Title: The effects of different delivery modalities on perceived benefits of individuals in the SPEAK OUT!® group

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Summary: This study aimed to evaluate how the delivery modalities of the SPEAK OUT!® program affected participants' perceived benefits. Specifically, it examined whether the mode of delivery (telehealth or inperson) has a differential impact on participants' perceived communication abilities and overall quality of life. Participants completed a 17-item survey, consisting of 16 closed-ended questions adapted from the Communicative Participation Item Bank (CPIB) and the Parkinson's Disease Questionnaire (PDQ-39), along with one open-ended question. Data was analyzed through frequency response analysis of the closed-ended questions and thematic analysis of the open-ended responses. Results showed that both in-person and telehealth delivery formats were perceived as beneficial for improving communication abilities and quality of life in both groups. In-person participants reported gains in conversational maintenance and swallowing. The telehealth participants reported more improvement in initiating conversations, sustaining speech volume, and reducing feelings of isolation and frustration. These findings suggest that both delivery modalities had advantages in their own unique ways.

Methods:

Study Design

Survey items adapted from the CPIB and PDQ-39. Comparative, survey-based design examining perceived benefits of SPEAK OUT!® delivered in-person vs. telehealth. Assessed participant self-reported outcomes: speech and volume, swallowing, life participation, and overall satisfaction. Survey development included a think-aloud protocol to evaluate clarity and content validity.

Participants

Recruited from the University of Minnesota Duluth SPEAK OUT!® group program who had a clinical diagnosis of Parkinson's disease. 10 participants completed the SPEAK OUT!® program via telehealth, while 9 participated in-person.

Survey & Procedures

Online survey distributed via QualtricsXM©; 17 items assessing Functional communication (Items 1–5), Psychosocial & swallowing aspects (Items 6–9), Daily life impacts (Items 10–13), demographics, and program feedback (Items 14–17). Participants were invited via email; reminders were sent at 2 and 4 weeks; the survey was open for 8 weeks.

Data Analysis

Survey responses were analyzed using descriptive statistics (item-by-item) and thematic analysis of open-ended responses to identify recurring themes in participant experiences and satisfaction.

Results:

Table 1

Questions 1–5 evaluated functional communication abilities, including verbal and nonverbal expression.

Question	Response Choice	In person (n)	In person (%)	Telehealth (n)	Telehealth (%)
Initiate a conversation with familiar people:	Significantly worse				
	Worse				
	Stayed the same	4	44%	3	30%
	Better	5	56%	7	70%
	Significantly Better				
Maintain a conversation with familiar people:	Significantly worse				
	Worse				
	Stayed the same	3	33%	4	40%
	Better	6	67%	5	50%
	Significantly Better			1	10%
Use appropriate body language (e.g., looking at the conversation partner) during a conversation	Significantly worse				
	Worse				
	Stayed the same	6	67%	6	60%
	Better	3	33%	4	40%
	Significantly Better				
Speak using appropriate volume:	Significantly worse				
	Worse	1	11%		
	Stayed the same			5	50%
	Better	6	68%	3	30%
	Significantly Better	2	22%	2	20%
Communicate effectively so others can easily understand:	Significantly worse				
	Worse	1	11%		
	Stayed the same			3	30%
	Better	8	89%	7	70%
	Significantly Better				

Note. Questions 1–5 evaluated functional communication abilities, including verbal and nonverbal expression. Percentages are based on the number of respondents in each setting (in person or telehealth). n = number of participants in each response category.

Table 2

Questions 6–9 assessed psychosocial and functional aspects of communication and swallowing.

Question	Response Choice	In person (n)	In person (%)	Telehealth (n)	Telehealth (%)
Confidence in speaking during social situations:	Significantly worse				
	Worse			1	10%
	Stayed the same	4	44%	5	50%
	Better	5	56%	4	40%
	Significantly Better				
Ability to participate in group discussions (e.g., family gatherings, social outings):	Significantly worse				
	Worse			2	20%
	Stayed the same	5	56%	5	50%
	Better	4	44%	3	30%
	Significantly Better				
Motivation to engage in social or community activities:	Significantly worse				
	Worse				
	Stayed the same	3	33%	8	80%
	Better	4	44%	1	10%
	Significantly Better	2	22%	1	10%
Swallowing ability (e.g., choking or coughing):	Significantly worse				
	Worse				
	Stayed the same	7	78%	4	40%
	Better	2	22%	4	40%
	Significantly Better			2	20%

Note. Questions 6–9 assessed psychosocial and functional aspects of communication and swallowing. Percentages are based on the number of respondents in each setting (in person or telehealth). n = number of participants in each response category.

