



Western Michigan University
ScholarWorks at WMU

Masters Theses

Graduate College

8-2021

A Preliminary Evaluation of the Behavioral Gerontology Staff Training Protocols

Minyoung Kim

Western Michigan University, minyoungkim.0214@gmail.com

Follow this and additional works at: https://scholarworks.wmich.edu/masters_theses



Part of the Geriatrics Commons, and the Telemedicine Commons

Recommended Citation

Kim, Minyoung, "A Preliminary Evaluation of the Behavioral Gerontology Staff Training Protocols" (2021).
Masters Theses. 5230.

https://scholarworks.wmich.edu/masters_theses/5230

This Masters Thesis-Open Access is brought to you for free and open access by the Graduate College at ScholarWorks at WMU. It has been accepted for inclusion in Masters Theses by an authorized administrator of ScholarWorks at WMU. For more information, please contact wmu-scholarworks@wmich.edu.



A PRELIMINARY EVALUATION OF THE BEHAVIORAL GERONTOLOGY STAFF
TRAINING PROTOCOLS

by

Minyoung Kim

A thesis submitted to the Graduate College
in partial fulfillment of the requirements
for the degree of Master of Arts
Psychology
Western Michigan University
August 2021

Thesis Committee:

Jonathan C. Baker, Ph. D., Chair
Jessica E. Van Stratton, Ph. D.
Stephanie M. Peterson, Ph. D.

A PRELIMINARY EVALUATION OF THE BEHAVIORAL GERONTOLOGY STAFF TRAINING PROTOCOLS

Minyoung Kim, M.A.

Western Michigan University, 2021

Staff training in aging settings is integral to ensuring quality services, and such training has traditionally been conducted in person. With the COVID-19 outbreak, there is a need for innovative approaches to training that reduce exposure for trainers and staff. However, the efficacy of such an approach has not yet been demonstrated. To prevent the waste of staff resources at long-term care facilities, this study evaluates the efficacy of behavioral gerontology staff training protocols as a form of telehealth by utilizing graduate and undergraduate students as pilot participants. We use an additive concurrent multiple-probe design across participants to evaluate the efficacy of staff training protocols on two different skills, offering choices and promoting independence, via videoconferencing. The results show that two of three participants were able to meet the mastery criterion on both skills. For both skills, one of the participants required a rehearsal and feedback training component, and another participant required a video self-monitoring and feedback training component. The third participant achieved three consecutive scores of 100% correct performance on choices in the baseline, but did not reach the mastery criterion for promoting independence.

Copyright by
Minyoung Kim
2021

ACKNOWLEDGEMENTS

Foremost, I would like to express my sincerest appreciation and gratitude to my academic advisor Dr. Jonathan Baker. Without his incredible support, guidance, advice, and mentoring, I would have not been able to get through tough moments in the past years. Especially after we had to change my thesis project completely due to pandemic, without your advice and support, I would not be able to accomplish this thesis.

I would also like to express my deepest appreciation to Dr. Stephanie Peterson and Dr. Jessica Van Stratton who were the thesis committee members. Their encouragements, insightful feedback, and advice throughout my proposal and defense led me to this successful achievement. I especially would like to thank Dr. Jessica Van Stratton for helping me during the recruitment process.

Also, I would like to express sincere acknowledgement and appreciation to the research assistant, Laurel Blakie, for assisting me throughout the whole process of my thesis sessions from the very beginning to the end of all data collections. Her help was one of the crucial portions for the completion of my thesis. Moreover, I would like to express sincere thank Amy Shaw, Mary Trimble, Victoria Risinger, for their assistance with some IOA data collection.

Lastly, I would like to express a huge thank to my husband, Jung Moon, and my family for their tremendous support and love throughout this whole process.

Minyoung Kim

TABLE OF CONTENTS

ACKNOWLEDGMENTS	ii
LIST OF FIGURES	v
INTRODUCTION	1
Grant-Funded Research in Long-Term Care Facilities	1
Impact of COVID-19 on Aging Facilities	3
Videoconferencing in Coaching and Training	4
Purpose of Current Study	7
METHOD	7
Participants	7
Setting and Materials	8
Dependent Variables	9
Interobserver Agreement	9
Experimental Design and Mastery Criteria	10
Procedures	10
Initial Meeting	10
Choices and Promoting Independence Training	12
Procedural Integrity	15
RESULTS	15
Participant A	15
Participant B	17

Table of Contents – Continued

Participant C.....	17
DISCUSSION.....	18
Different Training Sets with Participant C	20
Limitations.....	20
FUTURE RESEARCH.....	22
REFERENCES	23
APPENDICES	
A. Choices Training Module.....	25
B. Promoting Independence Training Module	49
C. Script and Scenario for Initial Meeting and Performance Evaluations.....	76
D. Participant Version Performance Evaluation Scenarios	80
E. Procedural Integrity Forms	83
F. HSIRB Approval Form	90

LIST OF FIGURES

1. The percentage of correct response on choices and promoting independence trainings
for Participants A and B16
2. The percentage of correct response on choices and promoting independence trainings
for Participant C17

Introduction

For individuals residing at aging facilities, an important factor supporting quality of life is good interactions with staff (Paudel et al., 2019). However, many residents in aging facilities have difficulties expressing their needs due to their cognitive impairments. These difficulties, along with changes in psychosocial factors such as health, environment, and personality, can lead to challenging interactions with staff and the manifestation of challenging behaviors such as resisting care (Paudel et al., 2019). In turn, this could lead to a decrease in residents' quality of life at aging facilities (Paudel et al., 2019) and result in challenges for activities of daily living. Therefore, it is prudent for researchers and clinicians to focus their efforts on improving interactions between staff and residents (Paudel et al., 2019). Recently, researchers began to evaluate approaches that were introduced in the behavioral gerontology literature over the past three decades through long-term, grant-funded research.

Grant-Funded Research in Long-Term Care Facilities

From 2016 to 2019, Dr. Janet Hahn and Dr. Jonathan Baker were principal investigators on a grant-funded study focused on behavioral services in long-term care facilities in southwest Michigan (Hahn et al., 2019). The behavioral services included reducing challenging behaviors such as spitting during mealtime, disruptive vocalizations during bath care, physical and verbal aggression during care, and taking other residents' meals and napkins (Hahn et al., 2019). Hahn et al. (2019) identified challenging behaviors and focused on not only reducing them but also increasing functional behaviors such as asking for preferred food and drink. Throughout the observations, Hahn et al. identified that there were some obstacles that staff encountered. Hahn

et al. also reported that most staff had busy schedules during their shifts due to their primary job responsibilities, which included documenting necessary records, taking care of meals, assisting with toilet care, changing clothes, assisting with ambulation, organizing and cleaning environments, and assisting residents with participation in activities. Due to these job responsibilities, opportunities for staff to have quality interactions with residents were negatively impacted.

Another set of obstacles was staff learning history and training. It appeared that some staff did not know the methods to properly approach residents during social interactions and care provision. Hahn et al. (2019) noted that overall, staff had little training and had “great variation in the duration and quality of training related to NCD” (p. 46). Some staff also reported that they had few resources, and these staff desired additional training (Hahn et al., p. 46).

Over the course of the grant, Hahn et al. (2019) found that trainings on four key skills reliably enhanced staff interactions with residents. These four trainings focused on reinforcing appropriate behavior, promoting independence, communicating strategies, and providing choice making opportunities. The four training modules included choices; prompting; reinforcing behavior; and Face to face, Orient, Continuity, Unsticking, Structured, Exchange, and Direct (FOCUSED). This study assessed and evaluated the choices and prompting modules. Choices training consisted of how to provide options to older adults with neurocognitive impairments (see Appendix A). Prompting training consisted of how to promote independence by providing least to most prompting (see Appendix B).

As a component of the grant, these four trainings were manualized and Hahn et al. (2019) created videos to augment the trainings such that they could deliver the trainings at other nursing homes. The goals of these trainings were to promote the older adults’ dignity, quality of life,

independence, and quality of interaction with staff; to reduce stressors for both staff and the older adults; and to reduce potentially unnecessary care time.

Impact of COVID-19 on Aging Facilities

During the early part of 2020, the COVID-19 pandemic forced the majority of aging facilities to lock down. The Occupational Safety and Health Administration (2020) created *COVID-19 guidance for nursing home and long-term care facility workers*, which stressed alternative meeting methods for in-person activities such as staff meetings, resident activities, and visits from friends and family. The Centers for Medicare and Medicaid Services (2020) reported that, even with only 54.10% of nursing homes participating in a nationwide survey, the total number of nursing home staff COVID cases was 34,442 and total number of staff deaths was 449. Existing staffing shortages in some aging facilities were further exacerbated by high numbers of staff deaths due to COVID-19 in understaffed aging facilities (Whoriskey et al., 2020). Additionally, facilities continued to have challenging staff and resident interactions, creating even further needs for training and support. These circumstances created an opportunity to evaluate the utility of the trainings created by Hahn et al. (2019) using telehealth. Puskin et al. (2006) defined telehealth as the provision of clinical services to individuals through electronic technology. Given the added stressors at aging facilities during this pandemic, noted above, it became important to evaluate the efficacy of the videos before limited staff time and resources were devoted to using them. One approach that has been demonstrated in the literature to evaluate the efficacy of training modules prior to distributing them to clinical populations is to utilize college students as pilot participants.

Videoconferencing in Coaching and Training

Several studies have used telehealth coaching to provide behavior modification services and have supported the effectiveness of a videoconferencing modality in coaching and training new skills. Machalicek et al. (2009a) employed videoconferencing sessions to teach three graduate students to implement paired choice preference assessments, even though the students had no previous experience. Prior to the preference assessment and videoconferencing coaching sessions, the graduate students were given written task analyses, lists of items to be used, the sequence of the item pairs, and a practice opportunity with child participants with developmental delays. After the practice, three doctoral students with experience in research and working with children with autism and developmental disabilities provided feedback to the graduate students via videoconferencing. The videoconferencing was set up with computers, cameras, and wireless headsets. The doctoral students monitored the processes and collected data from a university office while the graduate students were in a private school classroom with the children. Each graduate student was assigned to a different child participant. The graduate students wore headsets and could hear immediate feedback from the doctoral students in real time. During sessions, the doctoral students provided immediate feedback when the graduate students correctly or incorrectly implemented task analyses on paired choice preference assessments with the child participants. The doctoral students collected procedural integrity on the graduate students' performances during the sessions. All graduate students obtained 100% correct performance on implementing all procedures without any errors during sessions. As such, corrective feedback was never delivered, and only positive feedback was delivered throughout the sessions to all graduate students. After the assessment sessions were completed, the graduate

students and the doctoral students noted that implementing the assessment while utilizing the technology was simple and effective.

Machalicek et al. (2009b) conducted additional research with two graduate students who did not have previous experience implementing functional analysis. The two students worked with two children with moderate intellectual disabilities, with real-time supervision through videoconferencing. Doctoral students coached the graduate students and provided immediate feedback throughout sessions in real time. All sessions were conducted at a school for children with autism. Unlike Machalicek et al. (2009a), the doctoral students in this study were located in the same facility as the graduate students to prevent any unforeseen accidents. The graduate students received both audio and visual feedback delivered through the computer. An intervention was developed based on the results of the functional analysis to examine the accuracy of the results, and it was found that the intervention successfully decreased challenging behaviors and increased academic engagement in the children. These results supported the successful completion of functional analysis with supervision via a videoconferencing modality.

