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An attitudinal study of spouses of persons with aphasia

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AN ATTITUDINAL STUDY
OF SPOUSES OF PERSONS WITH APHASIA

by

Richard Isaac Zraick, Jr.

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STATEMENT BY AUTHOR

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APPROVAL BY THESIS DIRECTOR

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4-20-87
Date

DEDICATION

I dedicate this thesis to three individuals at the University of Arizona who have had a profound impact on my personal and professional life.

First, I dedicate this thesis to Dr. Wayne R. Carroll, Professor of Psychology. The three undergraduate years I spent as his research assistant provided me with the skills and experience necessary to conduct this research. I could not have had a better role model.

Second, I dedicate this thesis to Dr. Linda Swisher, Professor of Speech-Language Pathology. As my undergraduate advisor, she provided me with guidance and encouragement at a time when it was much needed. Her confidence in me instilled confidence in myself, and I am grateful to her for giving me a future. I might not be where I am today were it not for her.

Last, I dedicate this thesis to Dr. Daniel R. Boone, Professor of Speech-Language Pathology. As my graduate advisor, he has provided me with the most challenging of academic and clinical experiences, developing in me the skills and confidence necessary to be a successful speech-language pathologist. As a role model, his empathy and concern for the communicatively-impaired, coupled with his fund of knowledge and masterful clinical skills, has forever set in my mind what a helping professional should be. As my friend, I can think of no better tribute than to strive to achieve the standard he has set.

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ABSTRACT

The purpose of this investigation was to describe the attitudes of individuals who were spouses of patients with aphasia. Using modified Q-methodology, 15 spouses of fluent aphasic patients, 15 spouses of nonfluent aphasic patients and 30 matched controls completed a 70-item Q-sort constructed specifically for this study. The spouses of nonfluent aphasic patients were found to have a greater number of negative attitudes toward their spouses than were the spouses of fluent aphasic patients. The spouses of patients in both aphasia groups were found to have a greater number of negative attitudes toward their spouses than the matched controls. In addition, six factors (Compliance, Desirability, Egocentricity, Independence, Maturity, and Sociability) representative of the spouse-patient relationship were identified that incorporated the most commonly held attitudes by the spouses of patients in both aphasia groups.

INTRODUCTION

Because of the relative novelty of aphasia, the families of aphasic patients are confronted with a behavior related to language deficits for which they have had no previous experience. Most families, like the patients with aphasia, have never known much about the problem of aphasia. This lack of experience, coupled with a limited fund of knowledge, often leaves the family poorly prepared to cope with their new situation, and the resulting stress may negatively influence family dynamics, particularly spouse-patient interaction.

The linguistic deficits in aphasia are varied. These varying deficits are sometimes classified as either fluent or nonfluent aphasias, determined by the patient's verbal fluency (Geschwind 1970, Goodglass and Kaplan 1972). The fluent aphasias are found generally among patients whose cerebral lesion sites are in the posterior portion of the brain, such as seen in Wernicke's aphasia, anomic aphasia, and transcortical sensory aphasia; conduction aphasics, with more anterior lesions, are usually classified also as fluent. The nonfluent aphasias are found generally among those patients whose lesion sites are in the anterior portion of the brain, including Broca's aphasia and transcortical motor aphasia. Global aphasia may result from massive anterior-posterior lesions. Spouse relationship to the patient with aphasia may be influenced by the patient's relative verbal fluency.

Treatment of aphasia is a long-term process that often involves an intensive, long-term relationship between the speech-language pathologist, the patient, and the patient's family. Although various treatment procedures may be established, the primary objective of treatment for aphasia is to improve the patient's communication, including some focus on language comprehension and expression. Rehabilitative goals can be expanded to improved nonverbal communication (including gesture), auditory language comprehension, reading comprehension, and spoken language. The specificity of goals depends on the needs of the patient and the family, requiring the speech-language pathologist to individualize goals for the particular situation. Investigators looking at spouse-patient interaction rarely have compared the attitudes of spouses of fluent aphasic patients to those of spouses of nonfluent aphasic patients, nor have they compared the attitudes of either spouse group to those of normal age-peer adults.

One of the first studies of spouses of aphasic patients investigated the role of nurturance in wife appraisal of her aphasic husband (Buxbaum 1966). Nurturance was defined as the need to give affection and care (Murray 1938). Buxbaum found that those wives with high nurturance ratings viewed their husbands as less severely involved, had greater marital satisfaction with greater fulfilled affectionate roles, shared in activities more often, and demonstrated less negative feelings toward their spouses than wives with low nurturance ratings. It was suggested that wives with high nurturance ratings were able to elicit more information from their husbands because of their ability to anticipate their husbands' needs. In a similar study, Helmick (1976) explored spouses' understanding of the communicative disabilities of their aphasic spouse. Using the Porch Index of Communicative Abilities (PICA) (Porch 1967a) as a severity index, he compared spouse ratings on the Functional Communication Profile (FCP) (Taylor 1965) to those ratings by the patient's speech-language pathologist, finding that spouses underestimated considerably the degree of aphasia severity. Helmick suggested that this poor estimation of patient function could result in unrealistic expectations by the spouses, leading to possible frustration and depression on the part of the aphasic patient. Holland (1976) disagreed with Helmick's conclusions, countering that stimulus-response tests do not really assess interactive communication, that behavior in the clinic is not typical of the aphasic patient's actual abilities, and that the speech-language pathologists' FCP ratings were biased because of clinician knowledge of the patient's PICA score.

Whitehall-Smith (1977) used transactional analysis to relieve stress in spouses of aphasic patients. These spouses had been found to have higher blood pressure, more ulcers, more frequent headaches, and greater fatigue than spouses of normal controls. She found that when the wife of an aphasic patient was encouraged to be independent, acknowledging grief and anger, the wife's physical condition improved.

In a study that explored the consequences of poor spouse-patient interaction, Mulhall (1978) developed a Personal Relations Index, which structured information from an interview into an interactional analysis graph. He suggested that the index could provide the spouse awareness of implications of behavior, thus promoting possible modification of behavior. Additional advantages suggested were that the spouse and speech-language pathologist would have a common basis for understanding, that it would be easier to decide which actions should be taken, and that the index focused on change in areas of difficulty, allowing change to be monitored. Bernstein (1980) advocated the use of an interdisciplinary support group for spouses of aphasics, involving speech-language pathologists, occupational therapists, and physical therapists, suggesting that a larger portion of therapy time be spent dealing with the spouse's adjustment to the patient's disability.

Kinsella and Duffy (1979) compared the adjustment of spouses of aphasic patients with no hemiplegia to spouses of hemiplegics with or without aphasia. Compared in areas of social adjustment and physical/psychiatric health, they found that spouses of aphasics with hemiplegia were more poorly adjusted than the other two spouse groups. Variables of severity, gender of spouse, and social class were not significant, but time post-onset was found to be significant. In a follow-up study (1980), Kinsella and Duffy explored the self-attitudes of the same three spouse groups, and found unrealism and overprotection to be most prevalent, with no significant differences between groups. Predicting psychosocial adjustment to aphasia was explored by Muller and Code (1983), who used their Scale of Psychosocial Adjustment to explore incongruities between patients, speech-language pathologists, and spouses, regarding prognosis for recovery and degree of optimism; they found that spouses and patients were significantly more optimistic about prognosis than speech-language pathologists.

Henry (1985) compared patient versus spouse reports of emotional behavior following stroke and found significant differences across groups; the spouses reported more negative emotional behaviors in the aphasic patient than the self-reports of patients.

Many of the previous studies described have explored attitudes using tools such as checklists, questionnaires, scales, surveys, etc. Such tools rely on words to describe the person's attitudes, and as semantic literature implies, the words people use often shape their attitudes (Johnson 1946, Slobin 1979). With proper construction and careful interpretation of results, such tools can be useful in determining the attitudes of individuals.

The purpose of this research was to determine the attitudes of spouses of aphasic patients toward the patient with aphasia, i.e., the attitudes of spouses toward the fluent aphasic patient versus the attitudes of spouses toward the nonfluent aphasic patient. A second purpose of this research was to compare the attitudes of spouses of aphasic patients to spouses of normal adults (matched for age and sex).

