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A SCALE FOR ASSESSING HEARING ADULTS' BELIEFS ABOUT THE CAPABILITIES OF DEAF ADULTS

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This paper describes the Opinions About Deaf People (ODP) Scale, a scale for assessing hearing adults' beliefs about the capabilities of deaf adults. It addresses a specific gap in instrumentation, as previous instruments assessing attitudes about deaf persons were not specifically developed to assess this domain. They were adapted from instruments designed to measure attitudes toward other disabilities or general attitudes toward disabilities. The scale addresses a variety of commonly held misconceptions about deaf people. These misconceptions were identified from literature review and interviews with deaf professionals. This paper includes a copy of the ODP scale and administration and scoring instructions. The authors also suggest a variety of applications in educational, employment, and mental health settings and encourage readers to utilize the scale in a variety of contexts.

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A Scale for Assessing Hearing Adults' Beliefs About the Capabilities of Deaf Adults

The Americans with Disabilities Act of 1990 and The Rehabilitation Act of 1973 have directed that equal opportunities must be granted to deaf Americans in a way that does not discriminate based on handicap. However, several researchers (Beaudry & Hetu, 1990; Schroedel & Schiff, 1972; Strong & Shaver, 1991) have suggested that hearing person's beliefs about the abilities of deaf persons may create an attitudinal barrier to the implementation of these laws. The purpose of this article is to present a scale and administrative procedures to assess hearing adults' beliefs about the capabilities of deaf adults.

Within the deaf literature, the authors located only a few instruments designed to assess hearing person's beliefs about deafness. The most widely used instrument was the Attitudes to Deafness (ATD) Scale (Cowen, Bobrove, Rockway, & Stevenson, 1967).

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Although carefully developed and extensively validated (Beaudry & Hetu, 1990; Strong & Shaver, 1991), this scale has been criticized because a sizable number of its items were adapted from the Attitude to Blindness Scale (Cowen, Underberg, & Verrillo, 1958).

Two less utilized instruments have also been developed to assess attitudes toward deafness: The Disabilities Factors Scale: Deafness (DSF:D) (Ferguson, 1970) and a deaf version of the Attitudes Toward Disabled Persons (ATDP) scale (Furnham & Lane, 1984; Furnham & Pendred, 1983). However, both these instruments suffer from similar methodological weaknesses. They are revised versions of scales designed to measure general attitudes toward disabled persons (ATDP) or attitudes toward disabilities other than deafness (DSF:D). Some entirely new items were written for these revised scales. For many items, however, the phrase "deaf persons" was substituted for phrases related to general disabilities (e.g., "disabled persons") or other disabilities (e.g., "blind persons") (Beaudry & Hetu, 1990).

These revised instruments were not developed through a stringent reliability and validity process. The authors of both revised scales primarily relied upon reliability and validity studies conducted during the development of the original instruments (Beaudry & Hetu, 1990; Ferguson, 1970; Furnham & Lane, 1984; Furnham & Pendred, 1983).

To avoid the problems of these existing revised scales, the authors reviewed the literature on deafness to construct an entirely singular and contemporary item pool. This process considered attitudes towards deafness to be a unique construct, rather than one that was interchangeable with attitudes towards other disabilities or general attitudes toward disabilities. Therefore, the first step in the development procedure was to define clearly the construct of "attitude towards deafness."

The purpose of this article is to present the Opinions About Deaf People (ODP) scale, which is designed to measure hearing adults' beliefs about the capabilities of deaf adults. The administration procedures are also described. This article includes (a) a definition of the construct underlying the scale, (b) the results of reliability and validity studies, and (c) instructions for administering, scoring, and interpreting the scale and its results. Readers who are interested in more extensive documentation on the scale may wish to refer to Berkay, Gardner, and Smith (1994, 1995).