The two studies above showed successful cases of implementing certain protocols via videoconferencing. More recently, Sump et al. (2018) sought to more carefully evaluate the effectiveness of telehealth using students. Sump et al. (2018) compared telehealth and in-person training for new therapists in implementing discrete trial training (DTT). Seven undergraduate students participated in the study, six of whom did not have any experience in applied behavior analysis. The researchers taught the undergraduate students four DDT skills: instructional context, antecedent instructional strategies, multiple stimulus without replacement (MSWO) preference assessment, and consequences for accurate and inaccurate student responses. The researchers divided the students into two groups. Group One included in-person training for

“antecedents and MSWO” and telehealth training for “instructional contexts and consequences,” while Group Two received in-person training for “instructional contexts and consequences” and telehealth training for “antecedents and MSWO” (Sump et al., 2018). All of the students received both in-person and telehealth trainings. During the baseline, the researchers provided task analyses but did not provide any feedback. There was a mock student who performed as a child to assist with the sessions. During the baseline, all participants had low performance accuracy for all of the four target skills, ranging from 0% to 60%. However, all of the seven participants met the criterion of at least 90% accurate performance after the training phase, regardless of the modalities of the trainings. The researchers also conducted a maintenance phase after one week, two weeks, and one month, followed by a post-training phase. In the maintenance phase, four participants still had high accuracy in their performance, ranging from 90% to 100%, regardless of whether the trainings were conducted via telehealth or in-person. These results of high accuracy supported the argument that training via telehealth was as effective as in-person training.

One additional challenge for telehealth training presented itself when the skill required a role play partner. However, Rios et al. (2020) evaluated the use of a simulated role play partner. Rios et al. trained their simulated role play partner to respond to the participant as if they were in the same room. For example, when the participant needed to provide a physical prompt, they would reach toward the screen. The simulated role play partner would then respond as if their arm were being guided. Rios et al. demonstrated that all of the 10 participants met the mastery criterion in one or more functional analysis conditions out of four during the baseline. During the “Remote Behavior Skills Training” phase, all of the participants met the mastery criteria for the rest of the functional analysis conditions. During the post-training probe phase, eight participants

maintained their performance levels for all four conditions. During an in situ probe phase with the actual clients from their caseloads, nine participants met the mastery criteria, which supported the successful generalization of these results from a simulated client to actual clients.

Purpose of Current Study

The four studies above supported that training students via telehealth gives researchers opportunities to assess the effectiveness of the trainings and to modify and enhance the training modules without recruiting staff from nursing homes. Further, Rios et al. (2020) demonstrated that trainings requiring a role play partner could still be done in a telehealth modality. Prior to early 2020, all studies published in behavioral gerontology and conducted with staff included an in-person training component. The purpose of the current study, therefore, is to extend a telehealth training approach to evaluate the efficacy of trainings designed to improve basic interactions with older adults, utilizing graduate and undergraduate students as pilot participants.

Method

Participants

All participants were students in the psychology department at Western Michigan University. Within the department, there are graduate training programs in industrial/organizational behavior management and behavior analysis and the undergraduate program includes both a general psychology major and a behavioral science major. Both undergraduate and graduate students may or may not experience these trainings in their practicums. Two of the participants were in graduate programs, and one was in the undergraduate program. Participant A was an undergraduate student. She reported that she had little experience around older adults, nursing homes, or senior service facilities. She did not report whether she had had any prior training on how to offer options or in providing assistance

using least to most prompting to older adults. Participant B was a doctoral student. She had practicum experience working with staff at a senior service center. Previously, she had not had any training on how to offer options or in providing assistance using least to most prompting to older adults. Participant C was a master's student. Her experience with aging facilities was through visiting a family member in a nursing home. She reported that she had a few years of work experience at a behavior service center, and she reported using prompting at work.

During this study, the participants received choices and/or promoting independence training, depending on their performances during the initial meeting session. If they tested out by achieving 100% correct performance in three consecutive meeting sessions, the corresponding skill would not require training. If the participants did not meet this criterion, training for the corresponding skill was deemed necessary.

Setting and Materials

All sessions were conducted and video recorded via Cisco Webex Meetings videoconferencing software. All participants and researchers were in a room with minimal distractions and no other individuals present, so as to prevent training interferences and confidentiality breaches. Each participant had a computer so that she could use a web camera for videoconferencing. A microphone that could be connected to the computer was required, and the Cisco Webex Meetings software needed to be downloaded and set up prior to the initial meeting. Researchers would assist participants in setting up the software if needed. The participants could put their computer anywhere that was stable, and they could sit anywhere, so long as their upper body and arms could appear in the camera. The participants and researchers ensured that the camera was set at an appropriate angle throughout the whole training procedure. Except for

certain situations, such as researchers' interactions with simulated role play partners during trainings, all participants and researchers ensured that they were not muted.

Dependent Variables

The dependent variable was the percentage of correct responses on the target skill, which was calculated by the number of correct responses on each step divided by the total number of possible opportunities, multiplied by 100. The observers utilized datasheets (see Appendices A and B), which were labeled as procedural integrity datasheets in the original training manual (Hahn et al., 2019). For each skill, a response was recorded as "+" if a correct response occurred. Incorrect responses were recorded as "-." There was also a notes section where the observers could make comments. The researchers collected data afterwards by watching recorded performances of both trainings.

Interobserver Agreement

A secondary observer collected data by watching performance videos for all training modules using the same method and datasheets as the primary observer. The lead researcher provided all of the necessary materials by sharing a OneDrive folder with the secondary observer and calculating interobserver agreement by dividing the number of agreements plus the number of disagreements by the number of agreements times 100. The total average of interobserver agreement across all sessions with all three participants was 95.85% on average with a minimum of 20% and a maximum of 100%. However, the interobserver agreement in participant A's first probe during choices baseline and in participant B's first two probes during both choices and promoting independence baselines and during the promoting independence's post-session in task analysis condition was 66.79% on average with a minimum of 20% and a maximum of 85.71%.

After additional trainings with the secondary observer, the interobserver agreement became 100% across the rest of the sessions with all participants.

Experimental Design and Mastery Criteria

To evaluate the efficacy of the choices and promoting independence trainings to improve basic interactions with older adults at aging facilities, this study used an additive concurrent multiple-probe design across participants. All procedures were based on the mastery criterion achievement for each participant. When a participant met 100% correct performance over two consecutive sessions, training would be terminated. If participants met the mastery criterion before intervention, there would be another probe to evaluate their performances. If the participants achieved one more 100% performance (i.e., three consecutive 100% correct performances), then they would not require any intervention.

Procedures

Initial Meeting

There was a research assistant who acted as a simulated role play partner throughout all performance evaluations for all three participants. She was also a student in the Psychology department at Western Michigan University. The research assistant had previous experience with being a simulated role play partner at her practicum site. For this study, the researchers trained her with pre-determined scenarios for both choices and promoting independence skills.

The lead researcher provided a scenario to each participant to probe her skills of providing choices and in least to most prompting. During the initial meeting, the lead researcher did not answer any questions except those regarding the clarification of the scenario to be able to measure the participants' initial skill levels correctly. There were two sets of predetermined scenarios for each skill and one additional choices scenario, which were based on the original

training manuals (see Appendix C). The structure of the performance evaluation remained the same for all pre- and post-session performance evaluations throughout this study. For the performance evaluations, the lead researcher asked the participants to read one of two sets of participant version scenarios, except for the choices scenario 3 (see Appendix D). The choices scenario 3 was used only for Participant C because she achieved two consecutive 100% correct performances during the baseline. For instance, choices scenario 1 was the following: “Ms. A is an older adult with neurocognitive impairment such as Alzheimer’s disease who is able to communicate by talking. You’ve seen her engage with card games, sorting towels, and coloring. She does not enjoy word search. It is now time for an activity, and you want to offer options to her. Please demonstrate with the simulated role play partner how you would offer the choices.” Promoting independence scenario 1 was the following: “Mr. A is an older adult with neurocognitive impairment such as Alzheimer’s disease who was having lunch. He has arthritis in the left hand, which is not his dominant side. He was trying to drink his hot coffee, but he was having trouble holding the mug. The following are the small steps to drink. 1. Grab the handle of the mug with three or four fingers. 2. Place the thumb on top of the handle to secure the mug on your hand. 3. Gently move the mug towards your lips. 4. Take a sip. Please demonstrate with the simulated role play partner how you would assist.”

After reading the scenario, the participants demonstrated what they would do with the simulated role play partner, and when the participants were done performing, they would let the researchers know. While the participants performed what they would do for the scenario, the lead researcher collected data.

Based on the performance evaluation on each skill, the lead researcher determined whether to implement an intervention. The following rule was implemented for every

performance evaluation except for the performance evaluation that came after the last training component: if a performance evaluation resulted in 100%, then the researchers did one more probe in the following meeting session, and if a performance was lower than 100%, the participant would receive intervention in the following meeting session.

Choices and Promoting Independence Training

After the initial meeting, similar to Sump et al. (2018), there were pre- and post-session performance evaluations in between experimental components. The experimental conditions were task analysis, training video, rehearsal and feedback, and video self-monitoring and feedback. The lead researcher asked the participants to read one of the scenarios for the performance evaluation and to perform when they were ready. For the choices training, when the participants presented options to the simulated role play partner (a mock older adult), the role play partner made a selection, either verbally or by pointing. If the participants followed through on the selection, the simulated role play partner pretended to manipulate the item. If the participants did not follow through on the selection, the simulated role play partner did not respond. For the promoting independence training, when the participants provided assistance to the simulated role play partner based on the scenario, the simulated role play partner responded at the level of assistance as indicated on a script which had been provided to them (see Appendix C). To be able to watch performance videos and collect data afterwards, the lead researcher confirmed the camera angle in the beginning of every meeting session. Three-way videoconferencing occurred for every performance evaluation: one researcher conducted and video recorded the meeting sessions, a research assistant acted as a simulated role play partner, and the participants were the third parties.

During the task analysis condition, if the pre-session performance evaluation was less than 100% correct, the lead researcher provided a task analysis to the participants. The participants had around 10 minutes to read the task analysis. When the participants said that they had finished reading it, they were then asked to read a scenario to prepare for a post-session performance evaluation, which was procedurally the same as described above, and the lead researcher collected data after the meeting session.

During the training video condition, following a pre-session performance evaluation below 100% correct, the lead researcher provided an intervention. The lead researcher screen-shared the training video on Cisco Webex Meetings and monitored the participant's eye movements while watching the video. From the video, the participant received verbal and written instructions and modeling. When the video was finished, the researcher asked if the participants were ready for the post-session performance evaluation. It was important that the lead researcher did not answer any questions related to the training at this time. The post-session performance evaluation was procedurally the same as described above.

During the rehearsal and feedback condition, following a pre-session performance evaluation below 100% correct, the lead researcher provided rehearsal opportunities to the participants, utilizing the same scenarios and the same structure that were used in all previous performance evaluations. During the rehearsals, the participants role played with the lead researcher, who acted as the older adults in the predetermined scenarios. For the choices scenarios, the participants presented the lead researcher with options from which to choose. For the promoting independence scenarios, the participants provided assistance to the lead researcher based on the scenarios. At the end of each rehearsal, the lead researcher provided positive and corrective feedback. For example, the lead researcher would say, "That was a perfect modeling;

you demonstrated how to color on the paper by moving your pen like that” as a positive feedback. As a corrective feedback, the lead researcher would say, for instance, “You did verbal and partial physical, but skipped gestural and modeling in between. There is a sequence; verbal by saying out loud, gestural by pointing, modeling by demonstrating, and then partial physical by gently touching and guiding their elbow towards the object.” During the rehearsal and feedback component, the lead researcher was allowed to answer any questions. When the participant was ready, there was a post-session performance evaluation. The researcher could have one week prior to the fourth meeting session to review all performance videos and prepare concise positive and corrective feedback on each video.

