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From Traditional to Innovative Assessment: The Case of Depression

Irene W. Leigh, Ph.D.

Abstract

This article reviews various approaches to the assessment of depression in deaf people as based on current research. Studies comparing traditional paper and pencil instrumentation with American Sign Language (ASL) videotape approaches are presented. Results indicate that both approaches do work with deaf clients, depending on language proficiency in either English or ASL. Exploration of computerized technology is warranted.

It is part of human nature for people to assess the personality of others as a way of deciphering individual differences and ability to interact with others (Butcher, 1995). Assessment itself is defined as the process of estimating the worth, quality, or likelihood of some aspect (Oxford American Dictionary, 1980). Taking this notion one step further, mental health assessment consists of a process whereby individuals are evaluated for the purpose of identifying functional status and eventually a diagnosis (Olin & Keatinge, 1998). This requires an understanding of individual functioning, individual differences and, in the case of deaf persons, a critical understanding of influences that may come from membership in a group that has been perceived as deviant and treated differently by social systems within which the group is embedded.

In order to create innovative directions for mental health assessment that will take us into the 21st century, we need to have an understanding of how past perspectives on assessment have evolved into current trends. This foundation will enhance our ability to conceptualize the assessment approaches that hopefully will more truly reflect exactly what it is we are attempting to measure in deaf individuals.

The field of mental health assessment as an organized discipline is not even a century old (Butcher, 1995). The history of mental health assessment of deaf persons is almost as old. It began in the late 19th century when educators working with deaf children recognized the need for objective rather than subjective measures in order to evaluate deaf children (Pollard, 1992-93). Psychological assessment at that time and throughout the first half of the 20th century focused primarily on the use of psychological tests to investigate intelligence and learning achievement. Pintner, the first to study personality and psychosocial functioning in deaf children during the early part of the 1900's, eventually noted that linguistic

requirements within personality assessment measures developed at that time rendered such measures invalid for this population (Levine, 1956; Pollard, 1992-93). Consequently, he called for tests to be standardized on deaf children. He observed also that the lack of familiarity with deaf persons hindered psychologists from accurate personality evaluations. It would be decades before this observation would have a direct impact on mental health assessment.

Due to the belated recognition that there are discriminatory aspects within diagnostic processes for diverse cultural groups that do not fit the expectations of the dominant society (Sue & Sue, 1999), mental health professionals working with deaf persons are increasingly aware of the need to know this population as a diverse group in order to provide assessments that truly reflect the functional status of the individual deaf person. This is particularly true in the case of depression.

Depression in Deaf Individuals

The information currently available confirms at the very minimum that considerable numbers of deaf persons get depressed and need mental health intervention to deal with their depression (Altshuler, 1964, 1971; Altshuler & Abdullah, 1981; Altshuler, Rainer, & Deming, 1978; Grinker, 1969; Langholtz & Heller, 1986; Leigh, Robins, Welkowitz, & Bond, 1989; Marcus, 1991; McGhee, 1995; Pollard, 1994; Robinson, 1978; Schlesinger & Meadow, 1972; Watt & Davis, 1991). For this reason alone, the assessment of depression in deaf and hard-of-hearing individuals requires attention, particularly with the advent of managed care imperatives and the need for documentation of clinical status and rate of improvement based on objective statements (Kelly, 1997). Hence, the importance of evaluating the validity and reliability of psychological measures and self-report instruments for deaf populations cannot be denied, inherent measurement difficulties notwithstanding.

General Measurement Issues

The utilization of standard depression measures for this population did not received much attention prior to recent years because of the linguistic issues referred to earlier. Orr, DeMatteo, Heller, Lee, & Nguyen (1987) indicate that English-based questionnaires generally are not recommended for personality assessment of deaf clients. This is based on the rationale that a number of items on psychological instruments, which tend to be at the sixth grade or higher levels, have linguistic properties which might lead to misinterpretations on the part of deaf individuals who claim American Sign Language (ASL) rather than English language as their

first or primary language (Bradley-Johnson & Evans, 1991; Freeman, 1989; Garrison, Tesch, & DeCaro, 1978; McGhee, 1995). According to Marschark (1993), the average reading level of deaf individuals tends to be well below that of hearing peers, though the range of English skills may be broad. Paul and Jackson (1993) conclude that with some exceptions the majority of young deaf adults are reading and writing generally at the third to fourth grade level basically because of inadequate internalization of the English language. In a 1982 listing of personality tests, statements of appropriateness for hearing impaired persons were regularly qualified by the need to ensure that those taking such tests could handle the verbal content (Zieziula, 1982). This clearly takes into account the variability of English capabilities in deaf individuals and the fact that instruments vary in level of complexity. It also indicates the need to be extremely careful with written instruments.

