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PUBLIC AWARENESS OF HEARING IMPAIRMENT AND SOURCES OF ASSISTANCE

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Abstract

A telephone survey was completed within Columbus, Ohio, and surrounding metropolitan areas to determine public awareness of hearing impairment and community resources that serve hearing impaired persons. A probability sample was drawn for telephone interviews utilizing a standard procedure employed by The Ohio State University Polimetrics Laboratory. Respondents numbered 385 with a quota control for age and gender. Analysis of survey findings are discussed. Suggestions for public dissemination of information concerning hearing are highlighted.

Public awareness of professional services available to those with hearing impairment is important if infants, children, adults, and the elderly are to receive proper evaluation and ultimately the therapy needed. A survey of the literature reveals only a few attempts that have been made to ascertain the knowledge of the public regarding where and by whom help might be available to those with hearing loss. This is not to imply that only few or no attempts have been made to disseminate information to the public. Various organizations such as the Alexander Graham Bell Association, the John Tracy Clinic, state departments of education and health as well as community groups have rendered services through printed materials, radio, and television programs about the causes and effects of hearing loss and where to go for help. The ultimate question as to the level of awareness of the public is one that is in need of further exploration.

In a recent editorial, Van Hattum (1985) states the "the person on the street has no more idea what we do than he or she did in 1940." If this is true, one would expect this to become evident in a survey of the public awareness of the type of help we render for hearing impaired persons. Lass *et al* (1985) in a recent survey described the knowledge and exposure classroom teachers and special educators have to hearing impairment. He found that this population was moderately to well-informed on many issues but less well-informed on others.

The purpose of the present study was to determine public awareness in the area of hearing and hearing disorders and the extent to which respondents knew where services could be obtained. In order to accomplish this, a telephone survey was made in the greater metropolitan area of Columbus, Ohio.

Methodology

Subject Selection

A random sample of phone numbers was obtained for the Columbus, Ohio area from the Polimetrics Laboratory at The Ohio State University which generated a sample of 385 sets of phone numbers based on the 1985 Columbus and Vicinity White Pages. A computer printout provided the page number, column number, and the skip interval to select the appropriate phone numbers. The phone book was opened to the designated page and the specified column was located. The printout indicated whether counting should proceed up from the bottom or down from the top of the column 8 lines, which was the skip interval used in this study. The first five digits of the phone number were placed on the computer printout before the two digits generated by the computer which then became the last two numbers of the phone number to be called.

For each number obtained from the phone book there were five sets of two digit numbers to complete the series to be called. The caller began with the first number in each of the 385 phone number sets. In the event of no answer, each phone number was called three times before replacing it with one of the alternate numbers. Codes were provided to indicate the reason the number was eliminated from the data set. Only residential numbers were included in the study.

Of the 385 random phone numbers sampled,

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48% of the respondents were male and 52% were female, corresponding with the statistics of the national population. All respondents were 18 years of age or older.

Survey Instrument

The questionnaire was developed by communicative disorders professionals in a graduate seminar dealing with aural rehabilitation. Questions used by Lass *et al* (1985) deemed appropriate for the general population were included in the questionnaire. The specific items and procedures employed in conversing with those who answered phone calls were as follows.

This is _____ calling from the Department of Communication at The Ohio State University. We are doing a city wide research study in order to find out how much is known about how people hear. It will take approximately two minutes to complete the 12 questions. As I read the questions please answer **true, false,** or **don't know.**

1. An audiologist tests hearing and evaluates hearing aids. (True)
2. An otologist makes diagnoses and treats ear diseases. (True)
3. Repeated exposure to loud noises may cause a hearing loss. (True)
4. There is no way to test the hearing of infants. (False)
5. Many people lose hearing as they grow older. (True)
6. Deaf persons are not as intelligent as persons who have no hearing loss. (False)
7. Ear protectors such as those used in factories do not help to prevent hearing loss caused by loud noise. (False)
8. A preschool child cannot be fit with a hearing aid. (False)
9. There are several places in the Columbus area to get an unbiased evaluation of hearing and hearing aids by university educated and trained professionals. (True)
10. A hearing aid can be prescribed as accurately as eyeglasses. (False)
11. If you had to acquire a hearing aid, where would you go?
12. Would you be willing to tell me which age bracket you are in? The categories are: 18-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80-89, 90 and over.

Thank you for your participation.

Findings and Analysis

The results for each item of the telephone survey follow.

1. Somewhat more than half of the respondents (58.2%) knew that an audiologist tests hearing and evaluates hearing aids, whereas 7.3% responded incorrectly and 34.5% did not know.
2. Approximately one-fourth (25.2%) knew that an otologist diagnoses and treats ear diseases whereas 9.6% responded incorrectly. There were 65.2% who did not know what an otologist does.
3. That repeated noise exposure may cause hearing loss was known by almost all (95.8%) respondents. There were 1.6% who answered incorrectly and a remaining 2.6% who did not know.
4. Of all respondents, 81.0% were aware that the hearing of infants could be tested; 6.0% thought it was impossible and 13.0% did not know.
5. The vast majority of respondents (93.0%) were aware that hearing loss may occur with the aging process; 4.2% thought that it did not occur as people grow older and 2.9% did not know.
6. Almost all respondents (94.8%) believed that deaf persons are as intelligent as hearing persons. There were 2.6% who thought that this was not true and the remaining 2.6% did not know.
7. Ear protective devices such as those used in factories were thought to be useful in the prevention of hearing loss by 81.8% of the respondents. There were 8.3% who indicated that they were not helpful and 9.9% did not know.
8. There was an 83.9% correct response to the question as to whether or not children could be fitted with hearing aids; 4.2% thought that they could not be fitted with amplification and 11.9% did not know.
9. A majority of the respondents (84.4%) were aware that services provided by university educated and trained professionals were available in the Columbus area. There were 14.5% who did not know that professional services were available and only 1.0% responded erroneously.
10. Many respondents (82.6%) believed that hearing aids could be fitted as accurately as eyeglasses; 7.6% believed that this was not

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so and 9.9% did not know.