METHOD

Q-methodology (Stephenson 1953) is a general name used to characterize a set of philosophical, psychological, psychometric, and statistical ideas oriented to research on the individual. Q-methodology is particularly well suited for identifying attitudes of individuals, in this case spouses, offering the following advantages over traditional attitude assessment instruments:

1. It is more focused than a general attitude questionnaire, with the abstract "attitude" operationally defined via the Q-statement.

2. It may control for social desirability of responses.

3. It is more sensitive than an adjective checklist, providing a relative value for each adjective.

4. Because Q-sort distributions are normally distributed, they may be used parametrically in intergroup comparisons.

5. The same person can be given repeated administrations of the same or related Q-sorts.

Q-technique is a set of procedures used to implement Q-methodology. It centers particularly in sorting decks of cards called Q-sorts and in the correlations among the responses of different individuals to the Q-sort.

Q-sorts are sets of items all of which are related in one area, such as social values items, self items, or spouse items.

Q-sorts can be of two types: structured or unstructured. In a structured Q-sort, the variables of a "theory" are built into the items along experimental design principles, with the items partitioned in one or more ways. To structure a Q-sort is virtually to build a "theory" into it. Instead of constructing instruments to measure the characteristics of individuals, one constructs them to embody a "theory." Individuals as such are not tested; theoretical propositions are tested. In an unstructured Q-sort, items are selected and used because they presumably measure one broad variable, such as in this study, attitudes toward spouses. A large number of homogeneous statements are taken from various sources and put together in a Q-sort, with no partitioning of items. Structured Q-sorts are used predominantly in experimental research, while unstructured Q-sorts are used predominantly in descriptive research.

Development of the Q-Statements

To look closely at attitudes of individuals toward their aphasic spouses, 70 unstructured Q-statements were developed from a pool of 300 descriptive adjectives taken from The Adjective Checklist (Gough 1952). The descriptive adjectives on this checklist appeared to represent a wide range of human characteristics and behaviors, conforming to Murray's Need-Press theory of personality (Murray 1938). In consultation with other speech-language pathology graduate students and professional speech-language pathologists, the original 300 adjective list was reduced to 100 adjectives that were thought to be most relevant to the populations to be investigated. These adjectives were then operationally defined using Webster's New World Dictionary (Webster 1985), and typed on 5" x 7" index cards for easy sorting. Pilot data from a sample population of four spouses indicated a degree of ambiguity in 30 of the Q-statements; these were subsequently eliminated from the study. The remaining 70 Q-statements were found to be sorted easily, considering the relatively advanced age of the population to be investigated.

Subject Selection

All spouses in this study met the following criteria:

1. had a living spouse;
2. were native speakers of English;
3. could see well enough to read;
4. were of normal intelligence;
5. had no history of alcoholism; and
6. had no history of major disease (heart, stroke, cancer).

Control spouses: 30 spouses of normal adults who met all six study criteria were included as normal controls in the study.

Spouses of aphasic patients: 30 spouses of aphasic patients (15 fluent aphasic patients and 15 nonfluent aphasic patients), who met all six study criteria, were selected from the population receiving aphasia therapy at the University of Arizona Speech-Language Clinic, as well as at local hospitals and clinics treating aphasic individuals. A diagnosis of aphasia, specific to type and severity, had been made by a certified speech-language pathologist and/or neurologist. All aphasic patients were tested on the Western Aphasia Battery (Kertesz 1983) specific to the type and severity of aphasia.

All groups were matched for age, sex, educational level, and intelligence, with the two neurological disorder groups matched for time post-onset of the precipitating neurological illness (a minimum of 6 months post-onset was required to be in the study).

Testing Procedures

The following procedures were used in the testing phase of the investigation:

1. The examiner (in all cases the author) was introduced to the spouse by the referring speech-language pathologist. The spouse was made aware of the basic purpose of the study prior to meeting the examiner.

2. The spouse was seated in a chair next to the examiner in front of an empty table in a quiet room.

3. The examiner explained the purpose and provided general instructions to the spouse.

4. The spouse completed a human Subject's Consent Form which was filed with the University of Arizona Human Subject's Committee. A research assistant witnessed the signing.

5. A detailed case history was obtained from the spouse. Information gathered included the following:

a. Name
b. Address
c. Phone number
d. Birthdate
e. Age
f. Sex

g. Educational level
h. Years married to current spouse
i. Occupation
j. Medical information

Items a-j were obtained from all spouses. Those spouses of aphasic patients added the following information specific to their spouses:

k. Name
l. Birthdate
m. Age
n. Sex
o. Educational level
p. Premorbid handedness
q. Date of onset of precipitating neurological illness
r. Medical information and diagnosis
s. Results from the most recent Western Aphasia Battery examination

In the event that a Western Aphasia Battery (WAB) had not been administered, or a WAB score was not available, the examiner then administered the WAB to the aphasic patient prior to Q-sort testing of the spouse.

6. The spouse was given the 70 index cards (each containing a Q-statement) and asked to read them aloud.

7. The spouse was then instructed to sort the cards into three preliminary piles, arranged horizontally on the table, with the distribution of cards such that the pile on the spouse's left contained statements <u>most</u> representative of the aphasic patient; the pile to the spouse's right contained statements <u>least</u> representative of the aphasic patient; and the pile in the middle contained statements <u>neutral</u> relative to the aphasic patient.

8. The spouse was then further instructed to subdivide those piles until there were ultimately eleven piles, arranged horizontally on the table, with the Q-statements distributed as follows:

	MOST LIKE MY SPOUSE									LEAST LIKE MY SPOUSE
# of cards:	2	3	4	8	11	14	11	8	4	3	2
pile	A	B	C	D	E	F	G	H	I	J	K

This arrangement resulted in a continuum of statements from those most representative of the aphasic patient (Pile A), to those least representative of the aphasic patient (Pile K), with those statements in Pile F neutral relative to the aphasic patient.

RESULTS

Data for all spouses of aphasic patients specific to matched spouse, age, sex, and educational level are located in a summary table found in Appendix E. Data for each of their spouses specific to age, sex, months post-onset, Western Aphasia Battery Auditory Quotient (AQ), and fluency classification are located in a summary table found in Appendix F. No data concerning months post-onset, WAB (AQ), or fluency classification were appropriate for the normal adults.

Results from this study are best presented in two parts. Part A will identify those attitudes determined to be statistically significant by spouse group, and Part B will compare those attitudes across spouse groups.

Part A: Identification of Attitudes

The first step in determining which attitudes were most commonly held was to sum the raw score for each item per spouse group. From this, a rank order of items was constructed. Table 1 summarizes rank-order data for all spouse groups.

Table 1. Summary table of rank-order of items based on raw score data of spouses of aphasic patients and matched controls.

