The Diagnostic Interview Schedule for Deaf Patients on Interactive Video: A Preliminary Investigation

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Objective: The authors investigated the feasibility of translating the National Institute of Mental Health Quick Diagnostic Interview Schedule-III, Revised, computer version, for deaf individuals. **Method:** The study involved translation of selected scales into American Sign Language, Signed English, and speech reading; review by an advisory panel and back translator; and collection and analysis of deaf individuals' reactions to translations. **Results:** Focus groups responded favorably, translation problems were revealed, and solutions were suggested. **Conclusions:** The findings support the feasibility of translation of the Quick Diagnostic Interview Schedule-III, Revised, into American Sign Language, Signed English, and speech reading for deaf patients.

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Of approximately 20,000,000 hearing-impaired Americans, about 10% are profoundly deaf (1). Psychiatric assessment of this group is problematic: the median English literacy of deaf high school graduates is 4.5 grade equivalent (2); the average deaf adult lipreads only 26%–40% of speech (3); written inventories and self-administered questionnaires, usually written in ninth-grade English, can provide invalid diagnoses (4); and few diagnostic instruments have standardized American Sign Language versions (5).

METHOD

This study explored the feasibility of translating selected scales of the Quick Diagnostic Interview Schedule-III, Revised (Q-DIS-III-R) (6), into American Sign Language, Signed English, and speech reading. Translations were reviewed by an advisory panel, back translator, and deaf focus groups, and feedback was analyzed.

The National Institute of Mental Health Diagnostic Interview Schedule (DIS), a fully structured instrument, was chosen for its breadth of use, history of translation into 30 languages, and utility as a clinical and research tool. The Q-DIS-III-R, computer version, was selected to allow interaction with computerized video translation. Because of prevalence, six disorder sections were selected: generalized anxiety, simple phobia, agoraphobia, social phobia, manic episode/bipolar, and major depressive.

Two prelingually deaf individuals and a hearing mental health clinician/researcher experienced with deaf individuals comprised the translation team. The translation team and a psychiatrist reviewed items and reached consensus on intent, context, and potential translations of each item. Several translations were videotaped and reviewed by an advisory panel of experts who assessed the clarity and equivalence with original items and recommended how items such as "hearing voices" should be modified.

Back translation, following established practices (7), achieved translation equivalence among English, American Sign Language, and Signed English versions. First, a bilingual person, blind to original text, translated American Sign Language and Signed English items back into English. Second, original and back-translated English versions were compared and reconciled. Dr. Robins, senior author of the DIS (and Q-DIS), was consulted regarding equivalence to original items. The best version was edited onto a single tape for focus groups' reviews.

Deaf focus group members were recruited from diverse deaf community sectors and grouped by communication preference and education. Facilitators were fluent in American Sign Language and experienced in leading deaf groups. Groups were limited to six to eight members, videotaped, and voice interpreted for transcription. Four American Sign Language, one Signed English, and one speech reading focus group viewed the respective translations.

At each 2-hour session, facilitators described the study and procedures and obtained written informed consent from group members. Focus group members were cautioned not to answer questions but only to react to signing (or to speech for speech reading) for clarity, meaning, the signer's affect and signing speed, cultural sensitivity, and level of comfort in viewing the signed item. Improvements were solicited. Translation equivalence of American Sign Language, Signed English, and speech reading versions was examined, and the meaning of individual items, as understood by focus groups, was compared with the intended meaning for hearing subjects.

RESULTS

Time and duration concepts in American Sign Language were challenging. Some concepts (e.g., "at least a month," "for six months or more") were difficult to understand, even for well-educated deaf individuals.

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Concepts of time-within-time (e.g., "Have you experienced [insert symptoms] for one month or more during the past year?") were more difficult to convey.

Items that assumed knowledge of and experience with hearing and speaking and hearing-specific questions (e.g., "hearing voices") were problematic because deaf individuals vary in age at onset of deafness, severity of deafness, and experience with sound. Functional equivalents were all reviewed by Dr. Robins, the author of the original instrument.

The use of idioms ("feeling on edge," "keyed up"), paucity of signs for fine distinctions in mood, and some symptoms and constructs that do not equate cross-culturally proved challenging. For example, a deaf person pounding on the floor to get attention and rapidly signing with great emotion when aroused are normative behaviors in the deaf community.

Focus groups consisted of 16 men and 23 women, 53% of whom were between ages 26 and 40 (21% were between 18 and 25, 26% between 40 and 75). Forty-nine percent were Caucasian, 33% African American, and 18% Hispanic. Deaf adults with some postsecondary education were overrepresented in the study group (41% versus 9% nationally [8]), which somewhat limits the generalization of the study's findings. Two-thirds reported American Sign Language as their primary communication method, while 21% identified Signed English, and 12% identified speech reading.

Focus groups confirmed the following translation difficulties: translation of time-within-time and duration, English idioms, subtle distinctions in emotional states, and hearing-specific phenomena. The speech reading focus group felt that the clarity of the speech reading version was "exceptional, but [the] amount of captioning was . . . overwhelming." Focus groups suggested dividing time reference items into separate components.

Focus groups concurred that having the American Sign Language, Signed English, and speech reading translations interchangeably available, with simultaneous English captions and a native deaf signer, demonstrated sensitivity to the diversity of the deaf community. Focus groups suggested including a replay option to relieve pressure on the subject to understand questions on first viewing. Most stated that they were not comfortable discussing mental health issues but felt that having questions asked in their own language helped.

Concern emerged that unscrupulous providers might try to satisfy Americans with Disabilities Act requirements for "effective communication" by using the DIS for the Deaf (D-DIS) in lieu of qualified interpreters or mental health professionals competent in sign language. Focus groups recommended that professionals administering the D-DIS should be trained to work with deaf individuals.

DISCUSSION

This study demonstrates that a computerized version of a signed mental health diagnostic inventory can be effectively and accurately used with most deaf individuals; specifically, it is feasible to translate the Q-DIS-III-R sections into American Sign Language, Signed English, and speech reading for use by deaf patients. Phase I results indicate that problems remain in making precise sign distinctions among psychological states and constructs and in translating complex time concepts.

We anticipated that our chief obstacle would be translation problems and diversity within the deaf population in language preference and communication competency. Most deaf persons who sign can move from one sign modality to another; however, a distinct proportion of the deaf community do not sign well or at all and do not know English. We believe that the language diversity among deaf persons is addressed by creating the D-DIS in American Sign Language, Signed English, and speech reading, captioned in written English. Experience conducting a substance abuse survey in these modalities has taught us that diversity in communication competence can be met in part by providing replay controls for the respondent and by avoiding the use of complex sentences and sophisticated vocabulary (9).

In Phase II, we plan to use two translation teams that will represent the diversity of language skills and competencies. Time references will be divided into shorter units, and patients will be able to replay questions. This should resolve some of the difficulties noted in this pilot study. Anticipated revisions of the Q-DIS-IV may also ameliorate these difficulties.

Although the data suggest that subjects will understand and respond honestly, it was deemed important that the D-DIS be administered by a trained and deaf-sensitive professional. Using this computerized measure without a deafness-knowledgeable clinician present is inappropriate.

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