Evaluation of Telehealth Training to Teach the Stimulus Identification Questionnaire and Multiple Stimulus without Replacement

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Evaluation of Telehealth Training to Teach the Stimulus Identification Questionnaire and Multiple Stimulus Without Replacement

by

Andrea Perez

A dissertation submitted to the Graduate College in partial fulfillment of the requirements for the degree of Doctor of Philosophy
Psychology
Western Michigan University
May 2021

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Evaluation of Telehealth Training to Teach the Stimulus Identification Questionnaire and Multiple Stimulus Without Replacement

Andrea Perez, Ph.D.

Western Michigan University, 2021

The field of behavioral gerontology has seen a paucity in literature within the past 15 years focused on updating training technology and teaching best practice skills to staff. Specifically, there is a need to expand the breadth of training research focus areas could more broadly the elderly population (e.g., increasing engagement), to ensure that trainings are designed to equip caregivers with the skills to be independent, and finally, given the frequent staffing challenges experienced by aging settings (Harrington et al., 2020), to explore effective and efficient training techniques that are alternatives to lengthy, in-person training modalities. Given the personnel challenges, which have been exacerbated due to the COVID-19 pandemic (Denny-Brown et al., 2020), the present study sought to begin to expand research by first evaluating trainings with college students via telehealth. The study evaluated a telehealth training which consisted of instructions, a video training, self-monitoring, and feedback provided in an additive design to identify the most effective and efficient training components to train participants to conduct the Stimulus Identification Questionnaire (SIQ) and a Multiple Stimulus Without Replacement (MSWO) preference assessment. Overall, results showed that five out of the six participants achieved 100% mastery of the SIQ, and four out of the five students achieved 100% mastery of the MSWO. These results could be used to inform an effective and efficient way to train caregivers to conduct the SIQ and MSWO in aging settings.
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Andrea Perez
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**Introduction**

Behavioral gerontology has seen a growing literature base over the span of the last 40 years (Baker et al., in press). This growing literature base continues to support a behavior analytic approach to addressing challenges experienced by the aging population. Overall, non-pharmacological interventions focused on caregiver interventions have the strongest evidence base and have produced greater effects than pharmacological interventions (Kales et al., 2015). Additionally, researchers have evaluated strategies to address crucial areas of need for those working with older adults in the areas of behavior management, increasing independence, increasing social behaviors and increasing health behaviors (Buchanan & Fisher, 2002, Baker et al., 2006; Dwyer-Moore & Dixon, 2007; Feliciano et al., 2009; Feliciano et al., 2010, Oleson & Baker, 2014; Trahan et al., 2014; Sharp et al., 2019). For example, Burgio and Burgio (1986) demonstrated that a family training program to implement behavioral strategies allowed families to successfully care for their dependent elders and avoid institutionalization. This led Burgio and Burgio to issue a call to action for additional research evaluating procedures focused on training care providers to implement behavioral strategies in settings such as adult day programs, nursing homes and supported living. Since the 1986 publication, there has been a growing shift within the behavioral gerontology literature focusing on training caregivers to acquire skills to implement behavioral strategies addressing the crucial areas of interest mentioned above. This shift towards caregivers (e.g., families and staff) as the behavior change agent was appropriate, as caregivers would often be directly implementing the behavioral interventions when working within aging settings.
Trainings Within Behavioral Gerontology

To date, within behavioral gerontology there appears to be a greater focus on staff training in behavior management strategies as well as prompting and praising techniques. Alternatively, researchers have disseminated relatively few studies related to staff training on conducting assessments, increasing engagement, and increasing communication. The methodology of studies training behavior management, prompting and praising, increasing engagement and increasing communication approaches will be explained in greater detail in the following paragraphs.

Behavior Management

Within the behavior management category, Bourgeois et al. (1997) conducted a 3-hr in-person workshop and eleven 1-hr home visits to train caregivers to implements a cuing system as a behavior management program to respond to repetitive statements. The workshop consisted of a didactic presentation and the home visits consisted of monitoring the caregiver’s implementation of the interventions. Stevens et al. (1998) conducted a 5-hr in-person training followed by 3 weeks of on-the-job training to train nursing home staff to apply basic skills, including implementing non-verbal and verbal communication strategies, positive reinforcement, planned ignoring, distracting and diverting and identifying replacement behaviors to manage behavioral disturbances in the unit. The didactive training described the goals, techniques, interventions and the importance of the interventions, incorporated video examples of problem behaviors and conducted discussions around vignettes. The in-person training components consisted of observations and feedback provided to the staff. Burgio et al. (2002) conducted a 5-hr in-person training to train staff to increase effective nonverbal and verbal communication skills (e.g., announcing single activities) and decrease ineffective communication skills (e.g.,
using multiple prompts) to manage behavior during care routines. The training consisted of a
class which incorporated videotaped examples of the problem behaviors, discussion of vignettes,
discussions and plans for specific unit problem behaviors, followed by a 2-week hands-on in unit
training.

Two more recent studies that incorporated training related to behavior management did
not provide details regarding their training procedure. Baker et al. (2006) trained staff to
implement a non-contingent escape intervention informed by a functional analysis (FA).
Although Baker et al. provided details for the FA training, the authors did not provide the
training details for the non-contingent escape protocol. Fisher and Buchanan (2018) trained
nursing home staff to make a preferred stimulus available and orienting the resident to the
stimuli during a care session to manage aggressive behaviors. However, the authors did not
provide details on how the training was conducted.

**Prompting and Praising**

Within the prompting and praising category, Burgio et al. (1990), conducted a 1-hr course
to train staff to implement a prompted voiding schedule to increase continence. The training
consisted of verbal and written instructions, and modeling of procedures by experimenters.
Mathews and Altman (1997), Engelman et al. (2002), Altus et al. (2002), and Engelman et al.
(2003), trained special care unit and nursing home staff to implement least to most prompting
strategies and praising strategies during daily activities of daily living (e.g., dressing). Mathews
and Altman (1997) conducted a 45-90 min in-person workshop which consisted of a review of
how to use the prompt systems, and contrived opportunities for practice and feedback. Engelman
et al. (2002) conducted a 45-min in-person workshop consisting of a description of the
importance of the skill, a checklist with the steps, role play and feedback opportunities, followed
by a brief observation and feedback during the actual care routine requiring less than 60 min of overall training. Altus et al. (2002) conducted a 45-min in-person training consisting of instructions on the component skills, followed by two in-person on-the-job sessions of modeling, coaching and feedback opportunities. Lastly, Engelman et al. (2003) conducted an interactive 30-min training workshop. Although authors did not explicitly state this was in person, the same authors have published all other trainings in-person. The training workshop consisted of an explanation of the goals, a description of the component steps, role play and feedback opportunities, and on-the-job observation and feedback.

To date, only one study has been published in which caregivers were taught to conduct an assessment. Baker et al. (2006) implemented a 30-min in-person training for nursing home staff member to conduct an FA. The training consisted of providing rationales, descriptions, and role-playing performance feedback in a contrived scenario.

**Engagement**

Within the engagement category, Engelman et al. (1999) conducted four 30-min in-person training sessions to train assisted living staff to implement a check-in procedure to increase resident engagement with materials that were made available. The training consisted of a session to present the three skills, a modeling session, and two in-service feedback sessions during the staff’s scheduled shift.

**Communication**

Lastly, within the communication category, Burgio et al. (2000) conducted a 2-hr in-person training to train nursing home staff communication skills and the use of memory books to increase verbal interactions between residents and staff. The training consisted of a didactic
component, followed by role playing, discussion of real-life examples, and discussion of written vignettes.

**Implications for Behavioral Gerontologists**

While the training literature within behavioral gerontology appears to have had a strong beginning, the field has recently seen a paucity in both the overall training research and the breadth of training research. Within the past 15 years only two published studies have focused on staff training (Baker et al., 2006; Fisher & Buchanan, 2018). As a result, practicing behavioral gerontologists may find limited existing training literature designed for those working with the aging population, resulting in three potential challenges.

First, there is limited breadth of research scope. Specifically, practitioners will find that the majority of the training literature has historically focused on behavior management and prompting-and-praising strategies. This is problematic because practitioners may limit their scope of practice to remain within evidence-based practice, or practice outside of evidence-based practice by utilizing approaches that have not been empirically validated within the aging context (Slocum et al., 2014).

A second challenge practitioners face is that while studies have trained staff to effectively acquire a specific response to address a behavioral concern, the majority of the literature has not helped make staff autonomous to work independently from a behavior analyst. That is, staff have been trained to implement a procedure that has been designed for them for a specific context. The closest approximation to caregiver independence has been focused on teaching caregivers effective ways to use least intrusive prompts when working with the aging population and to follow a prompt hierarchy from least to most intrusive, encouraging elderly independence. However, these studies only practice the prompting skills in the relevant daily living activity.
This is problematic because studies often do not plan for caregiver success after the consultation process is terminated by ensuring skill generalization across other activities, restricting the application of the learned skill from other contexts which might benefit from its use.

A final challenge that practitioners face is that the literature on trainings in behavioral gerontology has always conducted using in-person lengthy trainings, which typically incorporate the same set of training approaches (verbal instructions, modeling, practice and feedback). By continuously implementing the same independent variables or training approaches, researchers continue to stay within the existing research scope and rely on previous approaches which may not lend themselves to more efficient trainings (e.g., shorter, varying modality than in-person). This is problematic because most nursing facilities are already understaffed, to such extent that in the U.S. 75% of nursing facilities failed to meet the Centers for Medicare and Medicaid Services’ staffing ratio requirements in 2017 and 2018 (Harrington et al., 2020). Therefore, these facilities do not have the resources to spare their limited staff to lengthy trainings that compete with their daily job. Further, in-person training may not always be feasible. For instance, in the year 2020, we experienced a global pandemic placing elderly individuals at greater risk than other populations. As a result, many nursing facilities temporarily restricted entry into their facility, preventing any non-essential employee from entering the facility and limiting any in-person training (Exec. Order No. 2020-37).

At this time, there is a clear and crucial need to disseminate more research that moves our behavioral gerontology training literature base forward. Specifically, researchers should expand the breadth of research focus to other areas that are crucial for the elderly population (e.g., increasing engagement), ensuring that trainings are designed to equip caregivers with the skills to be independent, and explore training techniques while considering alternatives to lengthy, in-
person training modalities. Specifically, one area that has gained momentum in behavior analysis but continues to be under researched in behavioral gerontology is the use of telehealth training with caregivers.

**Telehealth Literature on Caregiver Trainings Within IDD Population**

To date, behavioral gerontology research has not focused on utilizing telehealth to train caregivers for the elderly on behavior analytic strategies. However, research focusing on behavior analytic interventions for children and young adults with intellectual and developmental disabilities (IDD) suggest that telehealth training may be as effective and efficient as in-person trainings (Hay-Hansson et al. 2013). Further, the IDD literature base includes multiple studies supporting various training approaches via telehealth to train caregivers. Below I review training approaches within the IDD literature to help guide the initial steps into telehealth training designed for caregivers of the elderly population.

**Hybrid Approach**

Frieder et al. (2009) were among the first to study the use of a telehealth approach to training caregivers on behavioral strategies. This study combined an in-person training and web-based consultation to successfully teach two school personnel to implement an FA with a child. First, the in-person training was conducted to train the skill and to establish rapport with the school personnel. Second, the behavior analyst provided live coaching by prompting and feedback using a wireless headset during the FA.

**Task Analyses**

One simple approach to telehealth training involved the use of a task analysis to teach teachers to implement a preference assessment with children diagnosed with autism in a classroom setting (Machalicek et al., 2009b). Machalicek et al. provided teachers with a task
analysis for how to conduct the paired-choice assessment and a list of eight items, then instructed the teachers to practice the protocol prior to the video sessions. In preparation for teachers who did not master the skill, the supervisor planned to deliver positive feedback for correct responses and had a protocol to deliver corrective feedback. However, this additional component was not implemented as the teachers did not emit any errors during their sessions. These results were later used to inform instructional interventions for the children.

**Live Coaching**

Perhaps the most common use of live coaching in the autism and IDD telehealth literature is related to the design and implementation of FAs. The main component of this training approach typically involves a trainer providing live cues to guide the behavior of caregivers while implementing the procedures (Machalicek et al., 2009a; Martens et al., 2019). However, studies have incorporated additional training components to the live coaching approach. For instance, studies have delivered instructional material to caregivers via mail prior to each live coaching session (Barreto et al., 2006; Simacek et al., 2017; Benson et al., 2018). Studies have described the purpose of the assessment, reviewed instructions on setting up the environment, and described the procedure during an initial virtual meeting prior to starting a live coaching session (Suess et al., 2016). Other studies have provided instructional materials (e.g., training manual, checklists, case examples and scripts) and reviewed these with caregivers during an initial virtual meeting prior to the virtual live coaching sessions (Wacker et al., 2013; Suess et al., 2014; Tsami et al., 2019). Lastly, Suess et al. (2014) combined live coaching with video feedback in which caregivers video recorded their implementation of an FCT procedure and consultants used to provide feedback during the following live coaching session.
Self-Directed Modules

Several studies have incorporated a self-directed component with online modules to telehealth training. The main component in this training approach typically involves having participants complete all or some aspect of their training independently from the trainers. Studies have compared the self-directed training approach to self-directed and therapist assisted training. For instance, Ingersoll et al. (2016) compared self-directed to therapist-assisted coaching to train parent of children diagnosed with autism how to implement naturalistic, developmental-behavioral intervention. The self-directed component included 12 lessons, each approximately 75-min. The parents were instructed to review a lesson per week and to practice with their child in-between lessons. The therapist-assisted group received the same online modules but also received two 30-min live coaching sessions with the therapists. While the children in both groups showed an increase in one of the target behaviors (i.e., communication), only the children from the therapist-assisted group showed an increase in the two target behaviors (i.e., communication and social skills).

