that knowledge and education play in CNA job performance and the overall effectiveness of training. Researchers administered surveys with items about decision-making in the workplace, effectiveness of information exchange among staff members and satisfaction or commitment. Three hundred and fifty-nine CNAs working in eleven residential care facilities participated in the study. Findings indicated that "CNAs surveyed may not have received substantial training related to the depersonalization of residents, self-esteem, and direct decision-making" (pp. 115). Findings indicated that training for CNAs could be improved by implementing methods for the transference of acquired skills and knowledge to actual care scenarios. The authors found that the necessity for training often changes with the shifting goals of providing direct care to individuals with dementia. Today, training is intended to focus on person-centered outcomes rather than the individual's medical conditions. In Michigan, CNAs in training are required to complete coursework related to hygiene procedures, emergency medical assistance, assistance with activities of daily living, and ambulation/transferring (Michigan Department of Licensing and Regulatory Affairs, 2014). While reviewing course requirements, there was minimal mention of dementia and communication. Dementia was discussed in terms of anatomy and physiology; however, dementia care was not mentioned within the initial curriculum. This suggests that CNAs in Michigan receive certification without direct training in dementia communication. It is

noted by the Michigan Department of Licensing and Regulatory Affairs (2012) that training in dementia communication is often dependent on individual facilities. Studies have shown that CNAs lack knowledge in providing efficient and effective care for individuals with dementia. In addition to the shift from medical-centered care to person-centered care, CNAs are seeking additional information for person-centered care and communication to improve their skills and create an efficient and fulfilling work environment.

A study conducted by Kolanowski, Van Haitsma, Hill, and Yevchak (2015) explored the methods utilized for CNAs obtaining information about the provision of person-centered care to residents diagnosed with a dementia-related disorder. Researchers took personal opinions into account by conducting focus groups comprised of fifty-nine CNAs at two different residential care facilities. Staff members were prompted with questions about their beliefs related to an effective implementation of person-centered care as well as potential barriers that they have encountered when communicating and interacting with individuals diagnosed with a dementia-related disorder. CNAs indicated interest in additional training to ease their workload and improve person-centered care. Time-pressured work patterns were identified as a barrier as well as a lack of knowledge pertaining to effective communication. To overcome these barriers invoked by insufficient knowledge and time-pressured patterns, CNAs requested the implementation of educational programs addressing common behaviors associated with dementia and strategies for time-efficient communication that are scheduled regularly to reinforce previously learned skills.

Types of Education

Previous research has explored CNA education and training formats. Bird, Anderson, MacPherson, and Blair (2016) conducted a systematic review to examine the effectiveness of training methods and areas of care included in CNA training protocols. Findings indicated presentation-based learning and the hands-on approach are considered the main avenues for educating CNA staff for care areas such as hygiene, feeding, transferring, etc. The overall determination of effectiveness is dependent on the target area of care, facility time/resources, and individual staff participation and preference. Bird et al (2016) suggested that clinically realistic training opportunities are provided regularly for the purpose of providing frequent exposure to dynamic strategies in best practice while contextualizing the information for potentially increased generalization of learned strategies. Additionally, CNA positions are known to experience fast turn-over rates and regular training could ensure that all staff members receive information pertaining to best practice in dementia care.

Coleman, Fanning, and Williams (2015) compared the effectiveness of in-person and online training. Findings indicated there is not a significant difference in effectiveness between in-person and online training; however, participants prefer online formats. It is likely that online formats will become more common in future years as technology continues to develop and create a presence in health care for greater staff accessibility. Online training for dementia care provides a viable option as it allows for greater accessibility and is more time- and resource-friendly. Regular training is beneficial and virtual formats can better provide those opportunities than in-person opportunities.

