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A PILOT INVESTIGATION OF THREE FACTORS OF THE 16 P.F. FORM E COMPARING THE STANDARD WRITTEN FORM WITH AN AMESLAN VIDEOTAPE REVISION

**Charlene L. Dwyer
and
Sue L. Wincenciak**

The evaluation of personality structure is an important component of any complete psychological test battery and is, therefore, a routine procedure used in testing the hearing impaired individual. Most authorities in the field of deafness consider personality testing to be a highly complex task. In fact, due to communication and language limitations inherent in severe hearing loss, personality is often thought to be the most difficult dimension to test.

The difficulties encountered in obtaining valid psychological evaluations of hearing impaired persons appear to be related to several factors. One of the problems is the client's lack of familiarity with the procedures and formats of standardized testing. Further complications may result from the reading level of the instructions and test items or the client's lack of reading skill. A third factor which may be considered an even greater difficulty than the reading level is the difference between word meaning and word concept. Koch (1974) has proposed that a word may take on a different conceptual definition when learned and assimilated through the eyes only.

Although some accommodations to the first two problems have been made in the areas of intelligence and academic testing, the area of personality evaluation remains an especially difficult one for evaluators working with deaf people (Trybus, 1972). The issue concerning word concept and the deaf client, although recognized by most examiners, has not been dealt with in

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COMPARING THE STANDARD FORM WITH AN AMESLAN VIDEOTAPE REVISION

the realm of personality testing. Further, there is some question as to the legitimacy of norms which reflect the personality structure of normally hearing persons when applied to the deaf and severely hard of hearing person (Jensema, 1975; Sachs, et al., 1974; Trybus, 1975; and Vernon, 1967). Tests which have been designed or at least revised for application to hearing impaired persons are virtually non-existent (Jensema, 1975). Compounding this dilemma, tests which involve the use of verbal language to measure personality are, in general, not valid because they measure the deaf person's language limitations due to his deafness (Vernon, 1967).

It has been repeatedly recommended that test instruments be adapted to the deaf population in a standardized manner. It has been suggested that these tests should particularly take into consideration the language commonly employed by deaf adults and should be normed specifically for this population (Jensema, 1975; Sachs et al., 1974; Vernon, 1967). One author has even suggested that since psychological tests and questionnaires appear in French, German, and other languages, translations should also be available in American Sign Language (Sachs, 1974).

The language (i.e., structure and word concepts) of the low verbal deaf person used in a personality assessment instrument with this population is the subject of this article. Dr. Carl Jensema, Senior Research Associate at Gallaudet College, is currently involved in the development of normative data for the Gallaudet student population on the Sixteen Personality Factor Questionnaire: Form E. He makes the following observations on the use of this instrument with the deaf population:

One of the paper and pencil personality tests commonly used by counselors of the hearing impaired is the Form E of the "Sixteen Personality Factor Question" (16 P.F.). This test was designed by Eber and Cattell in 1967 and is considered appropriate for low-literate adults with a third to sixth grade reading level. As the name implies, the 16 P.F. Form E is considered as measuring 16 aspects of personality. . .

Although those who use the 16 P.F. Form E on hearing impaired individuals obviously consider it to have face validity, its statistical validity remains questionable. . .

Although it would be improved by a revision of its items, the 16 P.F. is one of the better tests currently used on hearing impaired individuals (Jensema, 1975).

The study presented in this article involved a pilot attempt to translate questions for three of the sixteen personality dimensions of the 16 P.F. into an Ameslan videotape form. The purpose of the study was to determine the statistical difference, if any, between the resulting scores after both questionnaires had been administered to a group of low verbal, young, deaf adults and secondly, to make implications for future testing research from these findings.

COMPARING THE STANDARD FORM WITH AN AMESLAN VIDEOTAPE REVISION

Test Materials

The 16 P.F. Form E, an objective personality assessment instrument which is commonly used with hearing impaired individuals, is designed to measure the dimensions of personality as derived from extensive factor analytic study of real life behavior and self-reporting answers on questionnaire items, and is commonly used by vocational rehabilitation experts, psychologists, and educators (Trybus, 1973).

A survey was made of the 128 questions which comprise Form E and which measure the sixteen separate personality dimensions. Questions containing idiomatic content words or phraseology with which the low verbal deaf client might be expected to have difficulty, were considered for this study. The term "idiom" was defined as:

a mode of expression or a form of speech peculiar to a language or a dialect and which is not usually susceptible to grammatical analysis.

a fixed mode of expression, a peculiar structure.

an expression which defies the rules of a language and in usage depends upon the habit of observing words and how they are combined.

For example, questions 20 and 67 from Form E ask, "Most of the time would you rather play it safe or take a chance?", "Do little things get on your nerves a lot or are little things not important?" Questions which could not be translated literally to have the same meaning were considered idiomatic. The three primary order factors (personality dimensions) which, in the authors' opinion, contained the most idiomatic question content were chosen for the study. These factors were: (1) factor C—emotional stability, mature vs. emotionality, affected by feelings; (2) factor E—submissiveness, humble, mild vs. dominant, assertive and aggressive; (3) factor H—timid, shy, restrained vs. adventurous, bold and uninhibited. Four of the 16 personality factors, Q1 through Q4, were not considered appropriate for study purpose because their dimensions have not been measured in behavior ratings (Eber and Cattell, 1970).

The twenty-four questions which pertained to factors C, E, and H were translated into an Ameslan structure and content. The authors ascertained from the Institute for Personality and Ability Testing Bureau, the publisher of Form E, that language changes of this nature could be made without detrimental effect to the validity of results. A faculty member and graduate assistant from Northern Illinois University, who are experts in American Sign Language, acted as advisors to the authors in creating the Ameslan translations. The Ameslan translations were then signed by one of the authors and videotaped by the Northern Illinois University Communication Services Division.

