DOCUMENT RESUME

ED 040 525 EC 005 444

AUTHOR Quigley, Stephen P.; And Others
TITLE Educational and Occupational Status of Young Deaf Adults in Illinois.
INSTITUTION Illinois Univ., Urbana. Inst. of Research for Exceptional Children.
SPONS AGENCY Rehabilitation Services Administration (DHEW), Washington, D.C.
PUB DATE 69
NOTE 66p.

EDRS PRICE EDRS Price MF-$0.50 HC-$3.40
DESCRIPTORS Academic Achievement, *Aurally Handicapped, Day Schools, Educational Status Comparison, *Exceptional Child Research, Group Status, Job Placement, *Occupational Surveys, Questionnaires, Residential Schools, Vocational Adjustment, *Young Adults

ABSTRACT

A questionnaire was used to obtain information from 464 hearing impaired individuals concerning occupational status and to determine any relationship between types of educational programs attended and later occupational achievement. Subjects had attended exclusively one of four types of programs: residential, day school programs in Chicago, day school programs in other areas of Illinois, and public school classes for the general population. Analysis of the data revealed similarities among groups in wages received for given occupations and job satisfaction. Residential groups reported lower hearing ability and socio-economic level. Non-residential groups reported more professional, technical, and clerical employment; more social and marital involvement with normally hearing persons; better oral communication skills; a greater value on oral communication as related to job performance and advancement. (JB)

EDUCATIONAL AND OCCUPATIONAL STATUS OF YOUNG DEAF ADULTS IN ILLINOIS

Stephen P. Quigley, Ph.D.

Barbara E. Babbini, M.A.

William J. A. Marshall, M.S.Ed.

Institute for Research on Exceptional Children

University of Illinois

1969

This investigation was supported, in part, by a research grant RD 2922s from the

Rehabilitation Services Administration

Department of Health, Education, and Welfare

Washington, D. C.

EDUCATIONAL AND OCCUPATIONAL STATUS OF YOUNG DEAF ADULTS IN ILLINOIS

Stephen P. Quigley, Ph.D.

Barbara E. Babbini, M.A.

William J. A. Marshall, M.S.Ed.

Institute for Research on Exceptional Children

University of Illinois

1969

This investigation was supported, in part, by a research grant RD 2922s from the

Rehabilitation Services Administration

Department of Health, Education, and Welfare

Washington, D. C.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES (CONT.)

REFERENCES

Brill, R. G. Deafness and the genetic factor. Amer. Ann. Deaf, 108, 359-373 (1963).

Lunde, A. S. and Bigman, S K. OCCUPATIONAL CONDITIONS AMONG THE DEAF. Washington, D. C.: Gallaudet College (1965).

Quigley, S. P., Jenné, W. C. and Phillips, Sondra B. DEAF STUDENTS IN COLLEGES AND UNIVERSITIES. Washington, D. C.: The Volta Bureau, Alexander Graham Bell Association for the Deaf, Inc. (1968).

Rainer, J. D., Altshuler, K. Z., Kallman, F. J. and Deming, W. E. FAMILY AND MENTAL HEALTH PROBLEMS IN A DEAF POPULATION. New York: Columbia University (1963).

Schein, J. D. THE DEAF COMMUNITY: STUDIES IN THE SOCIAL PSYCHOLOGY OF DEAFNESS. Washington, D. C.: Gallaudet College Press (1968).

Schunhoff, H. F. Comprehensive programming to meet today's needs for all deaf children. Volta Rev., 7, 410-414 (1964).

Streng, Alice H. The swing of the pendulum: A critique of the education of the deaf. Volta Rev., 69, 2, 95-96 (1964).

U. S. Bureau of the Census. METHODOLOGY AND SCORES OF SOCIOECONOMIC STATUS. Working paper No. 15. Washington, D. C. (1963).

Weir, R. C. Impact of multiple handicapped deaf on special education. Volta Rev., 65, 287-289; 325 (1963).

ACKNOWLEDGMENTS

Grateful acknowledgment is made to all of the administrators of schools and classes for deaf students in the state of Illinois who provided the information needed for tracing former students as possible subjects for the study. The authors are grateful also to personnel of the Survey Research Laboratory of the University of Illinois who conducted and guided major portions of the project. They acknowledge with gratitude the efforts of the interviewers whose skill in manual communication was vital to the conduct of personal interviews with a number of the subjects. And finally, the authors recognize, and gratefully acknowledge, the Rehabilitation Services Administration whose financial support made the project possible.

OBJECTIVES OF THE STUDY

The study had two major objectives: (1) to determine the occupational, marital, and social conditions of persons who had attended educational programs for deaf individuals in the state of Illinois; and (2) to determine if there were any relations between the types of educational programs which deaf persons had attended in the state and their later functioning in adult society.

In addition to the specific objectives, it was hoped that the study would contribute to the general body of knowledge about the adult deaf population in the United States which has been accumulating during the past 15 years. The pioneering work in this area in recent times was contributed by Lunde and Bigman (1959) in their national study of occupational conditions among deaf persons. This study provided much information about the occupational, marital, and social conditions among deaf people, and emphasized the need for further information in many areas, including the relationship of educational background to functioning in adult life which is a major focus of the present study. Since the Lunde and Bigman study, a number of efforts have contributed to our knowledge of the status of deaf adults including studies by Rainer and his associates at the New York Psychiatric Institute (1963), Crammatte (1967), Quigley, Jenné, and Phillips (1968), and Schein (1969).

As has been stated, one of the major objectives of the present study was to examine the relationships between the types of educational programs which deaf persons had attended in Illinois and their later occupational, social, and marital status. While there has been considerable discussion of the advantages and disadvantages of the various types of educational programs available to deaf students, little factual information has been presented on the matter. Three such types of programs are available to deaf students in many states:

residential schools; day schools; and day classes. In earlier times, most deaf students were educated in residential programs; however, with increased urbanization of the population in the United States, there has been a dramatic increase in the numbers of deaf students attending day schools and day classes and this trend is likely to continue. What this means for the educational future of deaf persons remains to be determined.

Illinois is one of a number of states which has sizable day school and day class programs in addition to a residential school. It was decided to attempt to obtain relatively "pure" samples of deaf adults who had been educated in each of the types of programs and to determine, by comparison, if there were any differences among the groups which might be ascribed to the effects of the programs. The "pure" samples were to include only individuals who had received all of their education in a single type of program - residential school, day school, or day class. As will be seen later this meant excluding many individuals who had attended more than one type of educational program in the state and some who had received part of their education outside the state.