Communication Strategies

As previously mentioned, communication is a necessary and dynamic portion of providing care to individuals with dementia. According to Beer, Hutchinson, and Skala-Cordes (2012), it is important to begin the education process by explaining the cognitive effects associated with dementia and how they impact daily communicative functions. This lays a foundation for the facilitation of communication and methods that do/do not heed desired results. Ellis and Astell (2017) suggests the utilization of techniques termed Adaptive Interaction, which encourage CNAs to observe and imitate the communicative behaviors of individuals that are nonverbal to build a unique repertoire. When forming these relationships and participating in these meaningful interactions, Levy-Storms et al (2011) stresses the importance of discerning equity and perceived favoritism. There is a fine line between effective, personal communication and altering regimented care based on a certain fondness for certain individuals. Therefore, this study emphasizes the importance and implementation of equity by providing strategies applicable to a variety of individuals with dementia (i.e. different stages, characteristics, abilities).

A textbook written by Hoffman and Platt (2000) discusses the progressive nature of dementia-like symptoms and how communication is impacted through this progression. As the interpersonal and cognitive skills of an individual diagnosed with a dementia-related disorder become compromised, it is not only important to recognize progressive characteristics but have an understanding about how to modify communication for optimal interaction and care. Hoffman and Platt (2000) provide various strategies for improved communication such as using simple and repetitive language and relying more heavily on nonverbal or gestural means of communication. However, suggestions are provided while addressing the aging and dementia-

related disorder population as a whole. In an activity as personal as communication, Page, Marshall, Howell, and Rowles (2018) suggest that communicative strategies require personalization for individual residents once a foundation of basic strategies has been solidified. Based on Hoffman and Platt (2000) and of Page et al. (2018), it is apparent that strides forward are being made in best practice for dementia communication. This study seeks to further those strides by laying a foundation for basic skills that facilities have an option to build from for future educational opportunities.

3 METHODOLOGY

Study Design

This study represented an observational study design. Outcomes were measured using questionnaires administered before and after completion the pre-recorded, presentation-based learning. Anticipated problems included recruitment concerns and potential lack of interest from CNAs. Because all materials were administered virtually, there was not a way to fully ensure that all CNAs would actively participate in the intended intervention. Advantages included minimal inclusion and exclusion criteria to reach a wider range of individuals eligible to participate in a comparison between before and after the intended intervention.

Study Site, Subjects, and Population

The site of this study was solely online without the inclusion of in-person interaction between the researchers and participants. Eligible participants in this study were CNAs employed at one of five residential care facilities under one large integrated health system. Facilities were located throughout Michigan with each facility maintaining an average of 75 beds. Units vary among facilities; however, all contain subacute rehabilitation, long-term skilled nursing, and memory care. The target population of this study was CNAs employed at residential care facilities that provide direct care to individuals diagnosed with a dementia-related disorder. Demographic background and levels of previous knowledge were allowed to freely vary. Participants were required to have their CNA licensure and be employed at a residential care facility as a CNA.

Equipment and Instruments

Materials for this study included a pre-recorded, thirty-seven-slide PowerPoint training tool divided into five training modules with an embedded, 5-question activity following each

module (see Appendix A) following each module as well as a pre-questionnaire, immediate post-questionnaire, and follow-up questionnaire that was administered one month following initial participation (see Appendix B). The pre-recorded training tool consisted of information pertaining to manifestations of dementia, biases associated with dementia, general dementia care practices, barriers to effective communication, communication strategies, and quality of life. The platform on which this training tool was presented was determined based on preference of participating facilities. The questionnaire consisted of nineteen items with four addressing perceived purpose and fifteen addressing knowledge of dementia communication. A 5-point Likert scale (1=strongly disagree, 2=somewhat disagree, 3=neutral, 4=somewhat agree, 5=strongly agree) was used to report participant responses for the four items addressing perceived purpose. To measure knowledge of dementia communication, fifteen items were listed with eight statements being correct and 7 incorrect. Participants were expected to indicate which statements they believe to be correct. Demographic information (i.e. years certified, primary shift, age, gender, family member with dementia) was included on the pre-questionnaire as well. The pre-, post-, and post-post-questionnaires were identical with the exception of demographic information included on the pre-questionnaire and one qualitative item included on the post-post-questionnaire asking the participant to reflect on the impact they believe training had on their daily work. Questionnaires were administered via the online software Qualtrics. Equipment required by participants included access to a working computer for the completion of the questionnaires and training modules.