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Method

The Construct: Beliefs About Deaf Person's Capabilities

According to Nunnally (1978), individuals often make judgments about others using themselves as frames of reference. Therefore, to measure hearing adult's beliefs regarding capabilities of deaf persons, the authors determined that the scale should be anchored on a comparison of deaf people's capabilities and hearing people's capabilities. This construct was conceptualized to represent a continuum between two extreme beliefs regarding deaf individuals: Deaf people are equally capable as hearing people versus deaf people are less capable than hearing people. In addition, beliefs were conceived to be influenced by the context in which capabilities might be observed.

It was assumed that those who expressed "equal capability" opinions would perceive deaf individuals to possess the same range of intelligence and skills as hearing individuals, with the exception of the ability to hear. In other words, an individual responding with an "equal capability" belief system would recognize that there are both high and low functioning deaf people, just as there are both high and low functioning hearing people. Those with an "equal capability" belief would perceive that there are no differences in the distribution of intelligence between populations of deaf and hearing people (Myklebust, 1964). In addition, those holding an "equal capability" position would perceive that deaf people possess capabilities required in everyday tasks and interactions with society, such as (a) communicating with hearing people, even without the services of an interpreter (Foster, 1987); (b) living independently and taking care of themselves (Oklahoma Department of Human Services, 1993); (c) being gainfully employed (DeCaro, 1981); (d) safely operating a car (Baker & Cokely, 1980), and (e) being academically competitive with their hearing peers (Culton, 1975; Murphy, 1976).

Development of the Opinions About Deaf People Scale

The first task in the development of the instrument was to identify common misconceptions that hearing people have about the capabilities of deaf adults. The authors contacted six deaf professionals and interviewed them about their personal experiences with hearing individuals to ascertain capabilities that they believed were most often misperceived by hearing adults. In addition, the authors reviewed the literature to ascertain other misconceptions that had been reported. This information was compiled, and the following

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categories were determined: (a) academic abilities, (b) language and communication skills, (c) operating an automobile, (d) intelligence, (e) job skills, and (f) independent living skills. These skill areas provided the basis for examining adults' perceptions of deaf individuals' capabilities across a broad range of contexts.

The authors developed the 35-item Opinions About Deaf People (ODP) scale for an initial pilot study that used a 4-point Likert scale. This 35-item scale was reviewed by measurement specialists and professionals in the field of deafness. Based on their feedback, a number of minor revisions were made prior to conducting initial piloting of the instrument. For example, a few ambiguous items were rewritten for clarity. The initial pilot study with the 35-item scale was conducted with 38 students (10 males and 28 females, ages 19 to 48). The subjects were enrolled in an undergraduate course in a teacher education program at a Southwestern university. Based on reliability and validity data and an item analysis, the authors revised the 35-item instrument to obtain a 20-item version by discarding 15 items.

A second pilot investigation was conducted using the revised 20-item scale with 290 subjects (120 males, 167 females, and 3 gender unreported; ages 18 to 50). The subjects were from two sections of an upper-division general-education sociology course at a Southwestern university. Construct validity was examined by comparing subjects' responses on the ODP Scale with their scores on Cowen's 25-item ATD scale (Cowen et al., 1967) and through a factor analysis of the resulting data.

Results

Data analysis using SPSS (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975) was conducted to examine the correlations of the new ODP Scale and the older ATD Scale. Further, a factor analysis was conducted to examine whether single or multiple constructs were being measured with the ODP Scale. The correlation of the ODP and ATD Scales was .75 ($p < .001$), indicating that scores on the ODP Scale accounted for approximately 56% of the variance of the scores on the ATD Scale. This moderate correlation helped to confirm that the scales were related, but that each scale was measuring something unique. These findings help to support the authors' contention that the ODP Scale is not simply

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a scale to measure general attitudes, but reflects more specific beliefs about deaf persons' capabilities.