It was also decided to limit the target population to individuals who had terminated in educational programs, for any reason, between the years 1957 and 1967, inclusive. First, this placed the emphasis on the younger deaf adults in the population. Second, most day class programs in the state are of relatively recent origin, and it was considered unlikely that many persons would have been educated solely in these classes prior to 1957. Third, this seemed about as long a period of time as day schools and classes could be expected to have kept records which would be needed in tracing former students.

PROCEDURES OF THE STUDY

Conduct of the study involved: (1) preparation of the questionnaire; (2) location of the population; (3) collection of the data; (4) limitation and categorization of the population; and (5) treatment of the data.

Preparation of the Questionnaire

A structured questionnaire was used to obtain the desired information from the target population. The 12-page questionnaire contained 55 items, most of which had several sub-items, and was designed to obtain information on a wide range of topics including the following.

1. Characteristics of the Respondents. Questions in this section of the study instrument provided information on age, sex, and racial origin of the respondents; geographic distribution of the respondents; information on various factors related to hearing such as age at onset of deafness, cause of deafness, hearing ability with and without amplification, hearing aid usage, and age at which a hearing aid was first used.

2. Family Background. This section of the instrument included questions on the occupation, income, and education of the head of the family of each respondent; and on the hearing ability of each member of the family.

3. Methods of Communication. Information was sought on the oral communication abilities of the target population; the methods of communication they used with members of their families, friends, employers, and co-workers; the frequency with which they needed to use speech in their employment; and the importance they assigned to speech ability in obtaining occupational advancement.

4 Current Educational and Occupational Status. A number of questions concerned the educational and occupational activities of the respondents since

leaving programs for deaf students. Educational information included the types, names, and locations of schools attended, and current educational status. Occupational information included type of occupation, weekly income, occupational satisfaction, difficulties encountered in obtaining employment, sources used in obtaining employment, union membership, and type of occupation the respondent would prefer if he had free choice of selection and was starting over again.

5. Marital Status. The potential respondents were asked to supply information on their present marital status; their preference for marrying a person with normal hearing or impaired hearing; and, if married, the hearing ability of their spouses.

6. Social Activities. Several questions were designed to elicit information on membership in clubs and organizations; church membership and attendance; extent of involvement in church social activities; and types of spare time activities. However, this produced so little information of interest that the data are not included in the results of the study.

7. Areas of Perceived Educational Need. A section of the questionnaire was devoted to obtaining information on areas in which respondents felt a need for further education or training; their opinions of their educational preparation in relation to their present occupations; and their opinions of the five most important items which should be included in educational programs for deaf children.

The initial form of the questionnaire was pre-tested on a random sample selected from the target population. Questionnaires were mailed to 33 persons and responses were obtained from 25, a response rate of 75 per cent. Examination of these returns, and suggestions from a number of persons involved in the education and rehabilitation of deaf people, resulted in some modification of the questionnaire into its final form.

Location of the Population

The target population consisted of those persons who had left programs for deaf students in the state of Illinois between the years 1957 and 1967, inclusive. A list of all such programs within the state was compiled and letters were sent to the appropriate administrative officers requesting the names of former students who had left their school during the designated period. The letter emphasized that the writers were interested in all students who had left during this period, regardless of the reason for leaving, and not exclusively in graduates of the programs. Follow-up procedures by letter and telephone resulted in responses from all of the schools and classes. The only items of information sought in the letters were: (1) names of former students; (2) last known addresses of students; (3) last known addresses of parents or guardians; and (4) birthdates and sex of students.

A total of 942 names was supplied by the various educational programs, including the 33 which were used in pre-testing the questionnaire. As the names were received, letters were sent to parents with an enclosed card listing the names and addresses of their deaf children and requesting verification or correction of the information on the card.

Collection of the Data

Mail questionnaire. The final form of the questionnaire was mailed to 909 potential subjects in April, 1968. Follow-up letters were sent to non-respondents in May, and a second copy of the questionnaire was mailed to remaining non-respondents in June.

Table 1 shows the classification of persons to whom questionnaires were sent.

Insert Table 1 about here

TABLE 1

Classification of Questionnaire Attempts
(Includes 33 in Pre-test Sample)

I.	Respondents		477
	Codeable questionnaires received	402	
	Incomplete or uncodeable questionnaires received	11	
	Completed questionnaires received but respondents ineligible		
	Still in state programs for deaf students	52	
	Severely disabled	12	
II.	Non-Respondents		465
	Questionnaires apparently delivered but not returned	311	
	Questionnaires returned as undeliverable	147	
	Deceased or not deaf	3	
	Refusals (questionnaire returned blank	3	
	Total		942

Personal Interview. In order to obtain as large a group as possible of the target population of 942 persons, it was decided that a sample of non-respondents to the mailed questionnaire would be sought through personal interview. Of the 311 non-respondents who apparently had received the questionnaire, a group of 177 was selected for interview attempts. This group included a random 50 per cent sample of non-respondents from Chicago and "clusters" of non-respondents from five areas of the state in which qualified interviewers could be found. The areas were (1) Rockford and Dixon; (2) Jacksonville, Decatur, Peoria, and Springfield; (3) Champaign-Urbana and Danville; (4) East St. Louis; and (5) the extreme southern section of the state.

It was anticipated that most of the personal interviews would have to be conducted through manual communication, so the major criterion for selection of interviewers was that they be proficient in this method of communication. Two training sessions were conducted for the interviewers, one on the campus of the University of Illinois in Chicago for interviewers in the northern part of the state, and one at the University of Illinois in Champaign-Urbana for interviewers in the other areas of the state. Training was provided by personnel of the Survey Research Laboratory at the University of Illinois. Interviewers were instructed to make three attempts to contact each potential respondent and to use the project questionnaire as the interview instrument.

The northern Illinois target sample included Chicago and the Rockford-Dixon cluster and consisted of 108 persons. The target sample for the remainder of the state consisted of 69 persons. Table 2 shows the results of the personal interview attempts. It can be seen that 89 usable questionnaires were obtained through the personal interviews, 49 from Chicago and northern

---

Insert Table 2 about here

Illinois, and 40 from the remainder of the state.