Studies have also extended the self-directed component to incorporate live virtual meetings with instructors. For instance, Fisher et al. (2014) had technicians complete e-learning modules for 17 skills at times that were most convenient to each participant. The self-directed training was followed by modeling, role-play opportunities, and real-time coaching and feedback via a virtual meeting for six of the modules. Heitzman-Powell et al. (2014) had seven parents complete eight modules consisting of an online tutorial, knowledge assessment, and a virtual coaching session. The coaching session consisted of a discussion regarding the module content, practice opportunities, and live feedback. Wainer and Ingersoll (2015) had parents conduct an online interactive module and skills assessment. The training was then followed by a virtual
coaching session which consisted of discussion regarding the content, problem solving opportunities, practice opportunities and live feedback.

Lastly, one study added a video component to the training. Wilczynski et al. (2017) had a teacher independently complete eight online modules on behavior analytic strategies. After every two modules were completed, the teacher also recorded and submitted a video of herself implementing the techniques with a student. Afterwards, the teachers attended a virtual session in which they received coaching and feedback based on the video submitted.

Self-Monitoring

One study attempted to increase independence by teaching behavior therapists to engage in self-monitoring. Neely et al. (2016) had the behavior therapists complete an online module, receive a self-evaluation sheet and complete a post-training assessment. Afterwards, the therapists were instructed to record a video of themselves implementing the technique with a child. Then, the therapist and the trainer independently reviewed the video using the self-evaluation sheet. Finally, the therapist and trainer met virtually to review the evaluation and to deliver delayed feedback based on the procedure.

Behavioral Skills Training

Several studies have utilized a training package commonly referred to as behavioral skills training (BST). This package incorporates descriptions of skills, modeling, practice opportunities and feedback. Researchers have utilized this package to teach students, teachers, and parents (Gibson et al., 2010; Machalicek et al., 2010; Wacker et al., 2013; Machalicek et al., 2016; Simacek et al., 2017; Hoffman et al., 2019). Further, some studies have modified or delivered components of this training package in unique ways. For instance, Sump et al. (2018) compared the efficiency of telehealth to in-person BST trainings to teach seven undergraduate students to
implement discrete trial training. The telehealth training time was shorter than the in-person training time for one of the skills taught. Overall, results showed that the telehealth trainings were as effective and efficient as in person trainings for all participants. Vismara et al. (2012) provided parents with a DVD video which included descriptions of the skill and video examples of how to implement the skills. Afterwards, parents met with the trainer and engaged in the skill with their child, which allowed the trainer to observe and deliver feedback. Monlux et al. (2019) had parents complete a didactic training on basic behavioral principles to provided parents prerequisite knowledge. Higgings et al. (2017) provided the description and instructions of the skills using a multimedia presentation. Lastly, Rios et al. 2020 had participants complete post-training probes with a simulated child and in-situ probes with the actual child following the BST training.

Finally, studies have implemented BST at an international level. For instance, Alnemary et al. (2015) trained four special education teachers in Saudi Arabia to implement an FA. Barkaia et al. (2017) trained three therapists in Eastern Europe to implement strategies (e.g., delivering instructions and consequences) to increase children’s echoics and mands. Lastly, Tsami et al. (2019) successfully replicated the Wacker et al. (2013) procedures with eight families in other countries (i.e., Greece, Turkey, Saudi Arabia, Costa Rica, Mexico, Ukraine and Russia).

Summary of Telehealth Research and Considerations for Behavioral Gerontology

In summary, there is a growing emphasis on telehealth training within the IDD literature within the past 15 years. There have been many training approaches utilized in a telehealth model, including the use of task analyses, live coaching, self-directed modules, and BST. Overall, it appears that telehealth trainings can be as successful as in-person trainings (Sump et al., 2018). While the majority of the studies have focused on teaching caregivers to implement FAs, there have been a variety of skills trained using a telehealth approach (e.g., preference
assessments, FCT, natural environment teaching techniques, discrete trial teaching techniques, imitation procedures, echoic and mand training procedures, etc.). The studies that implemented a self-directed component (e.g., online modules or independent instructional materials) demonstrated initial increases in participant performance. However, the participants were more likely to reach mastery criteria when the self-directed component was followed by a therapist or coaching component (Machalicek et al., 2009b; Machalicek et al., 2010; Ingersoll et al., 2016). Finally, the majority of the studies involved some version of live virtual interaction with the trainers.

As mentioned above, the growing literature base in telehealth training within the IDD population stands in sharp contrast to the existing training literature within behavioral gerontology. The majority of behavioral gerontology training research is more than 20 years old and only conducted via in-person trainings. In addition to a telehealth model, the ample literature base within the IDD population offers advances in effective and efficient training technologies for behavior analysts extending training research into aging settings. To be successful in expanding into aging settings, behavior analysts must consider how aging service environments differs from those of the IDD population.

A significant factor when working within an aging environment (e.g., nursing home) is the relatively low staffing ratios. For instance, in the state of Michigan, a nursing home should have at least one nursing personnel for every eight residents during a morning shift and one nursing personnel for every fifteen residents during a night shift (Act 368, 1978). This would suggest that procedural interventions designed for nursing personnel as behavior change agents should require minimal timing resources. Further, these settings experience frequent staffing shortages (Stutzky, n.d). As a result, aging settings may not have an abundance of time allotted
to caregiver training (e.g., trainings requiring a couple of hours or weeks). Finally, there is a limited number of practicing behavioral gerontologists. As of February 16th, 2021, the BACB registry data list 0.14% of all board-certified behavior analysts, a total of 47 people, as specializing in behavioral gerontology. This is contrasted with 73.16% (66,713) of behavior analysts practicing with an autism focus. Therefore, interventions should be designed in ways that allow the few behavior gerontologists to reach more aging settings in effective and efficient ways. If behavior analysts pursue the expansion into aging settings without special consideration to these characteristics, the effectiveness of any effort will be compromised (Slocum et al., 2014).

**Purpose and Participant Modification Due to COVID-19**

The purpose of this study was to bridge the existing IDD telehealth training literature and the behavioral gerontology training literature, while considering the special characteristics of aging settings and incorporating a telehealth model to training. Specifically, this study used telehealth to identify the most effective and efficient training component to train participants to conduct the Stimulus Identification Questionnaire (SIQ), a questionnaire designed to identify preferences for older adults within seven categories (games, arts and crafts, physical activities, self-care, visual activities, auditory activities, social activities, chores), and a Multiple Stimulus Without Replacement (MSWO) preference assessment.

As mentioned above, aging settings often have time and personnel challenges, which have been exacerbated due to the COVID-19 pandemic (Denny-Brown et al., 2020). In the development of this study, we sought to collaborate with an aging provider in Southern Illinois who was very interested in receiving the trainings across their facilities. However, outbreaks, lock downs, and staff shortages led us to consider whether it was most ethical to conduct a study
that evaluated different training techniques with a staffing population that was overworked, stressed, and understaffed. Ultimately, we chose to keep the methodology but change our participants to college students. Although this presents some limitations on the generality of the findings, this approach allowed for an evaluation of the most effective and efficient methods that could then be used to train caregivers in aging settings.

**Methodology Part I SIQ**

**Participants, Setting, and Compensation**

Study part I included seven participants recruited from undergraduate courses offered at Western Michigan University. The study included six female participants (Anna, Valerie, Eloise, Amy, Sophie and Sybil) and 1 male participant (Andrew). All participants were between the ages of 19-23. All participants indicated having no prior history with conducting interviews with the exception of Anna who stated a history of “mock interviews for undergraduate courses”. All sessions were conducted via telehealth. Although Amy was recruited as a student, she was a certified nursing assistant (CNA) in a nursing home at the time of the study. The researcher conducted each session from Southwest Michigan and met with each participant via WebEx. Each participant received $10 for each session they completed.

**Materials**

This study utilized the SIQ (see appendix A), an interview questionnaire which includes step by step instructions, datasheets and has been designed to be used without additional supports, the SIQ training video (see appendix B), self-monitoring datasheets (see appendix C), Self-monitoring training PowerPoint (see appendix D), Researcher script for the probes (see appendix E), a computer with a video camera and sound capabilities and access to WebEx video conference application.
The training video was created using Microsoft PowerPoint following the structure described by Higgings et al. (2017). The content of the video training only included the information described in the SIQ instructions and did not provide additional information. The video first identified the components of the SIQ. Then, a description of each the component skills was provided demonstrate while presenting each component skill using the SIQ questionnaire and providing a narrated description of how to conduct each step. Afterward, a model was provided for how to conduct each step.

**Response Measurement and Data Collection**

The dependent variable for part I consisted of the percentage of accuracy of each component steps while implementing the SIQ (see appendix C). The dependent variables were measured when the participant completed an SIQ interview probe.

A second independent observer watched 30% of the recorded sessions and recorded accuracy of participant performance during the probes. Inter-observer agreement (IOA). IOA was obtained by dividing the number of agreements across steps by the number of agreements plus disagreements and multiplied by 100%. For instance, if both the primary observer and secondary observer recorded a response as correct, this was counted as an agreement. If the primary observer scored a response as correct and the secondary observer scored a response as incorrect, this was counted as a disagreement. The two observers scored 98% agreement (ranging from 92% to 100%).

**Mastery Criterion**

Mastery criterion was set at 100% accuracy. If a participant scored 100% during the baseline part of the study, they would have mastered the SIQ part of the study, and their participation ended. If the participant scored at 100% after receiving any training component in
the training sequence (video only, video and self-monitoring, and video, self-monitoring and feedback; described in detail below), an additional meeting was scheduled, a generalization probe was conducted, and their participation ended. If a participant scored below their baseline level during the generalization prove they would have been re-entered into the training sequence (re-entry was not needed for any participant).

If a participant did not score at 100% accuracy during a training component probe (e.g., video training), they continued to the next training component (video training and self-monitoring), until they reach the final training component (video training and feedback). The training sequence was terminated after the participant experienced the final training component once, regardless of their accuracy score.

**Experimental Design and Procedures**

This study followed an additive design embedded within a concurrent multiple baseline probe design across participants. Data analysis was conducted during the baseline probes to determine the order in which participants would receive the training components. Participants whose data demonstrated a decreasing trend were selected to receive the training components first. If a participant’s data depicted an increasing trend, they remained in baseline until their performance stabilized or decreased from the previous probe. The training sequence consisted of first the training video, then the training video plus self-monitoring and lastly, the training video, self-monitoring, and feedback. All participants received one training component at a time before moving to the next training component within the sequence or before mastering out of the study. Lastly, all sessions were recorded for data collection purposes but also for use in the self-monitoring training component and lasted between 25 min to 60 min.
All probes consisted of the participant conducting the SIQ questionnaire with the researcher as a confederate for three SIQ categories (games, arts and crafts, and visual activities). The researcher followed a pre-determined script for responses to each of the SIQ questions. The pre-determined scripts that the researcher followed were designed to simulate different scenarios which would require specific responses from the participant. For example, the script for the Visual activities category only offered one preference which required the participant to reference the SIQ appendix and offer examples of activities until 5 activities were identified. The script was also designed to offer an equal number of opportunities for all participants to engage in the correct responses.

Sessions in this study involved initial greetings once the participant and researcher joined the virtual room. Then, the research provided an explanation of the condition for that session. For example, if the participant was in a baseline condition, the research would state “for today, we will start by having you open the questionnaire, taking the time you need up to eight minutes to review the instructions and then jumping right into the questionnaire. After you are done, we will end out session”. If the participant was in an intervention session, the training component (e.g., video) was delivered after the condition explanation. A probe was conducted immediately following the training component by having the participant having up to eight minutes to review the questionnaire instructions and then conducting the interview. Afterwards, the researcher thanked the participant for joining the session and instructed them to expect an email with the scheduling information for their next meeting.

Once a participant reached mastery or reached the final training component in the sequence (i.e., video, self-monitoring and feedback), a post training probe was conducted days
after. The post training probe was identical to the training probes, except the researcher followed a novel script to test for generalization.