Validity and Reliability

Validity of the training tool and procedures can be addressed in terms of its relevance to common practice in facilitating education in dementia communication. Previous studies have

utilized presentation-based learning to introduce information to employees, specifically CNAs, pertaining to various areas related to care in residential care facilities. Questionnaires utilizing a 5-point Likert scale have proven effective in analyzing pre- and post-intervention comparisons. Reliability of the training tool and procedures can be addressed in terms of heeding consistent results across occasions of administration. The training tool and a version of the questionnaire was presented and administered live to undergraduate students studying Speech-Language Pathology in early 2020. Results indicated success in changing questionnaire results after participating in presentation-based learning about dementia communication. This specific training tool has not been previously used.

Procedure

IRB approval was obtained for the completion of this study. Administrators of facilities were emailed an informative email discussing the premise of the study as well as potential risks and benefits (see Appendix C). This email was then forwarded to CNAs employed at the facilities. An interest survey (see Appendix D) was included for potential participants to complete to indicate their agreement to participate and provide contact information that would be used to administer the materials necessary for the study.

Participants received a link via their email to a pre-questionnaire, post-questionnaire, and pre-recorded set of training modules. Prior to entering the training webpage, participants were instructed to complete a pre-questionnaire. Immediately following the modules, participants were instructed to complete a post-questionnaire. A third questionnaire was administered one month following each participant's initial training session via a link to Qualtrics. Pre-, post-, and post-post-training questionnaires were identical and bundled with a participant-chosen identifier to be used for comparative analysis before and after participation in the pre-recorded modules. After

completing the third questionnaire, participants received a $20.00 gift card to a local business (i.e. Starbucks) provided by approval of the Presidential Grant offered by Grand Valley State University.

4 RESULTS AND DATA ANALYSIS

Techniques of Data Analysis

Due to limited responses, data was analyzed via informal comparison utilizing Microsoft Excel to report findings associated with a single participant and differences observed between questionnaires as opposed to differences between participants across all questionnaires. See "Characteristics of Subjects" and "Limitations" for further explanation of limited responses.

In the event of increased participation, respondent outcomes collected by Qualtrics would be analyzed and stratified comparing demographic information. Demographics would be compared between participants using ordinal logistic regression (OLR) with dimension scores as the outcome measures. Variation would be explained in dimension scores with length of time as CAN (continuous), primary shift (categorical), and unit type (categorical). Bivariate analysis with each dimension score and each predictor variable: length of time as CAN, primary shift, and unit type using t-tests and Chi-Square tests, depending on the nature of the variable (Kusmaul & Sahoo, 2019). Responses would be analyzed to find patterns of improvement before and after participation in training modules using Microsoft Excel and SPSS. The pre- and post-questionnaires would be coded and bundled based on participant email address and their unique chosen identifier. Permission was obtained for the utilization of email addresses for the purpose of bundling the questionnaires. Collected data would be laid out in a Microsoft Excel spreadsheet with demographic information, permission, and items 1-4 of the pre-/post-/post-post-questionnaires to address perceived purpose and items 5-19 to address knowledge of dementia communication. Each row of the spreadsheet would represent a single participant. Cross-tabulations and percentages would be performed on single items for comparative analysis. Scores would then be collapsed into two unique items by factor analysis (items related to perceived

purpose and items related to acquired knowledge) and multi-linear regression technique would be utilized to determine effectiveness of the training tool in terms of each research question (demographic differences, perceived purpose, knowledge of dementia communication) when comparing participants.

Characteristics of Subjects

Questionnaires for data collection and analysis were divided into three sections to correspond with each research question investigated in this study: demographics, perceived purpose, and knowledge of dementia communication. One CNA participated in the study with corresponding data described below.

Demographic profile: The participant was a 38-year-old female who has held a CNA license and been employed for nineteen years. The participant worked second shift in facility units including subacute rehabilitation, long-term skilled nursing, and memory care. The participant reported on the pre-questionnaire that she currently has a relative diagnosed with a dementia-related disorder. This demographic variable may have influenced the participant's scores as they indicate experience with dementia-related disorders outside of their work experience.

