

Outcomes Related to Training for Complex Information Dissemination to a Lay Audience

Amanda Kole, Scott Youmans and Linda Carozza

Pace University

ABSTRACT

Speech Language Pathologist (SLPs) are tasked with diagnosing and providing recommendations for their clients/patients. They are also required to convey diagnoses and recommendations to their clients and often family members/caregivers. However, this information can be complex and filled with medical jargon. Therefore, the information conveyed can be difficult for a lay person to understand. The study includes four students that were videoed conveying complex information based on case studies as though to lay persons. The students were given a brief training on how to convey information most effectively. The students were again videoed presenting a new case study. A comparison was made between pre- and post- training information by listeners with no experience with the subject matter. Results indicated a significant improvement in listener ratings related to the information provided. Direct training may be superior to indirect on-the-job training for education/counseling and other skills.

Introduction

Speech-Language Pathologists (SLPs) are responsible for diagnosis and treating clients. It is crucial that the information gleaned from testing and treatment recommendations be adequately conveyed to the persons relevant to the situation, including clients and caregivers. Often, this information contains professional jargon and complex medical and professional information. Additionally, this debriefing session often comes in the context of a new and stressful situation.

Well-presented information can lead to better understanding. The understanding and memorability of this information can result in a relevant person's conception of the disorder in lay terms and comprehension of the reason, importance of, and correct execution for the resulting recommendations. This, in turn, may lead to improved session attendance, compliance with recommendations, empowerment and self-advocacy, and overall outcomes. Conversely, poor understanding may lead to poorer outcomes, including reduced motivation (Schulz et al., 2016).

This study employed direct training for a counseling skill. To our knowledge, this has not been specifically studied to date. It appears that most training is indirect. Students are encouraged to observe their clinical supervisors in these situations and then use these skills with other clients. Trial and error and experience are used to hone these counseling skills (Buckman, 1984).

The purpose of the study is to determine if specific training with graduate students on how to convey complex information related to the field of speech-language pathology to a naïve audience would result in improved perception of quality by naïve raters. The amount and quality of the information will be rated by lay respondents to determine if training had a beneficial effect on the presenter.

Methods

Participants

For the study, 33 participants were recruited to serve as respondents for the study. All participants signed an informed consent form. All were English speaking. All were reportedly in good health. All had functional vision (corrected or uncorrected) and hearing. Participants were excluded from the study if they had a history of communication disorders, or if they have specific training in counseling.

Of the 33 participants, the average age of was 33.94 years old, with a standard deviation of 17.31 ranging from 22 to 66. Eleven of the participants were male (33.3%) and 22 of them were female (66.7%), 21 white (63.6%) and 12 persons of color (36.4%). The average education level was 16.67 with a SD of 1.38, ranging from 12-20.

Procedure

Informed consent was obtained from each candidate prior to participating in the study. Then, the participant filled out a questionnaire including basic demographic information and inclusion/exclusion criteria. If the candidate met all criteria for participation, they then completed the remainder of the tasks.

The participants were shown videos of four different “actors” disseminating information about communication disorders cases. Each actor performed two videos: one pre training and one post- training. Each video ranged around 2 minutes and was presented to the viewer in random order. Four, different video sets were used equally across respondents to control for an order-effect; that is, four, different randomizations were used across participants. The participants each viewed a total of eight videos.

Following each video, participants immediately responded to questions about their reactions to the information they received on a Visual Analog Scale. The questions included: How much information was conveyed? How well was the information conveyed? How much information do you recall? How much information did you understand? How did the video make you feel?

Visual Analog Scale

Answers to the questions prior to watching each video were recorded on a Visual Analog Scale in which the rater draws a mark on a line to indicate their response. The participants answered each question posed on the visual analog scale by placing a mark anywhere along the 129-centimeter line that reflects their response. On either end of the line are opposite descriptive statements. On the right side of the line, the statement reflected more positive reactions to the stimuli. On the left side of the line, the statement reflects a less positive negative reaction to the stimuli. Therefore, starting from the endpoint on the left side, the farther the respondent’s mark was along the line to the right, the more positive they rated the stimuli (i.e., more information conveyed, better quality information, better overall feelings, etc.). Because visual analog scales do not have rankings along the line, they evoke ratio data (as opposed to ordinal data) and allow for parametric statistics to be conducted. Measurement was made in cm from the left edge of the line to the mark made by the rater and used for analyses.

Stimuli

Pre-training stimuli

Four speech-language pathology student volunteers with no prior formal counseling training comprised the “actors” in the videos. The student volunteers were given a case study with five minutes to read the study. Then,

they were asked to convey the relevant information from the case study as if to a client or caregiver with no expertise in the area while being video recorded.

Post-training Stimuli

Following training, the same four student volunteers were asked to repeat the process. The volunteers were given a new case study. They were given five minutes to read the study. They were asked to convey relevant information as if to a client or caregiver while being video recorded. A total of eight videos were recorded. The contents of the videos were based on the graduate clinician’s reading of a case study and attempting to describe it as to a naïve audience on video. Two clinicians used Case Study A as their pre-training clip and Case Study B as their post-training clip. The other clinicians used the case studies in the opposite order. As previously mentioned, the videos were presented as stimuli in random order.

Training

Following a pre-training video, a brief training session was conducted to instruct the volunteers to effectively convey complex information. The training included a PowerPoint presentation, an example case presentation, and questions and answers session. Training included preparation and inclusion of salient information only. Training on preparation for information dissemination included taking notes about the case study, creating a bullet list, picking only the most salient information, and looking up information that they did not fully understand. Information dissemination techniques that were also taught included looking at the person, maintaining eye contact, progressing slowly even if nervous (the client is most likely more nervous than the informant), say complicated things more than once in different ways, speak at a slow, unrushed pace, don’t use jargon when avoidable, being to the point, giving examples when appropriate, emphasizing positives, not just negatives, and summarizing at the end.