SPOUSE GROUP		
Fluent Aphasia (N=15)	Nonfluent Aphasia (N=15)	Controls (N=30)
Demanding	Demanding	Mature
Temperamental	Temperamental	Kind
Worrying	Immature	Sensitive
Nervous	Worrying	Good-natured
Emotional	Nervous	Friendly
Immature	Adaptable	Pleasant
Moody	Preoccupied	Warm
Impatient	Confused	Sexy
Confused	Intolerant	Thoughtful
Mannerly	Impatient	Intolerant
Excitable	Irritable	Impatient
Irritable	Resentful	High-strung
Persistent	Self-pitying	Nagging
Assertive	Excitable	Dependable
Adaptable	Moody	Emotional
Tense	Headstrong	Selfish
Restless	Selfish	Cooperative
Resentful	Emotional	Cheerful
Gloomy	Friendly	Reasonable
Good-natured	Sociable	Adaptable

Table 1—Continued

Fluent Aphasia (N=15)	Nonfluent Aphasia (N=15)	Controls (N=30)
Pleasant	Tense	Withdrawn
Reasonable	Self-centered	Relaxed
Sympathetic	Slow	Intelligent
Thoughtful	Gloomy	Aggressive
Shy	Kind	Affectionate
Friendly	Stubborn	Defensive
Warm	Warm	Irritable
Kind	Good-natured	Capable
Sociable	Sensitive	Preoccupied
Cooperative	Dominant	Patient
Unambitious	Complaining	Self-controlled
Sentimental	Undependable	Optimistic
Defensive	Persistent	Argumentative
Self-controlled	Aggressive	Cooperative
Preoccupied	Nagging	Headstrong
Dependable	Argumentative	Complaining
Cheerful	Assertive	Sociable
Affectionate	Pessimistic	Excitable
Sensitive	Unambitious	Pessimistic
Slow	Weak	Weak
Weak	High-strung	Moody
Intolerant	Cold	Restless

Table 1--Continued

Fluent Aphasia (N=15)	Nonfluent Aphasia (N=15)	Controls (N=30)
Headstrong	Shy	Dominant
Argumentative	Timid	Independent
Pessimistic	Withdrawn	Self-pitying
High-strung	Mannerly	Shy
Selfish	Infantile	Sympathetic
Stubborn	Reasonable	Undependable
Self-pitying	Self-confident	Tense
Submissive	Patient	Stubborn
Timid	Cooperative	Sentimental
Dominant	Relaxed	Resentful
Withdrawn	Submissive	Unambitious
Relaxed	Pleasant	Submissive
Undependable	Cheerful	Timid
Infantile	Sympathetic	Infantile
Nagging	Sentimental	Mannerly
Complaining	Restless	Assertive
Optimistic	Self-controlled	Persistent
Aggressive	Optimistic	Worrying
Cold	Dependable	Nervous
Obnoxious	Affectionate	Gloomy
Self-confident	Thoughtful	Confused
Self-centered	Obnoxious	Cold

Table 1—Continued

Fluent Aphasia (N=15)	Nonfluent Aphasia (N=15)	Controls (N=30)
Intelligent	Intelligent	Slow
Mature	Mature	Obnoxious
Capable	Sexy	Temperamental
Sexy	Capable	Demanding
Independent	Independent	Immature

In addition to the rank-order of items, the means and standard deviations of the raw scores for each item were calculated. Table 2 summarizes data for all spouse groups.

Table 2. Summary table of means and standard deviations of raw score data for all spouse groups on each item.

	SPOUSE GROUPS					
	Nonfluent Aphasia (N=15)		Fluent Aphasia (N=15)		Controls (N=30)	
ITEM	Mean	SD	Mean	SD	Mean	SD
1.	6.3	2.6	6.0	1.6	5.2	2.0
2.	4.0	3.4	2.1	1.9	5.1	2.0
3.	2.4	2.1	4.2	2.1	5.1	1.9
4.	3.5	2.1	4.0	2.2	4.7	2.3
5.	6.2	2.8	5.0	1.1	3.6	2.2
6.	2.1	1.2	1.9	1.6	5.0	2.0

Table 2--Continued

ITEM	Nonfluent Aphasia (N=15) Mean	SD	Fluent Aphasia (N=15) Mean	SD	Controls (N=30) Mean	SD
7.	4.0	2.9	2.8	2.0	5.3	1.9
8.	3.6	2.1	2.3	1.9	3.1	1.8
9.	4.4	2.2	2.7	2.1	4.6	2.4
10.	6.0	1.7	6.5	2.1	3.1	2.5
11.	3.0	2.3	5.6	2.9	5.3	1.8
12.	4.0	1.1	4.3	2.6	5.1	1.7
13.	9.6	0.7	7.3	3.2	1.8	1.2
14.	2.3	1.7	4.1	2.7	5.3	1.8
15.	4.5	2.1	3.2	2.4	4.4	1.7
16.	5.3	1.9	6.9	1.7	5.4	1.9
17.	5.6	2.3	6.4	1.8	4.8	1.7
18.	5.2	2.3	5.2	2.8	6.7	2.1
19.	4.9	1.6	5.6	2.9	3.1	2.6
20.	4.6	2.4	5.6	2.7	6.8	2.7
21.	5.4	2.5	3.6	2.1	4.7	1.7
22.	3.7	1.8	3.4	2.5	5.5	1.9
23.	8.4	2.2	6.8	3.2	2.2	1.4
24.	5.9	1.9	6.6	1.6	5.6	2.3
25.	0.7	0.7	1.0	1.5	4.4	1.7
26.	3.3	2.6	2.7	2.5	3.8	2.2
27.	1.9	1.3	2.6	1.6	5.1	1.8
28.	6.0	2.0	3.6	2.7	5.2	1.7

Table 2—Continued

ITEM	Nonfluent Aphasia (N=15) Mean	SD	Fluent Aphasia (N=15) Mean	SD	Controls (N=30) Mean	SD
29.	4.7	2.5	6.6	2.6	5.0	1.5
30.	4.8	2.2	5.6	2.9	7.3	2.7
31.	3.4	2.2	6.4	3.5	4.9	2.8
32.	1.5	1.2	2.0	1.3	7.3	2.7
33.	5.5	1.9	6.8	2.1	4.4	1.5
34.	4.1	1.9	2.6	2.0	5.4	2.0
35.	8.6	1.9	7.0	2.4	3.1	2.1
36.	2.5	2.0	2.2	1.8	2.5	2.2
37.	2.4	2.3	2.4	2.2	4.8	2.2
38.	3.1	2.1	4.8	3.1	4.9	1.6
39.	4.4	2.8	6.2	3.0	5.3	2.9
40.	3.9	1.7	3.4	2.8	4.5	1.8
41.	2.8	2.2	5.5	2.5	6.6	2.2
42.	6.1	1.9	4.2	2.8	4.9	2.0
43.	3.2	2.8	5.0	2.2	5.2	2.2
44.	3.0	2.5	2.8	2.5	5.1	2.0
45.	5.7	2.3	5.7	3.1	4.1	1.6
46.	2.6	2.4	5.8	3.0	4.4	2.1
47.	5.0	1.9	2.2	2.1	4.8	1.8
48.	3.2	2.4	2.2	2.1	4.7	1.9
49.	2.5	2.4	4.9	2.4	4.8	1.6
50.	5.6	2.3	3.2	2.4	4.3	2.2

Table 2—Continued

ITEM	Nonfluent Aphasia (N=15) Mean	SD	Fluent Aphasia (N=15) Mean	SD	Controls (N=30) Mean	SD
51.	5.4	1.66	3.3	2.5	5.3	2.3
52.	4.6	2.4	3.9	2.1	7.0	2.2
53.	2.6	2.2	4.5	2.7	4.1	1.5
54.	2.0	1.2	1.5	1.2	5.8	1.6
55.	3.6	2.3	5.2	2.8	4.5	2.1
56.	5.0	1.5	3.8	2.3	2.9	2.5
57.	5.2	2.5	5.0	1.5	4.0	1.8
58.	4.8	2.5	3.2	2.0	5.0	2.2
59.	2.9	2.7	3.1	2.4	4.0	2.1
60.	2.7	1.9	5.4	2.7	4.1	2.3
61.	9.3	0.4	7.2	2.5	1.9	1.2
62.	5.1	2.3	5.8	2.3	4.2	2.0
63.	2.3	2.0	5.3	3.5	5.6	3.9
64.	3.5	2.2	3.0	2.1	3.9	2.2
65.	3.8	2.2	4.8	2.5	4.1	2.2
66.	4.3	2.6	2.8	2.3	4.2	1.4
67.	4.7	2.2	5.1	2.8	6.9	2.5
68.	3.8	2.7	3.7	2.4	4.5	1.7
69.	3.4	2.5	2.8	2.3	4.8	1.5
70.	8.0	1.8	7.1	1.7	3.3	2.0

The next level of analysis focused on the relationship among items. A first step in this analysis was to calculate Pearson product moment correlation values for all items, a 70 x 70 matrix. From this matrix, a factor analysis was used to determine the underlying structure of the items. Initial results were unsuccessful, however, due to there being more items to be extracted than subjects responding. Therefore, using each item's Estimated Degree of Communality (Lawley and Maxwell 1963) as a criterion, those items with a value of <.60 were eliminated from consideration. Forty-five items were left for the new factor analysis. Table 3 summarizes the factors obtained using VARIMAX rotation (Kaiser 1958).