During the video self-monitoring and feedback condition, following a pre-session performance evaluation below 100% correct, the lead researcher provided the intervention. The lead researcher sent the corresponding datasheet for the skill that required the video self-monitoring and feedback component to the participant via e-mail following the pre-session performance evaluation. The lead researcher explained how to collect data by scoring “+” for correct responses and “-” for incorrect responses, using the datasheet. The researcher screen-shared the performance videos one at a time. The participants self-monitored their performance by scoring on the datasheet. After the participants completed the data collection, the datasheet completed by the lead researcher was compared with the datasheet completed by the participants. The participants were instructed to verbalize whether they scored correctly or incorrectly for each response listed on the datasheet. When there was a discrepancy in data between the researcher and the participants, the researcher asked the participants for their rationale of their scoring. During the discussion, they re-watched the videos, and the researcher would pause at the moments where they disagreed and explain what the participants performed and what they

should have performed. The researcher provided positive and corrective feedback while they compared the data, similar to the rehearsal and feedback component. There was a post-session performance evaluation afterwards. If the participant did not achieve 100%, the participation was terminated. However, if the participant reached 100% during the post-session performance evaluation, then there was another performance evaluation in the following meeting session.

Procedural Integrity

The secondary observer also collected data on the lead researcher's procedural integrity utilizing procedural integrity forms (see Appendix E) by watching the whole session videos. The calculations were performed as follows: the number of correct responses was divided by the total number of possible opportunities and multiplied by 100. The results of the procedural integrity data were 88.73 % on average with a minimum of 66.67% and a maximum of 100%. In some videos, unfortunately, the mirrored camera checking was not recorded because the lead researcher hit the recording button after she checked the camera. The research assistant verbally reported that she remembered the lead researcher checking the camera in the beginning of each session. However, except for the mirrored camera checking, the study proceeded as intended throughout all sessions with 100% of procedural integrity data.

Results

Participant A

Figure 1 shows the results for Participant A. For the choices skill (left bottom panel of Figure 1), Participant A scored 25% and 50% during the baseline. During the task analysis component, she scored 0% and 25%. During the video and rehearsal and feedback, she scored 100% one time on each condition. However, she did not perform at the 100% level during two consecutive performance evaluations, which was the mastery criterion, so the researchers moved

on to the next training component, which was the video self-monitoring and feedback. After she watched, scored, and discussed all of her previous performance videos with the lead researcher, she reached two consecutive 100% performances. For the promoting independence skill (right bottom panel of Figure 1), during the baseline, she scored 66.67% on both probes. Until the video self-monitoring and feedback, she scored 66.67%. In all the performance evaluations in which she scored 66.67%, she did not follow the least to most prompting hierarchy. For example, she started from gesture or modeling without verbal prompting, or, at times, she did verbal and skipped to full physical while skipping gesture, modeling, and partial physical prompts. After video self-monitoring and feedback, she scored 100% on two consecutive performances. In summary, she required self-monitoring on all of her previous performance videos and feedback from the researcher to be able to meet 100% correct performance on both skills.

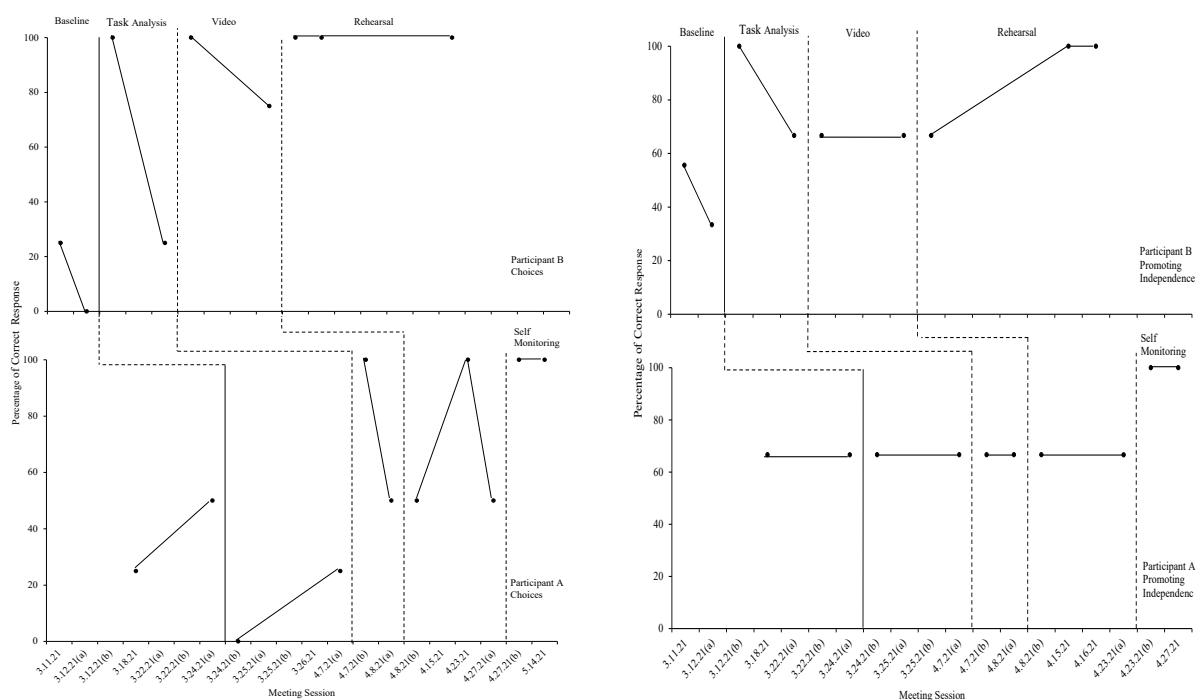


Figure 1. The percentage of correct response on choices and promoting independence trainings for Participants A and B

Participant B

Figure 1 also shows the results for Participant B. In the choices skill (left top panel of Figure 1), she scored 25% and 0% during the baseline. During the task analysis and video conditions, she scored 100% one time on each. After the rehearsal condition, she scored 100% on three consecutive performance evaluations. In the promoting independence skill (right top panel of Figure 1), during the baseline, she scored 55.56% and 20% respectively. During the task analysis condition, she scored 100% one time. After rehearsal and feedback, she scored 100% on two consecutive performances. In summary, she required rehearsal and feedback with the researcher for both skills in order to meet two consecutive 100% correct performances on both skills.

Participant C

Figure 2 shows the results for Participant C. In the choices skill (left panel of Figure 2), she scored 100% on three consecutive performance evaluations during the baseline.

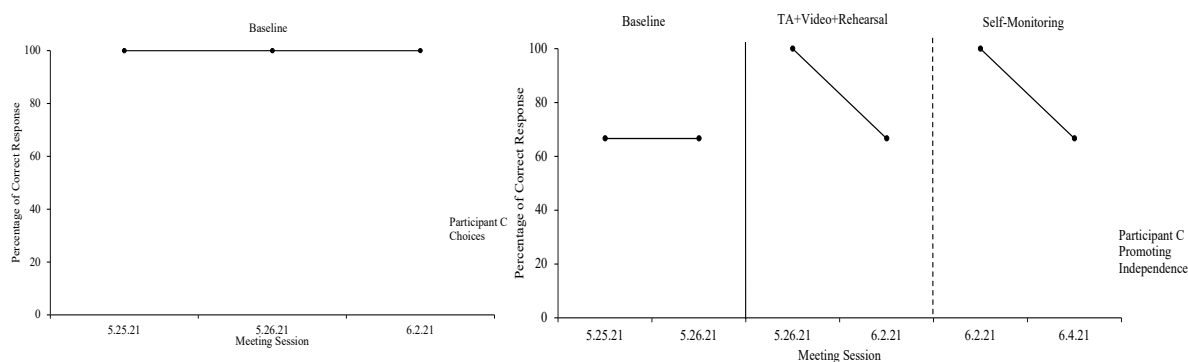


Figure 2. The percentage of correct response on choices and promoting independence trainings for Participant C

Since she tested out on all three scenarios consecutively, training was not provided. In the promoting independence skill (right panel of Figure 2), during the first two probes, she scored 66.67%. During the intervention, in which the researcher provided a task analysis, a training

video, and rehearsal and feedback all at one session, she scored 100% on the post-session performance evaluation. However, she did not score 100% on the following probe, the last training component, which was the video self-monitoring and feedback. She scored 66.67% on this last probe. Because there were no further designed trainings, her participation was completed. In summary, although she did not meet the mastery criterion for promoting independence, she did score 100% on the post-session performance evaluation after each intervention condition.

Discussion

The purpose of the current study was to extend a telehealth training approach to evaluate the efficacy of trainings designed to improve basic interactions with older adults, utilizing graduate and undergraduate students as pilot participants. Similar to Machalicek et al. (2009a), Machalicek et al. (2009b), Sump et al. (2018), and Rios et al. (2020), all participants of this study showed positive improvements when trained via telehealth. Participants A and B met the mastery criterion of two consecutive 100% performances on both skills tested. Although Participant C did not meet the mastery criterion for promoting independence, she scored 100% on the two post-session performance evaluations immediately after intervention. Similar to Participant C, in some conditions, Participants A and B also showed that they had 100% performance immediately after intervention and went back to a level similar to the baseline probes. These scores could be improved by follow-up practice sessions. Participants A and B's choices showed that there were more than two and a half weeks and three weeks of gap between their first 100% performance and the last probes. They showed there was maintenance over time. On the other hand, Participant C's experience and background could have impacted her results on both choices and promoting independence. Especially concerning promoting independence, she

reported that she did it differently at her place of work when utilizing prompting. This may give some insight into why her performance showed 100% immediately after training but went back to baseline level during the following probes. It also may imply a lack of maintenance of the skill acquisition, and it could be improved by follow-up practice sessions.

Similar to Rios et al. (2020), this study also demonstrated successful results of telehealth training conducted with a simulated role play partner throughout the whole study, though the modality of telehealth led to challenges related to training procedures with the simulated role play partner, virtual role plays, and choices scenario 2. During trainings and practices to prepare to conduct the actual sessions, the lead researcher needed to hold several pilot sessions with the simulated role play partner to figure out camera angles. Because the sessions were virtual, the training of how to collect data and how to act as a simulated role play partner during the performance evaluations for each different scenario also required feedback regarding the camera angles. Moreover, even after several pilot data collection practices, the actual participants' performance videos required 3 sessions of additional trainings and feedback to have 100% interobserver agreement. There were also some technical challenges. Holding a virtual meeting through WebEx software, recording, and conducting three-way sessions at the same time caused the lead researcher's computer to crash, and some bad internet connections during the virtual meetings led to the rescheduling of sessions a few times.