COMPARING THE STANDARD FORM WITH AN AMESLAN VIDEOTAPE REVISION

The corresponding twenty-four English questions from the standard Form E were reprinted using the 16 P.F. format, on a shortened test form.

Subjects

Five young deaf adults, four female and one male, with profound hearing losses, served as subjects for this pilot study. All were students in the Residential Program for Hearing and Speech Impaired Young Adults at Northern Illinois University. The subjects ranged in age between eighteen and twenty-one years; the mean age was 19.4. All subjects possessed between a 3.0 and a 6.0 reading vocabulary and comprehension level as measured by the Gates Basic Reading Survey. The publishers of the 16 P.F. Form E consider this literacy range a prerequisite for its use. From subjective teacher evaluation and self-report, all subjects were determined to be proficient in the use of American Sign Language.

Method

The subjects were asked to answer the twenty-four questions which appeared on the paper-and-pencil shortened version of Form E. A separate answer sheet was provided and a careful explanation of instructions was given until the examiner was satisfied that each subject knew the proper procedure. The examiner also spent several minutes attempting to establish a favorable test-taking attitude, one which would minimize distortion or defensiveness in the subjects' responses. These preliminary procedures are recommended by the authors of the 16 P.F. (Eber and Cattell, 1970). The test was untimed and the subjects were advised to spend as much time as necessary to answer each question carefully. All subjects finished the shortened questionnaire within twenty minutes.

One week later, the subjects were shown the Ameslan videotape version of the same twenty-four questions. A new answer sheet, identical to that used the previous week, was furnished. The explanation of instructions and a short rapport-building talk were given by the examiner.

The videotape test form was twenty-two minutes in length. Each Ameslan question was signed by the examiner, while the Form E standard English question appeared simultaneously in caption form. After a fifteen second delay, the question was repeated in the same manner. Additionally, all twenty-four questions were separated by a fifteen second delay.

Results

Composite raw scores were computed from the twenty-four binarily (0 or 1) scored items. A total raw score of 0 to 8 points was possible for each factor dimension. The subject's raw scores on each of the three dimensions appear in table I. The raw scores are shown separately for the two test forms.

COMPARING THE STANDARD FORM WITH AN AMESLAN VIDEOTAPE REVISION**TABLE I**

Subject Raw Scores for Standard English Written and Videotape Ameslan Versions of Form E Questions to Measure Three Personality Dimensions of the 16 P.F. Questionnaire. Also shown, t-Values for Related Means and Pearson r Correlation Coefficients for the Two Test Forms.

Factors	Subject	Raw Scores		t-value	Pearson r
		Ameslan Videotape	Standard Written		
C	1	6	5	4.00	0.87
	2	7	6		
	3	7	6		
	4	6	5		
	5	5	5		
E	1	1	5	0.69	0.62
	2	0	0		
	3	2	1		
	4	4	4		
	5	5	5		
H	1	5	4	0.78	-0.37
	2	5	7		
	3	4	5		
	4	6	3		
	5	5	2		

The t-test for the difference between similar means was used to compare the raw score results of the two questionnaires. This test was performed separately on each of the three personality dimensions. A .05 alpha level of significance for a non-directional test was employed. The t-value for a difference in test form means was significant, at this level, only for factor C. Factors E and H showed no significant difference for the means of the two test forms at the 95% confidence level.

In addition, a Pearson Product-Moment Correlation (Pearson r) coefficient was computed, using raw scores, to show the relationship between the two test forms. This analysis was also performed for each personality dimension measured by the two questionnaires (see Table I). The Pearson r correlation coefficients showed no significant relationship on any of the three factors for the two test forms. Again, the .05 alpha level of significance was employed.

COMPARING THE STANDARD FORM WITH AN AMESLAN VIDEOTAPE REVISION

Discussion

It is interesting to note that, although a statistical difference between the means of the two test forms was significant only for factor C, a statistical relationship was not significant for any of the three factors. After analyzing the raw scores for each factor, a possible explanation emerges. Factor C results showed raw scores which were different in one direction. All subjects scored higher (in a positive direction) on the Ameslan form for this factor. Although factors E and H showed some inconsistencies between the raw scores for the two forms, the fluctuations were both positive and negative in direction and the resultant means were not significantly influenced.

A correlation computation to reveal the relationship between the two test forms showed no significant relationship for any of the paired factors. Therefore, although there was no significant difference between the means for factors E and H, there was also no significant relationship between the results obtained on the two test forms. Consequently, the Ameslan videotape and the Standard Form E could not be considered as interchangeable test forms as neither would be a good indicator of results from the other. The authors conclude that, because a strong relationship did not exist for any factor on the two forms, further research is warranted to determine which test format, Ameslan videotape or standard English written, is a more accurate representation of personality structure.

In addition, it would be advantageous to devise some method by which evaluation of the effectiveness of the two test forms can be made. The authors of the 16 P.F. state that adequate correlations exist between questionnaire data and observer behavior rating (Cattell and Eber, 1967). However, other authors have experienced incongruencies between behavior ratings and questionnaire data and have challenged Cattell's assertions of secure linkage between the behavior ratings and questionnaire domains (Becker, 1960; Schaie, 1962). If, as suggested, observers ratings are not a useful indicator of questionnaire validity, some other evaluation method should be employed.

A great deal more investigation and research in areas of test design and implementation are needed if the language deficit factor, which impedes accurate evaluation of deaf individuals, is to be successfully overcome.

COMPARING THE STANDARD FORM WITH AN AMESLAN VIDEOTAPE REVISION

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