TABLE 2

Classification of Personal Interview Attempts

	Northern Illinois	Downstate Illinois	
I. Contacts			105
Usable interviews	49	40	
Refusals	4	3	
Ineligible			
Severely disabled	1	3	
Still in state programs for deaf students	2	1	
Deceased	1		
Unusable interviews	1		
II. Non-Contacts			72
Moved from area	8	16	
Could not be located	17	5	
No contact after repeated attempts	11	1	
Not attempted	14		
Total	108	69	177

Limitation of the Population

As stated earlier, a major objective of the investigation was to obtain comparative information on individuals who had received most or all of their education exclusively within one or another of various types of schools and classes for hearing impaired students in the state of Illinois and who had left those programs between the years 1957 and 1967. Examination of the 491 usable questionnaires (402 from mailed questionnaires and 89 from personal interviews) revealed that a number of respondents had attended more than one type of educational program, including some who had received part of their education in programs outside of Illinois. When these respondents were eliminated from consideration, 350 were left who had received all of their education within a single type of program in the state of Illinois. Of the total, 147 had obtained all of their special education in the Illinois School for the Deaf (the state residential school); 147 in the special day programs in Chicago; 36 in special day programs throughout the state, excluding Chicago; and 20 had not attended any special program for hearing impaired students. These 350 respondents form the subjects of the investigation, and most of the data presented are classified into the four types of programs for the purpose of comparison.

Table 3 shows the classification of the respondents by type of educational program attended and by area of the state in which they lived at the time the

---

Insert Table 3 about here

---

survey was conducted. The eight areas of the state are those used by the Illinois Division of Vocational Rehabilitation. Inspection of Table 3 reveals that there were marked differences in geographic distribution of the respondents who attended the four types of educational programs. Respondents who had

TABLE 3

Distribution of Respondents, by Area of State and by Type of Program (Unweighted)

	Residential program		Chicago day programs		Other day programs		No special program		Total	
	No.=147		No.=147		No.=36		No.=20		No.=350	
Area	no.	%	no.	%	no.	%	no.	%	No.	%
Extreme south	13	8.8	0	0	0	0	0	0	13	3.7
South central	23	15.6	1	0.6	0	0	0	0	24	6.8
Southwest central	28	19.0	0	0	3	8.3	0	0	31	8.8
East central	21	14.2	0	0	15	41.6	2	10.0	38	10.8
West central	14	9.5	2	1.3	6	16.6	0	0	22	6.2
Northwest	11	7.4	0	0	0	0	0	0	11	3.1
North central	11	7.4	1	0.6	1	2.7	0	0	13	3.7
Northeast (Cook County)	17	11.5	136	92.5	11	30.5	16	80.0	180	51.4
Information not supplied	9	6.1	7	4.7	0	0	2	10.0	18	5.1

attended the residential school were distributed fairly evenly throughout the eight areas of the state; those who had attended the day programs in Chicago still resided mostly in that area or the surrounding area of Cook County (92.5 per cent); 81.8 per cent of those who did not attend any special program for the deaf also resided within Cook County; and those who attended day programs other than in Chicago tended to be clustered in a few areas which have day programs for hearing impaired students.

Treatment of the Data

Data analysis was performed on the IBM 7094 and 360 computers at the University of Illinois. Initial analysis involved comparing the data for those persons responding to the mailed questionnaire and those for whom the questionnaire information was obtained by personal interview. It was expected there would be significant differences between the two groups on most of the questionnaire items, and chi-square comparison of the distributions of the two groups for each item proved this to be the case. Because of this, the two groups could not be combined without introducing a weighting factor for the interview group. Personnel of the Survey Research Laboratory determined the required factor and this was applied. Weighting had the effect of increasing the size of the interview group to the extent that the total group was equivalent to 464 persons. The weighted N (464) is used in all of the data and tables presented in the report with the exception of a few variables such as age, sex and racial origin of the respondents. Where the unweighted N is used (350) this is noted in the tables and in the text. Tests of statistical significance (chi-square in most cases) were performed for a number of the items as were correlational analyses between most of the variables. Where relevant, the results are discussed in the text.

RESULTS OF THE STUDY

Data in this chapter are presented in six sections. The first contains information on such characteristics of the respondents as chronological age, sex, and racial origin; factors related to hearing ability, including age at onset of deafness, and hearing ability with and without amplification. The second section presents information on the socioeconomic status of the respondents' parents or guardians and on the hearing ability of their families and friends. In the third section are data concerning the methods of communication used by the respondents with families and friends, and on the job. The fourth section contains the bulk of the information obtained from the study and includes data on educational background, occupational level, and occupational satisfaction of the respondents. Marital preference and status are discussed in the fifth section, and the final section presents information on the expressed needs of the respondents for further training, and how relevant they felt their educational programs had been to their later occupational opportunities and choices.

Where possible, the main study data are presented in tabular form, although space limitations made this unfeasible at times. Most of the tabular data are presented by type of educational program so that various comparisons can be made. Tests of significance were made among the four programs on a number of the variables and are discussed in the text. It should be understood this was not a controlled study with matched groups and the data must be evaluated in light of this. There were such significant differences among the four groups, however, as to make inappropriate any combination of the groups into a single group. In many respects, it will be seen that the four groups were essentially different types of hearing impaired individuals.

Characteristics of the Respondents

Using the unweighted N of 350, the 147 respondents who had attended only the Illinois School for the Deaf represented 42.0 per cent of the total and had a mean age at the time of the study of 25.4 years, with a standard deviation of 3.46 years. An identical number of respondents, 147 and 42.0 per cent of the total, had attended only the Chicago day programs: the group had a mean age at time of response of 23.9 years with a standard deviation of 2.76 years. There were 36 respondents who had attended only day programs outside of Chicago with a mean reported age of 24.0 years, and a standard deviation of 2.98 years: this group composed 10.3 per cent of the total. The 20 respondents who had not attended any special programs for deaf students represented 5.7 per cent of the total and had a mean age of 23.8 years, with standard deviation of 2.09 years. There were no significant differences among the four groups on the age variable. For the total unweighted N of 350, mean age was reported as 24.5 years, with a standard deviation of 3.15 years. The respondents therefore represented mostly young deaf adults, a factor which was anticipated since only students leaving school between the years 1957 and 1967 were included, and the data were collected in 1968.

Of the unweighted total of 350 subjects, 56.2 per cent were male and 43.7 per cent female. For the four types of educational programs the percentages were: residential school, 59.8 per cent male and 41.2 per cent female; Chicago day programs, 55.1 per cent male and 44.9 per cent female; the respondents from the remaining two groups each contained 50 per cent male and 50 per cent female subjects.