The choices scenario 2 appeared to impact performance. Both Participants A and B scored lower when they were given scenario 2 to perform than when they were given scenario 1. One possible reason could be that in scenario 2, the older adult with neurocognitive impairment did not communicate with speech and had a vision impairment to a degree of not being able to see objects. It may have been due to these complicated factors that the participants struggled to

communicate with the simulated role play partner during the role plays. For example, the participants could have offered only one option because the simulated role play partner was not able to see or speak. The participants asked the simulated role play partner to “raise your hand if you would like it” and then moved on to the next option to offer. Another possible reason could be that the scenario was about mealtime. The participants might have thought that they should have provided all of the options because the role play partner acting as an older adult should eat all of the meal. For instance, participants offered remaining options after the simulated role play partner had selected in order to provide a full meal. In contrast to scenario 2, scenario 1 was about individual activity; naturally, some time to engage in each activity after the selection was required.

Different Training Sets with Participant C

At the end of the sessions with Participants A and B, the researchers decided to modify the procedures with Participant C. Due to Participants A and B requiring all components and the original training manual being designed to be one training (Hahn et al., 2019), it seemed valuable to conduct the training as a full package. Therefore, the researchers provided the task analysis, training video, and rehearsal and feedback trainings during one intervention session. Although Participant C did well with this package, her previous experience working in a behavior service center may have impacted her perfect performance on the choices. She reported that she was working in early intervention using applied behavior analysis, so she might already have had experience with providing options to her clients.

Limitations

There are several important limitations related to the participants, design, and mode of delivery of this study. For Participants A and B, the requirement to experience all components

may have been impacted by their lack of familiarity with older adults. We decided to work with students due to the COVID-19 pandemic and lockdowns of aging facilities. Someone with experience around aging facilities, such as the staff at nursing homes or senior behavior service centers, might not need all trainings. However, we could not be sure if they could perform better with a different approach.

In addition to limitations due to participants, the experimental design of this study was different from the proposed design due to the possible impact of practice that participants might have gained through repetitive exposure to the same scenarios. This could have become a variable, so the sessions were conducted on different dates to control the time. However, it would have been better controlled if there was less of a gap of session dates. There were also difficulties in scheduling with the participants.

Finally, there might have been a few potential disadvantages inherent to videoconferencing. First, all three participants reported that they were confused because they were performing in front of a camera. Additionally, they all reported that the promoting independence skill was difficult to perform in front of the camera without having an actual person present. Participants B and C specifically reported that they were unsure how to clearly provide prompts virtually, and Participants A and B expressed “I don’t know” several times during the first few performance evaluations. Second, during a few of the performance evaluations across all participants, there were a couple of moments where the participants’ hands did not clearly appear in front of the camera, which might have led to imperfect data recording. The participants could have been using gestures outside of the camera view angle when they were supposed to be verbally prompting. Participant B reported that she did not realize that her hands and arms were not clearly shown in front of the camera view angle. Last, throughout the

trainings, it was difficult to figure out if the participants were using the training materials, such as task analyses or notes from previous trainings, during performance evaluations. When the researchers asked the participants to read the scenarios before each performance evaluation, the researchers could not be sure whether they were reading only the scenarios or the task analyses and notes as well. If they referred to those materials, it could have impacted their performance, which was not ideal for the purpose of this study. Although the data may have been affected by the ambiguity of telehealth training, in a natural training environment with staff at aging facilities, using the previous training materials would not interrupt the purpose of the original trainings (Hahn et al., 2019).

Future Research

In the future, it might be valuable to train students with the approach used with Participant C and provide additional practice opportunities to reveal on average how many practices are needed to maintain the skill acquisition, especially for the promoting independence skill. Such a study might be able to demonstrate training that is less cumbersome, less time-consuming, and more effective for the actual staff at aging facilities. Furthermore, after telehealth training to staff at aging facilities, it might be beneficial to conduct research observing whether the staff would generalize the skills to actual older adults.

References

- Centers for Medicare and Medicaid Services (2020). *Nursing home COVID-19 data*.
<https://www.cms.gov/files/document/6120-nursing-home-covid-19-data.pdf>
- Hahn, J.S., Baker, J.C., Wagner, S., Perez, A., Kim, M., & Bullock, S. (2016-2019).
Implementing behavior analysis and intervention for individuals with cognitive
impairment in skilled nursing facilities: Summary of results. (Project No. 16-09-07)
[Grant]. Michigan Department of Health and Human Services.
[https://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=1002&context=gerontology-
pubs](https://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=1002&context=gerontology-pubs)
- Machalicek, W., O'Reilly, M., Chan, J. M., Rispoli, M., Lang, R., Davis, T., Shogren, K.,
Sorrells, A., Lancioni, G., Sigafoos, J., Green, V., & Langthorne, P. (2009a). Using
videoconferencing to support teachers to conduct preference assessments with students
with autism and developmental disabilities. *Research in Autism spectrum disorders*, 3(1),
32-41. <https://doi:10.1016/j.rasd.2008.03.004>
- Machalicek, W., O'Reilly, M., Chan, J. M., Rispoli, M., Davis, T., Shogren, K., Sigafoos, J.,
Lancioni, G., Antonucci, M., Langthorne, P., Andrews, A., & Didden, R. (2009b). Using
videoconferencing to conduct functional analysis of challenging behaviour and develop
classroom behavioral support plans for students with autism. *Education and Training in
Developmental Disabilities*, 44(2), 207–217.
- Occupational Safety and Health Administration. (2020). *COVID-19 guidance for nursing home
and long-term care facility workers*. <https://www.osha.gov/Publications/OSHA4025.pdf>.

- Paudel, A., Resnick, B., & Galik, E. (2019). The quality of interactions between staff and residents with cognitive impairment in nursing homes. *American Journal of Alzheimer's Disease & Other Dementias*, 35, 1-10. <https://doi.org/10.1177/1533317519863259>
- Puskin, D., Johnston, B., & Speedie S. (2006). Telemedicine, telehealth, and health information technology. *The American Telemedicine Association*.
https://www.who.int/goe/policies/countries/usa_support_tele.pdf
- Rios, D., Schenk, Y. A., Eldridge, R. R., & Peterson, S. M. (2020). The effects of remote behavioral skills training on conducting functional analyses. *Journal of Behavioral Education*, 29(2), 449–468.
- Sump, L. A., Richman, D. M., Schaefer, A. M., Grubb, L. M., & Brewer, A. T. (2018). Telehealth and in-person training outcomes for novice discrete trial training therapists. *Journal of Applied Behavior Analysis*, 51(3), 466–481.
- Whoriskey, P., Cenziper, D., Englund, W., & Jacobs, J. (2020, June 4). Hundreds of nursing homes ran short on staff, protective gear as more than 30,000 residents died during pandemic. *The Washington Post*.
<https://www.washingtonpost.com/business/2020/06/04/nursing-homes-coronavirus-deaths/>

Appendix A
Choices Training Module

Choices

Manual Created By:

Sandra Wagner, M.A., BCBA
Andrea Perez, M.A., BCBA
Jonathan Baker, Ph.D., BCBA-D
Psychology Department
Western Michigan University

TABLE OF CONTENTS

How to use this manual	3
Materials	4
Rationale	5
Objectives	6
Identifying and selecting options.....	7
Presentation of items	8
Identifying how a selection is made	9
Demonstrating the skill.....	10
Sample resident card.....	11
Do-say.....	12
Practice opportunities	13
Blank resident cards.....	14
Evaluation and feedback.....	15
Procedural integrity data sheet	16
Task analyses.....	17
Summary.....	19
Post-training data collection	20
On the job coaching.....	21
References	22

HOW TO USE THIS MANUAL

Throughout the manual, you will find text that is included in brackets. If trainees watched the video prior to attending this training, then you need to follow the script that is in and outside the brackets and follow the practice opportunities (i.e., role plays). If trainees watched the video during the live training, then you need to only follow the script that is the brackets and follow the practice opportunities. If you do not use the video, then you need to follow the whole script, demonstrate the strategy, and allow for practice opportunities. If you use the video either prior to the live training session or during, it will take less time to present the training.

This manual includes all content that is related to the strategy of providing choices. The manual also includes the necessary materials for the training, instructions for how to demonstrate the skill, instructions for how trainees will practice the skill, instructions for evaluation and feedback, as well as instructions for on the job coaching.

MATERIALS NEEDED FOR TRAINING

If playing the video during the training, you will need the following materials:

1. Task analyses for each trainee
2. Blank resident cards
3. Procedural integrity form for each trainee
4. Copy of the manual
5. Writing utensils
6. Projector
7. Projector screen
8. Equipment for audio
9. Video
10. Computer

If the trainees watch the video prior to training, you will need the following materials:

1. Task analyses for each trainee
2. Blank resident cards
3. Procedural integrity form for each trainee
4. Copy of the manual
5. Writing utensils

If you do not use the video, you will need the following materials:

1. Task analyses for each trainee
2. Blank resident cards
3. Sample resident cards
4. Procedural integrity form for each trainee
5. Copy of the manual
6. Writing utensils

RATIONALE FOR THIS MANUAL

The purpose of the rationale is so that the trainees are aware of what the training will include, why it is important that they participate in the training, and why they should implement the techniques described in their daily work.

Say: [The specific technique described in this manual is to be used as a tool to aid in creating choice making opportunities for older adults with memory impairment in long-term care facilities (e.g., nursing homes). When we provide choices, we are asking the resident to make a selection that is meaningful to them, rather than choosing for them. It is also likely that we will see a decrease in challenging behaviors (e.g., physical aggression, wandering) and fewer depressive symptoms (Dwyer-Moore & Dixon, 2007; Feliciano, Steers, Elite-Marcandonatou, McLane, & Areán, 2009), if they are provided with preferred items. Residents are also more likely to have a sense of autonomy (O'Rourke, Duggleby, Fraser, & Jerke, 2015). With fewer challenging behaviors, the daily stressors may be lessened, and you may have more time to complete your job tasks because you are not spending a lot of time addressing those behaviors. Providing choices is a quick strategy that you can implement with any resident that you work. Choices should be provided when you are interested in engaging a resident with an activity/preferred item, assisting residents during cares, or during mealtimes. A choice making opportunity has ended when the resident has made a selection, and you gave the resident immediate access to that option.]

[] indicates text that should be presented in the live training session if video was used

OBJECTIVES

Say:

[At the end of this training, trainees should be able to:

1. Identify how to select which options to present based on resident characteristics
2. Identify how options should be presented based on resident characteristics
3. Identify how to create a choice making opportunity
4. Identify how a resident makes a selection

Upon completion of this training, you will be expected to implement this strategy during your daily work. I will provide on the job coaching, which consist of me watching you implementing the strategy. After you implement it with a resident, I will provide you with constructive feedback. If you have any questions throughout the training, do not hesitate to ask.]

[] indicates text that should be presented in the live training session if video was used

IDENTIFYING AND SELECTING OPTIONS

Say:

[There are many times in which you will want to offer choices. Throughout the day, you will work with residents while completing care tasks, helping them during meals, engaging them in activities, or transitioning them from one location in the unit to another location. During these interactions, you can use this time to present a choice making opportunity to the resident.

We want to identify what the resident likes, so that we can take individual preferences into consideration and create choice-making opportunities for each resident. Providing choices gives residents the freedom to make a choice and to create a person-centered care approach. Residents do not have the opportunity to make as many decisions for themselves, as they did prior to moving in the nursing home. Therefore, it is our role to continue incorporate choice making opportunities throughout the day. Before you can present choice-making opportunities, you have to identify the possible options to present the resident with. Here are some ways you can identify those options:

1. Refer to the resident's care plan to determine whether the resident's preferences for cares or activities are care planned
2. Brainstorm leisure items, activities, or food/drinks that you have seen the resident interact with, as well as preferences during cares
3. Ask the resident's family members or your colleagues]

When selecting options, you will have to consider resident characteristics, as this may help you determine which options to include. Some considerations may include whether the resident has hearing loss, vision impairment, or motor abilities. If you are identifying items for a resident who has hearing loss, then selecting music may not be the best option. If a resident has a vision impairment, you may not want to select a book. You want to consider each resident's strengths and challenges and select the items accordingly. You also want to refrain from selecting options that you know the resident does not like and keep in mind that each resident will have different options and preferences.