Studies using the Beck Depression Inventory

Studies investigating the efficacy of depression measures with deaf persons have taken two basic directions, both of which involve the Beck Depression Inventory (BDI) (Beck, 1967). One direction involves the linguistic revision of various measures in order to meet the linguistic needs of deaf individuals by more closely matching their English competency levels. The other direction covers translation of standard instruments into ASL on videotape.

The Beck Depression Inventory (BDI) is one of the most widely accepted instruments for assessing behavioral manifestations of depression. In terms of appropriateness for a deaf and hard-of-hearing population, the 6th grade reading level generally required to comprehend the BDI (Berndt, Schwartz, & Kaiser, 1983) renders this instrument problematic. However, according to LoSasso (1982), rewriting of existing instruments affords the possibility of evaluating deaf persons in ways that address their written linguistic needs. Following that vein, Gibson-Harman and Austin (1985) revised the Tennessee Self Concept Scale in order to achieve a reading grade level of 3.5. For the deaf and hard-of-hearing sample, all subscale correlations except one were statistically significant at the .01 level. Leigh, Robins, Welkowitz, and Bond (1989) revised the Parent Bonding Instrument (Parker, Tupling, & Brown, 1979) and determined the internal consistency for the two scales in this instrument to be .85 and .75 as based on a sample of deaf college students. They additionally revised the Sociotropy-Autonomy Scales (Beck, Epstein, Harrison, & Emery, 1983) and obtained internal consistencies of .84 for the Sociotropy Scale and .78 for the Autonomy Scale using the same deaf college student sample. It is

therefore possible to conclude that revisions of self-report instruments for deaf and hard-of-hearing persons can result in adequate reliability for a college student population.

In order to enhance the utility of the BDI with deaf and hard-of-hearing persons, Leigh, Robins, & Welkowitz (1988) developed a revised version of the Beck Depression Inventory (BDI-R) that has an approximate fourth grade reading level. The internal consistency of this revised version, as based on a sample of hearing college students, was .87; this compared favorably with the internal consistency of .86 reported by Beck (1967). However, for a deaf sample of college students, the internal consistency was .66 (moderate), which was significantly lower than that of the hearing sample. Additionally, the BDI -R scores of the deaf sample were significantly higher than those of the hearing sample. The authors reported that this result was not due to a few poor items, but rather apparently stemmed from the low item-total correlations. It must be kept in mind that for each response a choice must be made among four items that differ primarily in degree of severity and this requires the ability to decipher nuances of language.

Watt and Davis (1991) administered the BDI-R to a group of prelingually deaf adolescents attending a residential school for the deaf and included a sample of hearing peers attending public school as well. Their results confirmed the Leigh, Robins and Welkowitz (1988) conclusion that the depression scores of deaf subjects were significantly higher. The internal consistency for the deaf subjects was .70 as compared to .85 for the hearing group. The test-retest reliability after one week for a subsample was .63. While Leigh, Robins, and Welkowitz (1988) found no significant gender differences, both McGhee (1995) and Watt & Davis (1991) reported a significantly higher level of BDI-R scores for female subjects.

In the only study to use the BDI-R with a small clinical sample of deaf and hard-of-hearing participants with DSM III-R and DSM IV depression-related diagnoses, Leigh and Anthony (1999) noted that 72% of the participants scored within the moderate to severe range of depression. Participants with more severe therapist-assigned diagnoses had higher BDI-R scores than those with less severe diagnoses.