There were some apparent differences in the racial distribution of the four groups. The residential school group consisted of 84.4 per cent white, 7.5 per cent non-white, and 8.3 per cent who did not answer the question. For

the Chicago group the corresponding percentages were 74.8 white, 17.0 non-white, and 8.2 non-responders. Respondents who had attended only day programs other than in Chicago included 91.7 per cent white, 8.3 who did not answer the question, and none reporting as non-white. Of the total unweighted N of 350, 80.9 per cent reported as white, 11.1 per cent as non-white, and 8.0 per cent did not answer. The differences in racial distribution among the four groups may be partly attributable to the normal racial distribution of the Illinois population, with a heavy concentration of non-whites residing in Chicago and the surrounding area.

Table 4 shows the distribution of respondents in the four groups on age at onset of deafness. It can readily be seen that most respondents suffered hearing impairment at early ages. If the dividing line between prelingual and postlingual hearing impairment is taken to be at the age of three years, then 86.2 per cent of the residential group were prelingually deafened, 81.7 per cent of the Chicago group, 90.0 per cent of the day group outside Chicago, and 63.6 of those who did not attend special programs for deaf students. The percentages are quite similar among the groups with the notable exception of the respondents who did not attend special programs. This difference might be

Insert Table 4 about here

one factor in their being able to attend regular school programs, although other factors certainly must have been involved. It should also be noted that a high percentage of the latter group reported not knowing the age at onset of impairment. If it is assumed that all those so reporting did not know because of having been deafened when too young to remember, then adding the percentages from this category to each of the groups produces 89.0 per cent of residential respondents prelingually impaired, 84.4 per cent of those from Chicago, 95.0

TABLE 4

Age at Onset of Deafness, by Type of Program

	Residential program		Chicago day programs		Other day programs		No special program		Total	
	No.=211		No.=191		No.=40		No.=22		No.=464	
Age at Onset	no.	%	no.	%	no.	%	no.	%	No.	%
At birth	111	52.6	115	60.2	24	60.0	11	50.0	261	56.2
Under 3	71	33.6	41	21.5	12	30.0	3	13.6	127	27.4
4 - 5 years	15	7.1	11	5.7	1	2.5	1	4.5	28	6.0
6 - 8 years	4	1.9	12	6.3	1	2.5	2	9.1	19	4.1
9 - 11 years	0	0	1	0.5	0	0	0	0	1	0.2
12 - 14 years	0	0	2	1.0	0	0	0	0	2	0.4
Don't know	6	2.8	7	3.7	2	5.0	4	18.2	19	4.1
No answer	4	1.9	2	1.0	0	0	1	4.5	7	1.5

per cent from outside Chicago, and 81.8 per cent who did not attend special programs. Either the first or second set of figures indicates in any case that very high percentages of the respondents in all four groups suffered prelingual hearing impairment. This is possibly a reflection of the changing composition of the populations of students in programs for hearing impaired individuals which has been noted in recent years (Brill, 1964; Schunhoff, 1964; and Streng, 1967).

Tables 5, 6, and 7 show data on the reported hearing ability of the respondents on a scale described by Schein (1964). Table 5 reports data on hearing ability without hearing aid for all respondents in each of the four groups. It can be seen that respondents in the residential school group reported less hearing ability than the other three groups as indicated by smaller percentages of them answering positively to their ability to hear under the various conditions listed both with and without lipreading. Chi-square tests indicated that a number of the differences were statistically significant.

Insert Table 5 about here

Significant differences were found on: (1) ability to distinguish voices from other noises (.05 level); (2) understand a few words (.05 level); (3) understand most things said (.01 level); and (4) understand ordinary conversation between other persons (.01 level). These findings indicate lesser hearing ability on the part of the residential group. Significant differences were also found on the two items reported with lipreading, with .05-level significance on understanding a few words, and .01-level significance on understanding most things said. Again the residential school group had the lowest scores of the four. It is possible the lower reported hearing ability for the residential group resulted from a selective factor of fewer hard-of-hearing children attending that program than the other three.

TABLE 5

Hearing Ability Without Hearing Aid, by Type of Program: All Respondents

Without A Hearing Aid Respondent Can:		Residential program No.=211		Chicago day programs No.=191		Other day programs No.=40		No special program No.=22		Total No.=464	
Without lipreading		no.	%	no.	%	no.	%	no.	%	No.	%
Hear loud noises	Yes	140	66.3	152	79.6	27	67.5	17	77.3	336	72.4
	No	70	33.2	39	20.4	13	32.5	5	22.7	127	27.4
	N A	1	0.5	0	0	0	0	0	0	1	0.2
Discriminate between noises	Yes	70	33.2	91	47.6	18	45.0	10	45.5	189	40.7
	No	133	63.0	99	51.9	22	55.0	12	54.5	266	57.4
	N A	8	3.8	1	0.5	0	0	0	0	9	1.9
Distinguish voices from other noises*	Yes	101	47.8	125	65.5	27	67.5	15	68.2	268	57.7
	No	105	49.8	63	32.9	13	32.5	6	27.3	187	40.4
	N A	5	2.4	3	1.6	0	0	1	4.5	9	1.9
Understand a few words**	Yes	49	23.2	95	49.7	22	55.0	14	63.6	180	38.8
	No	155	73.5	93	48.7	18	45.0	7	31.8	283	61.0
	N A	7	3.3	3	1.6	0	0	1	4.6	1	0.2
Understand most things said	Yes	9	4.3	24	12.6	5	12.5	3	13.6	31	6.7
	No	195	92.4	165	86.4	35	87.5	18	81.8	413	89.1
	N A	7	3.3	2	1.0	0	0	1	4.6	10	2.2
Understand ordinary conversation between others*	Yes	7	3.3	23	12.0	5	12.5	2	9.1	37	7.9
	No	195	92.4	167	87.5	35	87.5	19	86.4	416	89.7
	N A	9	4.3	1	0.5	0	0	1	4.5	11	2.4
Use ordinary telephone without an amplifier*	Yes	25	11.9	45	23.6	9	22.5	7	31.8	86	18.5
	No	179	84.8	145	75.9	31	77.5	14	63.6	369	79.6
	N A	7	3.3	1	0.5	0	0	1	4.6	9	1.9
With lipreading											
Understand a few words*	Yes	52	24.6	72	37.7	17	42.5	12	54.5	153	32.9
	No	152	72.1	117	61.3	22	55.0	10	45.5	301	64.9
	N A	7	3.3	2	1.0	1	2.5	0	0	10	2.2
Understand most things said**	Yes	20	9.5	46	24.1	10	25.0	10	45.5	86	18.5
	No	183	86.7	144	75.4	30	75.0	12	54.5	369	79.6
	N A	8	3.8	1	0.5	0	0	0	0	9	1.9

*Significant at .05 level. **Significant at .01 level.

