Quality of Life Indicators for Deaf and Hard-of-Hearing Former VR Clients

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QUALITY OF LIFE INDICATORS FOR DEAF AND HARD-OF-HEARING FORMER VR CLIENTS

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Abstract

The success of vocational rehabilitation (VR) services is often measured by the percent of successful closures and employment rates at closure. However, these measures may not present a broad enough picture of the impact of these services, particularly since the ultimate goal of VR is lifelong adjustment for the individual. This paper presents data relating to the perceptions of quality of life for deaf and hard-of-hearing rehabilitees 3½ years after closure. These data highlight objective and subjective criteria to describe the long-term adjustment of these rehabilitees. Discussion describes some of the contradictions inherent between objective and subjective data, and makes suggestions for using quality of life data as a tool for both individual and program evaluation of service impact.

Outcome research regarding vocational rehabilitation (VR) services has typically focused on indicators such as the percent of successful closures (status 26) and employment rates after closure. Whereas these indicators provide important information, they provide little indication of the long-term influences VR services have on the individual’s adjustment. Other factors should also be used to evaluate the post-services adjustment of disabled persons. As Bolton (1981) stated, “the ultimate goal of VR services is the life-long vocational and psychosocial adjustment of disabled persons” (p. 58).

One approach to evaluate clients’ postservice adjustment is an assessment of their quality of life. VR services address concerns beyond vocational skill training (e.g., physical restoration and personal adjustment). It follows, then, that these services should influence areas of an individual’s life in addition to vocational functioning. Therefore, the person’s perception of his or her quality of life can provide an indication of the broader effects of VR services.

Prior quality of life research has been conducted with cross-sections of the nondisabled population (e.g., Campbell, Converse, & Rodgers, 1976; Flanagan, 1978). These large scale projects revealed significant information about the components and structure of quality of life. For example, Flanagan (1978) found that health and personal safety were considered the most important influence on one’s quality of life. Other important factors were: having and raising children, understanding of self, relationships with spouse, material comforts, and friendships. Since the data in this study measured many of the factors used in Flanagan’s study, it will provide a useful frame of organization for the results of this study.

In contrast to the aforementioned large scale studies, quality of life research involving hearing-impaired respondents is very limited. Only three studies could be identified that considered the quality of life of a hearing-impaired sample. The first study focused on perceptions of quality of life for elderly, hearing-impaired women (Magilvy, 1985). This study included elderly women with prevocational and later onset hearing losses, and indicated that the quality of life for these elderly, hearing-impaired women was best predicted by their perceptions of their hearing loss, functional social support, and perceived health. As would be expected, perceptions of hearing loss were more important for the later onset group than for the prevocationally hearing-impaired group.

In a second study, Anthony (1978, unpublished) measured quality of life for a sample of Gallaudet University alumni. Her results revealed that this group of deaf people were fairly satisfied with their quality of life across several domains (satisfaction with residence, family life, hobbies, friend-
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Anthony found that the best predictor of overall life satisfaction was the individual's level of social participation.

The third study investigated the quality of life of severely disabled deaf persons who were served at a comprehensive rehabilitation facility (Stewart & Watson, 1987). This study revealed that the former clients reported satisfaction with various aspects of their lives considered important to their quality of life (i.e., health, family life, leisure activities, and life in general). However, for the objective indicators of financial security, housing, and social integration, these deaf people were far behind the standards for people with normal hearing.

The study reported here is unique for two reasons. First, very few long-term follow-up studies have been done with deaf or hard-of-hearing rehabilitants; previous follow-up studies have focused on severely disabled, hearing-impaired persons who generally were served in rehabilitation facilities (e.g., Blake, 1970; Chicago Jewish Vocational Service, 1974; Hurwitz, 1971; Rice, 1973). Second, this study assessed post-service adjustment through measures considered indicative of a person's quality of life, including both subjective reports and more "objective" indicators (such as employment, earnings, and living arrangements). These measures provided a broader picture of adjustment similar to that called for by Bolton earlier.