[] indicates text that should be presented in the live training session if video was used

PRESENTATION OF ITEMS

Say:

[You will also want to identify how you will present the option. The options you would like to present and the resident's characteristics has implications on the format in which you present the options.]

There are four ways you can present choices. One presentation is the pictorial presentation. In order to present options in the pictorial format, you will need to take pictures of the options prior to offering choices. This presentation format requires more preparation on your end, but this presentation is helpful when you cannot present the physical item due to size or the item cannot be presented on the table or in your hand. For example, you may present the option of going to the activity room. You cannot hold the activity room, but you could take a picture of the activity room and present it to the resident. You may also use pictures to indicate different cares, such as the toilet or the shower. If you would like to present different drink or food items, pictures can be used so that you are less likely to waste food or drinks. For instance, you may present two drinks and after selection, you may have to throw away the drink that the resident did not select. The pictorial presentation is also helpful if the resident has difficulty understanding, comprehending, or hearing questions.

In addition, you may present options in a textual format. If you would like to present the options using a textual format, then you can write down the names of the options and present the written word to the resident. This format is also beneficial if the items cannot be physically presented. This format would not be suited for residents who cannot read and has poor vision.

You can also present options in a tangible format. This presentation format requires you to present the physical item. This is helpful if you are presenting different activities, leisure items, or different clothing items. If the resident was served foods in multiple bowls or served multiple drinks, you could physically hold the different containers.

Lastly, you can present the options vocally, in which you simply state each item that you have. This is most suitable when working with a resident that can hear, understand, and comprehend the options that you are presenting.]

[] indicates text that should be presented in the live training session if video was used

IDENTIFYING HOW A SELECTION IS MADE

Say:

[Typically, you and I make a selection by vocalizing what we want. You work with residents with varying levels of functioning, which may impact how they can make a selection. If they have a memory impairment, it is likely that they cannot vocalize their needs and want. They can still indicate a selection or choice in other ways. For example, selection may be indicated by:

- Speech
- Pointing/gesturing
- Signing
- Writing
- Speech generation device
- Affect

If you are presenting options using the tangible, pictorial, or textual format, then selection may also be indicated by staring at an item or moving closer to an item.]

[] indicates text that should be presented in the live training session if video was used

DEMONSTRATING THE SKILL

When you demonstrate how to present the choice making opportunity, you will need your resident card. See page 11. The resident card includes information about the resident's characteristics, options that would be inappropriate to present to the resident, the form in which options will be presented, rationale for why that form was selected, and information on how the resident makes a selection. These are critical components to providing choice making opportunities.

As you demonstrate the strategy, you will need someone to role-play the resident. The role-play can be done with a trainee or if you have a co-trainer, use that person to demonstrate how to do the steps while explaining what you are doing. The person who role-plays the resident will need to play the role as outlined on the resident card.

On page 12, you will see "do" and "say." You will complete the task that is listed under "do" column, while saying everything that is under the "say" column. This will give the trainees the opportunity to see you demonstrate the skill.

If you presented the video during the training, skip to page 13.

Sample Resident Card
What are the resident's characteristics? The resident is hard of hearing and no longer uses speech as a form of communication. The resident is also in a wheelchair.
What would be an inappropriate option to present to this resident? Given that the resident is in a wheelchair, it would be inappropriate to offer walking as an activity for this resident.
What form would you present the options? I would present options by holding the physical items in front of the resident. I would also use pictures, if physical items were not feasible.
Why did you select that form? These forms were selected over the vocal presentation because the resident is hard of hearing and may not be able to hear the vocal presentation.
How do you know a resident made a selection? The resident will point to the item or stare at one of the items. This indicates selection.

DEMONSTRATING THE SKILL

Do	Say
1. Identify items to present using the resident card (see page 17 for resident card).	1. My resident card states that the resident is hard of hearing, does not use speech as a form of communication, and is in a wheelchair. Based on these resident characteristics, I would present items by physically presenting the items or as pictures. I would select these presentation forms because the resident is hard of hearing and the resident may not hear the options if presented vocally. I could add the vocal statement as I present the physical items or pictures, but it is not necessary.
2. Present the options using the pictorial format, as identified on your resident card.	2. When presenting choice making opportunities, you will want to only present two options at a time. If you use pictures, you hold two pictures or place two pictures in front of the resident.
3. Present the options using the tangible format, as identified on your resident card.	3. If you use tangibles, you hold the physical items or you may place them on a table in front of the resident. When using the pictorial or tangible presentation, you will need to have the items readily accessible.
4. If you were to present the options using the vocal format, then you would ask the resident to pick one by stating, “would you like [insert name of option 1] or [insert name of option 2]?”	4. When you present the choice in the vocal format, you want to label the options that you are presenting. You will want to refrain from saying, “would you like this or that?” Depending on the resident’s level of functioning, he/she may not understand what “this” or “that” is.
5. Give immediate access following selection	5. After the resident makes a selection, you should follow through on the resident’s selection immediately.

PRACTICE OPPORTUNITIES

Immediately after demonstrating the skill, give the trainees three blank resident cards (see page 14 for a copy of the resident card). Ask the trainees to think of three residents that they work with and to create three resident cards based on those three residents. After the resident cards are created, divide the group of trainees into pairs. Once in pairs, the trainees will practice presenting choices based on the information they wrote on their resident card. When the pair is done practicing with each other, instruct them to raise their hand to practice in front of you, so you can provide feedback. No more than three practice opportunities will be provided. See page 15 for feedback and evaluation.

RESIDENT CARD

Resident Card
What are the resident's characteristics?
What would be an inappropriate option to present to this resident?
What form would you present the options?
Why did you select that form?
How do you know when the resident made a selection?

EVALUATION AND FEEDBACK

As you observe the trainee's implementation of the strategy, you will complete a procedural integrity form (see page 16 for the form). If the trainee does not meet the mastery criteria, then give the trainee another opportunity to practice. Additional practice opportunities should be completed with a different set of resident cards. Trainees need to practice with a different set of resident cards that their partner had.

You will also provide feedback on whether the trainee correctly implemented each technique. Your feedback should be behavior specific. For instance, instead of saying, "you did a great job," you can say, "you did a great job presenting two options and giving the resident the item after selection." This lets the trainee know exactly what step of the technique they did well. If they did not do something well, you should be behavior specific. For instance, instead of saying, "you implemented the strategy incorrectly," you can say, "you presented three items instead of two items." After you provide feedback on what was done incorrectly, you can demonstrate the correct way to do it given the information on the resident card and provide suggestions on how the trainee could correct their error.

Procedural Integrity Data Sheet

Staff Member: _____ Date: _____ Time: _____

Instructions: During the training, record whether the staff member presented appropriate options, presented only two options at a time, provided the instruction, and followed through on the resident's selection (i.e., gave immediate access to the option selected) for each time the staff member presented an option (i.e., opportunity). Afterwards, calculate the percentage correct by taking the total correct divided by number of opportunities multiplied by 100.

Correct response	Implemented Correctly per Opportunity + or -	Notes
Staff member selected appropriate options to present.	1. 2. 3.	
Staff member presented two options at a time.	1. 2. 3.	
Staff member said, "would you like [insert name of option 1] or [insert name of option 2]?"	1. 2. 3.	
Staff member immediately followed through on the resident's selection.	1. 2. 3.	

Total Correct: _____

Total Opportunities: _____

Percentage correct: _____ (total correct) / _____ (total opportunities) x 100% = ____%

Mastery Criteria: 100%

Task Analysis: Selecting Items and Presentation Modality

Task: Identify and Select Items to Present to the Resident

Materials Needed:

No materials are needed

Location of Materials:

N/A

Task Steps:

1. Identify when you want to offer choices
 - a. Are you completing a care task with the resident?
 - i. If yes, are you completing multiple care tasks (e.g., getting ready for the day would include getting dressed, toileting, and brushing teeth) or only one care task (e.g., toileting)?
 1. Regardless of whether one or multiple care tasks need to be completed, refer to the resident's care plan to determine the approach that should be used with the resident and whether the resident's preferences have been care planned.
 2. Select the items that are needed for the completion of each care task.
 - b. Are you helping the resident during meal times?
 - i. If yes, select edibles and drinks that are made available to the resident.
 - c. Are you promoting activity engagement?
 - i. If yes, then create a list of activities that you have seen the resident engage in the past.
 1. If you are not familiar with the resident's interests, contact a family member via phone or ask the family member when he/she is visiting the resident at the facility.
 - d. Are you transitioning the resident from one location to another location?
 - i. If yes, then select rooms in which the resident can be in safely.
2. Identify how you want to offer the choice
 - a. Is the option you would like to present too large or cannot be physically presented?
 - i. If yes, then use a pictorial presentation by taking pictures of the options.
 - ii. If yes, then use a vocal presentation by stating the options without presenting the pictures of physical items.
 - iii. If yes, then use a textual presentation by writing down the names of the options and presenting the text to the resident.
 - b. Can the option you would like to present be physically presented?
 - i. If yes, then use a tangible presentation by have the physical items nearby.
 - c. Can the resident understand and comprehend questions?
 - i. If yes, then use a vocal presentation by stating the options without presenting the pictures or physical items.

Task and/or Output/Permanent Product Criteria: A list of items to present the resident and the format to present options			
Quality: Items and presentation format are selected based on resident characteristics	Quantity: Varies; depends on day	Timeliness: 2 minutes	Cost: Varies, depends if pictorial or textual formats are used

Creating Choice Making Opportunities Task Analysis			
Task: Present the Choice Making Opportunity			
Materials Needed:		Location of Materials:	
Materials will vary		Varies	
Task Steps:			
<div>1. Present two options</div> <div><div>a. If you are presenting options using the tangible format, hold one item in one hand and the other item in the other hand. You may also present the items on a table, rather than holding them.</div><div>b. If you are presenting options using pictorial format, hold one picture in one hand and the other picture in the other hand. You may also present both pictures on a table, rather than holding them.</div><div>c. Textual</div><div>d. Vocal</div></div>			
<div>2. Ask resident to pick one by stating, “would you like [insert name of option one] or [insert name of option two]?”</div> <div><div>a. If the resident does not make a selection within 30 seconds of you asking the question, repeat the question.</div><div>b. If the resident still does not make a selection within the 30 seconds, offer different options.</div></div>			
<div>3. When the resident makes a selection, immediately follow through on the resident’s selection.</div> <div><div>a. Needs to be broken down more</div></div>			
Task and/or Output/Permanent Product Criteria: Informed choice opportunity is presented			
Quality:	Quantity: Varies, depends on day	Timeliness: 2 minutes	Cost: Varies, depends if pictorial or textual format used

SUMMARY

Say:

[To summarize, this training was designed to provide you with tools to incorporate more choice making opportunities for residents with cognitive impairment. This training covered how you identify the options to present, how to present the options, when to present the options, and the different ways a resident may make a selection. We highlighted the importance of creating choices. We hope that you take this strategy to help you create more opportunities for residents to make a selection. By providing choices, we may be less likely to encounter challenging behaviors, which can help decrease the daily stressors of your job, as well as increase the resident's sense of autonomy.]