Besides being asked to respond on the scale on their ability to hear without a hearing aid (to which all subjects responded), subjects were asked to report on their ability to hear with a hearing aid. It was assumed that this response would be made by those who regularly wore aids. Table 6 reports the responses. Of the weighted total of 211 respondents who had attended the residential school, only 70, or 33.1 per cent, reported on the question, as compared to 64.9 per cent of the Chicago program group, 92.5 per cent of those who attended day programs other than in Chicago, and 59.1 per cent of the fourth group. When the respondents were asked if they had ever worn individual hearing aids, 55.9 per cent of the residential school group reported

---

Insert Tables 6 & 7 about here

---

that they had, as compared to 82.7 per cent of the Chicago group, 95.0 per cent of those who attended other day programs, and 77.3 per cent of those who did not attend special programs. The data, therefore, indicated that the wearing of individual hearing aids by the residential school group was much less prevalent than for the other groups at time of the study. This might be related to the lesser hearing ability reported by the residential group and discussed earlier, although correlational analysis showed only a low negative correlation ($r=-.32$) between hearing aid usage and hearing ability without a hearing aid. When asked in another question to give reasons for non-use of hearing aids, 80.9 per cent of non-users in the residential school group replied that it did not help as compared to 66.7, 50.0, and 60.0 per cent for the other three groups, respectively.

Average age at which hearing aid use began was reported as 9.4 years for the residential group, 9.0 for the Chicago group, 5.8 for those who attended programs outside Chicago, and 7.7 for the fourth group. The starting ages seem

TABLE 6

Hearing Ability With Hearing Aid, by Type of Program:
Respondents who Answered Q5 (Hearing Ability with Hearing Aid)

With A Hearing Aid, Respondent Can:		Residential program		Chicago day programs		Other day programs		No special program		Total	
Without lipreading		no.	%	no.	%	no.	%	no.	%	No.	%
Hear loud noises	Yes	69	98.6	124	100.0	37	100.0	13	100.0	243	99.6
	No	1	1.4	0	0	0	0	0	0	1	0.4
	N A	0	0	0	0	0	0	0	0	0	0
Discriminate between noises	Yes	59	84.3	107	86.3	33	89.3	12	92.3	211	86.5
	No	8	11.4	15	12.1	4	10.8	1	7.7	28	11.5
	N A	3	4.3	2	1.6	0	0	0	0	5	2.0
Distinguish voices from other noises	Yes	53	75.7	93	75.0	31	83.8	12	92.3	189	77.5
	No	17	24.3	29	23.4	6	16.2	1	7.7	53	21.7
	N A	0	0	2	1.6	0	0	0	0	2	0.8
Understand a few words	Yes	31	44.3	68	54.8	22	59.5	11	84.6	132	54.1
	No	38	54.3	56	45.2	15	40.5	2	15.4	111	45.5
	N A	1	1.4	0	0	0	0	0	0	1	0.4
Understand most things said	Yes	19	27.1	43	34.7	10	27.0	4	30.8	76	31.1
	No	50	71.4	80	64.5	27	73.0	9	69.2	166	68.0
	N A	1	1.4	1	0.8	0	0	0	0	2	0.8
Understand ordinary conversation between others	Yes	11	15.7	32	25.8	10	27.0	3	23.1	56	23.0
	No	57	81.4	92	74.2	27	73.0	10	76.9	186	76.2
	N A	2	2.9	0	0	0	0	0	0	2	0.8
Use ordinary telephone	Yes	20	28.6	53	42.7	15	40.5	11	84.6	99	40.6
	No	46	65.7	69	55.6	21	56.8	2	15.4	138	56.6
	N A	4	5.7	2	1.6	1	2.7	0	0	7	2.9
With lipreading											
Understand a few words	Yes	65	92.9	101	81.5	34	91.9	13	100.0	213	87.3
	No	4	5.7	23	18.5	3	8.1	0	0	30	12.3
	N A	1	1.4	0	0	0	0	0	0	1	0.4
Understand most things said	Yes	49	70.0	100	80.6	27	73.0	13	100.0	189	77.5
	No	20	28.6	24	19.4	10	27.0	0	0	54	22.1
	N A	1	1.4	0	0	0	0	0	0	1	0.4

Hearing Ability Without Hearing Aid, by Type of Program
Respondents who Answered Q5 (Hearing Ability with Hearing Aid)

Without A Hearing Aid, Respondent Can:		Residential program		Chicago day programs		Other day programs		No special program		Total	
Without lipreading		no.	%	no.	%	no.	%	no.	%	No.	%
Hear loud noises	Yes	65	92.9	101	81.5	25	67.6	11	84.6	202	82.8
	No	5	7.1	23	18.5	12	32.4	2	15.4	42	17.2
	N A	0	0	0	0	0	0		0	0	0
Discriminate between noises	Yes	38	54.3	58	46.8	16	43.2	6	46.2	118	48.4
	No	32	45.1	66	53.2	21	56.8	7	53.8	126	51.6
	N A	0	0	0	0	0	0	0	0	0	0
Distinguish voices from other noises	Yes	28	40.0	46	37.1	15	40.5	8	61.5	97	39.8
	No	41	58.6	78	62.9	21	56.8	5	38.5	145	59.4
	N A	1	1.4	0	0	1	2.7	0	0	2	0.8
Understand a few words	Yes	13	18.6	27	21.8	8	21.6	6	46.2	54	22.1
	No	56	80.0	97	78.2	29	78.4	7	53.8	189	77.5
	N A	1	1.4	0	0	0	0	0	0	1	0.4
Understand most things said	Yes	7	10.0	10	8.1	3	8.1	1	7.7	21	8.6
	No	62	88.6	113	91.1	34	91.9	12	92.3	221	90.6
	N A	1	1.4	1	0.8	0	0	0	0	2	0.8
Understand ordinary conversation between others	Yes	4	5.7	13	10.5	3	8.1	0	0	20	8.2
	No	64	91.4	111	89.5	34	91.9	13	100	222	91.0
	N A	2	2.9	0	0	0	0	0	0	2	0.8
Use ordinary telephone without an amplifier*	Yes	15	21.4	26	21.0	7	18.9	5	38.5	53	21.7
	No	54	77.1	98	79.0	30	81.1	8	61.5	190	77.9
	N A	1	1.4	0	0	0	0	0	0	1	0.4
With lipreading											
Understand a few words	Yes	60	85.7	83	66.9	25	67.6	10	76.9	178	73.0
	No	10	14.3	40	32.3	12	32.4	3	23.1	65	26.6
	N A	0	0	1	.8	0	0	0	0	1	0.4
Understand most things said	Yes	35	50.0	62	50.0	20	54.1	9	69.2	126	51.6
	No	34	48.6	61	49.2	17	45.9	4	30.8	116	47.5
	N A	1	1.4	1	0.8	0	0	0	0	2	0.8