**Method**

The data were collected as a part of a follow-up study of deaf and hard-of-hearing, former VR clients. Follow-up was conducted approximately 3½ years after closure. Interviews were conducted in the preferred communication mode of the respondent.

Eighty-one former clients were interviewed in this study. Each had been successfully closed by the Arkansas Division of Rehabilitation Services during fiscal year 1981. Using the 1981 Rehabilitation Services Administration disability codes, the respondents were divided into deaf and hard-of-hearing categories. This classification resulted in 38 deaf and 43 hard-of-hearing persons. Demographic characteristics of the two samples are presented in Table 1. The majority of the respondents in both the deaf and hard-of-hearing samples were white, and approximately half of the respondents in each sample were married. The deaf sample was predominately male whereas the hard-of-hearing sample was mostly female. The deaf sample was younger than the hard-of-hearing sample by approximately 7½ years.

The hard-of-hearing respondents tended to have later onset hearing loss (almost 80% reported post-lingual losses); on the other hand, over 60% of the deaf respondents reported prelingual losses. For those respondents who knew the etiology of their hearing loss, the majority in both samples reported an illness (e.g., measles, meningitis) as the cause.

**Measures**

The self-reports of quality of life were collected using a format similar to Campbell, et al. (1976); that is, respondents were asked to rate their satisfaction with selected aspects of their lives. There were a total of eight domains to which respondents gave ratings (health, employment, financial security, home, savings, standard of living, relationships with family, and friendships) using a four-response format: very satisfied, satisfied, dissatisfied, and very dis-

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Demographic Characteristics of the Deaf and Hard-of-Hearing Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Deaf (n=38)</td>
</tr>
<tr>
<td>% white</td>
<td>88.9</td>
</tr>
<tr>
<td>% married</td>
<td>50.0</td>
</tr>
<tr>
<td>% male</td>
<td>57.9</td>
</tr>
<tr>
<td>Age (mean)</td>
<td>33.5</td>
</tr>
<tr>
<td>% post-lingual hearing loss</td>
<td>39.5</td>
</tr>
<tr>
<td>% illness-caused hearing loss</td>
<td>63.6</td>
</tr>
</tbody>
</table>

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satisfied. Additional data were collected that were more objective in nature (i.e., income, living arrangements, and health problems in the last year); these measures were based also on the former clients' self-reports.

Results

Health

Flanagan (1978) found that health was considered the most important aspect of one's quality of life. Three questions in this study dealt with health matters. The majority of both samples reported no significant health problems during the previous year; nonetheless, 31.6% of the deaf sample and 44.2% of the hard-of-hearing sample did report a significant health problem. For those persons who reported a health problem, many felt that the problem imposed significant limitations on their activities. A higher percentage of hard-of-hearing respondents reported significant limitations than did deaf respondents (57.9% and 41.7% respectively). Still, when asked about their global satisfaction with health, the majority of both samples reported being satisfied or very satisfied (84.3% of the deaf sample and 76.8% of the hard-of-hearing sample). In addition, the correlations between the perceived degree of limitation and the overall rating of satisfaction with health were not significant for either sample.

Material Comforts

Flanagan's study (1978) indicated that material comforts were an important consideration in one's quality of life. Material comforts included elements such as financial security and housing. For this study financial security was indicated by employment and earnings. Three and a half years after closure, 63.2% (n=24) of the deaf and 53.5% (n=23) of the hard-of-hearing respondents were employed in the competitive labor market. Those persons who were unemployed were either out of work (but still seeking employment), or were homemakers, persons who had retired during the time following closure, or persons who reported additional disabilities preventing work. Those people who were working had weekly earnings that were considerably lower than other workers in the state of Arkansas. The deaf respondents' average earnings were $224.08 per week; the hard-of-hearing workers had average weekly earnings of $198.35. The question of importance was: How did the earnings of these respondents compare to the earnings of the general population of Arkansas?