Data Analysis

Paired t-tests were conducted to determine if a difference existed between pre- and post- training ratings by the observers. Alpha was set at 0.05.

Results

The results from the paired t-test to determine if a significant difference existed between responses to pre-training versus post-training videos follow. All results indicated a statistically significant increase from pre- to post-training for all ratings. Please see Table 1 for outcomes of the paired t-tests. Figure 1 illustrates the differences between mean from pre- to post-training ratings.

Table 1: Results of Paired t-tests for Pre- Versus Post-Training

Question	T-value	p-value
How much information was conveyed?	-8.379	<0.0001
How well was the information conveyed?	-7.708	<0.0001
How much information do you recall?	-6.225;	<0.0001
How much information did you understand?	-6.165	<0.0001
How did the video make you feel?	-6.165	<0.0001

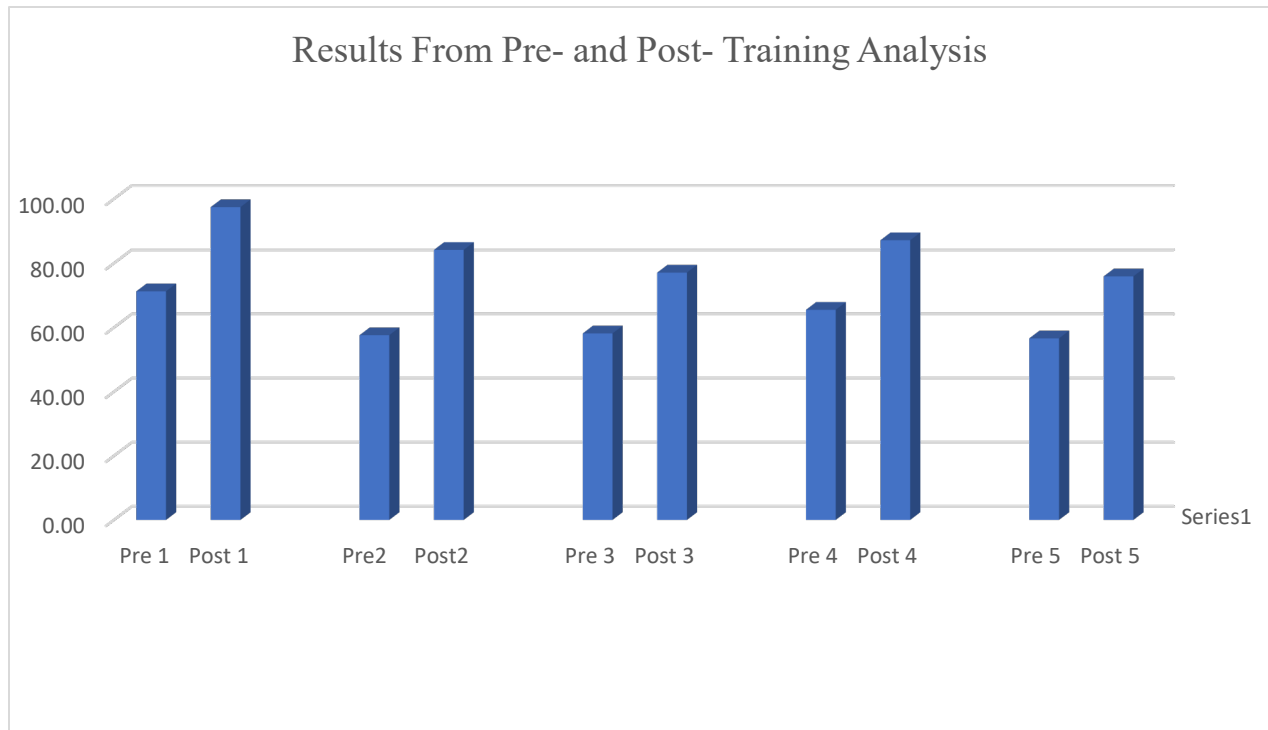


Figure 1. Results from pre- and post-training analysis.

Discussion

Students were trained to communicate complex information during a very brief tutorial (approximately 20 minutes). The tutorial included direct instruction via a PowerPoint presentation, an example of a case presented by the instructor, and allowed for questions. The outcomes indicated that, despite the brevity of the instruction and the students' prior experience with dealing with clients and their families, the instruction supported their communicative effectiveness significantly. Two of the four students who presented were in their first year of the Program and relatively new to this skill. Two of the four were in their second year of the Program and had some prior experience. Despite these differences, all of the presenters made significant gains due to the training.

Students were shown to provide significantly more information, provide the information significantly better, make the information significantly more memorable, make the information significantly more understandable, and leave the client with a significantly better feeling after training. As mentioned, this could lead to better client outcomes due to increased awareness of their disorder and what is required to help remediate/compensate for lost function.

This study indicated that direct training for skills may be more effective than indirect training. This could be expanded to include other complex skills. Additionally, more intensive, direct training might lead to even more impactful. Of additionally interest, are other factors that may influence listener perceptions, including informant and listener demographics.

The participants in this study were homogeneous, therefore, we are basing the results primarily from Caucasian, female participants. This results in limitations of the study. In future continuation of this or other studies, a more diverse population should be examined to see if different backgrounds and educational levels yields different results.

Conclusion

Brief instructive measures regarding important clinical functions could facilitate better clinical outcomes. More intensive training could lead to even better outcomes. Research on the variability of outcomes due to difference in demographics of the speakers and listeners could be investigated.

References

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