Table 3. Factor analysis results of the 45 most highly correlated items.

Factor	Eigenvalue	Percentage of Variance	Cumulative Percentage
1.	16.40235	48.9	48.9
2.	6.55695	19.5	68.4
3.	3.17134	9.5	77.9
4.	2.80797	8.4	86.3
5.	1.55309	4.6	90.9
6.	1.23278	3.7	94.6
7.	.93170	2.9	97.5
8.	.83640	2.5	100.0

In this analysis, only those factors with an Eigenvalue of >1.0 were retained. Items were included in a factor if their factor loading was >.70. Table 4 summarizes the results of the factor analysis.

Table 4. Items loading on the six factors.

Factor 1: MATURITY	Factor 2: INDEPENDENCE	Factor 3: DESIRABILITY
Mature	Dependent	Sexy
Immature	Independent	Affectionate
	Weak	Warm
	Capable	Cold
		Intelligent

Factor 4: COMPLIANCE	Factor 5: EGOCENTRICITY	Factor 6: SOCIABILITY
Cooperative	Selfish	Friendly
Reasonable	Nagging	Kind
Thoughtful	Complaining	Good-natured
Patient	Preoccupied	Self-confident
Relaxed	Withdrawn	Pleasant
Headstrong	Demanding	Cheerful
Sympathetic	Gloomy	
Argumentative	Worrying	
	Nervous	
	Sensitive	
	Pessimistic	
	Persistent	
	Assertive	
	Dominant	
	Aggressive	
	Restless	
	Temperamental	

The following interpretative labels were applied to each factor:

Factor 1:	MATURITY	Factor 4:	COMPLIANCE
Factor 2:	INDEPENDENCE	Factor 5:	EGOCENTRICITY
Factor 3:	DESIRABILITY	Factor 6:	SOCIABILITY

Factor scores for each respondent were then calculated. The means and standard deviations of these scores are presented in Table 5 for all groups.

Table 5. Summary table of the means and standard deviations of each factor score for all spouse groups.

	SPOUSE GROUP					
	Controls (N=30)		Fluent Aphasia (N=15)		Nonfluent Aphasia (N=15)	
FACTOR	Mean	SD	Mean	SD	Mean	SD
1: MATURITY	49.4	3.2	42.1	7.7	39.3	8.7
2: INDEPENDENCE	16.0	7.4	15.2	4.8	9.0	6.6
3: DESIRABILITY	24.4	6.2	22.8	9.4	14.6	10.5
4: COMPLIANCE	20.0	7.1	16.4	7.8	14.8	6.2
5: EGOCENTRICITY	11.5	5.7	9.2	5.6	6.1	2.6
6: SOCIABILITY	9.9	3.3	7.8	4.9	6.1	4.0

Part B: Comparison of Groups

On the rank order of items (Table 1), both the spouses of fluent aphasic patients and the spouses of nonfluent aphasic patients expressed DEMANDING and TEMPERAMENTAL as the most prevalent characteristics of their spouses. In addition, IMMATURE, WORRYING, NERVOUS, and CONFUSED were expressed by both groups among their top ten. Conversely, both groups expressed INDEPENDENT as the least prevalent characteristic. In addition, SEXY, CAPABLE, MATURE, and INTELLIGENT were expressed by both groups among their bottom five.

These results are in sharp contrast with those of the control group. These spouses expressed MATURE as the most prevalent characteristic of their spouses. Conversely, DEMANDING, IMMATURE, and TEMPERAMENTAL were expressed as the least prevalent characteristics. In addition, NERVOUS and CONFUSED were expressed among the bottom ten.

Comparing the means and standard deviations of each item across all groups (Table 2), CAPABLE, DEMANDING, DEPENDENT, IMMATURE, INDEPENDENT, MATURE, NERVOUS, SEXY, and TEMPERAMENTAL showed the greatest differences. The greatest differences expressed between the attitudes of spouses of fluent aphasic patients and the spouses of nonfluent aphasic patients were for the characteristics COOPERATIVE, IRRITABLE, MANNERLY, PLEASANT, SELF-CONTROLLED, and SYMPATHETIC. Spouses of fluent aphasic patients expressed these attitudes more often than spouses of nonfluent aphasic patients.

Comparing the means of each spouse group for each factor (Table 5), the control group had the highest means and the spouses of the nonfluent aphasic patients had the lowest means on all of the six factors: Compliance, Desirability, Egocentricity, Independence, Maturity, and Sociability.

To look at the group effect on all factors combined, a one-way Multivariate Analysis of Variance was completed. A significant effect was found [$\underline{F}$ (12,106)=8.12, $p<.01$]. This effect represents a squared canonical correlation of .69, indicating that 69% of the variation in factor scores were explained by the groups.

Univariate Analyses of Variance were completed to look at the effect of group on each dependent measure separately. Tables 6-11 summarize the results of this analysis.

Table 6. Summary table of one-way analysis of variance for all spouse groups on Factor 1: Maturity. (N=60)

Source	df	SS	MS	F
Factor A (Population)	2	1016.8	508.4	9.10*
Error	57	3186.0	55.9	

* Significant at the 0.01 level

Table 7. Summary table of one-way analysis of variance for all spouse groups on Factor 2: Independence. (N=60)

Source	df	SS	MS	F
Factor A (Population)	2	469.9	234.9	6.44*
Error	57	2080.3	36.5	

* Significant at the 0.01 level

Table 8. Summary table of one-way analysis of variance for all spouse groups on Factor 3: Desirability. (N=60)

Source	df	SS	MS	F
Factor A (Population)	2	972.1	486.1	7.10*
Error	57	3916.7	68.7	

* Significant at the 0.05 level

Table 9. Summary table of one-way analysis of variance for all spouse groups on Factor 4: Compliance. (N=60)

Source	df	SS	MS	F
Factor A (Population)	2	436.9	218.5	4.32*
Error	57	2878.3	50.5	

* Significant at the 0.05 level

Table 10. Summary table of one-way analysis of variance for all spouse groups on Factor 5: Egocentricity. (N=60)

Source	df	SS	MS	F
Factor A (Population)	2	226.5	113.2	4.32*
Error	57	1495.5	26.2	

* Significant at the 0.05 level

Table 11. Summary table of one-way analysis of variance for all spouse groups on Factor 6: Sociability. (N=60)

Source	df	SS	MS	F
Factor A (Population)	2	148.6	15.6	4.75*
Error	57	892.2	15.7	

* Significant at the 0.01 level

A follow-up test, the Tukey-HSD (Tukey, 1949) was then used to determine what contributed to the significant differences found between the spouse groups. Tables 12-17 summarize the results of this analysis.