Perceived purpose: On each questionnaire, the participant was asked to rank their agreement with statements related to perceived purpose associated with their employment. Statements included: 1) I feel valued at my job, 2) I currently feel confident in my abilities to communicate with residents who have dementia, 3) I have influence on the life of a resident who has dementia, and 4) I am satisfied with my job. Participant responses were consistent for statements one, two, and four across all questionnaires with "somewhat disagree" indicated for the first statement, "strongly agree" for the second, and "neither agree nor disagree" for the

fourth. Participant responses were not consistent for statement three as they indicated “agree” on the pre-questionnaire and “strongly agree” on the post- and post-post-questionnaires.

Knowledge of dementia communication: Fifteen identical statements were included on each questionnaire with the expectation that the participant would indicate which statements were true (see Appendix B). Participant responses were consistent and correct for all posed statements with the exception of “’Can you put your shoes on please’ is an appropriate question to ask when communicating and caring for an individual with dementia.” The participant marked this statement as true on the pre- and post-post-questionnaire, while they indicated false on the post-questionnaire. This statement is considered false.

5 DISCUSSION AND CONCLUSIONS

Discussion of Findings

In response to the rise in the aging population and reported lack of communication, the purpose of this study was to investigate the effectiveness of pre-recorded, presentation-based training on improving CNA perceived purpose and knowledge of dementia communication. Additionally, the responsiveness of one CNA demographic profile (i.e. sex, age, education level, years of certification, current unit, primary shift, relative with a dementia-related disorder) to pre-recorded, lecture-based training for dementia communication was explored in relation to evidence-based strategies for effective dementia communication.

This pre-recorded, presentation-based experience was found to change the participant's perceived purpose in relation to their influence on the life of a resident who has dementia as indicated by a change in responses from "agree" to "strongly agree" between the pre- and post-questionnaires. Additionally, the participant's knowledge of dementia communication subtly changed following this pre-recorded, presentation-based learning experience as indicated by the participant correctly answering a question on the post-questionnaire that she had previously answered incorrectly on the pre-questionnaire. However, this acquired knowledge was not demonstrated during the post-post-questionnaire completed one month after viewing the pre-recorded, presentation-based learning experience. This suggests that pre-recorded, presentation-based learning would potentially be better utilized with regular opportunities for acquiring knowledge (i.e. monthly or yearly seminars) to reduce loss of newly gained knowledge. This notion of regular learning experiences is supported by Yeatts, Cready, Swan, and Shen (2020) who suggested that CNAs desire opportunities to participate in training experiences with

inclusion of components that require them to apply gained knowledge to the actual provision of resident care.

The third research question regarding demographic profiles is unable to be fully explained based on the findings of a single participant.

Application of Practice, Administration, and Education

This study provides insight into pre-recorded training and education. Due to high turnover rates for CNAs in residential care facilities, CNA training and education are increasingly important to ensure all those working alongside those diagnosed with a dementia-related disorder are informed of best practice in communication to facilitate enhanced quality of life for those diagnosed with a dementia-related disorder. The effectiveness of presentation-based learning in terms of CNA perceived purpose and acquired knowledge for related topics were investigated during this study. This virtual platform can allow educational training that is convenient and socially distant to allow optimal opportunities for CNAs to participate in offered experiences. However, potential benefits of interactive educational experiences were not indicated or explored. Future research in the area of educational practices related to dementia communication could explore the potential benefits of interactive experiences. Additionally, further investigation into best practice in dementia communication in general is appropriate as it is an ever-changing field and research area.

Limitations

One limitation of this study was the small geographical rendering of the sample. All facilities utilized for the study were in the west Michigan area due to current resources and accessibility. Facilities were within one company indicating CNAs were relatively similar. This limits this study's applicability to differing geographical regions. Additionally, this study

unexpectedly heeded a single subject due to lack of responsiveness that most likely led to non-statistically significant treatment effect on CNA perceived purpose and acquired knowledge. Implementing this study in another educational setting with greater sample size and wider range of demographic profiles would not only increase statistical power but would also help establish greater generalizability (Beer, 2012).