The reliability analysis through a coefficient alpha of .83 indicated a strong internal cohesion among item responses. This cohesion was further verified through a factor analysis with a varimax rotation, which suggested one common factor with an Eigenvalue of 5.49 that accounted for 27% of the variance of individual responses. Item correlations with this factor ranged from .25 to .67. Although there appears to be one general deaf capabilities factor, a few items (5, 17, and 18) also correlate moderately with a factor that the authors termed "beliefs about intelligence." This factor had an Eigenvalue of 1.70 and accounted for 8.5% of the variance of individuals' responses. Further details regarding the factor analysis of the scale can be found in Berkay, et al. (1994, 1995).

Administration

Administration Instructions

The following are administration instructions for the ODP Scale. This scale measures hearing adults' beliefs about the capabilities of deaf adults. There is an intentional ambiguity in the Scale's title, "Your Opinions about Deaf People." The authors did not wish to convey too explicitly to the subjects the exact intent of the instrument for fear they might respond in a socially desirable, rather than a more candid, manner. If this scale is used to conduct research, subjects should be debriefed and informed of the scale's more explicit purpose following the collection of data. A reproducible copy of the scale is included in the Appendix.

This scale can be administered either individually or in a group. Subjects should be given the scale and told to complete all items. If more than one individual is present during testing, subjects should be instructed not to discuss the items or their responses. If a subject asks for clarification of a particular item or items, the administrator should respond with a non-directive comment, such as: "It would be better if you decided what this means to you. Why don't you look at the item again and answer it as best you can." In no case should the administrator explain any of the items to the subjects while they are completing the scale.

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Scoring and Interpreting the ODP

There are 20 items in this scale, worth 1 to 4 points each. Each subject's score can be calculated by adding up the points for all 20 items. The possible range of scores is from 20 to 80. A low score reflects a positive attitude about the capabilities of deaf adults, whereas a high score reflects a negative attitude. There are no cut-off points. The scores should be looked upon as indicating degrees of positiveness or negativeness in relationship to the total possible points. Scores below the middle score of 40 tend toward equal capability beliefs, whereas those above 40 tend toward unequal capability beliefs.

There are 10 positively stated and 10 negatively stated items. Agreement with a negative statement or disagreement with a positive statement reflects a negative attitude toward the capabilities of deaf adults. The positive and negative items are randomly dispersed throughout the scale. Table 1 provides the scoring key for the ODP.

Discussion

The Opinions About Deaf People (ODP) Scale was developed to provide a contemporary and focused measure of hearing adults' perceptions of the capabilities of deaf adults. The instrument was pilot tested with samples from the target population who were undergraduate students in a university setting. A reliability estimate from pilots of the instrument indicated an acceptable level of reliability, and factor analysis of the responses during the pilots indicated that a single major factor is being assessed. As with any scale, subsequent to its initial development and validity, information about the validity and reliability with other samples of the target population are needed.

A variety of uses of this scale are suggested by the authors. In employment settings, one application might be to utilize the instrument when a deaf person is hired to anticipate potentially prejudicial attitudes toward a future fellow employee. Secondly, the scale might be used prior to workshops on deaf awareness to assess the existing misconceptions of the audience, suggesting issues that should receive specific attention during training. The impact of such a workshop might be partially evaluated through re-administration of the scale. Finally, the scale could be used by personnel managers as a self-assessment instrument to determine if they have non-biased views regarding the capabilities of deaf persons as potential employees.

