Development of an Outcome Measure Based on Self-identified Goals to Assess Change of Knowledge, Skills, or Behaviors Following a 3-week Audiologic Rehabilitation Group Program for Adults

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Background and Rationale

- Outcome measures are needed to assess change of knowledge, skills, and behaviors following participation by persons with hearing loss in their frequent communication partners in audiology: rehabilitation (AR) groups for adults.
- Our experience, based on approximately 400 individuals who have attended such programs at the University of Arizona, is that the degree of change indicated by qualitative reports from participants typically exceeds that indicated by standardized questionnaires. Studies include:
  - Each individual’s specific reasons for attending may not be assessed by the outcome measures currently in use (i.e., International Outcomes Inventory: Alternative Intervention; and Significant Other Assessment of Communication: SOAC).
  - Participants’ responses to open-ended questions on the program evaluation form may raise unique quality-of-life issues that are not captured by questions on the current quantitative measures.
  - The purpose of rehabilitation, a goal, is the intended outcome of undergoing specific interventions.
  - Setting of goals increases behavior change. Having participants self-identify their goals should increase awareness of and investment in the personal intended outcomes of attending an audiologic rehabilitation program.

Purpose

To develop an outcome measure sensitive to change within persons with hearing loss and their frequent communication partners participating in a structured group AR program that a) identifies and quantifies change in self-identified goals and b) could be completed briefly and independently of group facilitators.

Preliminary Results from the Self-identified Goals (SIG) Outcome Measure

- Four versions of an outcome questionnaire based on individual goal setting have been evaluated using adult participants in a 3-week audiology rehabilitation program conducted with a standard curriculum.
  - Pre-group form: Mailed before beginning of group
  - Post-group form: Completed 2 weeks after final group meeting and by questions on the current quantitative measures.
  - Other version: Used to determine how each participant is able to manage issues related to hearing in the better ear (unaided).

General Methods

- Participants in each stage of development: persons with hearing loss (PHL) and frequent communication partners (FCP).

Participants Stage 1 Stage 2 Stage 3 Stage 4 Total
PHL 8 5 8 8 29
FCP 3 4 3 5 15
Total 11 9 11 13 44

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OUTCOMES:

- Participants required extensive coaching by group facilitators to understand and complete the forms. Even with coaching, participants continued to be confused.
- Completion rate, with 3 questions (pre-group form), of only 27% (3/11) revealed that this version required revision.
- The majority of items were marked unclear or lacked the clarity necessary for self-administration.
- 70% (7/11) of participants could not complete this form independently or in a brief time frame.
- 40% (4/10) of participants identified no goals.
- 50% (5/11) of participants completed the post-group form.

Summary and Discussion

- Goal Attainment Scaling (GAS) is a technique for assessing the extent to which participants achieve individual goals.
  - Stages 3, 4, and 4.5 were based on the principles of GAS used in other health-related rehabilitation programs.
  - Living these principles, we developed the SIG outcome measure that can be used to determine how each participant is able to manage issues related to his or her individualized goals after intervention in group audiology rehabilitation.
  - The SIG can be quickly and easily self-administered.

Summary of Stage 4 of SIG Development:

- Pre-Group SIG:
  - Three self-identified goals are identified by each participant.
  - Each person rates how much hearing loss affects his/her quality of life related to each category of scaling (participants marked an “x” on a 15.5 cm line with two labeled endpoints).
  - Figure 1 displays responses to the quality-of-life question as a function of hearing in the better ear (unaided).
  - The poor agreement between Pre and quality-of-life reinforces the need to determine the degree of hearing loss for all patients as part of any routine evaluation.

- Post-group:
  - Following a 3-week group AR program, degree of change for each self-identified goal and degree of change in the quality of life question, are assessed using non-categorical scaling methods.

Preliminary Findings Using Outcome Measure SIG:

- Stage 4 of the development of the SIG outcome measure was evaluated on 8 participants with hearing loss and 5 communication partners.
  - Forms were scanned and a computer algorithm was used to evaluate frequencies using non-categorical scaling.
  - Figure 2 illustrates a greater degree of change, measured with the SIG form than with the post vs. SAC/SOAC comparisons, for most participants (10/11) who completed the post-group forms.
  - 1/11 participant did not demonstrate change on the SIG or SAC/SOAC. This participant had hearing loss since childhood.

- Figure 3 illustrates the SIG form’s sensitivity to measuring degree-of-change for the person with hearing loss as well as their frequent communication partner.

Overall, pilot work suggests that positive attributes of this technique are adaptable to measuring participant change after a structured group AR program.

Further Developments

- Increase the sample size (n) by continuing to use this form with additional adult audiologic rehabilitation groups in the Living Well with Hearing Loss program.
- Collaborate with other adult audiologic rehabilitation group programs to use the form in additional environments and obtain feedback from facilitators.
- Simplify instructions on the post-group form.
- Continue analysis pre vs. post-group and make comparisons to other outcome measures that are currently being used in the Living Well with Hearing Loss program.
- Further Developments
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References