**Written Instructions (Baseline)**

During the baseline session, the researcher and participant were present in the virtual WebEx meeting room. The researcher provided the participant with an electronic version of the SIQ via email right before each session. The session began with the researcher instructing the participant to review the instructions on the first page of the SIQ (also screenshared by the researcher) by stating “take your time in reviewing these instructions, let me know when you are ready and then we can get started”. After the participant indicated that they had reviewed the instructions, the researcher began the training probe by asking the participant to conduct the SIQ interview for three categories (games, arts and craft, and video) following the pre-determined script. The instructions remained available to the participant during the probe (this was the case for all training components as well). The researcher did not answer any questions regarding the SIQ or clarify any instructions for the participant. For two participants (Eloise and Sybil), a generalization probe with a new script was also conducted during baseline to test for the possibility of practice effects.

**Video Training**

The video training component consisted of a pre-recorded narrated PowerPoint presentation (here after referred to as the training video). The training video included an introduction to the purpose of the SIQ, introduction to the SIQ sections, an explanation of how to complete each step, and an example of how to complete each step. During this training session, the researcher and participant were present in the virtual WebEx meeting room. The researcher screenshared and played the training video for the participant while remaining present in the
virtual room to ensure that the participant contacted the entire video. The researcher was only available for technical support but was not be available to answer any questions regarding the implementation of SIQ or to clarify components of the training video. For example, if the participants asked a question about the implementation of the SIQ, the researcher would state “I cannot answer any questions about the assessment at this time”. After the participant viewed the training video, they completed a post training probe which was conducted similarly to the baseline session probe.

**Video Training and Self-monitoring**

During the video training and self-monitoring session, the researcher and participant were present in the virtual WebEx meeting room. The researcher first conducted a self-monitoring pre-training with the participant to ensure they had the pre-requisite skills to complete the self-monitoring training component. The pre-training consisted of the researcher screensharing the self-monitoring training PowerPoint. The training included a review of the self-monitoring scoring form, examples of how to use the self-monitoring scoring form, a practice opportunity and feedback.

During the video training and self-monitoring training component, the researcher screenshared and played the training video for the participant and remain present in the virtual room to ensure that the participant contacted the entire video. Then, the researcher screenshared and played a video clip of the participant’s performance obtained from their previous session or a baseline probe. While the participant observed their own performance, they used the self-scoring form to score procedural fidelity on their own performance. The researcher did not provide feedback on accuracy of self-recording to ensure that participants only received feedback from the researcher in the *video training, self-monitoring, and feedback training component*. 
Therefore, the researcher was only available for technical support but was not be available to answer any questions regarding the implementation of SIQ. For example, if the participants asked a question about the implementation of the SIQ, the researcher would state “I cannot answer any questions about the assessment at this time”. After the participant had scored their performance, they were asked to share their completed self-scoring form with the researcher via email. Lastly, the participant completed a post training probe as previously described.

**Video Training, Self-monitoring, and Feedback**

During the video training, self-monitoring, and feedback training component, the researcher and participant were present in the virtual WebEx meeting room. The researcher screenshared and played the training video for the participant and remain present in the virtual meeting room to ensure that they contact the contacted the entire video. Then, the researcher screenshared and played a video clip of the participant’s performance obtained from their previous probe or a baseline probe. Following Mager (2012), the researcher then provided adequacy feedback, diagnostic feedback, and corrective feedback for each component skill. Prior to the session, the researcher reviewed the participants scoring form for the previous session and identify components that the participant conducted correctly and incorrectly. Based on this information, the researcher then provided feedback verbally based on the participant’s performance. Feedback was provided by selecting each component step and stating whether the participant completed this step correctly or incorrectly, provided an example of how they completed the step and for incorrect responses, providing an example of how to conduct this step. After the participant received feedback on their performance, they completed a training probe. If the participant made an error during the training probe, the research provided corrective feedback verbally based on the participant’s performance.
Procedural Integrity

An independent observer reviewed 30% of the recorded sessions using the procedural integrity checklist corresponding to each training component (see Appendix F). Procedural integrity was scored at 99%.

Methodology Part II (MSWO)

To evaluate the generality of the findings, we replicated part I methodology while teaching participants how to conduct the MSWO. Part II was a direct replication of part I methodology with slight changes in the four sections described below.

Participants and Setting

Part II included 4 participants from the Part I (Anna, Eloise, Amy and Sybil) and 2 new female participants (Vivian and Michelle). All participants were between the ages of 18-23. All participants indicated having no prior history with conducting MSWO assessments.

Materials

This study required five MSWO prop items, MSWO datasheet (see appendix G), MSWO instructions (see appendix H), MSWO training video (see appendix I), Self-monitoring training PowerPoint (see appendix J), self-monitoring scoring form (see appendix K), MSWO script (see appendix L), a computer with a video camera and sound capabilities and access to WebEx video conference application.

Dependent Variables

The dependent variable for part II consisted of the percentage of accuracy of each component steps while implementing the MSWO (See appendix K). The dependent variables were measured when the participant completed an MSWO probe.
A second independent observer watched 30% of the recorded sessions and recorded accuracy of participant performance during the probes. Replicating part I, IOA was obtained by dividing the number of steps with agreements by the number of steps with agreements plus disagreements and multiplied by 100%. The two observers scored 95% agreement (ranging from 86% to 100%).

Probes

Each probe consisted of the participant conducting an MSWO with a partner. To facilitate the probes, participants were asked to have a partner present with them during the probes. During the probes, the partner wore headphones and followed the researcher’s instructions, who was following a pre-determined script on how to respond during the MSWO. All participants were seated next to their partner, selected five prop items from their environments and conducted the assessment with these items. The environment was arranged in a way that allowed the camera to capture the participant, the partner and the five items in front of the partner (e.g., a participant seated next to the partner at a table).

Each probe consisted of a pre-session exposure for each of the five items, the five-item assessment and a datasheet to record selections and calculate preference rank. Similar to part I (SIQ), after participants achieved mastery criterion or had been exposed to the final training component, they met once more with the researcher to conduct a post training probe. The post training probe session was identical to a baseline session.

Procedure

All other procedures, including the mastery criteria, the order of independent variables, and the procedures of those variables were identical to Part I.
Procedural Integrity

An independent observer reviewed 30% of the recorded sessions using the procedural integrity checklist corresponding to each training component (see Appendix M). Procedural integrity was scored at 99%.

Results

Part I (SIQ)

Two participants completed initial baseline session probes but did not receive any training component. Valerie received two baseline session probes in which she scored 67% and 100% accuracy. Given that she had not had access to the scenario prior to the probes, there was no concern that her mastery was based on exposure to the script and therefore, she did not receive the post training probe. Anna received three baseline session probes in which she scored 78%, 87%, and 85% accuracy. Following completion of probe 3, Anna requested to be done with the study without providing any context into her decision to terminate her participation.

Figure 1 depicts the results of Andrew’s, Sophie’s and Amy’s performance. Andrew (top panel) received two baseline session probes in which his highest performance was his initial baseline probe at 61% accuracy and then decreased his performance for his second probe. He was then exposed to the video training condition, the video and self-monitoring condition and the video, self-monitoring and feedback condition. His highest performance was a 92% accuracy probe following the video, self-monitoring and feedback condition. During the post training probe, he scored at 94% accuracy.

Sophie (middle panel) received three baseline session probes in which her highest performance was her initial baseline probe at 92% accuracy and then her performance decreased to 85% accuracy. Due to the minimal change in performance from probe two to probe three and
the increasing trend observed from all other participants, we intervened with her at this point. She was exposed to the video training condition and achieved mastery at 100% accuracy. By having achieved mastery during the video training condition, she was not exposed to any other training components. During the post training probe, she scored at 98% accuracy.

Amy (bottom panel) also received three baseline session probes with a week missed in between sessions two and three. Her highest performance was her second baseline probe at 70% accuracy and then her performance decreased to 68% accuracy. She was then exposed to the video training condition, the video and self-monitoring condition and the video, self-monitoring and feedback condition. Her highest performance was a 100% accuracy probe following the video, self-monitoring and feedback condition. During the post training probe, she scored at 100% accuracy.

Figure 2 depicts the results of Eloise’s and Sybil’s performance. Eloise (top panel) received six baseline session probes in which her highest performance was her third baseline session probe at 97% accuracy and then remained at this level. She was then exposed to the video training condition and scored at 100% accuracy. By having achieved mastery during the video training condition, she was not exposed to any other training components. During the post training probe, she scored at 100% accuracy.

Sybil (bottom panel) received seven baseline session probes in which her highest performance was her sixth baseline probe at 97% accuracy, which then decreased to 93% accuracy. She was then exposed to the video training condition, and the video and self-monitoring condition. Her highest performance was a 100% accuracy probe following the video and self-monitoring condition. During the post training probe, she scored at 100% accuracy.
Error Analysis

Figure 3 depicts the result of the error analysis for Andrew and Amy. Although we conducted error analyses for all participants, the patterns shown in Andrew and Amy’s data are representative of all participants. The results of the error analysis showed that the majority of the errors occurred during the visual category. Further, during baseline sessions, participants were likely to demonstrate a skill without consistency. Participants engaged in correct responses during one session and then did not respond correctly for the exact same response during the following session. However, once the training components were introduced, if a skill was corrected, it remained correct for the remainder of the probes. As the training components were introduced, the instances of correct responding increased and errors decreased.

Part II (MSWO)

Two participants completed initial baseline session probes but did not receive any training component. Anna received two baseline session probes in which she scored at 43% and 43% accuracy. Following completion of probe 2, Anna requested to be done with the study without providing any context into her decision to terminate her participation. Eloise received two baseline session probes in which she scored at 100% and 100% accuracy. Given that she achieved mastery criterion while in baseline her participation in the study was discontinued. However, she received a third baseline session probe without access to the written instructions and scored at 98% accuracy.

Figure 4 depicts the result of Vivian, Sybil’s, Amy’s and Michelle’s performance. Vivian (top panel) received two baseline session probes in which her higher performance was her initial baseline probe at 65% accuracy. She was then exposed to the video training condition, and the video and self-monitoring conditions. Her highest performance was a 98% accuracy probe
following the video and self-monitoring condition. Unfortunately, at this time she contracted a mild case of COVID-19 and was unable to continue to participate in sessions with a partner due to quarantine requirements.

Sybil (second panel) received three baseline session probes in which her highest performance was her last baseline probe at 49% accuracy. Due to the minimal change in performance from probe two to probe three and the increasing trend observed from all other participants, we intervened with her at this point. She was then exposed to the video training, the video and self-monitoring, and finally, the video, self-monitoring and feedback conditions. Her highest performance was a 93% accuracy probe following the video, self-monitoring and feedback condition. During the post training probe, she scored at 100% accuracy.

Amy (third panel) received three baseline session probes with a week missed in between session two and three. Her highest performance was her first probe at 51% accuracy. She was then exposed to the video training, the video and self-monitoring, and finally, the video, self-monitoring and feedback conditions. Her highest performance was an 84% accuracy probe following the video, self-monitoring and feedback condition. During the post training probe, she scored at 93% accuracy.

Michelle (bottom panel) received six baseline session probes. Her highest performance was her fifth probe baseline probe at 89% accuracy. She was then exposed to the video training, the video and self-monitoring and finally, the video, self-monitoring and feedback condition. Her highest performance during training occurred following the video, self-monitoring and feedback condition at 100% accuracy. During the post training probe, she scored at 100% accuracy.
**Error Analysis**

Figure 5 depicts the results of the error analysis for Sybil, Amy and Michelle (similar to Part I, these three participants’ error analyses are representative of the patterns observed). The results of the Amy’s MSWO error analysis (top panel) showed similar patterns to the SIQ error analyses in regard to the consistency of errors in the baseline sessions. That is, during baseline sessions, participants engaged in correct responses during one session and then did not respond correctly for the exact response during the following session. However, once the training components were introduced, if a skill was corrected, it was more likely to remained correct for the remainder of the probes. As the training components were introduced, the instances of correct responding increased and errors decreased. Further, Michelle demonstrated consistent errors during the first two baseline sessions and then independently improved performance. Once she self-corrected a response during baseline sessions, she continued to perform the response correctly.

**Discussion**

Within the past 15 years, researchers in the field of behavioral gerontology have only published two studies focusing on caregiver training (Baker et al., 2006; Fisher & Buchanan, 2018). Both of these studies were focused on a single person’s individualized plan, required continuous support from a behavior analyst, and were conducted in-person. Thus, there is a clear and crucial need to conduct more research that moves our behavioral gerontology training literature base forward. With the limited behavioral gerontology training research, behavioral gerontologists should consult the IDD training literature base in their pursuit to push our training literature forward. Specifically, researchers should expand the breadth of research focus to a wider range of skills that have applicability for the elderly population and are not specific to a
single older adult (e.g., teaching caregiver techniques for increasing engagement vs a specific behavior reduction protocol). They should also ensure that trainings are designed to equip caregivers with skills that allow them to be successful without ongoing support from a behavior analyst. Finally, they should explore alternatives to lengthy, in-person trainings.