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Table 1

Scoring Key and Suggested Interpretation of Highest and Lowest Possible Scores for the ODP Scale

Scoring Key

Items scored as positive statements:

(Strongly agree = 1, mildly agree = 2, mildly disagree = 3, strongly disagree = 4):

2 3 4 5 7 8 17 18 19 20

Items scored as negative statements:

(Strongly agree = 4, mildly agree = 3, mildly disagree = 2, strongly disagree = 1):

1 6 9 10 11 12 13 14 15 16

Score Interpretation

20 Least biased attitude toward deaf people's capabilities
 Subject scored one point on each item
 Subject strongly agreed with all positive items
 Subject strongly disagreed with all negative items

80 Most biased attitude toward deaf people's capabilities
 Subject scored four points on each item
 Subject strongly agreed with all negative items
 Subject strongly disagreed with all positive items

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In educational settings, for classrooms that will include a "new" deaf student, the instrument might be administered to the hearing students as a means of initiating student dialogue regarding their attitudes toward the capabilities of deaf persons. Teachers could also administer the instrument after the deaf student has been a class member for a period of time to determine if students' attitudes have changed following extended contact with the deaf student. Depending upon the maturity of the students, they could be presented with both their pretest and posttest information to evaluate their attitude changes personally. In a graduate school setting, the instrument might be used as an example in measurement courses to examine reliability and validity issues. The instrument might also be administered to members of university admissions committees. The scores from each admissions unit might be correlated with the percentage of deaf students admitted to the program to examine the relationship between bias and program admittance.

In a mental health setting, the scale could be administered to professionals who work with deaf patients. This could help to determine whether negative attitudes or misconceptions about deaf people need to be addressed.

In the preceding paragraphs, a range of potential applications for the Opinions About Deaf People Scale has been presented. The scale can be used as a self-assessment, research, screening, and learning tool. Interested individuals are invited to administer the instrument and communicate information about utilization and results at conferences and in the professional literature.

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Appendix

Your Opinions About Deaf People (20-Item Version)

We are asking for your opinions about deaf people. We are not talking about people who have a mild hearing loss or elderly people who have lost their hearing late in life.

To indicate your opinion, please circle:

- A If you strongly agree
- B If you mildly agree
- C If you mildly disagree
- D If you strongly disagree

Please complete all items. There are no right or wrong answers.

| | Agree | Disagree | | |
|--|-------|----------|---|---|
| | A | B | C | D |
| 1. Smarter deaf people have better speech than deaf people who are less intelligent. | A | B | C | D |
| 2. Deaf people drive just as safely as hearing people. | A | B | C | D |
| 3. A deaf person can have the leadership abilities needed to run an organization. | A | B | C | D |
| 4. It is unfair to limit deaf people to low-paying, unskilled jobs. | A | B | C | D |
| 5. A deaf person could get a Ph.D. or a Masters degree. | A | B | C | D |
| 6. If a boss has a problem with a deaf employee, the boss should talk with the interpreter, rather than the deaf person. | A | B | C | D |
| 7. A deaf person could be promoted to a management position. | A | B | C | D |
| 8. An 18-year-old deaf adult is capable of living alone and taking care of him- or herself. | A | B | C | D |
| 9. It is nearly impossible for a deaf person to keep up with a hearing person in school. | A | B | C | D |
| 10. It can be frustrating to pay a visit to deaf people because they can't hear you knock at the front door. | A | B | C | D |
| 11. Deaf people cost tax payers lots of money because they can't keep their jobs. | A | B | C | D |
| 12. Deaf people should only work in jobs where they don't need to communicate with anyone. | A | B | C | D |
| 13. It is a mistake to leave a baby alone with a deaf person, because he/she can't hear the baby cry. | A | B | C | D |

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Appendix

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|-----|--|---|---|---|---|
| 14. | Deaf adults must depend on their parents to make important decisions. | A | B | C | D |
| 15. | Signing is not really a language because only simple thoughts can be communicated. | A | B | C | D |
| 16. | A deaf person could not go to a restaurant without a hearing person, because he/she could not order food without assistance. | A | B | C | D |
| 17. | A deaf person can be an excellent writer. | A | B | C | D |
| 18. | Deaf people are as intelligent as hearing people. | A | B | C | D |
| 19. | If there was a fire, a deaf person could get out of a building safely without help just as easily as a hearing person could. | A | B | C | D |
| 20. | Deaf adults are able to communicate with their hearing children. | A | B | C | D |