

Confidence in Ratings of Aphasic Patients' Functional Communication:
Spouses and Speech-Language Pathologists

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Recent trends in aphasia rehabilitation have included increased emphasis on functional communication and involvement of family members in the patient's rehabilitation. Family members are also keenly aware of the need to improve functional communication. In a recent study by Linebaugh and Young-Charles (1981), 92% of the spouses of 60 aphasic patients stated that techniques for improving functional communication should be taught to family members.

A potential source of difficulty may arise, however, in discussions concerning the aphasic patient's functional communicative abilities. Helmick, Watamori, and Palmer (1976), Flowers, Bottorf, and Kelley (1977), and Linebaugh and Young-Charles (1978) have all reported a strong tendency for family members to rate the functional communication of aphasic patients higher than Speech-Language Pathologists do. In addition, Flowers *et al.* (1977) and Linebaugh and Young-Charles (1978) found that family members are generally very confident of their judgments regarding the patient's communicative abilities. In dealing with the families of aphasic patients, therefore, Speech-Language Pathologists may find themselves making statements that are in conflict with impressions and judgments about which family members are quite confident. This may have a detrimental effect on the Speech-Language Pathologist's credibility, especially if their statements are based on tasks the family members perceive as "foolish" (Czvik, 1977), and may compromise the family's willingness to be actively involved in the patient's rehabilitation.

In view of this potential problem, this study was undertaken to assess more comprehensively the confidence that (a) spouses of aphasic patients and (b) Speech-Language Pathologists have in their ratings of functional communication.

METHOD

Subjects

Aphasic Patients. Fifty-eight patients from 15 rehabilitation facilities (Appendix A) were included in this study. The mean age of the patients was 55.1 years. The mean time post onset was 18.4 months with a range of 3-75 months.

Spouses. The spouse of each aphasic patient also participated in this study. Forty-two of the spouses were female and 16 were male. Their mean age was 53.7 years. The couples had been married a mean of 29.6 years.

Speech-Language Pathologists. Thirty Speech-Language Pathologists participated in the study. Each held the Certificate of Clinical Competence of the American Speech-Language-Hearing Association and had at least two years experience working with aphasic patients.

Procedure

Severity of Aphasia. The performance of each aphasic patient was rated by a Speech-Language Pathologist on 40 functional communication tasks—10 each in auditory comprehension, verbal expression, reading, and graphic expression. These ratings were accomplished using a five-point scale on which 4 indicated normal or premorbid performance, 3 good, but reduced performance, 2 fair performance, 1 poor performance, and 0 indicated that the patient was unable to perform the task. The spouse of each aphasic patient also rated his/her aphasic partner's communicative abilities on the same scale.

Rating Deviation. The mean difference between the ratings of the Speech-Language Pathologist and the spouse was determined for each patient's overall communicative ability and for each of the four modalities considered.

Confidence Levels. Both the Speech-Language Pathologists and the spouses rated their confidence in each of their 40 ratings of the patient's communicative performance. These ratings were done on a five-point scale where 1 indicated "100% certainty," 2 indicated "75% certainty," 3 indicated "50% certainty," 4 indicated "25% certainty," and 5 indicated "just guessing." The mean confidence level for ratings of overall communicative ability and ratings of each of the four modalities were then determined for each aphasic patient's spouse and for the speech pathologist's ratings of that patient.

RESULTS

Severity of Aphasia. The mean overall severity rating for the aphasic patients as judged by the Speech-Language Pathologists was 2.2 with a range of .5 - 3.9. The mean severity ratings for auditory comprehension, verbal expression, reading, and graphic expression were 2.9, 2.5, 2.5, and 1.6, respectively.

Rating Deviation. The mean difference between the Speech-Language Pathologists' and spouses' performance ratings for overall communicative ability was .50. Those for auditory comprehension, verbal expression, reading, and graphic expression were .61, .57, .60, and .56, respectively.

Confidence Levels. The mean overall confidence level for the spouses was 1.45 with a standard deviation of .34. That for the Speech-Language Pathologists was 1.55 with a standard deviation of .72. As can be seen in Table 1, this trend for the spouses to be more confident of their ratings of functional communication was repeated for each of the modalities considered. However, only the difference between the mean confidence levels for auditory comprehension was significant ($t = -2.89, p < .005$). In addition, the Speech-Language Pathologists as a group were more variable in their confidence ratings than were the spouses (as revealed by the greater standard deviations).

Table 1. Mean Confidence Levels and (standard deviation) of spouses and Speech-Language Pathologists.