Another limitation of the study was the training tool. This study utilized a single presentation-based training tool that differs from other education tools for best practice in dementia care (i.e. intentional connections, respect, repeating/redirecting, family involvement); it focuses on evidence-based strategies as well as barriers associated with effective communication between individuals with dementia and CNAs. Due to mandated social distancing as a result of the global pandemic, COVID-19, the training tool was converted to an online format. Providing opportunities for role-playing or hands-on training with patients could have increased CNAs' comfort level and perceived skills addressed in the training tool.

Each limitation (i.e. online platform, small sample size) can be largely attributed to the co-occurrence of this study with the global pandemic known as COVID-19. Orders for social distancing and contact restrictions were increased during March 2020 and currently remain in place. Therefore, in-person training was forbidden at residential care facilities at the time of this study. It is speculated being considered an essential health care worker with increased hours and responsibilities limited individual participant's time and energy to complete this study.

Suggestions for Research and Modification

Due to the limitations previously discussed, research related to the effectiveness of presentation-based learning in educating CNAs about dementia communication would benefit from a larger population pool consisting of a more diverse demographic background and

experience level. A larger population pool would better represent the majority of those employed as CNAs in various facilities and settings working alongside those with a dementia-related disorder. Additionally, future research would potentially benefit from in-person and interactive portions of the educational material that are currently restricted due to COVID-19. According to Coleman, Fanning, and Williams (2015), in-person and interaction learning was deemed effective in increasing CNA knowledge of expected information and skills in their field.

Conclusion

Due to limited responses, little is known about the effectiveness of this pre-recorded, presentation-based learning for CNAs working in residential care facilities. Further research with a greater number of participants is warranted to further understand the impact of pre-recorded, presentation-based learning on CNAs' perceived purpose and knowledge of dementia communication. If found effective, pre-recorded presentation-based learning has the potential for greater utilization with the collaboration of speech-language pathologists (SLPs) and other medical professionals to develop relevant programs.

Douglas and Affoo (2019) suggest that it would be beneficial for SLPs to train and support the utilization of effective communication between CNAs and individuals with a dementia-related disorder. SLPs are considered experts in the field of repairing communication disorders with dementia-related disorders being among relevant diagnoses. For those with a dementia-related disorder and their frequent caregivers, communication may become a specialized task requiring specific strategies and approaches established by SLPs. For this reason, this particular research study promotes itself in the realm of speech-language pathology as it common for SLPs to find themselves in a role tasked with educating CNAs and family members about dementia-related disorders and their direct impact on communication and overall

care. It is anticipated this research will guide SLPs in their approach to education and provision of care to individuals with a dementia-related disorder.

APPENDICES

APPENDIX A: Module Activities

Activity #1: Background and Misconceptions/Biases

1. Dementia can be defined as a progressive decline in…
    a. memory
    b. language
    c. motor skills
    d. all of the above
2. Which of the following characteristics is NOT present in the mild stage of dementia?
    a. Personality changes
    b. Loss of physical capabilities
    c. Assistance with IADLs (Instrumental Activities of Daily Living)
    d. Difficulty problem solving
3. True or false. Biases about dementia have the potential to impact quality of care and communication.
    a. true
    b. false
4. True or false. Dementia is not a natural part of aging.
    a. true
    b. false
5. True or false. It is important to correct someone with dementia when they are wrong.
    a. true
    b. false

Activity #2: General Care Practices

1. True or false. Being right is always right.
    a. true
    b. false
2. The method of establishing connection and protection includes making a connection…
    a. visually
    b. verbally
    c. individually
    d. all of the above
3. Shouting or pushing is a specific example of which trigger response?
    a. fright
    b. fight
    c. flight
    d. all of the above
4. All of the following are appropriate "I'm sorry" statements EXCEPT…
    a. I'm sorry. I was trying to help.
    b. I'm sorry that happened.
    c. I'm sorry, but you are wrong.

d. I'm sorry I made a mistake. Let me see what I can do to help.