*Significant at .05 level

late for all groups, considering most respondents reported onset of hearing impairment as having taken place before the age of three, but it should be remembered they were reporting this information for the early 1950's, when hearing aid usage at a very young age was not as prevalent as it is now.

Chi-square tests of significance revealed no differences among the four groups on any of the items of the scale. Hearing aid users apparently were receiving equal benefit from their aids regardless of type of school. Table 7 shows the scale responses for the same respondents as in Table 6 but without use of a hearing aid. Comparison of the two tables will reveal the considerable benefit being obtained through use of a hearing aid by users from all four types of programs. Scores were higher for all groups on all items on Table 6 as compared to Table 7. Chi-square tests were performed on Table 6 to check for differences among the four groups on the scale items when hearing aids were being used. One significant difference was found for the final item at the .05 per cent level, apparently due to a considerably higher percentage of the fourth group reporting they could use an ordinary telephone without an amplifier than the other three groups reported. This again indicates less severe hearing impairment among respondents in the group which did not attend special programs.

Family Background

Table 8 shows the distribution of the amount of education reported by the respondents for the parent or guardian regarded as the head of the family while the respondent was growing up. Table 9 shows similar distribution for occupations of the heads of families, and Table 10 for income. Chi-square tests

---

Insert Tables 8, 9 & 10 about here

---

revealed that the distribution in each Table was significantly different among

TABLE 8

Education of Family Heads, by Type of Program

Education*	Residential program No.=211		Chicago day programs No.=191		Other day programs No.=40		No special program No.=22		Total No.=464	
	no.	%	no.	%	no.	%	no.	%	No.	%
Some elementary school	36	17.1	25	13.1	5	12.5	1	4.5	87	15.0
Graduated from elem. school	45	21.3	16	8.4	8	20.0	0	0	82	14.2
Some high school	48	22.7	53	27.7	3	7.5	3	13.6	132	22.8
Graduated from high school	39	18.5	37	19.4	9	22.5	3	13.6	112	19.3
Attended vocational school	7	3.3	11	5.8	0	0	2	9.1	27	4.7
Some college	10	4.7	21	11.0	5	12.5	1	4.5	46	7.9
College degree	4	1.9	7	3.7	2	5.0	5	22.7	19	3.3
Graduate degree	1	0.5	10	5.2	8	20.0	4	18.2	29	5.0
No answer	17	8.1	11	5.8	0	0	2	9.1	39	6.7
Not applicable	4	1.9	0	0	0	0	1	4.5	6	1.0

*Significant differences found at .01 level.

TABLE 9

Occupation of Family Heads, by Type of Program

Occupational Category*	Residential program No.=211		Chicago day programs No.=191		Other day programs No.=40		No special program No.=22		Total No.=464	
	no.	%	no.	%	no.	%	no.	%	No.	%
Professional and technical	6	2.8	14	7.3	7	17.5	3	13.6	34	5.9
Farm owners and managers	21	10.0	0	0	1	2.5	0	0	34	5.9
Managers, officials, proprietors	6	2.8	22	11.5	5	12.5	10	45.5	45	7.8
Clerical workers	12	5.7	18	9.4	2	5.0	0	0	36	6.2
Craftsmen, foremen	42	19.9	60	31.4	12	30.0	2	9.1	150	25.9
Operative workers	44	20.9	30	15.7	2	5.0	1	4.5	105	18.1
Private household workers	1	0.5	0	0	0	0	0	0	1	0.2
Service and protective services	24	11.4	21	11.0	5	12.5	1	4.5	58	10.0
Farm laborers	0	0	0	0	1	2.5	0	0	1	0.2
Unskilled laborers	30	14.2	12	6.3	3	7.5	2	9.1	59	10.2
Sales workers	6	2.8	16	3.1	2	5.0	0	0	18	3.1
Retired	0	0	1	0.5	0	0	0	0	2	0.3
Do not know	0	0	1	0.5	0	0	1	4.5	2	0.3
No answer	15	7.1	6	3.1	0	0	1	4.5	28	4.8
Not applicable	4	1.9	0	0	0	0	1	4.5	6	1.0

*Significant differences found at .01 level.

TABLE 10

Income of Family Heads, by Type of Program

Income*	Residential program		Chicago day programs		Other day programs		No special program		Total	
	No.=211		No.=191		No.=40		No.=22		No.=464	
	no.	%	no.	%	no.	%	no.	%	No.	%
Less than $2,500	21	10.0	8	4.2	3	7.5	0	0	45	7.8
$2,500 - $4,999	88	41.7	55	28.8	6	15.0	3	13.6	183	31.6
$5,000 - $7,499	47	22.3	35	18.3	12	30.0	5	22.7	137	23.7
$7,500 - $9,999	19	9.0	41	21.5	8	20.0	3	13.6	88	15.2
$10,000 - $14,999	7	3.3	17	8.9	3	7.5	2	9.1	34	5.9
$15,000 - $19,999	1	0.5	5	2.6	3	7.5	0	0	10	1.7
More than $20,000	0	0	9	4.7	3	7.5	4	18.2	16	2.8
Do not know	7	3.3	4	2.1	0	0	0	0	11	1.9
No answer	17	8.1	17	8.9	2	5.0	4	18.2	49	8.5
Not applicable	4	1.9	0	0	0	0	1	4.5	6	1.0

*Significant differences found at .01 level.

the four groups (.01 level). In general, inspection of the distributions in the three tables reveals that the respondents who attended the residential school came from families where the family head had lower educational, occupational, and income level than the heads of the families of respondents in the other three groups.