	<u>Spouse</u>	<u>Sp-Lang Path</u>
Overall	1.45 (.34)	1.55 (.72)
Auditory Comprehension	1.25 (.30)	1.49 (.54)
Verbal Expression	1.31 (.37)	1.34 (.41)
Reading	1.67 (.67)	1.73 (.94)
Graphic Expression	1.58 (.67)	1.62 (1.12)

The number of cases on which the spouses were more confident than the Speech-Language Pathologists was also assessed (see Figure 1). The spouses

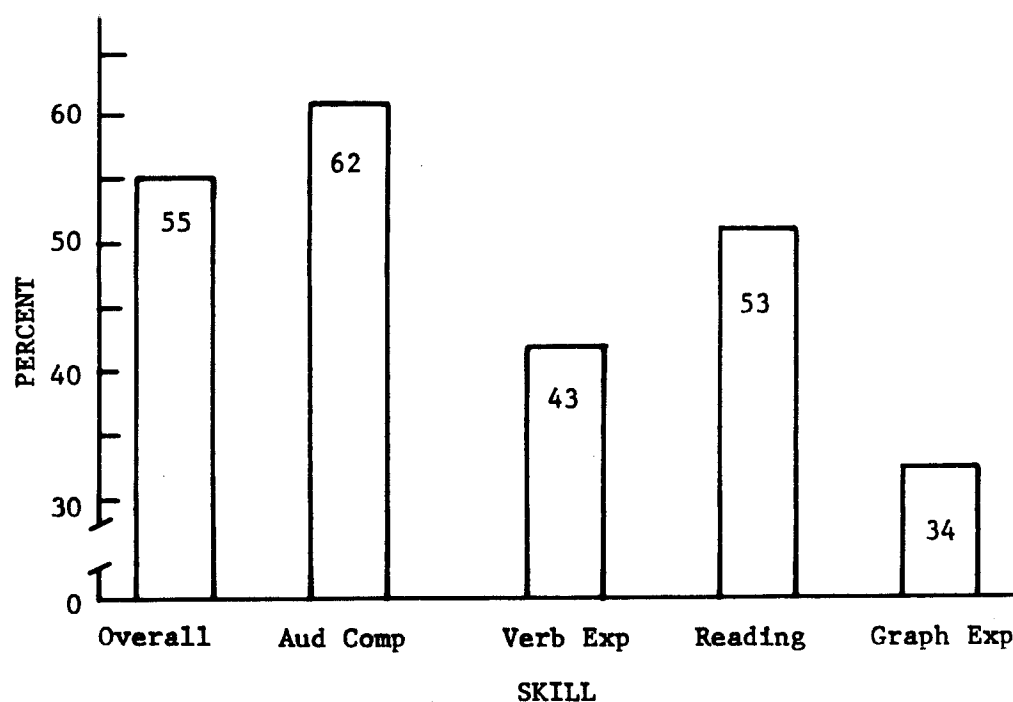


Figure 1. Percent of cases on which the spouse was more confident than the Speech-Language Pathologist.

were more confident than the Speech-Language Pathologists on a majority of cases, overall (55%), as well as for auditory comprehension (62%) and reading (53%). However, for verbal expression (43%) and graphic expression (34%) they were more confident in a minority of cases. For overall confidence level and for each of the 4 modalities, the spouses expressed 100%

certainty in their performance ratings for more cases than did the Speech-Language Pathologists (see Figure 2).