ASL translations of self-report measures have been attempted in order to differentially address the linguistic needs of those deaf individuals who rely on ASL for communication. One prototype is the videotaped ASL translation of the MMPI (Brauer, 1993). The translation itself was based on a bilingual test-retest procedure. Brauer (1984) also had the BDI translated into ASL on videotape. Marcus (1991) determined the interclass correlation coefficient reliability of the videotaped ASL-BDI to be .72, thereby

indicating the potential of this instrument to perform similarly to the original English version. Of note is that in his study of depression in deaf college students, his bilingual sample tended to score higher on the ASL videotaped version than the English version. There were no differences according to gender.

Mulcahy (1994) compared the Hamilton Rating Scale for Depression (an interview-based instrument), the original BDI, the BDI-R, and Brauer's videotaped ASL BDI (1993) using deaf college students. For the Hamilton Rating Scale for Depression, interviews were conducted in the subjects' preferred mode of communication, specifically ASL, total communication utilizing both signs and speech, or oral communication alone. Results indicated that the group means of the original and revised BDI were not significantly different. Additionally, both means were not significantly different from the group mean on the Hamilton Rating Scale for Depression. In comparison to these three instruments, the use of the ASL-BDI resulted in significantly higher depression mean scores, thereby supporting the Marcus (1991) results. Mulcahy (1994) theorized that signer effects could have been partially responsible in eliciting more depression type responses.

In a follow-up study, which investigated the influence of videotape measures on subject responses, Mulcahy (1998) used a videotaped ASL-BDI that differed from the original Brauer version in that a different signer with more neutral affect was used. He found no significant differences between this particular ASL-BDI version and the BDI-R for deaf subjects. Additionally, he compared the BDI-R and a videotaped spoken version of the BDI using hearing subjects and found no differences as well, thereby ruling out differences based on the artifact of the videotaped experience when stimuli presentations are "neutral." In another study, McGhee (1995) evaluated the equivalency of the BDI-R (which she labeled the Modified BDI, or MBDI), with a videotaped ASL version that she developed for her study. She reports that statistical results suggest the two tests may be linguistically equivalent. Additionally, it appears that the videotaped version was cumbersome to administer.

The length of time needed to complete the videotaped ASL-BDI is approximately 30 to 35 minutes (Marcus, 1991; McGhee, 1995). This compares unfavorably with the typical five to 10 minutes required for the written form of the BDI (McGhee, 1995; The Psychological Corporation, 1997). Because of new rules surrounding treatment authorization for mental health services, mental health centers have become very cautious regarding the effective use of time spent with clients. This was personally communicated to the author when she attempted to develop a survey for

deaf clients being serviced in the mental health system and was repeatedly told that time constraints precluded the administration of measures that were too time consuming. The current situation therefore warrants the continuing investigation of different approaches to the assessment of depressive symptoms.

Current and Future Directions

The original BDI version was modified in 1979 (Beck, Steer, & Brown, 1996). During this modification, alternative wordings for the same symptoms and double negatives were eliminated. The number of optional responses was limited to four alternatives for each item, including the null option, and minor word modifications were made for 15 items. In the ensuing interval between 1979 and 1994, the need to revise the BDI in accordance with changes in symptomatology reflected in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders - Third Edition, Revised (DSM III-R; 1987) and the fourth edition of this manual (DSM-IV; 1994) became apparent (Beck, Steer, & Brown, 1996). In this revision process, which resulted in the BDI-II, items were revised to better reflect DSM-IV symptomatology for depression and statement options were partially reworded for clarity. The youngest age for those taking the BDI-II was lowered from 17 to 13 (The Psychological Corporation, 1997).

Since the items on this current revision appear to be linguistically more accessible for deaf persons in comparison to those on the BDI-R, the BDI-II was evaluated on a sample deaf college student population (Leigh & Anthony, 2000). It demonstrates good reliability for this sample as indicated by an internal consistency of .88 and a test-retest correlation of .74. Consequently, the BDI-II is recommended for use in research with deaf and hard-of-hearing persons who have a basic command of English. Future research efforts should address the BDI-II's applicability for deaf and hard-of-hearing clientele served by mental health agencies.

Another promising direction is that of computerized technology, which has the potential for more efficient utilization of time in comparison to videotaped versions of measures. The next article in this series of assessment articles presents exciting initial research in this area, one which researchers and clinicians working with deaf and hard-of-hearing individuals should closely follow.

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