Differences in the four groups can more readily be seen by computing average socioeconomic scores for the family heads of the four groups. This method combines the data on income, education, and occupation and gives a single index of socioeconomic status. It is used by the United States Bureau of the Census (1963) and a description of its computation can be found in Quigley, Jenné, and Phillips (1968). The SES scores for the four groups were: (1) residential, mean score 45.8, standard deviation 20.0; (2) Chicago day group, mean score 55.8; standard deviation 22.0; (3) day group from outside Chicago, mean score 55.5, standard deviation 27.2; and (4) group from no special program, mean score 66.6, standard deviation 27.7. The steady upward progression in average socioeconomic status can readily be seen from a low of 45.8 for the residential group to a high of 66.6 for the group who attended no special programs for deaf students.

The differences in socioeconomic status among the groups can possibly be explained, at least in part, by the distribution of the respondents across the state. This distribution was presented in Table 3 and showed that, while the respondents from the residential school were evenly distributed throughout the eight areas of the state (many of these being rural and small town areas), the respondents in the other groups tended to be clustered in a few large or moderate-sized urban areas. If their families were similarly distributed for the several groups at the time the respondents were in school, then this might explain the differences in socioeconomic level. It is likely that this was the

case for the group from Chicago day programs, since 92.5% reported residing in the area at the time of the study as well as having attended school there. By the nature of day programs, which accept only day students, it can be assumed they lived with their families in the Chicago area within commuting distance of their school.

Of those respondents who attended the residential school, 15.6 per cent reported one or both parents as being deaf or hard-of-hearing as compared to 10.8 per cent of the Chicago group, 7.5 per cent of the group who attended day programs other than in Chicago, and 4.5 per cent of those who attended no special programs. For deaf or hard-of-hearing siblings of the respondents, the percentages for the groups in the same order were 28.0 per cent, 20.9 per cent, 10.0 per cent, and 4.5 per cent. In reporting the hearing ability of their friends, 16.1 per cent of respondents from the residential group stated they were all or almost all normal hearing as compared to 31.4 per cent for the Chicago group, 55.0 per cent who attended day programs outside of Chicago, and 77.3 per cent for those who attended no special programs. It thus can be seen there were some differences among the groups in terms of percentages of hearing impaired family members, and this is reflected also in patterns of friendship with normal hearing people, and, as will be discussed in the next section, the modes of communication as well.

Methods of Communication

Table 11 contains data on the reported oral communication abilities of

---

Insert Table 11 about here

---

the respondents. The "Expressive" section of the table refers to the respondents' estimates of how intelligible their speech is to others. It can be seen that there are obvious differences among the groups, particularly with

TABLE 11

Oral Communication Abilities, by Type of Program

Communication Abilities	Residential program No.=211		Chicago day programs No.=191		Other day programs No.=40		No special program No.=22		Total No.=464	
Expressive										
Of respondent's speech, others understand:*	no.	%	no.	%	no.	%	no.	%	No.	%
Almost nothing said	74	35.1	15	7.9	1	2.5	1	4.5	91	19.6
Some things said	50	23.7	36	18.8	9	22.5	3	13.6	98	21.1
Most things said	46	21.8	113	59.2	27	67.5	14	63.6	200	43.1
Everything said	5	2.4	25	13.1	3	7.5	4	18.2	37	8.0
Respondent never uses speech	34	16.1	2	1.0	0	0	0	0	36	7.8
Receptive										
Respondent understands by lipreading:*										
Almost nothing said	74	35.1	28	14.7	3	7.5	2	9.1	107	23.1
Some things said	52	24.6	41	21.5	8	20.0	3	13.6	104	22.4
Most things said	61	28.9	101	52.9	25	62.5	13	59.1	200	43.1
Everything said	3	1.4	12	6.3	3	7.5	4	18.2	22	4.7
Respondent never learned to lipread	21	10.0	5	2.6	1	2.5	0	0	27	5.8

*Significant at .01 level.

regard to the residential group which reported much less intelligible speech than the other three. A similar situation exists on the "Receptive" part of the table which gives data on reported lipreading ability. Chi-square tests revealed that the differences among the distributions were significant at the .01 level for both speech and lipreading. The low self-reported ability on both speech and lipreading of the group who had attended the residential school could result from a number of factors. First is, of course, the reliability of self reports through questionnaires. This must always be viewed with caution. Other possible factors are the self-reported lower hearing ability of the residential group and the lower socioeconomic status of their families. Both of these factors could exert an important influence on speech and lipreading ability, for families low on the socioeconomic scale seldom have the education, the financial resources, nor the time to work extensively with their hearing-impaired children at home (and thus reinforce and expand the training given the children at school) to the extent that families higher on the scale can expend.

Table 12 shows the extent to which various types of communication were used by respondents in the four groups in communicating with their families and friends. Chi-square tests revealed there were significant differences (.01 level) among the four groups of respondents in the methods they used. For example, 31.3 per cent of respondents who had attended the residential school used the language of signs in communicating with their families, 37.9 per cent reported using fingerspelling, 60.7 per cent used speech, and 46.0 per cent resorted to writing. For the group who had attended day programs in Chicago the corresponding percentages were: language of signs, 9.9 per cent; finger-spelling, 11.0 per cent; speech, 92.1 per cent; writing, 15.1 per cent. The pattern of use of communication methods used by the Chicago group is similar

to that for the third and fourth groups. Patterns of communication used with deaf friends and with hearing friends can readily be detected by examination of Table 12.

Insert Table 12 about here

The differences in type of communication methods used by the various groups seemed to be related to their oral communication abilities as discussed in Table 11. The lower self-reported abilities of the residential group in speech and lipreading were reflected in their less frequent use of these methods of communication with their families and friends in comparison to the other three groups. The lesser reliance of the residential group on oral communication ability was also reflected in the use of writing by the four groups. Writing tends to be somewhat of a common denominator in communication for many deaf people when other means (manual or oral communication) prove inadequate. It can be seen in Table 12 also that 46.0 per cent of the residential group reported the use of writing with their families and 70.1 per cent with their hearing friends. The percentages using this means of communication with family and friends were much lower for all of the other three groups.