To answer this question, the weekly earnings of each respondent were compared to the average earnings for Arkansans employed in the same job (Arkansas Employment Security Division, 1987a, 1987b, 1987c), and a percent difference was calculated (see Table 2). For deaf respondents, the average percent difference between their earnings and the Arkansas average was -19%. That is, the deaf respondents were earning 19% less than the average Arkansan in a similar job category. Naturally, there was some variation in the differences in earnings across job categories. The greatest disparities were in the machine trades and service occupations; deaf persons earned respectively 38 and 31% less than the average for Arkansans in those jobs. On the other hand, the deaf respondents who were employed in benchwork occupations earned 7% more than Arkansans in those categories. Finally, deaf respondents in structural and miscellaneous occupations earned respectively 16 and 20% less than the Arkansas average for those occupations. Comparative figures for the specific sales-clerical jobs held by the deaf respondents were unavailable.

Hard-of-hearing respondents also earned less than the average Arkansan, but the percent difference was not as great as for the deaf respondents. Hard-of-hearing respondents earned an average of 8.5% less than their Arkansas counterparts in similar jobs. Three occupational categories showed considerable deficits in earnings — processing (-31%), machine trades (-23%), and benchwork (-24%). In the sales-clerical category, there was an 8% deficit in earnings. Two categories of hard-of-hearing respondents had earnings that exceeded the Arkansas average. Respondents in service occupations earned 2% more; respondents in the structural occupations had earnings that were 15% higher than the Arkansas average. Comparison figures for the specific professional and related jobs held by hard-of-hearing respondents were not available.

Even though the earnings of these hearing-impaired workers were comparatively low, they overwhelmingly reported satisfaction with their job. The majority (86.9%) of both samples said they were satisfied or very satisfied with their job.
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The financial situation of unemployed rehabilitants was determined by considering their income from other sources. These sources included spouse's earnings if married, Social Security Disability Insurance (SSDI), Supplemental Security Income (SSI), welfare payments, and other types of income (e.g., pension plans and insurance benefits). The financial security of the unemployed, hearing-impaired people in this sample seemed limited. The hard-of-hearing rehabilitants who were unemployed (n=20) averaged only $100.28 each week from the sources listed above. The unemployed, deaf respondents (n=14), however, doubled that figure by receiving $213.80 per week. Part of the difference can be attributed to the higher percentage of deaf persons who received SSDI payments; 57.1% of the unemployed, deaf respondents received SSDI, whereas only 20.0% of the unemployed, hard-of-hearing persons received SSDI.

Housing arrangements were indicated by two criteria: type of residence and ownership. The majority of both samples lived in a house (68.4% of the deaf sample and 55.8% of the hard-of-hearing sample). Most of the people not living in houses were living in either apartments or mobile homes. Approximately half of each sample owned the home in which they lived. This percentage was considerably lower than the percentage for the state of Arkansas as a whole (70.5%) (University of Arkansas at Little Rock Demographic Research Division, 1985). When asked about their satisfaction with their home, 84.2% of the deaf respondents and 88.4% of the hard-of-hearing respondents reported being satisfied or very satisfied. Similarly, 89.2% of the deaf and 86.0% of the hard-of-hearing respondents reported being satisfied or very satisfied with the neighborhood in which they lived.

Two additional indicators of material comforts were included in this study, i.e., satisfaction with savings and with standard of living. Only 28.6% of the hard-of-hearing sample reported having a savings account. The deaf sample had a higher percentage of respondents with a savings account (47.4%). Savings was the area in which respondents expressed considerable dissatisfaction. Two-thirds of the hard-of-hearing persons (66.7%) were dissatisfied or very dissatisfied with their savings situation; 47.4% of the deaf persons were dissatisfied with their savings situation. When evaluating their standard of living, 81.8% of the deaf respondents and 67.5% of the hard-of-hearing respondents reported being satisfied or very satisfied.