The current study sought to address each of the above points in three ways. First, by selecting implementation of the SIQ and MSWO as target skills. These two assessments have been designed to identify and calculate overall preferences. Thus, both have the potential to inform strategies that will increase elderly engagement (LeBlanc et al., 2006; Feliciano et al., 2009; Quick et al., 2018; Perez & Baker, 2019) and subsequently, increase the quality of life of many aging individuals. Second, unlike an FA, the SIQ and MSWO do not require extensive behavior analytic training. Thus, it was possible to train participants to a level of independence that would allow them to continue to implement the skills acquired in the absence of a behavior analyst. Finally, this study incorporated an additive design to identify which training components were necessary to achieve desired levels of performance in the least amount of time possible via telehealth. Overall, the results of this study showed that all participants performed at or above 93% accuracy across the 2 skills. The following sections highlight several implications from the present study related to (a) the training components, (b) skills chosen as targets (i.e., SIQ vs MSWO), and (c) the utility of the present training approach in an aging setting.

Training Components

This study incorporated four components which consisted of instructions, a video training, self-monitoring, and feedback provided in an additive approach as the participant progressed through the training sequence. The first component delivered was the instructions. While the present study did not evaluate performance in the absence of instructions to determine
what improvements the instructions produced, instructions constitute a minimal effort intervention. Overall, participants in this study did not have any experience conducting the SIQ or MSWO, yet with access to the instructions during the baseline condition participants demonstrated moderate performance in both groups, averaging 83% for the SIQ and 65% for the MSWO. Interestingly, the instructions were sufficient for one participant to achieve mastery of the SIQ and for one participant to achieve mastery of the MSWO. For these two participants, our results were similar to results were obtained by Machalicek et al. (2009b) in which access to a task analysis for conducting a paired-choice preference assessment was sufficient for the teachers to achieve mastery.

While the SIQ was originally designed to function independently from an instructor, and initial performances were high during the baseline, only one participant achieved mastery. As noted in the error analysis, it appeared the issue was not so much a skill deficiency, but rather that the skills were not occurring consistently in the presence of the appropriate stimulus. Future research should focus on identifying strategies to increase stimulus control (e.g., making components of the instruction more salient) to produce more accurate performance.

The second component delivered was the video training component. Previous studies have demonstrated that a self-directed component (e.g., online modules) may increase overall performance accuracy for all participants but may be insufficient to achieve mastery for some participants (Wainer & Ingersoll, 2015). Similar results were obtained from the present study once the video training component was introduced. Two of the five participants achieved mastery once video component was implemented for the SIQ, but none of the participants achieved mastery with the video for the MSWO. Overall, the video resulted in an increase of
performance for the remaining three participants for the SIQ (e.g., average score of 92%) and all participants for the MSWO (e.g., average score of 70%).

As noted in the above methodology, there was a strategy in the design of the video training materials. Specifically, the content was minimized to clear and concise instructions, the individual steps were presented in the order in which they should occur, and several steps were combined into video models. While the results suggest that these materials have an effect on performance, future research may consider evaluating which video components are necessary. For instance, the videos models only provided a demonstration of how to correctly engage in the performance and did not include incorrect responses. Therefore, a clear rule for what constitutes an error was not provided until the feedback session. Future research might evaluate whether models demonstrating how not to perform the skill may minimize participant errors. Overall, these results showed that the instructions and video could be a cost effective and efficacious approach, resulting an average proficiency of 92%.

The third component delivered was the self-monitoring component. This component introduced new skills (i.e., self-monitoring and data collection), required a higher response effort from the participants, introduced multiple materials (e.g., self-monitoring training PowerPoint, self-monitoring datasheet), and required a live coaching session from a behavior analyst to train and provide practice opportunities teaching participants to self-record. The results from this component showed that participants only demonstrated a slight improvement in performance (e.g., from 92% to 95% for the SIQ and from 70% to 79% for the MSWO). Only one participant from the SIQ group achieved mastery during this component. However, this participant was already scoring at 99% accuracy and had demonstrated the missing skill in previous probes (e.g., clarifying a specific preference when a vague answer was provided). In fact, the majority of the
participants who did not master the skill once the video component was introduced required the feedback component to achieve mastery. Future research might consider evaluating whether it is possible to omit this component and move directly into feedback.

Finally, this study included feedback both prior to performance and following performance. Studies have found that providing feedback immediately prior to a session resulted in more accurate performance. For instance, although Aljadeff-Abergel et al. (2017) found that feedback increased overall performance when delivered prior to and following performance. However, the authors found that delivering feedback immediately prior to the session resulted in the highest performance. In the present study participants’ performance was sensitive to feedback delivered immediately before and immediately following a probe (which included a time delay of anywhere between two to seven days). Specifically, the average SIQ scores increased from a high 95% to a 96% from self-monitoring to feedback and then further increased to 98% during the post training probe. A slightly higher increase was observed during the post-session probe in which feedback had been delivered immediately following the probe during a previous session. That is, the average scores increased from self-monitoring to feedback from 79% to 92% accuracy and then further increased to 98% during the post training probes. Further, the time in-between sessions in the Aljadeff-Abergel et al., study ranged from two days to five days which was similar to our time in-between sessions which ranges from two days to seven days.

Overall, it appears that feedback was an essential component for the majority of participants in the MSWO part and for two of five of the participants in the SIQ. These findings are similar to those found in a study by Wainer and Ingersoll (2015) in which five out of the five participants showed an increase in performance after contacting self-directed online modules.
However, only two of the five participants achieved mastery after completing the online modules and the remaining three achieved mastery after they contacted a virtual coaching session.

**Chosen Targets**

While both the SIQ and MSWO fall within an assessment category, the SIQ is an interview which requires the ability to read along a script, which one might argue is less complex than the MSWO, an assessment which requires an active role in time management, decisions points based on performance, and data recording from the assessor. Overall, results from the present study showed that the participant’s baseline performance was much lower during the MSWO than during the SIQ probes. These results suggest that in addition to instructional components, skills requiring more complex skills, such as the MSWO, may require a more intensive training component (e.g., feedback). In contrast, skills that are less complex, such as the SIQ, might simply require a training video to achieve high levels of performance.

For instance, Amy and Sybil completed both SIQ and MSWO parts of the study. Amy scored at 67% accuracy during the SIQ and at 41% accuracy during the MSWO. Once the video component was introduced, she scored at 88% accuracy during the SIQ and only at a 60% accuracy during the MSWO. Similarly, Sybil scored at 83% accuracy during the SIQ and at 47% accuracy during the MSWO. Once the video component was introduced, she scored at 99% accuracy during the SIQ and only at a 58% during the MSWO both performance for those participants who did both SIQ and MSWO. Further, Amy increased her performance to near mastery during the self-monitoring but still required feedback for the SIQ, while Sybil achieved mastery during self-monitoring for the SIQ. For the MSWO, both participants required the feedback component, however, Sybil achieved mastery following the feedback session while Amy achieved the highest score of 93% accuracy.
Overall, the independent variables affected patterns of responding differently across skills for each participant. Therefore, researchers should consider selecting the independent variables based on the skills they are hoping to teach versus on a participant’s performance in a single skill. That is, if we had decided to only provide the video training component to teach the MSWO for Sybil based on her high performance with this training component during the SIQ, we would have only achieved moderate levels of performance accuracy.

**Utility of Present Training Approach in Aging Settings**

The training components designed for this study may easily be implemented within aging settings with time and staffing constraints. Overall, trainings that have been conducted within the behavioral gerontology literature base have ranged from 30 minutes to over 14 hours. As noted earlier, such training time requirements may not be tenable in aging settings. In the present study, each training for the SIQ session lasted between 32 min (i.e., video only) to 1-hr and 1-min (i.e., video, self-monitoring, and feedback). The MSWO sessions lasted between 23 min (i.e., video only) to 55 min (i.e., video, self-monitoring, and feedback).

Further, the use of technology translates well to aging setting constraints. First, this approach allows consultation to occur in convenient locations for the clients (e.g., a client’s home setting). Secondly, this approach would facilitate training efforts at a national and international level (Alnemary et al., 2015; Barkaia et al., 2017; Tsami et al., 2019). Finally, this approach would allow a single behavior analyst to work with a variety of settings from a single location, which is beneficial given the limited number of practicing behavior gerontologist. For instance, Tsami et al. (2019) trained caregivers in eight different countries simultaneously and overcame the language barriers by incorporating translators into their training efforts.
Finally, our results suggested that a full BST approach was not necessary to produce sufficient performance across participants, which has implications for the dissemination of skills. It is common for aging facilities to hold group staff meetings or require outside of work continuing education. The materials and video for the SIQ could be easily disseminated to facilities and potentially result in the majority of their staff being equipped to identify preferred items for their residents. Further, it may be more effective and efficient for behavior analysts working within these settings to offer caregivers training videos of MSWO following the approach used in this study to obtain moderate levels of performance. Behavior analysts could then increase implementation accuracy by providing positive and corrective feedback during a brief coaching to achieve accuracy levels that would allow staff to effectively identify a hierarchy of preferences.

Limitations

There are a number of limitations to the present study that are worth discussing. First, the study was conducted with undergraduate students and not with caregivers from an aging setting. Therefore, the results of the study do not directly provide data on how caregivers from an aging setting would perform. While the participants were not recruited from an aging setting, one participant (i.e., Amy) worked as a caregiver at a local nursing home at the time of the study. Additionally, the probes evaluated performance of the skill in highly controlled and contrived scenarios. Therefore, it remains unclear if the skill would generalize to real scenarios when working with an elderly adult.

The study also does not provide information on how the performance maintains over time. The study did incorporate a final probe after mastery of the skill and after all training components have been implemented; however, there are no data on maintenance of the skill after
this probe. Future studies should specifically measure how the skills maintain over time when training caregivers in aging settings.

The present study utilized an additive design and did not directly compare the training components in isolation with the exception of the video only condition. Therefore, the increase in performance accuracy may be a combination of practice effects from the previous components, in addition to the most recent training components. If so, although a certain training package may have been effective in the present study (e.g., video, self-monitoring and feedback), we may not expect to see similar response patterns if we were to deliver a training component combination once. Future research should evaluate the effectiveness of delivering each training component (e.g., Video only, video and self-monitoring, and video, self-monitoring and feedback) for each of the skills independently.

Lastly, all participants during part II were asked to attend each session with a partner of their choosing and most partners were friends or significant others. The partners were instructed on how to respond by the researcher and were told to expect certain responses from the assessor. Therefore, while the partner was instructed to keep the instructions to themselves until the end of their participation in the study, it is impossible to know whether they shared information with the participants after each session. If they had, the participant would have contacted some level feedback prior to the introduction of this component.

Conclusion

There are over 49.2 million adults over the age of 65 in the United States and number is projected to almost double to 98 million by the year 2060. Currently, there are only 47 registered practicing behavioral gerontologists. Therefore, it is going to be impossible to meet the needs of our growing aging population without developing strategies that allow us to reach a high number
of people. Efficacious telehealth trainings and packaged interventions present an ideal solution to the growth challenges in behavioral gerontology. While the current study did not directly test the training package with aging staff, and therefore does not have an immediate direct impact on the quality of life of elderly individuals, it has the means to inform trainings that will. Therefore, this study is one of the first steps to work towards achieving successful behavioral gerontology support for our growing population and their caregivers.
References


Figure 1
SIQ Accuracy

Note. This figure displays the performance accuracy during the SIQ probes. For the purposes of this figure, V: video only condition, V + S-M: Video and self-monitoring, and V+S-M+F: Video and self-monitoring and feedback.
Figure 2
SIQ Accuracy 2

Note. This figure displays the performance accuracy during the SIQ probes. For the purposes of this digure, V: video only condition and V+S-M+F: Video and self-monitoring and feedback.
**Figure 3**

*Participant Error Pattern During SIQ*

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<th>Baseline 2</th>
<th>Baseline 3</th>
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*Andrew*

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*Amy*

*Note:* Participant error pattern for each category of the SIQ during each session. (1) Green corresponds to correct responses (2) red corresponds to incorrect responses and (3) corresponds to a non-opportunity.
Figure 4
MSWO Accuracy

Note: This figure displays the performance accuracy during the SIQ probes. For the purposes of this figure, V: video only condition, V + S-M: Video and self-monitoring, and V+S-M+F: Video and self-monitoring and feedback. Vivian dropped out after session 4.
Figure 5
Participant Error Pattern During MSWO

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Note: Participant error pattern for the MSWO during each session. (1) Green corresponds to correct responses (2) red corresponds to incorrect responses and (3) corresponds to a non-opportunity.
Appendix A SIQ

Stimulus identification questionnaire

Participant's Name: ________________________________     Date: __________________
Interviewer: ______________________________________

For interviewer:

The purpose of this tool is to help identify resident preferences from a variety of categories. There is a total of nine categories. You will ask the resident questions regarding items and activities that fit within each category description. You may ask about all categories during the interview or you may ask about specific categories you are interested in.

Instructions per category:

I. Complete step 1
   a. Ensure that you mention the category name
   b. Ensure that you provide a description of the category
   c. Ensure that you provide an example

II. Complete step 2
   a. Ensure that you write down all items identified by the resident on their own line
      i. If the resident provides more than 5 items, you should continue to write down all answers.
   b. Fill in the blanks with items identified
   c. If a general preference is offered (e.g., watching movies) proceed to the specific item information to identify specific details on the general preference (e.g., lone ranger movie)
   d. If the resident does not provide an answer to the category or does not identify at least 5 items individually, the interviewer should provide suggestions from the item inventory (Appendix A)

III. Complete step 3 once specific items have been identified proceed with the item specific questions
   a. For every item that the resident identifies ensure that you
      i. Ask if they prefer to engage in the activity alone or with others
      ii. Ask if there is a specific time or location in which they prefer to engage in the activity
      iii. Ask if they have enjoyed the activity within the past week
      iv. If resident indicates not having engaged with an item within the past week, ask if they have access to the item
      v. Ask if there is something specific that make engaging in this activity difficult?
         1. If there are challenges, indicate yes to a potential modification.