11. When asked where they would go to acquire a hearing aid the findings were:
    Do not know..... 35.1%
    Family physician..... 25.2%
    Ear, Nose, Throat Specialist 16.9%
    Audiologist..... 3.9%
    All others (18.9%) indicated that they would contact The State University Clinics (medical or non-medical), hearing aid stores, community clinics, hospitals, the yellow pages, health services, or the military.
12. The age distribution of the respondents was as follows:
    18-29 years old 30.9%
    30-39 years old 22.9%
    40-49 years old 14.0%
    50-59 years old 11.9%
    60-69 years old 11.7%
    70-79 years old 6.2%
    80-89 years old 2.3%

Upon statistical examination of the results of the survey it was determined that there were no significant differences between male and female responses except for question one (definition of audiologist) wherein the Chi Square value (6.38, $p<.05$) indicated that over age groups males were correct more often than females.

In order to derive a view of possible age differences in responses, analysis was made of those 18 to 49 years of age as compared with those 50 to 89 years of age. Results of Chi Square tests were not significant ($p>.05$) for the two age categories for six of the ten questions.

However, for the remaining four questions, the Chi Square analysis indicated that there were significant differences ($p<.05$) between the two age groups. On questions four (testing of hearing of infants), six (intelligence of deaf persons), seven (ear protective devices), and eight (fitting children with hearing aids successfully), the 18-49 year old group was correct significantly more often than the 50-89 year old group.

Discussion

The survey findings demonstrate rather clearly that the terms "audiologist" and "otologist" are not commonly understood by the public. However, a greater percentage of individuals seem to be acquainted with the term audiologist. Insofar as some causes of hearing loss are concerned, the vast majority sampled recognize the hazards of noise exposure and that protective devices in noisy environments are necessary. Furthermore, the respondents seemed well-informed as to the possible relationship between hearing loss and aging.

This study suggests that there has been rather effective public education concerning the ability to test the hearing of infants. Likewise, there has apparently been effective dissemination of information concerning the necessity of evaluation and fitting of hearing aids to young auditorily impaired children.

Unlike a myth that prevailed in years gone by concerning the relationship between deafness and lack of intelligence, the survey reveals that the respondents generally did not believe this myth.

Approximately 85% of respondents recognized that within the area surveyed there were well-trained professionals to assist them.

In light of the number of individuals in hospitals, university clinics, community clinics, and in private practice who dedicate their efforts on a full-time basis to hearing health care, one might assume that the public would be even better informed. Public education could be enhanced by an emphasis on hearing health with children in the schools, informing and counseling of their parents at meetings such as parent-teacher organizations, and administration of hearing tests and exhibitions at county, state, and health fairs. Better use should be made of both the print and broadcast media to relay important messages concerning hearing conservation, treatment, and rehabilitative and educational programs for those having auditory impairment.

It was disconcerting to learn from the respondents that over 80% believed that the fitting of hearing aids can be done as accurately as the fitting of eyeglasses. One cannot help but speculate as to whether or not this misinformation stems from hard-line, high-pressure, and misleading advertising.

Over one-third of the respondents stated that they did not know where they would go were it necessary for them to acquire a hearing aid. Only 20% of them indicated they would go to an otologist or an audiologist. Over one-fourth indicated that they would consult their family physician in the matter.

It was of interest to note that the responses of males as a whole were correct more than those of females. The difference, even though statistically significant, was very small. As for age, the

differences between the younger group (18-49 years) and the older group (50-89 years) were not significant for the majority of the questions. The better performance, however, of the younger group on questions concerning the intelligence of the deaf, use of ear protection, loud noise, testing of the hearing of infants, and the feasibility of fitting children with hearing aids might be attributed to the results of studies in these areas being communicated to them during the course of their more recent education, or in caring for their own infants and children.

Implications and Recommendations

The implications of the foregoing results and discussion become quite evident. In terms of general public education there needs to be a greater effort by individual audiologists and particularly those organizations and associations whose interest is in serving hearing impaired persons, not only to continue in their good efforts of informing the public, but to increase them as well. As suggested earlier, this could be accomplished through individual counseling and more importantly through well conceived programs aimed at disseminating information concerning hearing health to the general public. The mass media with their pervasive influence on public information and opinion should be utilized extensively in this effort.

As for the education of related professionals, participation of audiologists in conferences developed by such groups as gerontologists, nurses, etc. is recommended. Likewise, professionals in audiology would do well to invite related professionals from otolaryngology, nursing, gerontology, etc. to participate in conferences dealing with the welfare of hearing impaired persons.

Therefore, based upon the data derived from this survey and the foregoing implications, it is recommended that:

1. there be frequent periodic efforts made, both locally and nationally, to inform the public concerning hearing function, as well as causes of hearing loss in both children and adults.
2. the public be made aware of professional health care providers within local communities.
3. there be a concerted effort, both locally and nationally, to enforce truth in advertising regarding hearing aids and restoration of hearing.
4. there be a greater interface in professional meetings between audiologists, otologists, and other health-care providers.

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