5. Which statement about the foot space rule is INCORRECT?
    a. touching is considered intimate space
    b. 6 feet should be utilized for one-on-one conversation
    c. 3 feet is considered personal space
    d. 6 feet is considered public space

Activity #3: Barriers

1. All of the following are environmental barriers associated with dementia communication EXCEPT…
    a. Distant seating arrangement
    b. Several side conversations occurring nearby
    c. Basic care as the ultimate priority
    d. All of the above could be environmental barriers
2. Allowing a resident with dementia to make small decisions, such as meals and clothing option, is representative of viewing them as a(n)
    a. commodity
    b. autonomous person
    c. fictive kin
    d. none of the above
3. Circumlocutionary statements for a hairbrush might include
    a. "It has a handle"
    b. "I use it with my hair"
    c. "It is hard and plastic"
    d. All of the above
4. All of the following are considered an individual barrier to communication EXCEPT…
    a. Background noise
    b. Use of vague terms
    c. Circumlocutionary tendencies
    d. Limited listening/reading comprehension skills
5. True or false. Individual and environmental barriers should both be considered when facilitating communication with an individual who has dementia.
    a. True
    b. False

Activity #4: Effective Communication Strategies

1. According to a study done by Perry et al in 2005, which is a classification of communication commonly utilized with those who have dementia
    a. Assisting – asking about the provision of physical support
    b. Validating – acknowledging expressed/inferred feelings
    c. Discourse markers – social/generational expectations
    d. Clarifying – ensuring understanding
2. True or false. Empathy and validation are inappropriate approaches when an individual who has dementia is struggling to express their thoughts.
    a. True

b. False

3. All of the following should be taken into account when considering the volume of communication EXCEPT…
    a. Eliminating distractions
    b. Hearing loss is not directly linked to dementia
    c. Using a clear and normal tone
    d. Using a raised voice to ensure comprehension
4. Which is NOT an "R" utilized in averting a resident's attention?
    a. repeat
    b. redirect
    c. retain
    d. respond
5. True or false. When responding and interacting with someone who has dementia, sometimes less words or more meaningful.
    a. True
    b. False

Activity #5: Quality of Life and Family Involvement

1. Which of the following is considered when setting goals for an individual who has dementia?
    a. The number of other residents at the facility
    b. The individual's eye color
    c. The management of resident, staff, and family stress
    d. None of the above should be considered when setting goals
2. True or false. Once goals are set for an individual who has dementia, they are unlikely to change for the rest of their life.
    a. True
    b. False
3. Which of the following is an example of a simple and comforting activity for someone who has dementia?
    a. Word or jigsaw puzzles
    b. Coloring or drawing
    c. Past hobbies
    d. All of the above are generally appropriate
4. True or false. Encouraging family involvement can minimize family frustration, confusion, and/or embarrassment.
    a. True
    b. False
5. True or false. CNAs are active participants in providing insight into goals and ensuring that the integrity of the goals is maintained.
    a. True
    b. False

APPENDIX B: Questionnaires

LET'S TALK ABOUT DEMENTIA

pre-questionnaire

Please circle one option for each of the following questions:

Sex: Male Female Prefer to not say

How many years have you been a CNA? _____ **Unit:_____**

Primary Shift: 1st. 2nd. 3rd.

Age: Drop down box on software (18 to 63+)

Do you have a relative with dementia? Yes No

Chosen Identifier: _____

I give permission to have this questionnaire used for the study. Yes No

(this item will be presented address on the interest survey)

Please select the option that most closely represents your desired response for each of the following statements.

1 = Strongly Disagree 2 = Somewhat Disagree 3 = Neutral

4 = Somewhat Agree 5 = Strongly Agree

1. _____ I feel valued at my job.
2. _____ I currently feel confident in my abilities to communicate with residents who have dementia.
3. _____ I have an influence on the life of a resident with a who has dementia.
4. _____ I am satisfied with my job.

Please select the true statement(s) about dementia care and communication from the list below.

____ Subtle or obvious changes in personality are seen in the mild and/or moderate stages of dementia.

____ Dementia is not a natural part of aging.

____ Building a verbal connection with an individual with dementia means greeting them and using their preferred name prior to starting the conversation.