### TABLE 2
Percent Differences in Earnings of Hearing Impaired Respondents and Arkansans in Similar Jobs

<table>
<thead>
<tr>
<th>Job Category</th>
<th>% Difference</th>
<th>Deaf</th>
<th>Hard-of-Hearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional-managerial-technical</td>
<td>-24.5</td>
<td></td>
<td>-8.0</td>
</tr>
<tr>
<td>Sales-clerical</td>
<td>-31.0</td>
<td>+2.0</td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>-16.0</td>
<td>+15.0</td>
<td></td>
</tr>
<tr>
<td>Structural</td>
<td>-38.0</td>
<td>-23.0</td>
<td></td>
</tr>
<tr>
<td>Machine trades</td>
<td>+7.0</td>
<td>-24.0</td>
<td></td>
</tr>
<tr>
<td>Benchwork</td>
<td></td>
<td>-31.0</td>
<td></td>
</tr>
<tr>
<td>Processing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>-20.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>-19.0</strong></td>
<td><strong>-8.5</strong></td>
<td></td>
</tr>
</tbody>
</table>

Note. The percent difference for each job category represents the average for all available respondents in that category. No entry in a column means that earnings for an occupation held by a hearing impaired respondent were not available for the general population.

This figure represents the average percent difference across all respondents for all job categories.
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Relationships With Family

Relationships with other people were considered an important part of American's quality of life in Flanagan's study (1978). Particularly important were relationships with a spouse, and having and raising children. As Table 1 indicated, approximately half of each sample were married at the time of interview. For these married respondents, 89.5% of the deaf persons and 95.0% of the hard-of-hearing persons stated that they could depend on their spouse for support when needed. Only eight deaf respondents and 19 hard-of-hearing respondents reported having children. All of these respondents reported being satisfied or very satisfied in their relationships with their children. When asked to rate overall satisfaction with their family life, a large majority (92.1%) of the deaf respondents indicated that they were satisfied or very satisfied. Similarly, 93.1% of the hard-of-hearing persons were satisfied or very satisfied with their family life.

Relationships With Friends

In Flanagan's study (1978) having close friends was rated by a majority of his sample as an important consideration in one's quality of life. For this study three questions related to one's friendships. One question asked about the hearing status of the respondent's friends. As would be expected for the hard-of-hearing sample, the majority (95.2%) stated that most of their friends were hearing people. Surprisingly, the deaf sample also had a high percentage of respondents (48.6%) reporting that most of their friends were hearing. On the other hand, 21.6% of the deaf respondents stated that the majority of their friends were deaf; the remaining respondents (29.7%) indicated that their friendships were equally divided between deaf and hearing persons. Chi-square analyses did not reveal any relationship between the hearing status of friends and satisfaction with friendships for either sample.

A second question concerned the frequency of visitation with friends. The hard-of-hearing sample had a slightly higher percentage of respondents reporting weekly visits with friends than did the deaf sample (51.2% and 44.7% respectively). Even though they had more frequent weekly visits, the hard-of-hearing sample also had a higher percentage of respondents reporting monthly or fewer visits with friends — 37.2% vs. 23.7% for the deaf sample.

The third question concerned their overall satisfaction with their friendships. The majority of the respondents in both samples indicated that they were satisfied or very satisfied (94.8% of the deaf sample and 92.9% of the hard-of-hearing sample). No association was found between the frequency of visitation with friends and satisfaction with friendships.

Discussion

The results of this study provide information concerning the quality of life for a group of deaf and hard-of-hearing, former VR clients 3 years after closure. When one considers only the objective indicators, these rehabilitants' quality of life could be described as mixed. The financial resources of both samples were limited. For example, employed, hearing-impaired persons received earnings considerably lower than comparably employed Arkansans. Deaf respondents exceeded the average earnings for Arkansans in only two occupational categories (service and structural occupations).