Table 12. Summary table of Tukey-HSD test for all spouse groups on Factor 1: Maturity. (N=60)

SPOUSE GROUP	Fluent Aphasia (N=15)	Nonfluent Aphasia (N=15)	Controls (N=30)
Fluent Aphasia (N=15)			
Nonfluent Aphasia (N=15)	**		
Controls (N=30)	**		

** Significant at the 0.05 level.

Table 13. Summary table of Tukey-HSD test for all spouse groups on Factor 2: Independence. (N=60)

SPOUSE GROUP	Fluent Aphasia (N=15)	Nonfluent Aphasia (N=15)	Controls (N=30)
Fluent Aphasia (N=15)			
Nonfluent Aphasia (N=15)			
Controls (N=30)		**	

** Significant at the 0.05 level.

Table 14. Summary table of Tukey-HSD test for all spouse groups on Factor 3: Desirability. (N=60)

SPOUSE GROUP	SPOUSE GROUP: Fluent Aphasia (N=15)	Nonfluent Aphasia (N=15)	Controls (N=30)
Fluent Aphasia (N=15)			
Nonfluent Aphasia (N=15)	**		
Controls (N=30)		**	

** Significant at the 0.05 level.

Table 15. Summary table of Tukey-HSD test for all spouse groups on Factor 4: Compliance. (N=60)

SPOUSE GROUPS	SPOUSE GROUPS: Fluent Aphasia (N=15)	Nonfluent Aphasia (N=15)	Controls (N=30)
Fluent Aphasia (N=15)			
Nonfluent Aphasia (N=15)	**		
Controls (N=30)			

** Significant at the 0.05 level.

Table 16. Summary table of Tukey-HSD test for all spouse groups on Factor 5: Egocentricity. (N=60)

	SPOUSE GROUPS		
SPOUSE GROUPS	Fluent Aphasia (N=15)	Nonfluent Aphasia (N=15)	Controls (N=30)
Fluent Aphasia (N=15)			
Nonfluent Aphasia (N=15)	**		
Controls (N=30)		**	

** Significant at the 0.05 level.

Table 17. Summary table of Tukey-HSD test for all spouse groups on Factor 6: Sociability. (N=60)

	SPOUSE GROUPS		
SPOUSE GROUPS	Fluent Aphasia (N=15)	Nonfluent Aphasia (N=15)	Controls (N=30)
Fluent Aphasia (N=15)			
Nonfluent Aphasia (N=15)			
Controls (N=30)		**	

** Significant at the 0.05 level.

Standardized discriminant function coefficients for each factor were also determined. Table 18 summarizes the discriminant rankings of the six factors.

Table 18. Standardized discriminant function coefficients for each factor.

Factor	Value
EGOCENTRICITY	1.18
DESIRABILITY	.74
MATURITY	.72
INDEPENDENCE	.64
COMPLIANCE	.30
SOCIABILITY	.04

DISCUSSION

General Comments

When examining the theoretical constructs, procedures used, and results obtained from this investigation, the speech-language pathologist should be encouraged as to the applicability and probable relevance of the study conclusions. Consistent with the belief that most speech-language pathologists recognize the need for spouse monitoring, it is the intent of this discussion to suggest a psychometrically sound, yet easy to use, clinical tool for assessing spouse attitude toward the aphasic patient. Using the Q-sort to look at spouse attitude appears to reveal clinically important information about spouse attitude toward the aphasic patient's overall function.

Q-Technique as a Clinical Tool

Speech-language pathologists who suspect a need for psychological screening of their communicatively impaired patients and/or families are often frustrated by the lack of psychometrically sound instruments available for easy clinical use. Rather than having to rely totally on such instruments as checklists, questionnaires, scales, surveys, etc., these speech-language pathologists may wish to use a Q-sort instrument.

For the speech-language pathologist, Q-items are easy to construct. They can be designed to explore almost any aspect of the patient-family-clinician relationship and can be tailored to any impairment of speech and/or language and/or hearing. Analysis can be as simple as looking at those items in Pile A (most like my spouse). If such items have a negative connotation, they can be quickly identified by the simple sorting of the spouse.

Q-sorting is an easy procedure to follow. Not one spouse of 60 spouses in this study had difficulty with the task, all finishing in less than one hour. As one spouse said, "It was easy, kind of fun, and it made me think about things I never thought of before."

The Findings

Common sense and clinical experience often suggest that there may be major differences in spouse attitude between spouses of aphasic patients and spouses of normal or non-neurologically impaired adults. This study appears to show that there are significant differences in spouse attitude between the spouse groups, revealing patterns of attitudes representative of particular groups.

The finding that there are significant differences in spouse attitude between spouses of aphasic patients and spouses of non-neurologically impaired adults (Tables 6-11) perhaps validates the need for this study. For example, the rank-ordering of attitudes reveals the polarity of attitudes expressed by the spouse groups. Those attitudes expressed most frequently by spouses of aphasic patients are expressed least frequently by control spouses. More specifically, the attitudes expressed most frequently by spouses of aphasic patients are DEMANDING, TEMPERAMENTAL, IMMATURE, WORRYING, and NERVOUS, not typical attitude views of spouses of normal individuals.

Examination of the top half of the list reveals almost exclusive expression of negatively-connotated attitudes. This negative view perhaps warns the speech-language pathologist to recognize the potential that such attitudes may have in disrupting spouse-patient interaction, which in turn may affect patient-clinician interaction. While a single, negative attitude is not always reflected in negative behavior, a preponderance of negative attitudes may well surface in some form of negative behavior. Even if the spouse internalizes his or her attitudes, it can have a negative effect, as was reported earlier in the Whitehall-Smith study (1979). There is also the potential for the spouse to overcompensate for the reactive guilt for having negative attitudes.

The finding that spouses of fluent aphasic patients differ from spouses of nonfluent aphasic patients in their view of their spouses (Tables 12-17) may have some clinical relevance. In Table 1, we find that the same attitudes are expressed most and least frequently by both spouse groups, but with a greater deal of variation in between. Table 2 reveals that spouses of nonfluent aphasic patients express their negative attitudes to a greater extent than do spouses of fluent aphasic patients. It would appear that the spouses of nonfluent aphasic patients experience greater negative attitudes than those whose spouses have a fluent aphasia. These negative attitudes may be due in part to the nonfluent aphasic patient's absence of words and/or struggle to speak, or possibly to hemiplegia (which is more prevalent in the nonfluent patient). Spouses of aphasic patients may require differential management just as the specific aphasic patient requires some individualization of approach.

Tables 3 and 4 reveal that certain specific attitudes tend to cluster together, forming what are known statistically as factors. Perhaps it is more convenient to think of these factors as components of the spouse-patient relationship. Further, Table 18 reveals that certain of these factors better discriminate spouse groups than others, i.e., certain components of the relationship seem to have more importance than others. A close look at these factors, which have been subjectively labeled MATURITY, INDEPENDENCE, DESIRABILTIY, COMPLIANCE, EGOCENTRICITY, and SOCIABILITY reveal that all reflect some form of patient behavior. Fortunately, many of these attributes appear to reflect behaviors that can be changed. It is apparent that by helping the aphasic patient to become more mature, more independent, more desirable, more compliant, more sociable, and less egocentric, the improved living situations would probably have a positive effect on spouse attitudes. A positive spouse attitude may lead to a more positive spouse-patient relationship and, hopefully, a more positive patient-clinician relationship.

A Final Thought

Traditionally, the primary role of the speech-language pathologist has been to act as a speech and/or language facilitator, relying on various clinical techniques to improve the communicative abilities of the impaired patient. A secondary role has been to act as a psychological facilitator, relying on a limited research base and limited clinical techniques to improve the psychosocial adjustment of the impaired patient and/or his family. Oftentimes, this secondary role is delegated to other professionals, not for want of caring, but from a sense of frustration about not knowing just what the speech-language pathologist can and should do to help the patient in psychosocial areas. It would appear that there is a need for the speech-language pathologist to expand his or her "other" role as a counselor, so that the patient and/or family may receive and share information, clarify attitudes, and explore options for change.

APPENDIX A

GOUGH'S ADJECTIVE CHECKLIST

THIS EDGE FIRST INTO SCANNER AND THIS SIDE UP

THE ADJECTIVE CHECK LIST

By Harrison G. Gough, Ph.D.

ARION II

Marking Instructions: Please fill in your identification number and other information on this inventory. Follow the instructions carefully.
1. Use a #2 pencil only. Make a heavy, dark mark.
2. If you make a mistake or change your mind, erase carefully and thoroughly.
3. This inventory will be processed by automatic equipment. To avoid errors, please keep it free from wrinkles and stray marks.
4. *If instructed, write your name, age, school, and today's date in the box below.*

FOR LOCAL SCORING ONLY.
DO NOT SEND TO
NATIONAL COMPUTER SYSTEMS
FOR SCORING.

IDENTIFICATION

SEX: MALE / FEMALE

NAME ____________ AGE ____

SCHOOL ____________ TODAY'S DATE ____

Test Directions: This answer sheet contains a list of 300 adjectives. Please read them quickly and blacken in the circle beside each one you would consider to be self-descriptive. Do not worry about duplications, contradictions, and so forth. Work quickly and do not spend too much time on any one adjective. Try to be frank, and fill the circles for the adjectives which describe you as you really are, not as you would like to be. BE SURE TO TURN THE PAGE OVER and continue through adjective number 300 on the reverse side.