Table 3

Questions 10–13 explored the emotional and practical impacts of communication abilities in daily life

Question	Response Choice	In person (n)	In person (%)	Telehealth (n)	Telehealth (%)
Feelings of isolation related to communication:	Significantly worse				
	Worse				
	Stayed the same	3	33%	7	70%
	Better	5	56%	3	30%
	Significantly Better	1	11%		
Feelings of frustration related to communication:	Significantly worse				
	Worse	1	11%	1	10%
	Stayed the same			4	40%
	Better	8	89%	5	50%
	Significantly Better				
Ability to communicate effectively during everyday activities (e.g., errands, appointments):	Significantly worse				
	Worse	1	11%		
	Stayed the same	4	44%	5	50%
	Better	4	44%	5	50%
	Significantly Better				
Ability to maintain your speech volume during longer conversations:	Significantly worse	1	11%		
	Worse			1	10%
	Stayed the same	2	22%	3	30%
	Better	5	56%	6	60%
	Significantly Better				

Note. Questions 10–13 explored the emotional and practical impacts of communication abilities in daily life. Percentages are based on the number of respondents in each setting (in-person or telehealth). n = number of participants in each response category.

Table 4

Participant Response	Theme(s)
"I am so impressed with the SPEAK OUT program. I was helped in so many ways but it also tells me that I have a long way to go yet. I love the daily home practice sessions."	Program Benefits; Daily Practice
"I have enjoyed the 2 SPEAK OUT groups I've been a part of and hope to continue. The fellowship dynamic and the care given by the programmers is an important benefit."	Group Fellowship; Program Benefits
"Two therapy groups. Individual therapy as well as daily Parkinson voice project speak out exercises are also needed with the group speak out therapy. Group therapy is not enough to help. Daily exercise is a must and individual therapy from time to time is very helpful."	Need for Individual Therapy; Daily Practice
"Zoom meetings are also very different from in-person meetings. For example, when I am having difficulty understanding what a person is saying in a Zoom meeting I can use the speaker focus and read lips to help tremendously. That is more difficult in an in-person group setting."	Delivery Format; Hearing
"Consider also those of us that are hard of hearing how that impacts our answers. It might be helpful to ask for examples about not being heard before diagnosis as well as examples after diagnosis. Before I was diagnosed my wife would say I can't hear you. I would reply you're not listening to me. My children would say Dad I can't hear you. I would say you are not listening to me."	Hearing; Delivery Format
"SPEAK OUT therapy was very helpful, especially for my speech. I am much more confident that I can communicate effectively now."	Program Benefits
"I have learned how to project my voice and make it less raspy. And better yet, every once in awhile I am able to sing which I have been unable to do for a few years."	Program Benefits; Unexpected Benefits
"My speak out group became very close. The group offered support to each member."	Group Fellowship
"Very beneficial."	Program Benefits
"It was a great experience and I learned strategies to help me with my overall communication."	Program Benefits
"No SPEAK OUT emphasis on choking and swallowing."	Areas for Improvement
"Lack of appearance of customized therapy to individuals as a result of SPEAK OUT training."	Areas for Improvement; Need for Individual Therapy
"I am doing the daily online exercises and plan to take a refresher class next fall. My daughters say that my speech has improved since I have been in this program."	Daily Practice; Program Benefits
"Wish you all the best."	Neutral/No Theme
"I miss having the sessions during school breaks."	Areas for Improvement (Continuity)
"No."	Neutral/No Theme
"I benefited from this experience just by being a part of the group work. It offered support and I look forward to continuing with it."	Group Fellowship; Program Benefits
"I look forward to joining the group once again when the next sessions begin."	Group Fellowship

Note. Themes were identified through qualitative content analysis. The following major themes were program benefits, daily practice, group fellowship, need for individual therapy, delivery format, hearing, areas for improvement, and neutral/no theme.

Discussion: Both in-person and telehealth delivery of SPEAK OUT!® were perceived as effective in improving communication and quality of life for

individuals with Parkinson's disease, with each format offering unique benefits.

In-person participants: A majority of respondents reported greater gains (better or significantly better) in effective communication, maintaining conversations, using appropriate volume, motivation to engage in activities, reduced feelings of isolation, and frustration, likely due to face-to-face interaction and clinician feedback, though some experienced frustration or difficulty maintaining vocal volume in daily activities.

Telehealth participants: A majority of respondents reported improvements (better or significantly better) in initiating conversations, communicating effectively so others can easily understand, increased perceived swallowing ability, and maintaining speech volume during conversations, likely supported by the convenience and comfort of the virtual format. A few participants noted a decrease in ability to participate in social settings, limited individualized feedback, and occasional technology challenges.

Across both modalities, participants highlighted the importance of daily practice, group support, and ongoing guidance. They also suggested the need for more individualized therapy and program continuity. Overall, both delivery methods provide meaningful perceived benefits, showing that flexible options can help meet individual needs and preferences.

Limitations: Some limitations of this study include the small sample size, reliance on self-reported perceptions, and lack of data on the number of SPEAK OUT!® sessions attended. Additionally, survey responses may be inconsistent, and duplicate entries could not be prevented, which may affect the generalizability of the findings.

Future Directions: Future studies should combine objective and self-report measures, track session attendance, use a larger sample size, and include follow-up to strengthen reliability and generalization.