IV. Complete step 4 by asking the designated question regarding dislikes within this category

V. Once you have completed a category, you can select the endorsed items and use those items in programming or to increase engagement

Note: Appendix A includes an item inventory for additional support in the event that the interviewee experiences difficulties identifying items. You may add items or modify appendix A to be site specific.
Stimulus identification questionnaire

Step 1: **Category A: Games** Have you ever enjoyed games of chance, competition or strategy (e.g., card games, board games, Bingo)

Step 2: **Specific item information**

<table>
<thead>
<tr>
<th>General identified Item</th>
<th>Specific Item, if appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1:</td>
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Step 3:

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<tr>
<td>Do you prefer to do this activity with other people or by yourself?</td>
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<tr>
<td>Item 1: Y / N</td>
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<tr>
<td>Item 2: Y / N</td>
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<tr>
<td>Item 3: Y / N</td>
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<tr>
<td>Item 4: Y / N</td>
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<tr>
<td>Item 5: Y / N</td>
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Step 4: **Dislikes**: Are there any games in this category that you do not enjoy?
Stimulus identification questionnaire

Step 1: *Category B - Arts and Crafts*: Have you ever enjoyed activities that involve creating things with your hands or decorative design (e.g., drawing or decorating cards)

Step 2: Identified Items:

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Step 3:

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<tr>
<td>Is there a specific time and location you prefer for this activity?</td>
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<tr>
<td>Have you done this activity in the last week?</td>
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<tr>
<td>If not, is it easy for you to get access to this activity?</td>
</tr>
<tr>
<td>Is there anything that makes doing this activity challenging? If yes, what?</td>
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<td>Do not ask* Interviewer use only accommodations needed for activity?</td>
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Step 4: *Dislikes*: Are there any items in this category that you do not enjoy?
**Stimulus identification questionnaire**

**Step 1:** *Category C: Physical activities* - Have you ever enjoyed any activity that would require active effortful and/or physical bodily movements (e.g., balloon toss or walking)

**Step 2:** Specific item information:

<table>
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<tr>
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<th>General identified Item</th>
<th>Specific Item, if appropriate</th>
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**Step 3:**

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<td>Have you done this activity in the last week?</td>
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<td>If not, is it easy for you to get access to this activity?</td>
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<tr>
<td>Is there anything that makes doing this activity challenging?</td>
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<td>If yes, what?</td>
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**Step 4:** *Dislikes:* Are there any items in this category that you do not enjoy?
Stimulus identification questionnaire

Step 1: Category D: Self-care activities. Have you ever enjoyed any activity that involves grooming, cleaning or otherwise taking care of themselves (e.g., brushing hair or getting nails done)

Step 2: Specific item information:

<table>
<thead>
<tr>
<th>Item 1:</th>
<th>General identified Item</th>
<th>Specific Item, if appropriate</th>
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Step 3:

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<tr>
<td>Do not ask Interviewer use only accommodations needed for activity?</td>
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Step 4: Dislikes: Are there any items in this category that you do not enjoy?

__________________________
Stimulus identification questionnaire

Step 1: Category E: Visual activities. Have you ever enjoyed any activities that require watching or looking at an item, person, thing (e.g., reading, watching sitcoms)?

Step 2: Specific item information:

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Step 3:

<table>
<thead>
<tr>
<th>Item Specific Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you prefer to do this activity with other people or by yourself?</td>
</tr>
<tr>
<td>Is there a specific time and location you prefer for this activity?</td>
</tr>
<tr>
<td>Have you done this activity in the last week?</td>
</tr>
<tr>
<td>If not, is it easy for you to get access to this activity?</td>
</tr>
<tr>
<td>Is there anything that makes doing this activity challenging? If yes, what?</td>
</tr>
<tr>
<td>Do not ask* Interviewer use only accommodations needed for activity?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item 1:</th>
<th>Y / N</th>
<th>Y / N</th>
<th>Y / N</th>
<th>Y / N</th>
<th>Y / N</th>
<th>Y / N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 2:</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
</tr>
<tr>
<td>Item 3:</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
</tr>
<tr>
<td>Item 4:</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
</tr>
<tr>
<td>Item 5:</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
<td>Y / N</td>
</tr>
</tbody>
</table>

Step 4: Dislikes: Are there any items in this category that you do not enjoy?
Stimulus identification questionnaire

Step 1: Category F: Auditory activities- Have you ever enjoyed any activity that requires being actively or passively listening to any sound (e.g., listening to music or nature sounds)

Step 2: Specific item information:

<table>
<thead>
<tr>
<th>General identified Item</th>
<th>Specific Item, if appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1:</td>
<td></td>
</tr>
<tr>
<td>Item 2:</td>
<td></td>
</tr>
<tr>
<td>Item 3:</td>
<td></td>
</tr>
<tr>
<td>Item 4:</td>
<td></td>
</tr>
<tr>
<td>Item 5:</td>
<td></td>
</tr>
</tbody>
</table>

Step 3:

<table>
<thead>
<tr>
<th>Item Specific Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you prefer to do this activity with other people or by yourself?</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>Item 1:</td>
</tr>
<tr>
<td>Item 2:</td>
</tr>
<tr>
<td>Item 3:</td>
</tr>
<tr>
<td>Item 4:</td>
</tr>
<tr>
<td>Item 5:</td>
</tr>
</tbody>
</table>

Step 4: Dislikes: Are there any items in this category that you do not enjoy?
Stimulus identification questionnaire

Step 1: Category G: Social activities. Have you ever enjoyed any activity that requires contact with other individuals (e.g., talking with others).

Step 2: Specific item information:

<table>
<thead>
<tr>
<th>General identified Item</th>
<th>Specific Item, if appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1:</td>
<td></td>
</tr>
<tr>
<td>Item 2:</td>
<td></td>
</tr>
<tr>
<td>Item 3:</td>
<td></td>
</tr>
<tr>
<td>Item 4:</td>
<td></td>
</tr>
<tr>
<td>Item 5:</td>
<td></td>
</tr>
</tbody>
</table>

Step 3:

<table>
<thead>
<tr>
<th>Item Specific Questions</th>
<th>Item 1</th>
<th>Item 2</th>
<th>Item 3</th>
<th>Item 4</th>
<th>Item 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you prefer to do this activity with other people or by yourself?</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>Is there a specific time and location you prefer for this activity?</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>Have you done this activity in the last week?</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>If not, is it easy for you to get access to this activity?</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>Is there anything that makes doing this activity challenging? If yes, what?</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>Do not ask* Interviewer use only accommodations needed for activity?</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
</tbody>
</table>

Step 4: Dislikes: Are there any items in this category that you do not enjoy?

________________________
Stimulus identification questionnaire

Step 1: *Category Pt. Chores.* Have you ever enjoyed any activity that requires completing a task of daily living not related to self-care (e.g., folding towels)

Step 2: Specific item information:

<table>
<thead>
<tr>
<th>Item 1:</th>
<th>General identified Item</th>
<th>Specific Item, if appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 2:</td>
<td>_______________________</td>
<td>_____________________________</td>
</tr>
<tr>
<td>Item 3:</td>
<td>_______________________</td>
<td>_____________________________</td>
</tr>
<tr>
<td>Item 4:</td>
<td>_______________________</td>
<td>_____________________________</td>
</tr>
<tr>
<td>Item 5:</td>
<td>_______________________</td>
<td>_____________________________</td>
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</tbody>
</table>

Step 3:

<table>
<thead>
<tr>
<th>Item 1:</th>
<th>Do you prefer to do this activity with other people or by yourself?</th>
<th>Is there a specific time and location you prefer for this activity?</th>
<th>Have you done this activity in the last week?</th>
<th>If not, is it easy for you to get access to this activity?</th>
<th>Is there anything that makes doing this activity challenging? If yes, what?</th>
<th>Do not ask <em>Interviewer use only accommodations needed for activity?</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>_______</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>Item 2:</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>Item 3:</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>_______</td>
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<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>Item 4:</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
<tr>
<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
</tr>
<tr>
<td>Item 5:</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
<td>Y/N</td>
</tr>
</tbody>
</table>

Step 4: *Dislikes.* Are there any items in this category that you do not enjoy?


<table>
<thead>
<tr>
<th>Games</th>
<th>Arts and Craft</th>
<th>Physical Activities</th>
<th>Self-care Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dice</td>
<td>Decorating items</td>
<td>Walking</td>
<td>Dress up</td>
</tr>
<tr>
<td>Poker</td>
<td>Scrapbooking</td>
<td>Ball games</td>
<td>Nails done</td>
</tr>
<tr>
<td>Blackjack</td>
<td>Sponge painting stationary</td>
<td>Writing</td>
<td>Hair done</td>
</tr>
<tr>
<td>Bingo</td>
<td>Making greeting cards</td>
<td>Instruments</td>
<td></td>
</tr>
<tr>
<td>Rummy</td>
<td>Painting</td>
<td>Exercise</td>
<td></td>
</tr>
<tr>
<td>Mahjong</td>
<td>Making potpourri bowls</td>
<td>Ball toss</td>
<td></td>
</tr>
<tr>
<td>Pursuit</td>
<td>Flower arranging</td>
<td>Inflatable Bowling</td>
<td></td>
</tr>
<tr>
<td>Scrabble</td>
<td>jewelry making</td>
<td>Bag toss</td>
<td></td>
</tr>
<tr>
<td>Dominos</td>
<td>coloring/drawing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yahtzee</td>
<td>Sewing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monopoly</td>
<td>Knitting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sequence</td>
<td>Crocheting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life</td>
<td>Stringing beads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory games</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puzzles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uno</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chess</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect four</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Go Fish</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solitaire</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Stimulus identification questionnaire

<table>
<thead>
<tr>
<th>Visual Activities</th>
<th>Auditory Activities</th>
<th>Social Activities</th>
<th>Chores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>Nature sounds</td>
<td>Talking to people</td>
<td>Sorting items</td>
</tr>
<tr>
<td>Magazines</td>
<td>Music</td>
<td>Group discussions</td>
<td>Folding items</td>
</tr>
<tr>
<td>Books</td>
<td>Radio</td>
<td>Book club</td>
<td>Cooking</td>
</tr>
<tr>
<td>Poems</td>
<td>Talk shows</td>
<td>Group memory activities</td>
<td>Outdoor/indoor gardening</td>
</tr>
<tr>
<td>Plays</td>
<td>News</td>
<td></td>
<td>Clipping coupons</td>
</tr>
<tr>
<td>News</td>
<td></td>
<td></td>
<td>Wiping tables</td>
</tr>
<tr>
<td>Stories</td>
<td></td>
<td></td>
<td>Watering plants</td>
</tr>
<tr>
<td>Novels</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talk shows</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching people</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photography</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Movies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching sports</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TV</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B SIQ Training

Stimulus Identification Questionnaire (SIQ)
Purpose of this training

- Introduce the SIQ
- Introduce each section of the SIQ
- Introduce and explain how to complete each interview step
- Provide an example of each interview step
Introducing the SIQ
The SIQ is a questionnaire designed to help you identify preferences that are specific to a resident. The complete version of the questionnaire has a total of 7 different categories.

You may conduct the interview with a resident or a family member or someone who is familiar with the resident. If you chose to interview the resident, it is important that the individual has the ability to communicate and recall information.
You may choose to complete an interview with a resident for all categories.
Now we will move into introduction each section of the SIQ. At this time it will be helpful if you pull up your printed version of the SIQ and follow along with the training.
Instructions

For the resident:

The purpose of this tool is to help identify resident preferences from a variety of categories. There is a total of nine categories. You will ask the resident questions regarding items and activities that fall under each category. You may ask about all categories during the interview or you may ask about specific categories if you wish.