1 absent-minded	36 cold	71 dreamy	106 hard-headed	141 lazy
2 active	37 commonplace	72 dull	107 hard-hearted	142 leisurely
3 adaptable	38 complaining	73 easygoing	108 hasty	143 logical
4 adventurous	39 complicated	74 effeminate	109 headstrong	144 loud
5 affected	40 conceited	75 efficient	110 healthy	145 loyal
6 affectionate	41 confident	76 egotistical	111 helpful	146 mannerly
7 aggressive	42 confused	77 emotional	112 high-strung	147 masculine
8 alert	43 conscientious	78 energetic	113 honest	148 mature
9 aloof	44 conservative	79 enterprising	114 hostile	149 meek
10 ambitious	45 considerate	80 enthusiastic	115 humorous	150 methodical
11 anxious	46 contented	81 evasive	116 hurried	151 mild
12 apathetic	47 conventional	82 excitable	117 idealistic	152 mischievous
13 appreciative	48 cool	83 fair-minded	118 imaginative	153 moderate
14 argumentative	49 cooperative	84 fault-finding	119 immature	154 modest
15 arrogant	50 courageous	85 fearful	120 impatient	155 moody
16 artistic	51 cowardly	86 feminine	121 impulsive	156 nagging
17 assertive	52 cruel	87 fickle	122 independent	157 natural
18 attractive	53 curious	88 flirtatious	123 indifferent	158 nervous
19 autocratic	54 cynical	89 foolish	124 individualistic	159 noisy
20 awkward	55 daring	90 forceful	125 industrious	160 obliging
21 bitter	56 deceitful	91 foresighted	126 infantile	161 obnoxious
22 blustery	57 defensive	92 forgetful	127 informal	162 opinionated
23 boastful	58 deliberate	93 forgiving	128 ingenious	163 opportunistic
24 bossy	59 demanding	94 formal	129 inhibited	164 optimistic
25 calm	60 dependable	95 frank	130 initiative	165 organized
26 capable	61 dependent	96 friendly	131 insightful	166 original
27 careless	62 despondent	97 frivolous	132 intelligent	167 outgoing
28 cautious	63 determined	98 fussy	133 interests narrow	168 outspoken
29 changeable	64 dignified	99 generous	134 interests wide	169 painstaking
30 charming	65 discreet	100 gentle	135 intolerant	170 patient
31 cheerful	66 disorderly	101 gloomy	136 inventive	171 peaceable
32 civilized	67 dissatisfied	102 good-looking	137 irresponsible	172 peculiar
33 clear-thinking	68 distractible	103 good-natured	138 irritable	173 persevering
34 clever	69 distrustful	104 greedy	139 jolly	174 persistent
35 coarse	70 dominant	105 handsome	140 kind	175 pessimistic

CONTINUE ON REVERSE SIDE

51025

NCS Trans-Optic MP15-17731-32

011736

DO NOT WRITE HERE

176 ○ planful
177 ○ pleasant
178 ○ pleasure-seeking
179 ○ poised
180 ○ polished
181 ○ practical
182 ○ praising
183 ○ precise
184 ○ prejudiced
185 ○ preoccupied
186 ○ progressive
187 ○ prudish
188 ○ quarrelsome
189 ○ queer
190 ○ quick
191 ○ quiet
192 ○ quitting
193 ○ rational
194 ○ rattlebrained
195 ○ realistic
196 ○ reasonable
197 ○ rebellious
198 ○ reckless
199 ○ reflective
200 ○ relaxed
201 ○ reliable
202 ○ resentful
203 ○ reserved
204 ○ resourceful
205 ○ responsible
206 ○ restless
207 ○ retiring
208 ○ rigid
209 ○ robust
210 ○ rude
211 ○ sarcastic
212 ○ self-centered
213 ○ self-confident
214 ○ self-controlled
215 ○ self-denying
216 ○ self-pitying
217 ○ self-punishing
218 ○ self-seeking
219 ○ selfish
220 ○ sensitive
221 ○ sentimental
222 ○ serious
223 ○ severe
224 ○ sexy
225 ○ shallow
226 ○ sharp-witted
227 ○ shiftless
228 ○ show-off
229 ○ shrewd
230 ○ shy
231 ○ silent
232 ○ simple
233 ○ sincere
234 ○ slipshod
235 ○ slow
236 ○ sly
237 ○ smug
238 ○ snobbish
239 ○ sociable
240 ○ soft-hearted
241 ○ sophisticated
242 ○ spendthrift
243 ○ spineless
244 ○ spontaneous
245 ○ spunky
246 ○ stable
247 ○ steady
248 ○ stern
249 ○ stingy
250 ○ stolid
251 ○ strong
252 ○ stubborn
253 ○ submissive
254 ○ suggestible
255 ○ sulky
256 ○ superstitious
257 ○ suspicious
258 ○ sympathetic
259 ○ tactful
260 ○ tactless
261 ○ talkative
262 ○ temperamental
263 ○ tense
264 ○ thankless
265 ○ thorough
266 ○ thoughtful
267 ○ thrifty
268 ○ timid
269 ○ tolerant
270 ○ touchy
271 ○ tough
272 ○ trusting
273 ○ unaffected
274 ○ unambitious
275 ○ unassuming
276 ○ unconventional
277 ○ undependable
278 ○ understanding
279 ○ unemotional
280 ○ unexcitable
281 ○ unfriendly
282 ○ uninhibited
283 ○ unintelligent
284 ○ unkind
285 ○ unrealistic
286 ○ unscrupulous
287 ○ unselfish
288 ○ unstable
289 ○ vindictive
290 ○ versatile
291 ○ warm
292 ○ wary
293 ○ weak
294 ○ whiny
295 ○ wholesome
296 ○ wise
297 ○ withdrawn
298 ○ witty
299 ○ worrying
300 ○ zany

APPENDIX B

SEVENTY ADJECTIVES CHOSEN FROM GOUGH'S *ADJECTIVE CHECKLIST*

ITEM	ADJECTIVE	ITEM	ADJECTIVE
1.	Adaptable	36.	Obnoxious
2.	Affectionate	37.	Optimistic
3.	Aggressive	38.	Patient
4.	Argumentative	39.	Persistent
5.	Assertive	40.	Pessimistic
6.	Capable	41.	Pleasant
7.	Cheerful	42.	Preoccupied
8.	Cold	43.	Reasonable
9.	Complaining	44.	Relaxed
10.	Confused	45.	Resentful
11.	Cooperative	46.	Restless
12.	Defensive	47.	Self-centered
13.	Demanding	48.	Self-confident
14.	Dependable	49.	Self-controlled
15.	Dominant	50.	Self-pitying
16.	Emotional	51.	Selfish
17.	Excitable	52.	Sensitive
18.	Friendly	53.	Sentimental
19.	Gloomy	54.	Sexy
20.	Good-natured	55.	Shy
21.	Headstrong	56.	Slow
22.	High-strung	57.	Sociable
23.	Immature	58.	Stubborn
24.	Impatient	59.	Submissive
25.	Independent	60.	Sympathetic
26.	Infantile	61.	Temperamental
27.	Intelligent	62.	Tense
28.	Intolerant	63.	Thoughtful
29.	Irritable	64.	Timid
30.	Kind	65.	Unambitious
31.	Mannerly	66.	Undependable
32.	Mature	67.	Warm
33.	Moody	68.	Weak
34.	Nagging	69.	Withdrawn
35.	Nervous	70.	Worrying