____ Avoid asking questions related to the resident's past/current hobbies and/or

childhood memories.

____ Listening and reading comprehension skills potentially decline as dementia progresses and can pose as a barrier for an individual with dementia attempting to communicate.

____ It is important to only participate in caregiver-led conversations related to direct care as anything else may confuse the individual with dementia.

____ "Can you put your shoes on please?" is an appropriate question to ask when communicating and caring for an individual with dementia.

____ Using a clear tone at a conversational level is most appropriate when communicating with an individual with dementia.

____ Dynamic goal setting is an effective way to ensure that care is meaningful and appropriate for an individual with dementia.

____ It is better to involve families as little as possible in care to relieve their frustration, confusion, and embarrassment.

____ It is important to correct someone with dementia when they are wrong.

____ The implementation of appropriate communication strategies is a collaborative effort between CNAs, nurses, speech-language pathologists, and many more professional working at a residential care facility.

____ It is best practice to complete tasks for resident with dementia rather than cuing them to do it themselves.

____ Biases and misconceptions have the potential to negatively impact care and communication between residents and staff members within residential care facilities.

____ Dementia is typically a sudden decline in skills such as memory.

LET'S TALK ABOUT DEMENTIA

post-questionnaire

Chosen Identifier: _____

Please select the option that most closely represents your desired response for each of the following statements.

1 = Strongly Disagree 2 = Somewhat Disagree 3 = Neutral

4 = Somewhat Agree 5 = Strongly Agree

1. _____ I feel valued at my job.
2. _____ I currently feel confident in my abilities to communicate with residents with a dementia-related disorder.
3. _____ I have an influence on the life of a resident with a dementia-related disorder.
4. _____ I am satisfied with my job.

Please select the true statement(s) about dementia care and communication from the list below.

____ Subtle or obvious changes in personality are seen in the mild and/or moderate stages of dementia.

____ Dementia is not a natural part of aging.

____ Building a verbal connection with an individual with dementia means greeting them and using their preferred name prior to starting the conversation.

____ Avoid asking questions related to the resident's past/current hobbies and/or childhood memories.

____ Listening and reading comprehension skills potentially decline as dementia progresses and can pose as a barrier for an individual with dementia attempting to communicate.

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____ Biases and misconceptions have the potential to negatively impact care and communication between residents and staff members within residential care facilities.

____ Dementia is typically a sudden decline in skills such as memory.

LET'S TALK ABOUT DEMENTIA

post-post-questionnaire

Chosen Identifier: _____

Please select the option that most closely represents your desired response for each of the following statements.

1 = Strongly Disagree 2 = Somewhat Disagree 3 = Neutral

4 = Somewhat Agree 5 = Strongly Agree

1. _____ I feel valued at my job.
2. _____ I currently feel confident in my abilities to communicate with residents with a dementia-related disorder.
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____ It is best practice to complete tasks for resident with dementia rather than cuing them to do it themselves.

____ Biases and misconceptions have the potential to negatively impact care and communication between residents and staff members within residential care facilities.

____ Dementia is typically a sudden decline in skills such as memory.

How do you feel the information from the training modules has impacted your daily work?

APPENDIX C: Informative Email Documents

IRB information sheet:
TITLE: Best Practice in Dementia Communication: Determining the effectiveness of presentation-based learning in residential care facilities

RESEARCHERS: Dr. Laura E. Lenkey & Mary Kate Hoeve

PURPOSE: The purpose of this study is to improve knowledge of the importance of communication exchange between caregivers and individuals with dementia-related disorders. A group of CNAs employed at residential care facilities was selected to participate in this study. The effectiveness of educating CNAs on best practice in dementia communication will be measured by pre- and post-surveys completed by the CNAs. The assessment of this program could reveal information about dementia-related disorders that society may have been unaware of. The success of this study could provide benefits to direct care workers about individuals with dementia-related disorders, including best practice in communicating with adults with diagnoses of dementia-related disorders if the presentation is working as intended, and provide direct care workers with information from the research team on their perspectives of dementia-related disorders.