Instructions per category:

I. General rating:
   A. Ensure that you maintain the categories
   B. Ensure that any questions change throughout
   C. Ensure that you provide an example
   D. Provide the above questions based on your preferences as far as you include the three components mentioned under the item

II. General:
   A. Ensure that you write down all times identified by the resident or that the resident has
   B. If the resident provides more than one answer, you should continue to write down all
   C. If the resident provides more than one answer, you should continue to write down all
   D. If the resident provides more than one answer, you should continue to write down all
   E. If the resident provides more than one answer, you should continue to write down all
   F. If the resident provides more than one answer, you should continue to write down all

III. General:
   A. Ensure that you write down all times identified by the resident or that the resident has
   B. If the resident provides more than one answer, you should continue to write down all
   C. If the resident provides more than one answer, you should continue to write down all
   D. If the resident provides more than one answer, you should continue to write down all
   E. If the resident provides more than one answer, you should continue to write down all
   F. If the resident provides more than one answer, you should continue to write down all

IV. General:
   A. Ensure that you write down all times identified by the resident or that the resident has
   B. If the resident provides more than one answer, you should continue to write down all
   C. If the resident provides more than one answer, you should continue to write down all
   D. If the resident provides more than one answer, you should continue to write down all
   E. If the resident provides more than one answer, you should continue to write down all
   F. If the resident provides more than one answer, you should continue to write down all

V. General:
   A. Ensure that you write down all times identified by the resident or that the resident has
   B. If the resident provides more than one answer, you should continue to write down all
   C. If the resident provides more than one answer, you should continue to write down all
   D. If the resident provides more than one answer, you should continue to write down all
   E. If the resident provides more than one answer, you should continue to write down all
   F. If the resident provides more than one answer, you should continue to write down all

Note: If you have completed a category, you can select the item the resident indicated they enjoyed and use them when working with them or make them available to various management levels.

Note: Categories are inclusive to ensure variety for additional support in the area that the interviewee organization effectiveness identifies areas. You may ask extra or modify questions to be site-specific.
You will then find a brief description of the purpose of the SIQ.
Most importantly, you will find the instructions for how to conduct the category interview.
After the instructions page, you will find the interview page for each of the seven categories.
At the end of the interview, you will find the Appendix which includes examples of items within each category that you may want to ask the resident.
SIQ interview steps and examples
How to step 1:

- Complete step 1
  - Ensure that you mention the category name
  - Ensure that you provide a description of the category
  - Ensure that you provide an example

- Note: you may use the question provided or you may modify based on your preference if you include the three components mentioned under this step.

The first step whenever you start a new category will be introducing the category to the resident.
Stimulus Identification Questionnaire

Step 1: Category A: Games. Have you ever enjoyed activities that involve chance, competition, or strategy (e.g., card games, board games, Bingo).

Step 1 example

Play until 19 seconds.
How to step 2:

- **Complete step 2**
  - Ensure that you write down all items identified by the resident on their own line.
  - If the resident provides more than 5 items, you should continue to write down all answers.
  - Fill in the blanks with items identified.
  - If a general preference is offered (e.g., watching movies) ask specific item information to clarify the general preference (e.g., Lone ranger movie).
  - If the resident does not provide an answer to the category or does not identify at least 5 items individually, the interviewer should provide suggestions from the item inventory (Appendix A).
Watercolor painting, knitting, decorating, making bracelets and making cards. Plant pots and anything with real flowers stop at 37.
Example 2: Limited preference

<table>
<thead>
<tr>
<th>Step 2: Specific item information</th>
<th>Identified Item</th>
<th>Specific Item, if appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1:</td>
<td>Bingo</td>
<td></td>
</tr>
<tr>
<td>Item 2:</td>
<td>Memory games</td>
<td></td>
</tr>
<tr>
<td>Item 3:</td>
<td>Yahtzee</td>
<td></td>
</tr>
<tr>
<td>Item 4:</td>
<td>Uno cards</td>
<td></td>
</tr>
<tr>
<td>Item 5:</td>
<td>Chess</td>
<td></td>
</tr>
</tbody>
</table>

Bingo memory game Yahtzee Uno chess. Stop at 1:20
How to step 3:

- Complete step 3 once specific items have been identified. Proceed with the item specific questions.

  **For every item that the resident identifies ensure that you:**
  
  - Ask if they prefer to engage in the activity alone or with others.
  - Ask if there is a specific time or location in which they prefer to engage in the activity.
  - Ask if they have enjoyed the activity within the past week.
  - If resident indicates not having engaged with an item within the past week, ask if they have access to the item.
  - Ask if there is something specific that make engaging in this activity difficult?
    - If there are challenges, indicate yes to a potential modification.
**Step 3:**

<table>
<thead>
<tr>
<th>Item Specific Questions</th>
<th>Do you prefer to do this activity with other people or by yourself?</th>
<th>Is there a specific time and location you prefer for this activity?</th>
<th>Have you done this activity in the last week?</th>
<th>Is it easy for you to get access to this activity?</th>
<th>Is there anything that makes doing this activity challenging? If yes, what?</th>
<th>Do not ask: Interviewer use only accommodations needed for activity?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1:</td>
<td>By myself</td>
<td>In my room</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>NO</td>
</tr>
<tr>
<td>Item 2:</td>
<td>By myself</td>
<td>In my room</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>NO</td>
</tr>
<tr>
<td>Item 3:</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Item 4:</td>
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<td></td>
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<tr>
<td>Item 5:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

48 s start stop at 2:11 and suggest that they should continue with the 5 items.
How to step 4:

- Complete step 4 by asking the designated question regarding dislikes within this category

Table:

<table>
<thead>
<tr>
<th>Step</th>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Step 6: Are there any games in this category that you do not enjoy?
Stop at 24.
Using the SIQ information

1. You can now make individual items available
2. You can pair individuals who have similar preferences together in activities for increased socialization
3. You can ensure that dislikes are not frequently offered to the individual
4. You can modify activities that may be enjoyable but challenging to ensure the individual can continue to engage in the activity
5. You can select items identified and use them in assessments to evaluate preferences
You have completed the SIQ video training!
Appendix C SIQ Scoring Form

<table>
<thead>
<tr>
<th>Skill set 1</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Mentioned the category</td>
<td></td>
</tr>
<tr>
<td>B.</td>
<td>Provided a description</td>
<td></td>
</tr>
<tr>
<td>C.</td>
<td>Provided an example of</td>
<td></td>
</tr>
<tr>
<td>D.</td>
<td>Wrote down all items</td>
<td></td>
</tr>
<tr>
<td></td>
<td>identified by the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>resident under Step 2</td>
<td></td>
</tr>
<tr>
<td>E.</td>
<td>Asked specific item</td>
<td>#1</td>
</tr>
<tr>
<td></td>
<td>information to clarify</td>
<td>#2</td>
</tr>
<tr>
<td></td>
<td>the general preference</td>
<td>#3</td>
</tr>
<tr>
<td></td>
<td>under Step 2</td>
<td>#4</td>
</tr>
<tr>
<td>F.</td>
<td>Asked question regarding</td>
<td>#5</td>
</tr>
<tr>
<td></td>
<td>dislikes within this</td>
<td>#6</td>
</tr>
<tr>
<td></td>
<td>category</td>
<td></td>
</tr>
</tbody>
</table>

Total score: ____________
### SIQ Datasheet

#### Skill set 2

<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Provides suggestions if 5 items are not identified until 5 items are identified</td>
<td>#1</td>
</tr>
<tr>
<td>B. Asked if they prefer to engage in the activity alone or with others</td>
<td>#2</td>
</tr>
<tr>
<td>If less than 5 items identified, mark the numbers that were not asked as NO</td>
<td>#3</td>
</tr>
<tr>
<td>#4</td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td></td>
</tr>
<tr>
<td>#6</td>
<td></td>
</tr>
<tr>
<td>C. Asked if they prefer time and location</td>
<td>#1</td>
</tr>
<tr>
<td>If less than 5 items identified, mark the numbers that were not asked as NO</td>
<td>#2</td>
</tr>
<tr>
<td>#3</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td></td>
</tr>
<tr>
<td>#6</td>
<td></td>
</tr>
<tr>
<td>D. Asked if they engaged with activity in past week</td>
<td>#1</td>
</tr>
<tr>
<td>If less than 5 items identified, mark the numbers that were not asked as NO</td>
<td>#2</td>
</tr>
<tr>
<td>#3</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td></td>
</tr>
<tr>
<td>#6</td>
<td></td>
</tr>
<tr>
<td>E. Asked if they have easy access to item</td>
<td>#1</td>
</tr>
<tr>
<td>If less than 5 items identified, mark the numbers that were not asked as NO</td>
<td>#2</td>
</tr>
<tr>
<td>#3</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td></td>
</tr>
<tr>
<td>#6</td>
<td></td>
</tr>
<tr>
<td>F. Asked if engaging in activity is difficult</td>
<td>#1</td>
</tr>
<tr>
<td>If less than 5 items identified, mark the numbers that were not asked as NO</td>
<td>#2</td>
</tr>
<tr>
<td>#3</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td></td>
</tr>
<tr>
<td>#6</td>
<td></td>
</tr>
<tr>
<td>G. If activity is difficult, indicates yes to modification</td>
<td>#1</td>
</tr>
<tr>
<td>If less than 5 items identified, mark the numbers that were not asked as NO</td>
<td>#2</td>
</tr>
<tr>
<td>#3</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td></td>
</tr>
<tr>
<td>#6</td>
<td></td>
</tr>
</tbody>
</table>

**Total score:** __________
Appendix D SIQ Self-monitoring Training
Objective

• You will know how to record your own performance

• You will need
  • SIQ
  • Recording form
<table>
<thead>
<tr>
<th>Activity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentioned the category name</td>
<td></td>
</tr>
<tr>
<td>Provided a description of the category</td>
<td></td>
</tr>
<tr>
<td>Provided an example</td>
<td></td>
</tr>
<tr>
<td>Wrote down all items identified by the resident</td>
<td></td>
</tr>
<tr>
<td>Asked specific item information to clarify the general preference</td>
<td></td>
</tr>
<tr>
<td>Provides suggestions when 5 items are not identified</td>
<td></td>
</tr>
<tr>
<td>Asked question regarding dislikes within this category</td>
<td></td>
</tr>
</tbody>
</table>
**Recording Form (part 2)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asked if they prefer to engage in the activity alone or with</td>
<td></td>
</tr>
<tr>
<td>Asked if they prefer time and location</td>
<td></td>
</tr>
<tr>
<td>Asked if they engaged with activity in past week</td>
<td></td>
</tr>
<tr>
<td>Asked if they have easy access to item</td>
<td></td>
</tr>
<tr>
<td>Asked if engaging in activity is difficult</td>
<td></td>
</tr>
<tr>
<td>If activity is difficult, indicates yes to modification</td>
<td></td>
</tr>
</tbody>
</table>
Practice!
#1
Review
Appendix E SIQ Script

Probes SIQ script

Games.

Step 1 Question: Have you ever enjoyed activities that involve chance, competition, or strategy (e.g., card games, board games, Bingo)?

Answer:
- Bingo
- Chess
- Yahtzee
- Domino
- Card games

Step 2 specific item information:
- Card games:
  - Blackjack

Step 3 specific questions:
- Bingo
  - With other people
  - In the big dining room
  - I have
  - Yes, it is offered a lot (NA)
  - No
- Chess
  - With other people
  - In the dining room after dinner
  - I have not
  - I only play when my family brings the game when they visit
  - I don’t think so
- Yahtzee
  - With other people
  - Any room with a big table and during the afternoon or evening
  - I have
  - Yes, it is offered once a week (NA)
  - I don’t think so
- Domino
  - With other people
  - In the dining room after dinner
  - I have not
  - I only play when my family brings the game when they visit
  - I don’t think so
- Card games
  - With other people
  - Any room with a big table and during the afternoon or evening
  - I have not
  - I don’t know how to get the cards
  - Sometimes it is hard to hold the cards
    - (should mark yes)

Step 4 questions:
I don’t like playing Poker or board games like monopoly
Arts and crafts

Step 1 Question: Have you ever enjoyed activities that involve creating thing with your hands or decorative design (e.g., drawing or decorating cards)

Answer:
- Decorating items
- Painting with watercolors
- Making Clay figures
- Knitting
- Drawing animals
- Making bracelets

Step 2 specific item information:
- Decorating items
  - I like decorating plant pots and anything with real flowers

Step 3 specific questions:
- Decorating pots with flowers
  - With other people
  - In the dining room with a big table and in the morning
  - I have not
  - Sometimes when someone bring over materials
  - I don't think so
- Watercolor painting
  - By myself
  - In my room at anytime
  - I have not
  - Not really
  - Sometimes it is hard to hold the slim paint brushes
    - Should mark yes
- Making clay figures
  - With other people
  - In the dining room with a big table and in the morning
  - I have not
  - Sometimes when someone bring over materials
  - I don't think so
- Knitting
  - By myself
  - In my room and in the evening
  - I have
  - Not really-ask for materials (NA)
  - No
- Drawing animals
  - by myself
  - During the day and anywhere
  - I have not
  - It is, I just have to ask for the materials
  - No
- Making bracelets
  - With other people
  - Any room with a big table and space and during the morning
Step 4 questions:
I don’t like making origami designs

Total: 38 opportunities

Visual activities
Question: Have you ever enjoyed any activities that requires watching or looking at an item, person, thing [e.g., reading, watching sitcoms]?