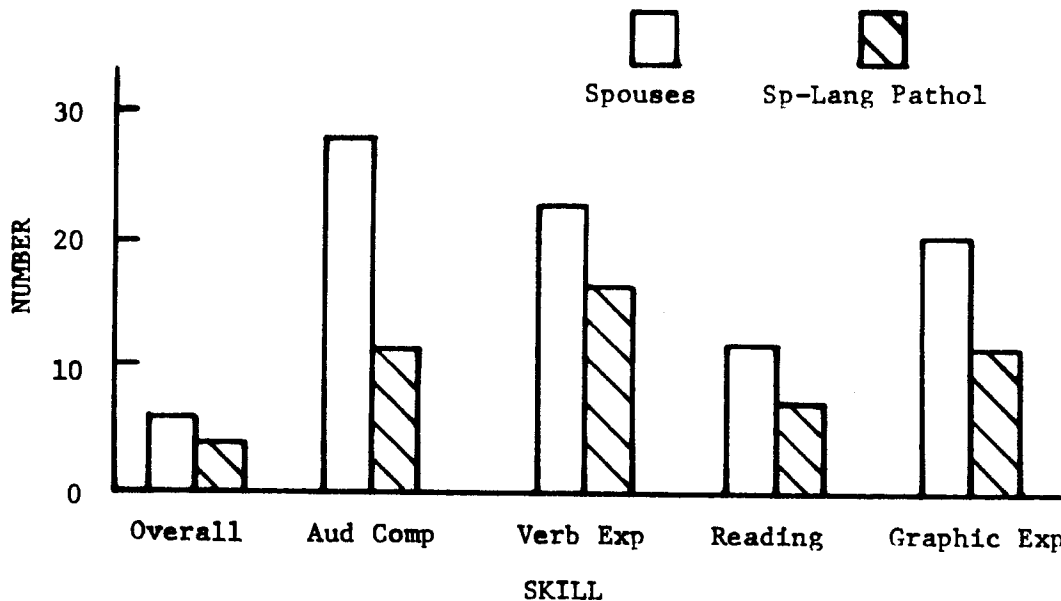


Figure 2. Number of cases on which raters expressed 100% certainty.

Comparisons were made among the mean confidence levels for the 4 modalities for the spouses and the Speech-Language Pathologists (Table 1). The spouses were significantly more confident of their ratings of auditory comprehension than either reading ($t = -5.38, p < .001$) or graphic expression ($t = -3.51, p < .001$). Likewise, they were significantly more confident of their ratings of verbal expression than either reading ($t = -3.91, p < .001$) or graphic expression ($t = -3.27, p < .002$). The differences between auditory comprehension and verbal expression and between reading and graphic expression were not significant. The Speech-Language Pathologists were significantly more confident of their ratings of auditory comprehension ($t = -2.71, p < .009$) and verbal expression ($t = -3.26, p < .002$) than for reading. They were also more confident of their ratings of verbal expression than of auditory comprehension ($t = 2.30, p < .025$). None of the comparisons with the mean confidence level for graphic expression were significant.

In order to determine if raters' confidence was related to the perceived severity of patients' communicative impairment, overall confidence levels and those of the 4 modalities were correlated with the mean performance ratings assigned by spouses and Speech-Language Pathologists. For spouses, a significant negative correlation of $-.31 (p < .009)$ for the ratings regarding reading indicated that spouses became less confident in their ratings as reading impairments became more severe. A positive correlation of $.26 (p < .03)$ for graphic expression suggested that spouses were more confident in rating more severe graphic impairments. For Speech-Language Pathologists, a positive correlation of $.24 (p < .04)$ for graphic

expression suggested that they too were more confident when rating more severe graphic impairments. None of the other correlation coefficients were statistically significant.

The confidence levels were also correlated with the rating deviations. This was done to determine if the raters appeared to be less confident in those areas on which their performance ratings were in less agreement. For the spouses, significant positive correlations were obtained for auditory comprehension ($r = .24, p < .04$) and graphic expression ($r = .35, p < .004$). These findings suggest that those spouses whose ratings deviated appreciably from those of the Speech-Language Pathologists were somewhat less confident. None of the correlations between the Speech-Language Pathologists' confidence levels and the rating deviations were significant.

DISCUSSION

Overall, both spouses and Speech-Language Pathologists were highly confident of their ratings of the patients' functional communicative abilities. The trend for the spouses to be somewhat more confident may have its basis in their more extensive opportunities to observe the aphasic individual communicating in a more natural environment. Holland (1977) has suggested that the spouse "who has a fairly secure grasp on a given patient's pretraumatic abilities and presently interacts with him or her on mutually familiar territory" may be in a better position to assess the patient's functional communication. The spouses of aphasic patients might, therefore, reasonably be expected to be more confident of such assessments. Note, however, that the difference between spouses' and Speech-Language Pathologists' confidence levels reached statistical significance only for auditory comprehension, and that while the mean confidence level of spouses was higher than that of Speech-Language Pathologists for verbal and graphic expression, spouses nonetheless were more confident in less than half of the individual cases.

The variation in confidence levels among the modalities for both spouses and Speech-Language Pathologists appears to be related to the opportunity to observe the patient performing specific communicative tasks. Both spouses and Speech-Language Pathologists have substantially greater opportunities to observe the patient engaging in functional communication via auditory comprehension and verbal expression than in reading or graphics. Indeed, spouses frequently commented when rating their aphasic partner's reading and graphic expression abilities, "I've never seen him/her try that." That the spouses were more confident of their ratings of auditory comprehension and verbal expression than either reading or graphic expression and that the Speech-Language Pathologists were more confident of their ratings of auditory comprehension and verbal expression than reading is therefore not surprising.

A second factor which may have influenced confidence levels across modalities is the relative "verifiability" of performance in the different modalities. Recall that the Speech-Language Pathologists were significantly more confident of their ratings of verbal expression than of auditory comprehension. In addition, both the spouses and the Speech-Language Pathologists were more confident of their ratings of graphic expression than reading, though these differences failed to reach statistical significance. These findings suggest that the raters were more confident of their judgments regarding the expressive modalities, where an overt response was

always available to evaluate, as opposed to the receptive modalities, where an overt response may have been more ambiguous or lacking altogether. Thus the patient's expressive performance was more readily verified than was his comprehension of auditory or graphic stimuli.