APPENDIX C

Q-STATEMENTS DERIVED FOR EACH ADJECTIVE CHOSEN

1. Is able to adjust to most situations; ADAPTABLE.
2. Is tender and loving; AFFECTIONATE.
3. Is bold and hostile; AGGRESSIVE.
4. Doesn't agree with others; ARGUMENTATIVE.
5. States his feelings confidently; ASSERTIVE.
6. Can handle most situations; CAPABLE.
7. Has a nice, happy disposition; CHEERFUL.
8. Shows little or no emotion; COLD.
9. Expresses displeasure; finds fault with others; COMPLAINING.
10. Is unclear about things; CONFUSED.
11. Will work together with others; COOPERATIVE.
12. Becomes upset when criticized; DEFENSIVE.
13. Requires a lot of attention; DEMANDING.
14. Relies on others for support; DEPENDENT.
15. Behaves in a controlling way over others; DOMINANT.
16. Readily shows feelings; EMOTIONAL.
17. Is easily aroused to show feelings; EXCITABLE.
18. Behaves openly toward others; FRIENDLY.
19. Is filled with deep sadness; GLOOMY.
20. Is agreeable; GOOD-NATURED.
21. Is determined to do as he pleases; HEADSTRONG.
22. Is very tense and excitable; HIGH-STRUNG.
23. Behaves foolishly and childishly; IMMATURE.
24. Is restless and eager; IMPATIENT.
25. Can survive on his own; INDEPENDENT.
26. Is like an infant or baby; INFANTILE.
27. Is smart; is bright; INTELLIGENT.
28. Is unwilling to tolerate other's beliefs; INTOLERANT.
29. Is easily provoked; IRRITABLE.
30. Behaves gently and compassionately toward others; KIND.
31. Behaves politely and orderly; MANNERLY.
32. Behaves in an adult-like way; MATURE.
33. Exhibits rapid changes in emotion; MOODY.
34. Troubles others often; NAGGING.
35. Is emotionally tense and restless; NERVOUS.
36. Behaves unpleasantly; OBNOXIOUS.
37. Has a bright outlook on life; OPTIMISTIC.
38. Tolerates without complaining; PATIENT.
39. Continues in the face of opposition; PERSISTENT.
40. Has a negative outlook on life; PESSIMISTIC.
41. Has an agreeable manner; PLEASANT.
42. Has his mind on many things; PREOCCUPIED.
43. Is just and fair; REASONABLE.
44. Is calm and rested; RELAXED.
45. Is full of bitterness and hurt; RESENTFUL.
46. Is rarely quiet or still; RESTLESS.
47. Is concerned only with his own affairs; SELF-CENTERED.
48. Has a belief in his own abilities; SELF-CONFIDENT.
49. Has control over his own behaviors; SELF-CONTROLLED.
50. Feels sorry for himself; SELF-PITYING.
51. Is overly concerned with his own interests; SELFISH.

52. Is easily offended; SENSITIVE.
53. Shows tender feelings about the past; SENTIMENTAL.
54. Excites others sexually; SEXY.
55. Is not at ease with others; SHY.
56. Is not quick to understand; SLOW.
57. Is friendly and gregarious; SOCIABLE.
58. Refuses to yield or comply; STUBBORN.
59. Is easily dominated by others; SUBMISSIVE.
60. Can understand and have the same feelings as others; SYMPATHETIC.
61. Angers easily; TEMPERAMENTAL.
62. Is emotionally and/or physically tight or taught; TENSE.
63. Thinks about other's feelings; THOUGHTFUL.
64. Is shy, fearful, or hesitant; TIMID.
65. Does not attempt difficult things or many things; UNAMBITIOUS.
66. Cannot be relied upon; UNDEPENDABLE.
67. Is genuinely loving; WARM.
68. Lacks physical or mental strength; WEAK.
69. Is shy and reserved; WITHDRAWN.
70. Spends a lot of time being concerned about things; WORRYING.

APPENDIX D

SAMPLE SCORE SHEET

SUBJECT/PATIENT INFORMATION

DATE: ____________________
SUBJECT NAME: ____________________
SUBJECT AGE: ____________________
YEARS MARRIED: ____________________
THERAPY HISTORY: ____________________
____

PATIENT NAME: ____________________
PATIENT AGE: ____________________
WAB (AQ) SCORE: ____________________
TIME POST-ONSET: ____________________
SPEECH TX HISTORY: ____________________
____
SOURCE: ____________________

Q-SORT

	ADJECTIVE	PT VALUE		ADJECTIVE	PT VALUE
1.	ADAPTABLE	______	36.	OBNOXIOUS	______
2.	AFFECTIONATE	______	37.	OPTIMISTIC	______
3.	AGGRESSIVE	______	38.	PATIENT	______
4.	ARGUMENTATIVE	______	39.	PERSISTENT	______
5.	ASSERTIVE	______	40.	PESSIMISTIC	______
6.	CAPABLE	______	41.	PLEASANT	______
7.	CHEERFUL	______	42.	PREOCCUPIED	______
8.	COLD	______	43.	REASONABLE	______
9.	COMPLAINING	______	44.	RELAXED	______
10.	CONFUSED	______	45.	RESENTFUL	______
11.	COOPERATIVE	______	46.	RESTLESS	______
12.	DEFENSIVE	______	47.	SELF-CENTERED	______
13.	DEMANDING	______	48.	SELF-CONFIDENT	______
14.	DEPENDENT	______	49.	SELF-CONTROLLED	______
15.	DOMINANT	______	50.	SELF-PITYING	______
16.	EMOTIONAL	______	51.	SELFISH	______
17.	EXCITABLE	______	52.	SENSITIVE	______
18.	FRIENDLY	______	53.	SENTIMENTAL	______
19.	GLOOMY	______	54.	SEXY	______
20.	GOOD-NATURED	______	55.	SHY	______
21.	HEADSTRONG	______	56.	SLOW	______
22.	HIGH-STRUNG	______	57.	SOCIABLE	______
23.	IMMATURE	______	58.	STUBBORN	______
24.	IMPATIENT	______	59.	SUBMISSIVE	______
25.	INDEPENDENT	______	60.	SYMPATHETIC	______
26.	INFANTILE	______	61.	TEMPERAMENTAL	______
27.	INTELLIGENT	______	62.	TENSE	______
28.	INTOLERANT	______	63.	THOUGHTFUL	______
29.	IRRITABLE	______	64.	TIMID	______
30.	KIND	______	65.	UNAMBITIOUS	______
31.	MANNERLY	______	66.	UNDEPENDABLE	______
32.	MATURE	______	67.	WARM	______
33.	MOODY	______	68.	WEAK	______
34.	NAGGING	______	69.	WITHDRAWN	______
35.	NERVOUS	______	70.	WORRYING	______

APPENDIX E

SUMMARY OF INDIVIDUAL SPOUSE DATA

SUBJECT	MATCHED CONTROL	AGE	SEX	EDUCATIONAL LEVEL
1-JG	43-SG	72	F	College, 6
2-TM	42-LA	71	M	College, 6
3-MI	47-LC	65	M	College, 2
4-JG	40-VH	62	F	High school
5-MW	39-HA	67	M	High school
6-BS	52-RM	68	F	High school
7-DA	51-RE	60	M	High school
8-AZ	54-CC	76	F	High school
9-DP	50-HP	75	M	College, 2
10-AH	60-DH	73	M	High school
11-BL	44-GP	63	M	College, 3
12-SE	56-SV	64	F	High school
13-BB	57-VP	66	M	High school
14-MC	38-TT	77	F	High school
15-TS	55-AR	79	M	College, 4
16-AB	58-TD	81	M	College, 1
17-JD	37-DB	69	M	College, 2
18-DW	31-DR	66	F	High school
19-CM	35-RB	63	F	College, 1
20-CP	36-RS	66	F	College, 1
21-RL	59-TH	72	M	College, 2
22-PE	45-LS	73	M	College, 3
23-WD	33-JA	69	F	High school
24-PB	32-NM	70	F	High school
25-KS	34-BH	77	M	College, 4
26-FC	46-JL	78	F	High school
27-PV	41-PA	65	F	High school
28-KL	49-TG	73	F	College, 4
29-FH	48-JH	63	M	College, 2
30-PB	53-PR	75	M	College, 1