If unemployed, and thereafter dependent on other income sources (e.g., public assistance, spouse's earnings), the situation for the hard-of-hearing respondents was especially poor, these persons received only about $100 a week. Unemployed deaf persons did better, more than doubling the money received by the unemployed hard-of-hearing group. In fact, unemployed deaf persons averaged more money than working hard-of-hearing persons, and almost as much as the employed, deaf respondents. This financial disincentive to work is a major problem for VR services. If a client receives financial benefits comparable to or higher than his or her potential salary, there is little monetary incentive to work. This circumstance was experienced by the unemployed, deaf respondents in this study. Recent changes in the management of SSI and SSDI benefit programs, however, may reduce this problem (Social Security Administration, 1987).

Another limiting financial condition for each sample concerned savings; the majority of both samples did not have a savings account. Even though financial resources were limited, the majority of both samples lived in a house, and almost half of each sample owned the home in which they lived.

Other objective indicators of quality of life were generally positive. Most of the deaf and hard-of-hearing respondents did not report significant health problems. Married respondents in
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both samples stated that their spouse could be depended on for support when needed. Approximately half of each sample reported weekly visits with friends.

In contrast to the objective indicators, the subjective indicators of quality of life presented a very positive impression regarding the life situation of these rehabilitants. On virtually all of the satisfaction ratings, a large majority of each sample reported being satisfied or very satisfied with the rated item. This statement was true even when a specific objective indicator could be interpreted as indicating a limited quality of life. For example, low wages earned by the respondents were not reflected in low satisfaction with the job or with one's standard of living. Similarly, the presence of a health problem was not related to satisfaction with health. There was only one area rated by respondents in which strong dissatisfaction was present (savings).

The lack of agreement between objective indicators of quality of life and subjective measures is not unique to this study. Campbell, et al. (1976) noted this problem with their sample from the general population. These authors noted that two broad explanatory concepts could account for this situation. First was the concept of aspiration level. Some people are satisfied with less of something others consider "good" or "necessary" because they have lower aspirations than others for that need. This explanation emphasized individual differences relating to the perceptions of necessity for specific needs. The second concept concerned person-environment fit. People show individual differences in what is considered optimal levels for specific needs. The degree to which an environment can supply the appropriate (optimal) amounts of various needs will determine the individual's level of satisfaction in that environment. As Campbell and his colleagues noted, these two concepts are not contradictory. Aspiration levels and optimum amounts of a need may be interchangeable.

Each of these concepts may have been operating in this study. For example, if respondents' life circumstances were perceived as superior to that of their parents' situation, then they would be more likely to rate their situation as satisfying. They have aspired to a level that exceeded their background, and the environment in which they operate has allowed them to achieve that aspiration level. However, it was not possible to test this conjecture using the data from this study.

Earlier, it was suggested that quality of life information may be helpful in assessing the effects of VR services, especially since the goal of these services is to enhance the life adjustment of clients. To use this type of data in an evaluation capacity, several steps will be needed. First, the components of quality of life for deaf and hard-of-hearing people will have to be determined. This study was similar to two previous studies of quality of life in terms of the general domains surveyed (Campbell, et al., 1976; Flanagan, 1978). However, Flanagan had his respondents rate items in each domain according to how important that item was to the individual's quality of life. In this way he was able to determine the relative importance of items. A similar technique may be necessary with deaf and hard-of-hearing people. It is possible that factors influencing the quality of life for hearing-impaired, and especially deaf, people are valued somewhat differently from hearing people. In addition, special factors particularly relevant to hearing-impaired people (e.g., communication issues on the job) need evaluation.

Second, in this study quality of life was measured at one point in time. Clearly this strategy permits only a description of circumstances for the rehabilitants at the time of measurement. Therefore, the next step needed to measure the effects of rehabilitation services would be the assessment of quality of life prior to the delivery of services. After services were completed, the measurement would be repeated to evaluate changes. This elementary design would permit a basic assessment of service impact. It would be desirable to retest the rehabilitant at some time after closure (e.g., one year or longer after closure) to further assess the maintenance of benefits over time. Such a technique would permit the evaluation of both an individual's maintenance of service benefits as well as the program's effectiveness in general.

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REFERENCES