Answer:
- I like watching the golden girls
- I don’t know what else…

Question: This is the script to follow based on suggestions offered by students

- Magazines:
  - Yes
    - Cooking magazines
    - Travel magazines
- Books:
  - Yes
    - Mystery novels
- Poems:
  - No
- Movies:
  - Yes
    - Romantic comedy movies
- News: no
- Talk shows:
  - Yes!
    - Jeopardy

Step 2 specific item information:

- Magazines:
  - Yes
    - Cooking magazines
    - Travel magazines
- Books:
  - Yes
    - Mystery novels
- Movies:
  - Yes
    - Romantic comedy movies
- Talk shows:
  - Yes!
    - Jeopardy
Step 3 specific questions:

- Watching golden girls
  - With others or by myself
  - After dinner
  - I have not
  - Depending if the shows come up on the cable
  - No

- Magazines (cooking and travel)
  - By myself
  - During the day
  - I have (NA)
  - It is easy, there are a few on the shelf
  - No

- Mystery novels
  - By myself
  - In the morning after I wake up
  - I have not
  - It is hard to get books
  - Sometimes when the text is too small it is hard for me to read it

- Romantic comedy(movies)
  - With others or by myself
  - During the day
  - I have
  - It is easy - there is often a movie a day and a lot are comedy (NA)
  - No

- Jeopardy
  - With others or by myself
  - I like to watch it on Sunday afternoons like I used to when I lived with my family growing up
  - I have not
  - I don’t think other people like watching it, so we don’t watch it a lot
  - No

Step 4 questions:
I don’t like watching sports

Total: 30 opportunities
Appendix F SIQ Procedural Integrity

Procedural integrity Baseline (or final post sessions probe)
Datasheet

Date:
Session:

1. The researcher prompted the participant to review the instructions (or offered the instructions if session was the final post session probe).
   a. Yes / No
2. The researcher did not answer any question regarding the SIQ instructions for the participant during the instruction review?
   a. Yes (did not answer) / No (did answer)
3. The researcher did not answer any question regarding how to conduct the assessment for the participant during the probe?
   a. Yes (did not answer) / No (did answer)
4. The participant conducted one probe (unless it is the first session in which case, they conducted two probes).
   a. Yes / No
5. The researcher followed the pre-determined script during the probe.
   a. Yes / No

Procedural integrity Video only
Datasheet

Date:
Session:

1. The researcher played the complete training video for the participant.
   a. Yes / No
2. The researcher did not answer any question regarding the training video content for the participant (exclude questions regarding technology issues)
   a. Yes / No
3. The researcher did not answer any question regarding how to conduct the assessment for the participant during the probes?
   a. Yes (did not answer) / No (did answer)
4. The researcher followed the pre-determined script during the probe.
   a. Yes / No
Procedural Integrity Video + Self-monitoring
Datasheet

Date:
Session:

1. The researcher played the complete training video for the participant.
   a. Yes / No
2. The researcher did not answer any question regarding the training video content for the participant (exclude questions regarding technology issues)
   a. Yes (did not answer) / No (did answer)
3. The researcher showed self-monitoring training with examples and non-examples of how to complete each step while showing how to score each on the self-monitoring datasheet.
   a. Yes / No
4. The researcher continued the self-monitoring practice until participant recorded performance with 100% accuracy.
   a. Yes / No
5. The researcher played a clip of the participant performing a previous probe
   a. Yes / No
6. The researcher asked participant to score performance while watching their own baseline probe clip
   a. Yes / No
7. The researcher did not answer any questions regarding how to conduct the assessment for the participant during the video clip and self-monitoring?
   a. Yes (did not answer) / No (did answer)
8. The researcher did not answer any question regarding how to conduct the assessment for the participant during the probes?
   a. Yes (did not answer) / No (did answer)
9. The researcher followed the pre-determined script during the probe.
   a. Yes / No
Procedural integrity Video + Self-monitoring + Feedback
Datasheet

Date:
Session:

1. The researcher played the complete training video for the participant.
   a. Yes / No
2. The researcher did not answer any question regarding the training video content for the participant (exclude questions regarding technology issues)
   a. Yes (did not answer) / No (did answer)
3. The researcher showed self-monitoring training with examples and non-examples of how to complete each step while showing how to score each on the self-monitoring datasheet.
   a. Yes / No
4. The researcher played a clip of the participant performing from a previous probe
   a. Yes / No
5. The researcher asked participant to score performance while watching their own baseline probe clip
   a. Yes / No
6. The researcher did not answer any questions regarding how to conduct the assessment for the participant during the video clip and self-monitoring?
   a. Yes (did not answer) / No (did answer)
7. The researcher provided descriptive feedback on correct and incorrect performances based on the clip
   a. Yes / No
8. The researcher reviewed with the participant how to correct the incorrect performances from the clip and offered an opportunity to practice the response
   a. Yes / No
9. The researcher did not answer any question regarding how to conduct the assessment for the participant during the post training probes?
   a. Yes (did not answer) / No (did answer)
10. The researcher followed the pre-determined script during the probe.
    a. Yes / No
Appendix G MSWO Datasheet

Who conducted the assessment: ____________________  Date: ____________________

Who was the assessment conducted with? ________________

Preference Assessment Data Sheet

Leisure Items:

Use this section to assign a number to each item you are going to assess by adding them next to an item number.

Item 1 ________________
Item 2 ________________
Item 3 ________________
Item 4 ________________
Item 5 ________________

Trials:

List the order of items when placed on the table using your perspective (left-to-right) using letters from above.
Circle the item selected in each trial.

Trial 1. ___ ___ ___ ___ ___
Trial 2. ___ ___ ___ ___ ___
Trial 3. ___ ___ ___ ___ ___
Trial 4. ___ ___ ___ ___ ___
Trial 5. ___ ___ ___ ___ ___

Calculating preference ranks:

Fill in the order in which items were selected
chosen #1 (most preferred): ________________
chosen #2: ________________
chosen #3: ________________
chosen #4: ________________
chosen #5 (least preferred): ________________
Appendix H MSWO Instructions

Set-up
1. Ensure that you seat the adult at a table large enough to place all your items on (e.g., Dining table)
2. Ensure that you are seated next to the adult and have enough space to manipulate items
3. Ensure you have filled in the datasheet

Pre-session exposure
1. Ensure you have all of your items within your reach but out of sight and reach of the participant
2. Present one item to the adult (you may teach them how to use it) and start a timer for 30 seconds.
3. After 30s have passed, ask for the item and remove it from sight and reach of the adult.
4. Repeat steps 1 through 3 for all the items until the adult has come into contact with all.

Session
1. Place all items in an array (straight line or arc) in front of the adult (make sure they are not too close to the edge of the table but within an arm’s)
2. Instruct the adult to "choose the one you want."
3. Give access to selected item for 30s.
4. Move remaining array items back or away from the reach of the adult.
5. Record selection on datasheet
6. Rotate items in the array by shifting all items to the position on their right
7. After 30s have passed, asked for the item and place it away (do not return it to the array)
8. Repeat steps 1-7 until all items are selected or until the adult indicates they would like to terminate the assessment
9. Once all items have been selected, terminate the session by thanking the participant from working with you.

Extra step: If the older adult did not select an item within 30 s, ask if they would like to keep working together or end the session
Appendix I MSWO Training

Preference Assessments
Purpose of training

1. Introduce the preference assessment
2. Introduce the materials needed to run the assessment
3. Explain how to record assessment data
4. Introduce and explain how to set-up the assessment
5. Introduce how to conduct each step and provide an example
6. Explain how to calculate preference rank
What is a preference assessment

- This assessment allows you to identify which items the individual prefers and may be more likely to engage with.
- Specifically, this assessment allows you to take items you think an individual might enjoy, and directly compare them to each other.
- In doing so, you will end up with the order of items the individual is most likely to choose first over the other items.
- This assessment is especially helpful for identifying which items are most preferred for those individuals who are experiencing challenges in reliably communicating their preferences.
Materials needed

- Datasheet and pencil/ pen
- Timer
- The items you would like to test (between 5-8 items)
  - Book
  - iPad
  - Playing cards
  - Movie
  - Coloring materials

In this case we will be using 5 items
Part 1: Recording data
Who conducted the assessment: ______________________ Date: ________________
Who was the assessment conducted with? ________________

Preference Assessment Data Sheet

Labeled Items:

Use this section to assign a number to each item you are going to assess by adding them next to an item number.

Item 1 ______________
Item 2 ______________
Item 3 ______________
Item 4 ______________
Item 5 ______________
Leisure Items:

Use this section to assign a number to each item you are going to assess by adding them next to an item number.

Item 1
Item 2
Item 3
Item 4
Item 5
Trials:
List the order of items when placed on the table using your perspective (left-to-right) using letters from above.
Circle the item selected in each trial.

Trial 1. _____ _____ _____ _____
Trial 2. _____ _____ _____
Trial 3. _____ _____
Trial 4. _____
Trial 5. _____
Calculating preference ranks:

Fill in the order in which items were selected
chosen #1 (most preferred): __________
chosen #2: __________
chosen #3: __________
chosen #4: __________
chosen #5 (least preferred): __________
Part 2: Set-up
Set up

1. Ensure that you seat the adult at a table large enough to place all your items on (e.g., Dining table).
2. Ensure that you are seated next to the adult and have enough space to manipulate items.
3. Ensure you have filled in the datasheet.

(You want to make sure you have set up the setting accurately for the assessment).
Part 3: Pre-session exposure
**Pre-session exposure** (Before starting the assessment you want to ensure the adult is familiar with each item)
Part 4: Running the assessment
Running the assessment

Step 1: Place all items in an array (straight line or arc) in front of the adult (make sure they are not too close to the edge of the table but within an arm's length).

Step 2: Instruct the adult to "choose the one you want."

Step 3: Give access to selected item for 30s.

Step 4: Move remaining array items back or away from the reach of the adult.
Running the assessment Cont.....

Step 5: Record selection on datasheet

Step 6: Rotate items in the array by shifting all items to the position on their right

Step 7: After 30s have passed, ask for the item and place it away (do not return it to the array)

Step 8: Repeat steps 1-7 until all items are selected or until the adult indicates they would like to terminate the assessment

Step 9: Once all items have been selected, terminate the session by thanking the participant for working with you.
Extra step: If the older adult did not select an item within 30 s, ask if they would like to keep working together or end the session.
Part 5: Post assessment
Datasheet

Calculating preference ranks:

Fill in the order in which items were selected

chosen #1 (most preferred): __________
chosen #2: __________
chosen #3: __________
chosen #4: __________
chosen #5 (least preferred): __________
You have completed the preference assessment video training!
Appendix J MSWO Self-monitoring Training
Objective

• You will know how to record your own performance

• You will need
  • MSWO datasheet
  • MSWO scoring form
Recording Form (part 2)
**Recording Form (part 3)**

### RSNO Data Entry

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record who they are identified (should be correct placement and selection of items in the array)</td>
<td>A1, A2, A3, A4, A5</td>
<td></td>
</tr>
<tr>
<td>Give access to selected items for 30s.</td>
<td>A1, A2, A4, A5, A6</td>
<td></td>
</tr>
<tr>
<td>Move responding away (back or away from the reach of the table while the adult engages with selected item)</td>
<td>A1, A2, A3, A6, A7</td>
<td></td>
</tr>
<tr>
<td>Do not return selected item to array (after as item has been selected and a new array is presented)</td>
<td>A1, A2, A3, A6, A7</td>
<td></td>
</tr>
<tr>
<td>Return array as the order by shifting all items to the position on their table (right or left)</td>
<td>A1, A2, A3, A6, A7</td>
<td></td>
</tr>
<tr>
<td>If the adult did not select an item within 30 s, ask if the participant would like to keep items together or split the array</td>
<td>A1, A2, A3, A6, A7</td>
<td></td>
</tr>
</tbody>
</table>

Total score: __________
Recording Form (part 4)
Practice!