[] indicates text that should be presented in the live training session if video was used

POST-TRAINING DATA COLLECTION

After the training, it is beneficial to continue gathering data about whether the trainees are implementing the skill in practice. To do so, you should observe each staff member that attended the training and fill out the data sheet on page 16. If time allows, you should observe the staff member multiple times and across multiple to days to obtain a representative sample of how the staff member is using the skill. Then, you should provide on the job coaching so that trainees know what they are and are not doing well. You should do this for all the trainees. See page 21 for how to provide on the job coaching.

ON THE JOB COACHING

When you provide on the job coaching, you should provide feedback. Feedback lets staff know how well they are doing relative to a goal and what they can do to improve. In order to provide feedback, you must:

1. Observe the staff member.
 - a. Without the observation, you will not know how staff implemented the techniques described in the training.
2. Take notes about what the staff member did and did not do.
 - a. These notes should be behavior specific and describe what the staff member did. For example, instead of saying “you did a great job,” you can say, “you did a great job presenting Bill with two items and giving him the item after he made a choice.” This lets the staff member know exactly which step he/she did a great job.
3. Write down a plan for how the staff member can make the recommended changes.
4. Meet with the staff member to review your notes.

Sometimes it can be uncomfortable to provide feedback. Here are some tips to help facilitate the meeting with the staff member.

1. Ask the staff member to express how they think they implemented the techniques
2. Be specific and objective (you want to describe what you saw the staff member do)
3. Provide praise when the staff member did something well, but remember to be behavior specific
4. Share an experience you had implementing these techniques and how you handled it

REFERENCES

- Feliciano, L., Steers, M. E., Elite-Marcandonatou, A., McLane, M., & Areán, P. A. (2009). Applications of preference assessment procedures in depression and agitation management in elders with dementia. *Clinical Gerontologist*, 23, 239-259.
- LeBlanc, L. A., Cherup, S. M., Feliciano, L., & Sidener, T. M. (2006). Using choice-making opportunities to increase activity engagement in individuals with dementia. *American Journal of Alzheimer's Disease and Other Dementias*, 21(5), 318-325.
- O'Rourke, H. M., Duggleby, W., Fraser, K. D., & Jerke, L. (2015). Factors that affect quality of life from the perspective of people with dementia: A metasynthesis. *Journal of the American Geriatrics Society*, 63, 24-38.

Appendix B

Promoting Independence Training Module

Promoting Independence

Manual Created By:

Sandra Wagner, M.A., BCBA

Andrea Perez, M.A., BCBA

Jonathan Baker, Ph.D., BCBA-D

Psychology Department

Western Michigan University

TABLE OF CONTENTS

How to use the manual	3
Materials	4
Rationale	5
Objectives.....	6
Encourage independence.....	7
Providing assistance	8
Doing versus assisting	9
Demonstrating the skill	11
Practice opportunities.....	15
Task cards.....	16
Break down of task.....	17
Instruction cards	18
Resident characteristics cards.....	19
Evaluation and feedback	20
Procedural integrity data sheet.....	21
Task analysis.....	22
Summary	23
Post training data collection	24
On the job coaching	25

HOW TO USE THIS MANUAL

Throughout the manual, you will find text that is included in brackets. If trainees watched the video prior to attending this training, then you need to follow the script that is in and outside the brackets and follow the practice opportunities (i.e., role plays). If trainees watched the video during the live training, then you need to only follow the script that is in the brackets and follow the practice opportunities. If you do not use the video, then you need to follow the whole script, demonstrate the strategy, and allow for practice opportunities. If you use the video either prior to the live training session or during, it will take less time to present the training.

This manual includes all content that is related to the strategy of promoting independence. The manual also includes the necessary materials for the training, instructions for how to demonstrate the skill, instructions for how trainees will practice the skill, instructions for evaluation and feedback, as well as instructions for on the job coaching.

MATERIALS NEEDED FOR TRAINING

If playing the video during the training, you will need the following materials:

11. Task analyses for each trainee
12. Task cards
13. Break down of task cards sheet
14. Instruction cards
15. Resident characteristic cards
16. Procedural integrity form for each trainee
17. Copy of the manual
18. Writing utensils
19. Projector
20. Projector screen
21. Equipment for audio
22. Video
23. Computer

If the trainees watch the video prior to training, you will need the following materials:

6. Task analyses for each trainee
7. Task cards
8. Break down of task cards sheet
9. Instruction cards
10. Resident characteristic cards
11. Procedural integrity form for each trainee
12. Copy of the manual
13. Writing utensils

If you do not use the video, you will need the following materials:

7. Task analyses for each trainee
8. Task cards
9. Break down of task cards sheet
10. Instruction cards
11. Resident characteristic cards
12. Procedural integrity form for each trainee
13. Copy of the manual
14. Writing utensils

RATIONALE FOR THIS MANUAL

The purpose of the rationale is so that the trainees are aware of what the training will include, why it is important that they participate in the training, and why they should implement the techniques described in their daily work.

Say:

[The specific technique described in this manual is to be used as a tool to aid staff in how to increase and promote independence among older adults with or without cognitive impairment in long-term care facilities (e.g., nursing homes). By increasing independence, there may be a fewer number of supports that you will need to provide those residents, which may result in a decrease of your daily stressors, as well as to give you additional time to work with residents who do require more assistance. Additionally, this training can help prevent further decline in older adults.]

[] indicates text that should be presented in the live training session if video was used

OBJECTIVES

Say:

[At the end of this training, the trainees should be able to:

5. Describe different levels of promoting independence
6. Describe the least to most approach to promoting independence
7. Describe how to promote independence by using the least to most approach

After completion of this training, you are expected to implement these strategies during your daily work. We will provide on the job coaching. On the job coaching will consist of us watching you implement the strategy and then providing constructive feedback. We can also answer any questions you have about the technique.]

[] indicates text that should be presented in the live training session if video was used

ENCOURAGE INDEPENDENCE

Say:

[It becomes our responsibility to help encourage and promote independence for residents in nursing home facilities. When we encourage independence, we are providing residents with opportunities to continue to practice skill. If residents are provided with many opportunities to practice a skill, then they become less likely to lose the skill. In addition, we are likely to see the residents level of functioning maintain over time, as well as a greater quality of life, self-sufficiency, and maintained dignity. We may also see decreases in challenging behaviors.

Although there are many benefits to promoting independence for the resident, there are also benefits for you. Encouraging independence prevents residents from becoming too dependent on your help when it is not physically needed. When the residents can do things for themselves, you do not have to spend as much time with the resident to complete the task. As a result, you will have more time to complete other tasks or to attend to residents who do require more supports due to medical impairments. Increasing independence also can create less stress for both you and the resident.]

[] indicates text that should be presented in the live training session if video was used

PROVIDING ASSISTANCE

Say:

[When we refer to assistance, we are referring to additional supports that you may have to provide to ensure that the behavior you want the resident to engage in can happen. Assistance may be provided in a variety of situations. Specifically, assistance may be needed when interacting with a resident, when helping a resident dress, when engaging the resident in activities, and during activities of daily living, such as eating meals and bathing routines. These situations may require many different types of assistance.]

[] indicates text that should be presented in the live training session if video was used

DOING VERSUS ASSISTING

Say:

[It is important to identify whether you are doing a task for a resident versus assisting the resident complete the task. When we complete task for the resident, it is possible that we are providing more supports than what the resident needs to complete the task. By completing the task for the resident, the resident may stop using that skill or may stop completing the task independently. Then, the resident will rely on those supports in the future, which may require more time and effort from you.]

To demonstrate the difference, let's look at this picture (see page 10). In this picture, the staff member is feeding the resident; the staff member is doing the task for the resident. We also see that the resident is holding a glass of water, which suggests that the resident has the physical ability to hold the cup. Based on this, we would suspect that the resident can also hold utensils. If true, then the staff member should have given the resident the fork so that she can feed herself. This training will highlight different methods that we can use based on individual strengths.]

[] indicates text that should be presented in the live training session if video was used



DEMONSTRATING THE SKILL

On pages 12-14, you will see a “do” and “say” column. You will complete the task that that is listed under the “do” column, while saying everything that is under the “say” column. Following the demonstration of the skill, the trainees will have the opportunity to practice. See page 15.

If you presented the video during the training, skip to page 15.

DEMONSTRATING THE SKILL

Do	Say
1. Break down the task into smaller steps	<p>1. The first step in promoting independence is to break down the task into smaller steps. When you break down the task, you will have a clear starting and ending point, and this will you determine whether the task has been completed. For example, let's say it is breakfast, and one of the resident is sitting at the table with a bowl of cereal in front of them.</p> <p>When we break down the task of eating cereal, we can identify about 7 smaller steps. For instance, the task starts with picking up the spoon, putting the spoon in the bowl, scooping cereal on the spoon, bringing the spoon to the mouth, put spoon in mouth, pull spoon out of mouth, and swallow. These steps get repeated until there is no more cereal in the bowl.</p>
2. Demonstrate the vocal assistance level by stating the first step of the task	<p>2. When you provide assistance, there are multiple assistance methods that you may use. You always want to start with the least effortful forms of assistance and the least intrusive for the older adult. One assistance method is providing a vocal statement. For example, I may approach the resident and say, "pick up your spoon."</p> <p>As you provide assistance, you should consider whether the environment is set up to ensure that the resident can be successful in completing the steps. For example, I want to be sure that the spoon is within the resident's reach. I cannot expect the resident to pick up the spoon if the spoon is not in sight or is out of reach.</p> <p>Other least assistance methods may include writing down the list of steps on a piece of paper, pictures demonstrating each step, or a combination of both. If you use one of these assistance methods, you must consider whether the resident has vision impairments or if the</p>

-
3. Demonstrate the gesture assistance level by pointing to the spoon

resident can read. If their vision is impaired and/or they can't read, it is likely that they will not complete the step(s) when either assistance methods are presented.

3. There may be times where you will need to gradually increase the assistance we are providing, and as you increase the assistance, it will require more effort from you. Before you increase the assistance level, you will want to make sure you gave the resident time to respond. We suggest 30 seconds

The next level of assistance includes providing gestures. You may use gestures by pointing to the objects to help initiate the completion of the task. For instance, I may point to the spoon. I could also point to the spoon while saying, "pick up spoon."

4. Demonstrate the model assistance level by completing the step while the resident watches you

4. You can also use a model or demonstrate what it is that you are asking the resident to do. Demonstrating the step allows the resident to see what the step is and the opportunity to engage in the behaviors to complete the task with minimal assistance. As you demonstrate the step, you will want to label what it is you are doing out loud and make sure the resident is watching you. For instance, you may say, "pick up the spoon" while you pick the spoon.

5. Assist the resident by increasing the assistance level to partial physical by gently guiding the resident's arm towards the spoon

5. If there continues to be no response, then you can increase the level of assistance to a partial physical assistance level. This level of assistance consists of providing minimal contact to help the resident complete the task. For example, I may guide the resident's arm towards the spoon.

6. Full assist the resident by feeding the resident

6. If As you increase my level of assistance, you should consider whether the older adult is physically capable of completing the task. You are working with people who may have medical impairments, like arthritis, that could impact whether they are capable of completing the task.

Medical impairments may impact their ability to physically hold a spoon, scoop cereal on the spoon, or bring the spoon to their mouth. In this example of eating cereal, the resident may no longer be able to feed themselves, in which you would have to provide full assistance and feed them.