PROCEDURES: The main activity for the knowledge improvement study is going to be a virtual presentation administered asynchronously on the virtual forum preferred by the identified residential care facility. Virtual pre- and post-surveys will be administered before and after the asynchronous presentation for all participants. Individuals will indicate their desire to participate in the study on an interest survey that will be administered prior to distribution of materials. The data will only be obtained and considered if the individuals voluntarily request via the interest survey to participate.

RISKS: Virtual pre- and post-surveys will be administered with minimal personal information obtained (i.e. email address).

POTENTIAL BENEFITS TO YOU: There is no direct benefit to participating in this study other than the anticipated gain of knowledge and improved perception of purpose obtained from participation in the intended presentation-based learning experience.

POTENTIAL BENEFITS TO SOCIETY: The anticipated benefit to the study will be to gain further knowledge about individuals with dementia-related disorders, and dementia in general.

VOLUNTARY PARTICIPATION: Your participation in this study is completely voluntary. You do not have to participate. There is an interest survey to indicate desire to participate in the study.

PRIVACY AND CONFIDENTIALITY: Email address will be the only identifiable information obtained during this study. Upon the completion of this study, all identifiable information will be deleted.

AGREEMENT TO PARTICIPATE: By filling out the interest survey, you are agreeing to the following:

- The detailed of this research study have been explained to me, including what I am being asked to do and the anticipated risks and benefits;
- I have had an opportunity to have my questions answered;
- I am voluntarily agreeing to participate in the study as described on this form;
- I may ask more questions or opt to withdraw from participating without penalty;
- I give my consent to participate in this study.

CONTACT INFORMATION: If you have any questions about the study you may contact:

NAME: Mary Kate Hoeve
E-MAIL: hoevem@mail.gvsu.edu

If you have any questions about your rights as a research participant, please contact the Office of Research Compliance & Integrity at Grand Valley State University, 1 Campus Drive, Allendale, MI. Phone: 616-331-3179. E-mail: rci@gvsu.edu.

This study has been reviewed by the Institutional Review Board at Grand Valley State University (Protocol #21-023-H).

Additional information sheet at the request of facility:

Grand Valley State University
Communication Sciences and Disorders

Grand Valley State University

Volunteers Needed for Research Study on Dementia Care & Communication

This study will be conducted by a graduate student studying Speech-Language Pathology to better understand the impact of presentation-based learning opportunities about dementia care and communication for CNAs employed at residential care facilities.

Qualifications for Participation:

To participate in this study, you must maintain current CNA licensure and employment at a residential care facility.

Participant Involvement:

Individuals are expected to complete 4 tasks:

1 pre-questionnaire	**5-10** minutes
5 pre-recorded modules (with brief, corresponding activities)	10-15 minutes/module **75** minutes total
1 post-questionnaire (directly following the modules)	**5-10** minutes
1 post-post-questionnaire (one month following the modules)	**5-10** minutes

Potential Benefits:

It is intended that participants will become better equipped with strategies and practices for effective and efficient dementia care and communication.
Individuals will also receive a $20 gift card to Starbucks for their participation in this study with thanks to GVSU's Presidential Grant.

Location:

To align with current social distancing recommendations, participation will fully take place online. There will not be any "in-person" or "hands-on" portions of this study.

FOR MORE INFORMATION: Please contact Mary Kate Hoeve (student researcher) via email at hoevem@mail.gvsu.edu

APPENDIX D: Interest Survey

By filling out the interest survey, you are agreeing to the following:

- The detailed of this research study have been explained to me, including what I am being asked to do and the anticipated risks and benefits;
- I have had an opportunity to have my questions answered;
- I am voluntarily agreeing to participate in the study as described on this form;
- I may ask more questions or opt to withdraw from participating without penalty;
- I give my consent to participate in this study.

____ Yes, I am interested in participating in this study.

____ No, I am not interested in participating in this study.

If you have indicated "yes" for the above question, please enter your email address to receive the questionnaires and modules necessary to complete this study. Note: email address will not be linked to questionnaires.

Email address: _____

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