Confidence in ratings of functional communication was also found to be partially related to the severity of the patient's impairment. The spouses' confidence in ratings of reading was inversely related to the severity of the patients' reading impairment. This was probably related to greater difficulty verifying the comprehension of graphic material by more severely impaired patients as well as less opportunity to observe them attempting to read. Conversely, both the spouses' and the Speech-Language Pathologists' confidence was directly related to the severity of the patient's impairment in graphic expression. This greater confidence in rating more severe graphic impairments may at least in part be accounted for by greater stability of the more severely impaired patients' performance across graphic expression tasks.

Those spouses whose ratings deviated to a greater degree from those of the Speech-Language Pathologists also seemed to be aware of difficulty in rating certain aspects of their aphasic partner's communicative abilities. This was evidenced by the significant positive correlation between the confidence levels for auditory comprehension and graphic expression and the rating deviations. These findings are consistent with those of Flowers et al. (1977) who reported that family members were more confident of their accurate judgments. For auditory comprehension, this may be related to the verifiability of the patient's comprehension, while for graphic expression it may be related to an extremely limited opportunity to observe the patient's writing. The lack of any significant correlations between the Speech-Language Pathologists' confidence levels and the rating deviations is probably related to the more systematic sampling of patient performance via the administration of standardized measurement instruments and in treatment.

The most salient finding of this study is that spouses of aphasic patients and Speech-Language Pathologists are highly confident of their judgments of functional communicative ability. That such levels of confidence exist in the face of significant differences in judgments of communicative performance requires adjustments in at least two aspects of our clinical practice. First, our assessments of functional communication must be made more accurate, more reliable, and more legitimate in the view of our patients and their families. The availability of instruments such as the CADL (Holland, 1980) and greater use of "communicatively" oriented treatment approaches are steps in the proper direction. Second, in counseling family members, we must recognize that they are in general highly confident of their own judgments of the patient's communicative abilities. In view of this, we must temper our own confidence. Family members' opinions should be elicited and given appropriate credence. They should be asked to provide specific examples of communicative success and failure, and we should do likewise. Participating in conversations with the patient and family members provides an invaluable opportunity not only to point out examples of breakdowns in functional communication, but to demonstrate effective facilitatory strategies as well. In essence, the assessment of the patient's functional communication should be a group effort; one that will expedite reaching a consensus on the patient's current level of function, realistic treatment directions

and realistic objectives. In this way, potential conflicts may be avoided and the energies of all involved directed in a more productive manner.

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APPENDIX A

Participating Rehabilitation Facilities

Crozier-Chester Medical Center
Delaware Curative Workshop
Fairfax (VA) County Health Department
Fort Howard Veterans Administration Hospital
McGee Rehabilitation Hospital
Moss Rehabilitation Hospital
Mount Vernon Hospital
St. Anthony Hospital
Thomas Jefferson University Hospital
The Fairfax Hospital
The George Washington University Medical Center
The George Washington University Speech and Hearing Center
Washington Hospital Center
Wilmington Medical Center
Visiting Nurses Association of Alexandria (VA)

DISCUSSION

Q: All of your subjects were at least 3 months post onset. Do you feel this had any effect on your findings?

A: It was our intent to assess the effectiveness of current counseling practices. Thus, we only took subjects who were at least 3 months post onset on the assumption that the "counseling process" should have been implemented and had some impact by that time. I'm certain that if we had sampled family members' confidence at shorter times post onset we would have found them to be less confident. Of course, an obvious problem exists in trying to obtain data of this type from families very early on while they are going through a very difficult time. Another problem with picking families up early is that they would have a very limited data base on which to base judgments regarding functional communication when the patient is still confined to an acute care or rehabilitation facility.

Q: How do we determine which family members are reliable observers?

A: For the most part, I think we have tended to rely on our clinical intuition and the consistency of the family members' observations with our own. We have attempted to take the first steps in bringing a greater degree of objectivity to this through the accuracy-by-confidence analysis which we reported in our 1978 paper and which is now being refined.

Q: Information we receive from family members may not influence what we do in therapy, but it may change how we present information to the family.

A: That is in essence what we are saying. We need to recognize that many family members are highly confident of their assessment of the patient's communicative abilities, even when they are at odds with the results of our standardized tests and clinical impressions. We must be sensitive to this and deal with family members accordingly if we are to avoid needless conflict and optimize cooperation for the good of the patient and his/her family.