APPENDIX F

SUMMARY OF INDIVIDUAL APHASIC PATIENT AND NORMAL ADULT SPOUSE DATA

PATIENT SPOUSE CHARACTERISTICS

SPOUSE	AGE	SEX	MONTH P.O.	WAB(AQ)	FLUENCY
101-A-WG	72	M	78	40.2	F
102-A-MM	68	F	66	33.4	F
103-A-JJ	62	F	21	69.5	F
104-A-BG	65	M	42	74.0	F
105-A-MW	66	F	18	[illegible]1.6	F
106-A-MS	69	M	15	21.7	F
107-A-PA	75	F	50	20.3	NF
108-A-RZ	74	M	156	37.6	F
109-A-EP	76	F	48	23.0	NF
110-A-RH	76	F	32	48.6	NF
111-A-SL	66	F	20	22.1	F
112-A-RE	68	M	30	49.7	NF
113-A-RB	74	F	33	66.2	NF
114-A-TC	73	M	47	73.8	F
115-A-SS	69	F	60	68.6	NF
116-A-TB	71	F	18	23.2	F
117-A-RD	75	M	50	31.7	F
118-A-MW	70	M	41	73.0	NF
119-A-RM	80	M	43	46.6	NF
120-A-TP	78	F	27	24.4	F
121-A-SL	73	F	31	52.4	NF
122-A-OE	66	F	44	21.8	NF
123-A-YD	65	M	38	39.6	NF
124-A-VB	66	M	50	37.7	F
125-A-LS	72	F	66	24.4	NF
126-A-EC	75	M	72	59.5	NF
127-A-TV	74	M	81	24.6	NF
128-A-RL	71	M	120	43.7	NF
129-A-EH	80	F	58	48.6	F
130-A-TB	77	F	40	22.0	F

NORMAL SPOUSE CHARACTERISTICS

SPOUSE	AGE	SEX
131-N-ER	77	M
132-N-VM	75	M
133-N-RA	66	M
134-N-EH	67	F
135-N-SB	61	M
136-N-TS	60	M
137-N-EB	66	F
138-N-RT	71	M
139-N-LA	70	F
140-N-TH	74	M
141-N-SA	80	M
142-N-DA	79	F
143-N-SG	79	M
144-N-HP	78	F
145-N-AS	76	F
146-N-PL	73	M
147-N-MC	71	F
148-N-LH	72	F
149-N-TG	73	M
150-N-LP	74	F
151-N-PE	74	F
152-N-TM	70	M
153-N-RR	69	F
154-N-DC	68	M
155-N-WR	60	F
156-N-VV	63	M
157-N-TP	64	F
158-N-YD	75	F
159-N-LH	77	F
160-N-BH	80	F

SELECTED BIBLIOGRAPHY

Bernstein, J.C. (1980). Benefits of an interdisciplinary support group for spouses of stroke patients. Folia Phonetrica, 3, 164-165.

Blum, G.S. (1983). Psychoanalytic Theories of Personality. New York: McGraw-Hill.

Brown, J.F. (1982). The Motivation of Behavior. New York: McGraw-Hill.

Buxbaum, J. (1967). Effect of nurturance on wives' appraisals of their marital satisfaction and the degree of their husbands' aphasia. Journal of Consulting Psychology, 31(3), 240-243.

Clark, H., & Clark, E. (1977). Psychology and Language. New York: Harcourt Brace Jovanovich.

Cobb, A.B. (1973). Medical and Psychological Aspects of Disability. Chicago: Charles Thomas.

Davitz, J. (1981). The Communication of Emotional Meaning. New York: McGraw-Hill.

Emerson, R.W. (1980). Changes in depression and self-esteem of spouses of stroke patients with aphasia as a result of group counseling. Dissertation Abstracts International, 40(9), 4893A.

Ferguson, G.A. (1980). Statistical Analysis in Psychology and Education. New York: McGraw-Hill.

Goodglass, H., & Kaplan, E. (1972). The Assessment of Aphasia and Related Disorders. Philadelphia: Lea & Febinger.

Gough, H.G. (1952). The Adjective Checklist. Palo Alto, CA: Consulting Psychologists Press.

Guilford, J.P. (1977). Fundamental Statistics in Psychology and Education. New York: McGraw-Hill.

_______. (1982). Psychometric Methods. New York: McGraw-Hill.

Helmick, J.W., Watamori, T.S. & Palmer, J.W. (1977). Spouses' understanding of the communication disabilities of aphasic patients. Journal of Speech and Hearing Disorders, 41(2), 307-310.

Henry, G.K. (1984). Emotional behavior following stroke: Patient versus spouse reports. Clinical Gerontologist, 2(4), 70-72.

Hess, L.T. & Bahr, R.E. (1981). What Every Family Should Know About Strokes. New York: Appleton Press.

Holland, A.L. (1977). Comment on "spouses'understanding of the communication disabilities of aphasic patients" (letter). Journal of Speech and Hearing Disorders, 42, 307-310.

Johnson, W. (1946). People in Quandaries. New York: Harper & Brothers.

Kaiser, H.F. (1958). The varimax criterion for analytic rotation in factor analysis. Psychometrika, 23, 187-200.

Kinsella, G.J., & Duffy, R.D. (1979). Psychosocial readjustment in the spouses of aphasic patients. Scandanavian Journal of Rehabilitation Medicine, 11, 129-132.

_______. (1980). Attitudes toward disability expressed by spouses of aphasic patients. Scandanavian Journal of Rehabilitation Medicine, 12, 73-76.

Lawley, D.N., & Maxwell, A.E. (1963). Factor Analysis as a Statistical Method. London: Butterworth & Company.

Lugar, O., & Kelz, J. (1971). Rehabilitation of stroke victims. Rehabilitation Counseling Bulletin, 14, 73-76.

Malone, R. (1970). Attitudes expressed by families of aphasics. British Journal of Disordered Communication, 5, 174-179.

Mischler, E. (1979). Meaning in context: Is there any other kind? Harvard Educational Review, 49, 1-21.

Mulhall, D. (1978). Dysphasic stroke patients and the influence of their families. British Journal of Disordered Communication, 13, 127-134.

Muller, D.J. (1984). Spouses' psychological adjustment to aphasia. International Journal of Rehabilitation Research, 7, 195-196.

Muller, D.J., & Code, C. (1983). Psychosocial adjustment to aphasia. British Journal of Disordered Communication, 18(1), 23-29.

Nunnally, J.C. (1978). Psychometric Theory. New York: McGraw-Hill.

Overall, J.E. (1981). Applied Multivariate Analysis. New York: McGraw-Hill.

Sarno, M.T. (1969). The functional communication profile. New York University Rehabilitation Monograph, 42.

________. (1985). Gender and recovery from aphasia after stroke. Journal of Nervous and Mental Disease, 173, 605-609.

Seigel, S.G. (1965). Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill.

Shaw, M.E. (1982). Scales for the Measurement of Attitudes. New York: McGraw-Hill.

Shewan, C.M., & Cameron, H. (1984). Communication and related problems as perceived by aphasics and their spouses. Journal of Communication Disorders, 17(3), 175-187.

Silverman, F.H. (1977). Research Design in Speech-Language Pathology and Audiology. New Jersey: Prentice-Hall.

Slobin, D. (1979). Psycholinguistics. Glenview, Illinois: Scott, Foresman.

Smith, C. (1977). Using transactional analysis with women whose husbands have had strokes. Transactional Analysis Journal, 7, 55-57.

Stephenson, W. (1953). The Study of Behavior. Chicago: University of Chicago Press.

Tukey, J.W. (1949). Comparing individual means in the analysis of variance. Biometrics, 5, 99-114.

Unks, R. (1984). The relative influence of social, physical and psychological factors on the morale and life satisfaction of elderly wives of stroke patients. Dissertation Abstracts International, 44, 2858A.

Van Uitert, D. (1985). Factors related to the adjustment of wives following their husbands' strokes. Dissertation Abstracts International, 45, 2461A.

Ventry, I.M., & Schiavetti, N. (1980). Evaluating Research in Speech Pathology and Audiology. London: Addison-Wesly.

Wright, B. (1980). <u>Physical Disability: A Psychological Approach</u> (rev. ed.). New York: Harper & Row.