If a medical impairment is impacting their ability to complete the task, you should continue to think about how you can use these assistance strategies for other tasks that they may be able to do.

Lastly, you want to ensure that you are in compliance with your organization's rights requirements when it comes to the assistance strategies that you wish to employ.

PRACTICE OPPORTUNITIES

Immediately after demonstrating the skill, the trainees will have the opportunity to practice the skill. You should divide the group of trainees into partners. Each trainee should have a task card, the break down of the task sheet, a resident card, and a resident characteristic card. Below is a description of each card:

1. Task cards (see page 16)
 - a. The task cards will indicate the task that the trainees will role play.
2. Break down of task (see page 17)
 - a. The trainee who is role playing the staff member should write down the steps that are needed in order to complete the task.
3. Instruction cards (see page 18)
 - a. The trainee who is role playing the resident will follow the instructions on the resident card. The trainee should not share what is on their resident card to their partner.
4. Resident characteristics cards (see page 19)
 - a. The trainee who is role playing the resident should role play these characteristics.

Once in pairs and the cards have been handed out, the trainees will practice the least to most approach based on the information provided on the cards. When the pair is done practicing with each other, instruct them to raise their hand to practice in front of you, so you can provide feedback. No more than three practice opportunities will be provided. See page 20 for evaluation and feedback.

Task Cards

Putting on shoes

Coloring

Bingo

Brushing teeth

Leaving a table

Drinking

Break Down of Task

Break down the task into smaller steps and write out the small steps below.
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.

Instruction Cards

You do not respond to the first two steps of the task. When the staff member provides the gestural assistance method, you may respond.

1

You require a partial physical assistance level. When the staff initiates the task, do not respond until the staff member increases his/her assistance to the partial physical level of assistance.

2

You can complete the first two steps of the task. After the first two steps of the task, you require minimal assistance. When the staff member presents the vocal level of assistance, you may respond.

3

You need assistance with the first step of the task. You can complete the second and third step independently, but you require a model after the third step.

4

You need minimal assistance with each step of the task. When the staff member presents the vocal level of assistance, you may respond.

5

Resident Characteristics Cards

The resident has arthritis in the left hand.

1

The resident is unable to use their left side of his/her body due to a stroke.

2

The resident is hard of hearing in both ears.

3

The resident is hard of hearing in only the left ear.

4

The resident has a loss of central vision.

5

The resident has diabetic neuropathy (nerve damage) in his/her feet.

6

EVALUATION AND FEEDBACK

As you observe the trainee's implementation of the strategy, you will complete a procedural integrity form (see page 21 for the form). If the trainee does not meet the mastery criteria, then give the trainee another opportunity to practice. Additional practice opportunities should be completed with a different instruction card and resident characteristic card. Additional practice opportunities may also be completed with a new task card and break down of task sheet. Trainees need to practice with a different set of instruction and resident characteristic cards than their partner. For example, if one partner role plays coloring with instruction card 1 and resident characteristic card 1, then the other partner may role play coloring, but with instruction cards 2-5 and resident characteristic card 2-6.

You will also provide feedback on whether the trainee correctly implemented each technique. Your feedback should be behavior specific. For instance, instead of saying, "you did a great job," you can say, "you did a great job providing a gesture after the resident did not respond to the vocal statement." This lets the trainee know exactly what step of the technique they did well. If they did not do something well, you should be behavior specific. For instance, instead of saying, "you implemented the strategy incorrectly," you can say, "you provided a vocal level of assistance and when the resident did not respond, you provided a partial physical assistance level. You did not gradually increase to the model level of assistance." After you provide feedback on what was done incorrectly, you can demonstrate the correct way to do it given the information on the resident card and provide suggestions on how the trainee could correct their error.

Procedural Integrity Data Sheet

Staff Member: _____ Date: _____ Time: _____

Instructions: During the training, read each staff member's resident card. Then, record whether the staff member broke down the task, selected an appropriate assisting method, implemented the assisting method correctly, allowed for a response, and used a least to most approach based on the information gathered from the card. Afterwards, calculate the percentage correct by taking the total correct divided by number of opportunities multiplied by 100.

Correct response	Implemented Correctly per Opportunity + or -	Notes
Staff member broke down the task into smaller steps and started on a smaller step.	1. 2. 3.	
Staff member considered the resident's characteristics when identifying the appropriate selecting assisting method.	1. 2. 3.	
Staff member implemented the assisting methods correctly by providing a verbal statement (for verbal method), pointing (for gestural method), demonstrating the step (for model), gently guiding the resident (for partial physical), and providing full assistance (for full physical).	1. 2. 3.	
Staff member allowed the resident time to respond before increasing the assistance level.	1. 2. 3.	
Staff member gradually increased to the next level of assistance.	1. 2. 3.	

Total Correct: _____

Total Opportunities: _____

Percentage correct: _____ (total correct) / _____ (total opportunities) x 100% = ____%

Mastery Criteria: 100

Task: Promoting Independence by Using the Least to Most Approach			
Materials Needed:		Location of Materials:	
Pictures, if necessary Text, if necessary		N/A	
Task Steps:			
<div>3. Break down the task into smaller steps</div> <div>4. Consider the resident characteristics<div><div>a. If the resident is hard of hearing, starting with the vocal assistance level may not be appropriate, and you may need to start on the gestural level of assistance.</div><div>b. If the resident has vision impairments, presenting the steps with text or pictures or modeling the step may not be appropriate, and you may need to start on the partial physical level of assistance.</div><div>c. If the resident has motor impairments, you may have to provide full assistance.</div></div></div> <div>5. Use least to most approach<div><div>a. Use the vocal assistance level by providing a statement about the step you are on. For example, “pick up the spoon.”</div><div>b. If the resident does not respond after about 30 seconds of presenting the vocal statement, increase your assistance level to a gesture by pointing to the object. For example, point to the spoon. You may also point to the spoon while saying, “pick up the spoon.”</div><div>c. If the resident still does not respond after about 30 seconds of presenting the gesture, increase your assistance level to a model. For example, you may pick up the spoon and set it back down while saying, “pick up the spoon.”</div><div>d. If the resident still does not respond after about 30 seconds of presenting the gesture, increase to a partial physical assistance level. For example, you may guide the resident’s arm towards the spoon.</div><div>e. If the resident did not respond to any of the levels of assistance, you may have to provide full assistance. For example, you may have to feed the resident.</div></div></div>			
Task and/or Output/Permanent Product Criteria: A completed task			
Quality: Varies	Quantity: Varies on the number of tasks completed each day	Timeliness: Varies on the amount of time it takes to complete the task and level of assistance required	Cost: Varies on the amount of time it takes to complete the task and level of assistance required

SUMMARY

Say:

[To summarize, the least to most approach can be used to increase and promote independence in older adults with or without memory impairments. This technique can also be used in all tasks and settings. The least to most approach can help older adults continue to use their current skills and prevent further decline. Further, this technique can reduce your daily stressors and allow more time for you to work with residents who do require more assistance.]

[] indicates text that should be presented in the live training session if video was used

POST-TRAINING DATA COLLECTION

After the training, it is beneficial to continue gathering data about whether the trainees are implementing the skill in practice. To do so, you should observe each staff member that attended the training and fill out the data sheet on page 21. If time allows, you should observe the staff member multiple times and across multiple to days to obtain a representative sample of how the staff member is using the skill. Then, you should provide on the job coaching so that trainees know what they are and are not doing well. You should do this for all the trainees. See page 25 for how to provide on the job coaching.

ON THE JOB COACHING

When you provide on the job coaching, you should provide feedback. Feedback lets staff know how well they are doing relative to a goal and what they can do to improve. In order to provide feedback, you must:

5. Observe the staff member.
 - a. Without the observation, you will not know how staff implemented the techniques described in the training.
6. Take notes about what the staff member did and did not do.
 - a. These notes should be behavior specific and describe what the staff member did. For example, instead of saying “you did a great job,” you can say, “you did a great job presenting Bill with two items and giving him the item after he made a choice.” This lets the staff member know exactly which step he/she did a great job.
7. Write down a plan for how the staff member can make the recommended changes.
8. Meet with the staff member to review your notes.

Sometimes it can be uncomfortable to provide feedback. Here are some tips to help facilitate the meeting with the staff member.

5. Ask the staff member to express how they think they implemented the techniques
6. Be specific and objective (you want to describe what you saw the staff member do)
7. Provide praise when the staff member did something well, but remember to be behavior specific
8. Share an experience you had implementing these techniques and how you handled it

Appendix C

Script and Scenario for Initial Meeting and Performance Evaluations

Initial Meeting Introduction

Lead researcher:

Introduce the participant and simulated role play partner to each other.

“Are you familiar with the term ‘neurocognitive impairment’? If you are familiar with Alzheimer’s disease, it will be easy to understand. Alzheimer’s disease is a specific type of neurocognitive impairment. If not, I can explain it to you: the symptoms may include difficulties remembering names or objects/people, and performing daily activities such as brushing teeth, putting on shoes, and so on. As a part of this study, we will ask you to demonstrate things. When we ask you to demonstrate in a certain scenario, we want you to act as if you are helping the ‘older adult [the simulated role play partner]’. You can talk to [the simulated role play partner], but you will also gesture or pretend you are moving the items. For example, you can pretend to gently touch their forearm like this and say, “I’m gently touching and guiding your arm towards the cup in front of you.” Let’s try it one time. Can you demonstrate how you would ask the older adults [simulated role play partner] to tap their head? Now have them tap with the other arm by pointing to their other arm? Now, have them do it with both hands by guiding their other arm toward their head? And then, they may or may not respond to your performance. Before we start, let’s check if the camera is mirrored. Can you grab the [item] on your left/right?”

Now, I will screen share a scenario with you. I will give you about 10 minutes but let me know whenever you are ready. When you are ready, you can perform your response, and the simulated role play partner will respond or not respond depending on their script. You don’t have to worry even if the simulated role play partner did not respond to you.”

Scenario #1,2 , & 3 for Performance Evaluation

Scenario #1

Choices

“Ms. A is an older adult with neurocognitive impairment such as Alzheimer’s disease who is able to communicate by talking. You’ve seen her engage with card games, sorting towels, and coloring. She does not enjoy word search. It is now time for an activity, and you want to offer options to her. Please demonstrate with the simulated role play partner how you would offer the choices”

Script for the role play partner:

If the participant provides you with the options including cards, sorting towels, or coloring, you will choose one of them. For example, you may say, “cards”. If the participant provides you with only the word search, you will not respond. You may pretend to look at somewhere else other than the camera.

Promoting independence

“Mr. A is an older adult with neurocognitive impairment such as Alzheimer’s disease who was having lunch. He has arthritis in the left hand, which is not his dominant side. He was trying to drink his hot coffee, but he was having trouble holding the mug. The following are the small steps to drink.

1. Grab the handle of the mug with three or four fingers.

2. Place the thumb on top of the handle to secure the mug on your hand.
3. Gently move the mug towards your lips.
4. Take a sip.

Please demonstrate with the simulated role play partner how you would assist?"

Script for the role play partner: (respond at gestural level for the first step)

If the participant verbally asks you to hold the handle, (e.g., "Mr. A, you can grab/hold the handle") you will not respond. You may pretend to look at somewhere else other than the camera. If the participant points at the handle and asks you to hold it, (e.g., "This is the handle. It will be safe and easier to drink your hot coffee when you hold the handle of the mug") then you will pretend to hold the handle and drink it in front of the camera.