#1
### Appendix K MSWO Scoring Form

#### MSWO Datasheet

<table>
<thead>
<tr>
<th>Participant:</th>
<th>Session:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td>Category:</td>
</tr>
</tbody>
</table>

**Total duration of assessment:** 

**Set up:**

Ensure that you seat the participant at a table large enough to place all of your items on (e.g., Dining table)

**Total score:** 

#### Pre-session Exposure

<table>
<thead>
<tr>
<th>Ensure you have all of your items within your reach but out of sight and reach of the participant</th>
<th>#1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#2</td>
</tr>
<tr>
<td></td>
<td>#3</td>
</tr>
<tr>
<td></td>
<td>#4</td>
</tr>
<tr>
<td></td>
<td>#5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Present one item at a time to the adult (you may teach them how to use it)</th>
<th>#1</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2</td>
<td></td>
</tr>
<tr>
<td>#3</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>After 30s have passed, ask for the item and remove it from sight and reach of the adult.</th>
<th>#1</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2</td>
<td></td>
</tr>
<tr>
<td>#3</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td></td>
</tr>
</tbody>
</table>

**Total score:** 

#### Running the Assessment

<table>
<thead>
<tr>
<th>Place all items in an array (straight line or arc) in front of the adult (make sure they are not too close to the edge of the table but within an arm’s)</th>
<th>#1</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2</td>
<td></td>
</tr>
<tr>
<td>#3</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instructed the adult to “choose the one you want.”</th>
<th>#1</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2</td>
<td></td>
</tr>
<tr>
<td>#3</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td></td>
</tr>
<tr>
<td>#5</td>
<td></td>
</tr>
</tbody>
</table>
### MSWO Datasheet

<table>
<thead>
<tr>
<th>Task</th>
<th>#1</th>
<th>#2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record selection on datasheet (should be correct placement and selection of item in the array)</td>
<td>#1</td>
<td>#2</td>
<td>#3</td>
<td>#4</td>
<td>#5</td>
</tr>
<tr>
<td>Give access to selected item for 30s.</td>
<td>#1</td>
<td>#2</td>
<td>#3</td>
<td>#4</td>
<td>#5</td>
</tr>
<tr>
<td>Move remaining array items back or away from the reach of the adult (while the adult engages with selected item).</td>
<td>#1</td>
<td>#2</td>
<td>#3</td>
<td>#4</td>
<td>#5NA (if ran the array)</td>
</tr>
<tr>
<td>Does not return selected item to array (after an item has been selected and a new array is presented)</td>
<td>#1 NA (if ran the array)</td>
<td>#2</td>
<td>#3</td>
<td>#4</td>
<td>#5</td>
</tr>
<tr>
<td>Rotate items in the array by shifting all items to the position on their right (or left)</td>
<td>#1 NA (if ran the array)</td>
<td>#2</td>
<td>#3</td>
<td>#4</td>
<td>#5</td>
</tr>
<tr>
<td>If the older adult did not select an item within 30 s, ask if the participant would like to keep working together or end the session.</td>
<td>#1 NA (if ran the array)</td>
<td>#2</td>
<td>#3</td>
<td>#4</td>
<td>#5NA (if ran the array)</td>
</tr>
</tbody>
</table>

**Total score:** _____________

### Post Assessment:

Calculate & rank items as instructed on datasheet

**Total score:** _____________

**TOTAL score:** _____________
Appendix L MSWO Script

Researcher MSWO script

Pre-session exposure:

Item 1: Engage with item full time
Item 2: Engage with item full time
Item 3: Engage with item full time
Item 4: Engage with item half the time
Item 5: Engage with item full time

Assessment:

Trial 1:
- Which location to choose: O O X O O
- Engage with item full time: Yes
- Give it back: Yes

Trial 2:
- Which location to choose: X O O Q O
- Engage with item full time: Yes
- Give it back: Yes

Trial 3:
- Which location to choose: O Q X
- Engage with item full time: Yes
- Give it back: Yes

Trial 4:
- Do not choose first and when asked, say you want to continue
- Which location to choose: O X
- Engage with item full time: No (only for 15 seconds then set it on table).
- Give it back: Yes

Trial 5:
- Which location to choose: O
- Engage with item full time: Yes
- Give it back: Yes
Appendix M MSWO Procedural Integrity Scoring Form

Procedural integrity Baseline Probe
Datasheet

Date:
Session:

1. The researcher prompted the participant to review the instructions.
   a. Yes / No
2. The researcher did not answer any question regarding the MSWO instructions for the participant during the instruction review?
   a. Yes (did not answer) / No (did answer)
3. The researcher did not answer any question regarding how to conduct the assessment for the participant during the probe?
   a. Yes (did not answer) / No (did answer)
4. The participant conducted one probe
   a. Yes / No
5. The probe included 5 items for the MSWO
   a. Yes / No
6. The researcher instructed the secondary participant to respond during the probes following a pre-determined script:
   a. Yes / No
7. The primary participant did not have access to sound during the probes (did not hear the instructions given to secondary participant)
   a. Yes (did not have access to sound) / No (did have access to sound)
Procedural integrity Video only
Datasheet

Date:
Session:

1. The researcher played the complete training video for the participant.
   a. Yes / No

2. The researcher did not answer any question regarding the training video content for the participant (exclude questions regarding technology issues)
   a. Yes (did not answer) / No (did answer)

3. The researcher did not answer any question regarding how to conduct the assessment for the participant during the probes?
   a. Yes (did not answer) / No (did answer)

4. The probe included 5 items for the MSWO
   a. Yes / No

5. The researcher instructed the secondary participant to respond during the probes following a pre-determined script:
   a. Yes / No

6. The primary participant did not have access to sound during the probes (did not hear the instructions given to secondary participant)
   a. Yes (did not have access to sound) / No (did have access to sound)
Procedural integrity Video + Self-monitoring
Datasheet

Date:
Session:

1. The researcher played the complete training video for the participant.
   a. Yes / No
2. The researcher did not answer any question regarding the training video content for the participant (exclude questions regarding technology issues)
   a. Yes (did not answer) / No (did answer)
3. The researcher ran the self-monitoring training for the participant.
   a. Yes / No
4. The researcher played a clip of the participant performing the probe
c. Yes / No
5. The researcher asked participant to score performance while watching their own probe clip
   a. Yes / No
6. The researcher did not answer any questions regarding how to conduct the assessment for the participant during the video clip and self-monitoring?
   a. Yes (did not answer) / No (did answer)
7. The researcher did not answer any question regarding how to conduct the assessment for the participant during the probes?
   a. Yes (did not answer) / No (did answer)
8. The probe included 5 items for the MSWO
   a. Yes / No
9. The researcher instructed the secondary participant to respond during the probes following a pre-determined script (either with written or vocal instructions)
   a. Yes / No
10. The primary participant did not have access to sound during the probes (did not hear the instructions given to secondary participant)
    a. Yes (did not have access to sound) / No (did have access to sound)
Procedural integrity Video + Self-monitoring & Feedback
Datasheet

Date:
Session:

1. The researcher played the complete training video for the participant.
   a. Yes / No
2. The researcher did not answer any question regarding the training video content for the participant (exclude questions regarding technology issues)
   a. Yes (did not answer) / No (did answer)
3. The researcher ran the self-monitoring training for the participant.
   a. Yes / No
4. The researcher played a clip of the participant performing the probe
   a. Yes / No
5. The researcher asked participant to score performance while watching their own probe clip
   a. Yes / No
6. The researcher did not answer any questions regarding how to conduct the assessment for the participant during the video clip and self-monitoring?
   a. Yes (did not answer) / No (did answer)
7. The researcher provided descriptive feedback on correct and incorrect performances based on the clip
   a. Yes / No
8. The researcher did not answer any question regarding how to conduct the assessment for the participant during the probes?
   a. Yes (did not answer) / No (did answer)
9. The probe included 5 items for the MSWO
   a. Yes / No
10. The researcher instructed the secondary participant to respond during the probes following a pre-determined script:
    a. Yes / No
11. The primary participant did not have access to sound during the probes (did not hear the instructions given to secondary participant)
    a. Yes (did not have access to sound) / No (did have access to sound)
12. The session started with a probe post “training”
    a. Yes / No
Appendix N HSIRB Approval Letter

Date: September 20, 2020

To: Jonathan Baker, Principal Investigator  
    Andrea Perez, Student Investigator for dissertation  

From: Amy Naugle, Ph.D., Chair  

Re: WMU IRB Project Number 20-07-05

This letter will serve as confirmation that the changes to your research project titled “A Comparison of Training Components Via Telehealth: Training Nursing Home Staff How to Conduct the Stimulus Identification Questionnaire and a Multiple Stimulus Without Replacement” requested in your memo received September 20, 2020 (to modify protocol to include undergraduate students to participate in the trainings and as research participants; add incentive for research participants; revise project title to reflect this change; update recruitment and consent materials to reflect these changes) have been approved by the Human Subjects Institutional Review Board.

The conditions and the duration of this approval are specified in the Policies of Western Michigan University.

Please note that you may only conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. 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 HSIRB for consultation.

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

Approval Termination: July 6, 2021
Appendix O HSIRB Consent Form

Western Michigan University
Department of Psychology

Principal Investigator: Jonathan C. Baker, Ph.D., BCBA-D
Student Investigator: Andrea Perez
Title of Study: A comparison of training components via telehealth: Training students and community living staff how to conduct the Stimulus Identification Questionnaire and a Multiple Stimulus Without Replacement

You are invited to participate in this research project titled “A comparison of training components via telehealth: Training students and community living staff how to conduct the Stimulus Identification Questionnaire and a Multiple Stimulus Without Replacement”

Study Summary
This consent form is part of an informed consent process for a research study and it will provide information that will help you decide whether you would like to take part in this study. Participation in this study is completely voluntary. The purpose of the research is to evaluate various training components (e.g., video, feedback) in the acquisition of two skills. The results will be used to provide remote behavioral services to evaluate behavioral treatments provided to residents at a community living facility, to include staff in the evaluation of the behavioral treatment, and continuously improve aspects of data collection, assessment, and treatment procedures (both in behavior reduction and skill acquisition) provided to older adults. Portions of this project will provide data that may be part of Andrea’s dissertation for the requirements of the doctoral program in the Psychology Department at Western Michigan University.

Dr. Jonathan C. Baker, an expert in Behavioral Gerontology at Western Michigan University (WMU) and graduate students are currently providing state of the art behavior analytic services and are serving as a model for other programs. We are requesting permission to use data from the trainings to share the information gathered with other professionals to further advance the quality of care provided to older adults in nursing home facilities. Your time in the study will require at least 2 1-hour sessions and up to 6 1-hour sessions. You will receive $10 for every session you completed at the end of your participation. The possible risks and costs to you taking part in the study may be a risk to confidentiality; the potential benefits of taking part may be the advancement effective trainings made available to staff in nursing home facilities. Your alternative to taking part in the research study is to not consent to participate in the study.
The following information in this consent form will provide more detail about the research study. Please ask questions if you need more clarification and to assist you in deciding if you wish to participate in the research study. You are not giving up any of your legal rights by agreeing to take part in this research or by signing this consent form. After all of your questions have been answered and the consent document reviewed, if you decide to participate in this study, you will be asked to sign this consent form.

**What are we trying to find out in this study?**
This study will utilize data from the trainings to identify the least intrusive but most effective training component (i.e., video training, video and self-monitoring, video and feedback). This study will involve analyzing data from trainings conducted via telehealth.

**Who can participate in this study?**
You are being invited as a participant because you are a student at Western Michigan University.

**Where will this study take place?**
This study will take place in a virtual Webex meeting room.

**What is the time commitment for participating in this study?**
Your time in the study will require at least 2 1-hour sessions and up to 6 1-hour sessions. During the meetings with the researchers, you will participate in trainings.

**What will you be asked to do if you choose to participate in this study?**
If you choose to participate in this study, your performance during the trainings will be monitored and evaluated by the research team.

**What information is being measured?**
This study will measure the number of correct responses when implementing a procedure. Examples of areas that may be addressed in this project include learning new ways to communicate with hypothetical clients and how to conduct a preference assessment.

**What are the risks of participating in this study and how will these risks be minimized?**
This study seeks to use data from the staff training you are receiving. Therefore, the only research risk is confidentiality. The student investigator will protect your identity by using an assigned number that will be used for data collection purposes. The master list of participants and numbers will be kept in password protected document that only the graduate student investigator will have access to.
While providing remote services, the researchers will collect data through online streaming programs, such as WebEx. The researchers will record the live streams and collect data using data sheets or iPads. Data collected on paper or iPad and the videos of the sessions will be stored on Western Michigan University’s OneDrive. The OneDrive is username and password protected, and only the research team will have access to the data. To protect confidentiality, no identifying information will be stored on the OneDrive.

You may always choose to stop your participation at any time. If you do not participate, you will not jeopardize your course performance or your relationship with the Western Michigan University.

What are the benefits of participating in this study?
While there are no real benefits to you directly, the overall potential benefits of this study may include creating best practice and training strategies that are designed to facilitate working with older adults. As a result, this may provide skills if you later choose to work with this population.

Are there any costs associated with participating in this study?
There are no costs associated with this study.

Is there any compensation for participating in this study?
You will earn $10 for each session attended at the end of your participation.

Future Use of Information
The information collected about you for this research will not be used by or distributed to investigators for other research.

Who will have access to the information collected during this study?
The doctoral and master students will be collecting all the data for this research study. The students and Dr. Jonathan Baker will be the people with access to the information. The research team will assign each participant a number to ensure that any individual data will not be disclosed. Data will be maintained for 3 years following the conclusion of the study. We may present the information from this research project at meetings or conferences.
What if you want to stop participating in this study?
Your participation in this research project is voluntary. You do not have to participate in this research project. If you are willing to have your data and video used for this study, then please indicate your consent by indicated “yes” next to the both options. You may also choose to only provide consent to the use of data, but not video, by indicating “yes” only next to the data option. Your decision whether or not to have your data used in this study will not affect your current or future involvement with Western Michigan University, or any of its affiliates. If you decide to participate, you are free to change your mind and discontinue participation at any time. You may contact Dr. Jonathan Baker at (269) 387-4355 at any time with any questions or concerns about your participation in this research project. You may also contact the Chair, Human Subjects Institutional Review Board (HSIRB) at (269) 387-8293 or the Vice-President for Research at (269) 387-8298 if questions or problems arise during the course of the research project.

This study was approved by Western Michigan University Institutional Review Board (WMU IRB) on July 7, 2020.

I have read this informed consent document. The risks and benefits have been explained to me. I provide consent for the following information about my data to be used by the graduate students and Dr. Baker:

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>( )</td>
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<td>Data</td>
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<tr>
<td>Both</td>
<td>( )</td>
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</tbody>
</table>

Please Print Your Name

________________________
Signature

________________________
Date