Scenario #2

Choices

"Mr. B is an older adult with neurocognitive impairment such as Alzheimer's disease. He has vision impairment and can hardly see objects in front of him. He does not communicate with others by talking. He will use gestures to communicate.

It is lunch time and he was served with ham and cheese sandwich, salad, chips, and orange juice. He does not like the chips. It has been 10 minutes since he was served his food and he has not started eating his meal. Please demonstrate with the simulated role play partner how you would offer him choices."

Script for the role play partner:

If the participant verbally offers and/or actually presents two menus other than the chips, you will choose one of them by pointing at it in front of the camera. If the participant offers only the chips, you will not respond. You may pretend to look at somewhere else other than the camera.

Promoting independence

"Ms. B is an older adult with neurocognitive impairment such as Alzheimer's disease. She is hard of hearing in only left ear. She can communicate with you by talking and gesturing.

It is time for an activity and she chose coloring. She had red, blue, and black markers and a coloring paper. She picked up the red marker and took off the lid but has not started coloring yet. The following is the small steps to color:

1. Choose and pick up one marker.
2. Take off the lid of the marker.
3. Place the tip of the marker onto the coloring paper and move any direction.

Please demonstrate with the simulated role play partner how you would assist with coloring."

Script for the role play partner: (respond at partial physical level for the third step)

You will not respond until the participant assists you with the partial physical level of assistance. In other words, if the participant verbally asks to color, you will not respond. If the participant increases the assistance level to gestural such as pointing at the coloring paper,

you will not respond. If the participant increases the assistance level to modeling such as demonstrating how to use the marker to color, you will not respond. When the participant assists you with partial physical such as gently guiding your arm towards the paper, you will respond. For example, you may pretend move your hand and fill out portion of the paper.

Scenario #3

Choices

“Ms. C is an older adult with neurocognitive impairment such as Alzheimer’s disease who is able to communicate by talking. She needs full assistance in all activities of daily living. Every morning she has list of things to get ready for the day.

1. Brushing teeth
2. Washing face
3. Changing clothes
4. Putting on shoes

She prefers to putting on shoes to finish up her morning routine. It is time to help her get ready for the day. Please demonstrate with the simulated role play partner how you would offer the choices”

Script for the role play partner:

If the participant provides you with any options besides putting on shoes, you will choose one of them. For example, you may say, “I would like to start with teeth brushing” when it was offered. If the participant provides you with only putting on shoes, you will not respond. You may pretend to look at somewhere else other than the camera.

Appendix D

Participant Version Performance Evaluation Scenarios

Scenarios for Performance Evaluations

Choices Scenario #1

“Ms. A is an older adult with neurocognitive impairment such as Alzheimer’s disease who is able to communicate by talking. You’ve seen her engage with card games, sorting towels, and coloring. She does not enjoy word search. It is now time for an activity, and you want to offer options to her. Please demonstrate with the simulated role play partner how you would offer the choices”

Promoting Independence Scenario #1

“Mr. A is an older adult with neurocognitive impairment such as Alzheimer’s disease who was having lunch. He has arthritis in the left hand, which is not his dominant side. He was trying to drink his hot coffee, but he was having trouble holding the mug. The following are the small steps to drink.

5. Grab the handle of the mug with three or four fingers.
6. Place the thumb on top of the handle to secure the mug on your hand.
7. Gently move the mug towards your lips.
8. Take a sip.

Please demonstrate with the simulated role play partner how you would assist”

Choices Scenario #2

“Mr. B is an older adult with neurocognitive impairment such as Alzheimer’s disease. He has vision impairment and can hardly see objects in front of him. He does not communicate with others by talking. He will use gestures to communicate.

It is lunch time and he was served with ham and cheese sandwich, salad, chips, and orange juice. He does not like the chips. It has been 10 minutes since he was served his food and he has not started eating his meal. Please demonstrate with the simulated role play partner how you would offer him choices.”

Promoting Independence Scenario #2

“Ms. B is an older adult with neurocognitive impairment such as Alzheimer’s disease. She is hard of hearing in only left ear. She can communicate with you by talking and gesturing.

It is time for an activity and she chose coloring. She had red, blue, and black markers and a coloring paper. She picked up the red marker and took off the lid but has not started coloring yet. The following is the small steps to color:

4. Choose and pick up one marker.
5. Take off the lid of the marker.
6. Place the tip of the marker onto the coloring paper and move any direction.

Please demonstrate with the simulated role play partner how you would assist with coloring.”

Choices Scenario #3

“Ms. C is an older adult with neurocognitive impairment such as Alzheimer’s disease who is able to communicate by talking. She needs full assistance in all activities of daily living. Every morning she has list of things to get ready for the day.

5. Brushing teeth
6. Washing face
7. Changing clothes
8. Putting on shoes

She prefers to putting on shoes to finish up her morning routine. It is time to help her get ready for the day. Please demonstrate with the simulated role play partner how you would offer the choices”

Appendix E

Procedural Integrity Forms

General Instructions

1. Before start watching the video, circle or highlight which skill training you are watching. (e.g., **choices**/ promoting independence)
2. Write or type the name of the video in the session (e.g., Session: MK 2/3/21 baseline probe 1)
3. Write or type the initial of the participant (e.g., JS)
4. Write or type the initial of your name (e.g., MK)

While you are watching the session video, record whether the researcher did or not did the following questions by circle or highlight yes or no (e.g., **yes**/no). Make any notes if needed (**e.g., the audio was broken for this part**).

IF the participants did not ask any question, please indicate it in the note section (e.g., “not applicable or N/A – no question was asked”)

Procedural Integrity: Baseline

Choices/ Promoting Independence (please circle or highlight which you are watching)

Session: _____ Date: _____ Time: _____
Participant: _____ Name: _____

	Implemented correctly or not	Notes
1. Did the researcher provide the participant an introduction as indicated in the script?	Yes/ No	
2. Did the researcher answer any questions regarding the performance evaluation?	Answered/ Did not answer	
3. Did the researcher provide any feedback regarding the performance evaluation?	Provided/ Did not provide	
4. Did the researcher follow the script?	Yes/ No	

Procedural integrity: Task analysis/Training video

(please circle or highlight which you are watching)

Choices/ Promoting Independence (please circle or highlight which you are watching)

Session: _____ Date: _____ Time: _____
Participant: _____ Name: _____

	Implemented correctly or not	Notes
1. Did the researcher check if the camera was mirrored?	Yes/ No	
2. Did the researcher provide the task analysis/full training video?	Yes/ No	
3. Did the researcher answer any questions regarding the performance evaluation?	Answered/ Did not answer	

4. Did the researcher provide any feedback regarding the performance evaluation? Provided/ Did not provide
5. Did the researcher follow the script? Yes/ No

Procedural integrity: Rehearsal and feedback

Choices/ Promoting Independence (please circle or highlight which you are watching)

Session: _____ Date: _____ Time: _____
 Participant: _____ Name: _____

	Implemented correctly or not	Notes
1. Did the researcher check if the camera was mirrored?	Yes/ No	
2. Did the researcher provide practice opportunities (rehearsal) with the participant?	Yes/ No	
3. Did the researcher provide positive and corrective feedback?	Yes/ No	
4. Did the researcher answer the questions when the participant asks <u>before</u> the performance evaluation?	Yes/ No	
5. Did the researcher answer any questions or provide feedback <u>during</u> <u>and after</u> the performance evaluation?	Answered or provided/ Did not answer or provide	
6. Did the researcher follow the script?	Yes/ No	

Procedural integrity: Video self-monitoring and feedback

Choices/ Promoting Independence (please circle or highlight which you are watching)

Session: _____ Date: _____ Time: _____
 Participant: _____ Name: _____

	Implemented correctly or not	Notes
--	------------------------------	-------

1. Did the researcher check if the camera was mirrored? Yes/ No
2. Did the researcher provide all of the previous performance evaluation videos to the participant? Yes/ No
3. Did the researcher provide data sheets? Yes/ No
4. Did the researcher go through and compare each data sheet with the participant? Yes/ No
5. Did the researcher provide positive and corrective feedback while comparing data? Yes/ No
6. Did the researcher answer the questions when the participant asks **before** the performance evaluation? Yes/ No
7. Did the researcher answer any questions or provide feedback **during and after** the performance evaluation? Answered or provided/ Did not answer or provide
8. Did the researcher follow the script? Yes/ No

Procedural Integrity: Probe

Choices/ Promoting Independence (please circle or highlight which you are watching)

Session: _____

Date: _____

Time: _____

Participant: _____

Name: _____

	Implemented correctly or not	Notes
5. Did the researcher check if the camera was mirrored?	Yes/ No	
6. Did the researcher answer any questions regarding the performance evaluation?	Answered/ Did not answer	

7. Did the researcher provide any feedback regarding the performance evaluation? Provided/ Did not provide
8. Did the researcher follow the script? Yes/ No

Procedural integrity: Task analysis+Training Video+Rehearsal

Choices/ Promoting Independence (please circle or highlight which you are watching)

Session: _____

Date: _____

Time: _____

Participant: _____

Name: _____

	Implemented correctly or not	Notes
6. Did the researcher check if the camera was mirrored?	Yes/ No	
7. Did the researcher provide the task analysis?	Yes/ No	
8. Did the researcher provide the full training video?	Yes/ No	
9. Did the researcher answer any questions regarding the performance evaluation when the researcher provided task analysis?	Answered/ Did not answer	
10. Did the researcher provide any feedback regarding the performance evaluation when the researcher provided task analysis?	Provided/ Did not provide	
11. Did the researcher answer any questions regarding the performance evaluation when the researcher provided training video?	Answered/ Did not answer	
12. Did the researcher provide any feedback regarding the	Provided/ Did not provide	

- performance evaluation
when the researcher
provided training video?
13. Did the researcher
provide practice
opportunities (rehearsal)
with the participant? Yes/ No
14. Did the researcher
provide positive and
corrective feedback
during the rehearsal? Yes/ No
15. Did the researcher
answer the questions
when the participant asks
before the performance
evaluation? Yes/ No
16. Did the researcher
answer any questions or
provide feedback during
and after the
performance evaluation? Answered or provided/ Did
not answer or provide
17. Did the researcher follow
the script? Yes/ No

Appendix F

HSIRB Approval Form

WESTERN MICHIGAN UNIVERSITY



Human Subjects Institutional Review Board

Date: November 16, 2020

To: Jonathan Baker, Principal Investigator
Minyoung Kim, Student Investigator for thesis

From: Amy Naugle, Ph.D., Chair

Re: IRB Project Number 20-10-03

This letter will serve as confirmation that your research project titled "A Preliminary Evaluation of the Behavioral Gerontology Staff Training Protocols" has been **approved** under the **expedited** category of review by the Western Michigan University Institutional Review Board (IRB). The conditions and duration of this approval are specified in the policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may **only** be conducted exactly in the form it was approved. You must seek specific board approval for any changes to this project (e.g., ***add an investigator, increase number of subjects beyond the number stated in your application, etc.***). Failure to obtain approval for changes will result in a protocol deviation.

In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the IRB for consultation.

The Board wishes you success in the pursuit of your research goals.

A status report is required on or prior to (no more than 30 days) November 15, 2021 and each year thereafter until closing of the study.

When this study closes, submit the required Final Report found at <https://wmich.edu/research/forms>.

Note: All research data must be kept in a secure location on the WMU campus for at least three (3) years after the study closes.

251 W. Walwood Hall, Kalamazoo, MI 49008-5456
PHONE: (269) 387-8293, FAX: (269) 387-8276