Methods of communication used by the four groups with employers and co-workers are shown in Table 13. Differences among the four groups are again

Insert Table 13 about here

apparent. For the residential group, the chief means of communication used were writing and speech, in that order. With the other three groups the order was reversed, with speech being first and writing second. The language of signs and fingerspelling were little used by any group, which is to be expected. As later results will show, the respondents were employed in a wide variety of

TABLE 12

Method of Communication with Family and Friends, by Type of Program

	Residential program		Chicago day programs		Other day programs		No special program		Total	
	No.=211		No.=191		No.=40		No.=22		No.=464	
Method of Communication	no.	%	no.	%	no.	%	no.	%	No.	%
Language of signs*										
Family	66	31.3	19	9.9	2	5.0	0	0	87	18.8
Deaf friends	198	93.8	129	67.5	14	35.0	6	27.3	347	74.8
Hearing friends	21	10.0	8	4.2	2	5.0	2	9.1	33	7.1
Fingerspelling*										
Family	80	37.9	21	11.0	0	0	0	0	101	21.8
Deaf friends	143	67.8	70	36.6	11	27.5	5	22.7	229	49.4
Hearing friends	46	21.8	16	8.4	0	0	0	0	62	13.4
Speech*										
Family	128	60.7	176	92.1	38	95.0	22	100.0	364	78.4
Deaf friends	11	5.2	94	49.2	23	57.5	16	72.7	144	31.0
Hearing friends	107	50.7	179	93.7	38	95.0	21	95.5	345	74.4
Writing*										
Family	97	46.0	29	15.2	3	7.5	2	9.1	131	28.2
Deaf friends	8	3.8	13	6.8	12	3.0	3	13.6	36	7.8
Hearing friends	148	70.1	58	30.4	12	3.0	3	13.6	221	47.6

*Significant differences at .01 level.

TABLE 13

Method of Communication on the Job, by Type of Program: Employed Respondents

Method of Communication	Residential program No.=176		Chicago day programs No.=160		Other day programs No.=32		No special program No.=15		Total No.=383	
With employer	no.	%	no.	%	no.	%	no.	%	No.	%
Sign language										
To employer	19	9.0	9	4.7	0	0	0	0	28	6.0
From employer	21	10.0	8	4.2	0	0	0	0	29	6.3
Fingerspelling										
To employer	20	9.5	4	2.1	0	0	1	4.5	25	5.4
From employer	25	11.8	4	2.1	0	0	0	0	29	6.3
Speech										
To employer**	79	37.4	141	73.8	30	75.0	13	59.1	263	56.7
From employer**	79	37.4	140	73.3	30	75.0	13	59.1	262	56.5
Writing										
To employer**	123	58.3	53	27.7	10	25.0	2	9.1	188	40.5
From employer*	113	53.6	55	28.8	8	20.0	4	18.2	180	38.8
With co-workers										
Sign language										
To co-workers	31	14.7	18	9.4	2	5.0	0	0	51	11.0
From co-workers	23	10.9	15	7.9	1	2.5	0	0	39	8.4
Fingerspelling										
To co-workers	34	16.1	5	2.6	2	5.0	0	0	41	8.8
From co-workers	22	10.4	5	2.6	1	2.5	0	0	28	6.0
Speech										
To co-workers**	90	42.7	147	77.0	31	77.5	15	68.2	283	61.0
From co-workers**	89	42.2	149	78.0	31	77.5	14	63.6	283	61.0
Writing										
To co-workers**	120	56.9	52	27.2	7	17.5	2	9.1	181	39.0
From co-workers**	119	56.4	51	26.7	8	20.0	4	18.2	182	39.2

Note: Multiple answers were possible.
*Significant at .05 level.
**Significant at .01 level.

occupations and it is likely that very few of the employers and co-workers had any knowledge of manual communication, although some apparently acquired some ability to use the method.

Table 14 presents data on the opinions of the four groups of respondents concerning their opinion of the importance of speech ability in obtaining occupational advancement. A majority in each of the groups considered it to be important or very important, but the percentage for the Chicago group was significantly higher than for the other three groups. Of the Chicago group 77.0 per cent rated speech as important or very important to occupational advancement, as contrasted by 51.0 per cent of the residential group, 59.0 per cent for the third group, and 58.0 per cent for the fourth group.

Insert Tables 14 & 15 about here

There were again significant differences (.01 level) among the groups on their reported frequency of need to use speech in their employment as can be seen in Table 15. Of the group who had attended only the residential school 32.4 per cent reported the need to use speech fairly often or almost all of the time. For the other three groups the percentages were 66.9, 68.8, and 80.0, respectively. It is likely that the differences among the groups were at least partly due to differences in type of employment, and some data on this will be presented later in the report.

Educational and Occupational Activities

The respondents were questioned concerning their activities in the immediate post-school period and the results are shown in Table 16. It can be seen there were substantial differences among the groups in what the respondents did immediately after leaving the educational programs they attended in the state. The largest number in each group entered employment with 63.0

TABLE 14

Respondents' Opinion of Importance of Ability to Speak in Obtaining Occupational Advancement, by Type of Program: Employed Respondents

Importance of Speech	Residential program No.=176		Chicago day programs No.=160		Other day programs No.=32		No special programs No.=15		Total No.=383	
	no.	%	no.	%	no.	%	no.	%	No.	%
Very important	54	30.7	82	51.3	13	40.6	8	53.3	157	41.0
Important	53	30.1	64	40.0	15	46.9	7	46.7	139	36.3
Not important	60	34.1	11	6.9	3	9.4	0	0	73	19.1
No answer	9	5.1	3	1.9	1	3.1	0	0	13	3.4

TABLE 15

Frequency of Need to Use Speech on the Job,
by Type of Program: Employed Respondents

Frequency of Use of Speech	Residential program No.=176		Chicago day programs No.=160		Other day programs No.=32		No special program No.=15		Total No.=383	
	no.	%	no.	%	no.	%	no.	%	No.	%
Almost all the time	19	10.8	43	26.9	12	37.5	6	40.0	80	20.8
Fairly often	38	21.6	64	40.0	10	31.3	6	40.0	118	30.8
Occasionally	59	33.5	41	25.6	9	28.1	2	13.3	111	28.9
Almost never	19	10.8	9	5.6	0	0	1	6.6	29	7.5
Never	36	20.5	2	1.3	0	0	0	0	38	9.9
No answer	5	2.8	1	0.6	1	3.1	0	0	7	1.8

Insert Table 16 about here

---

per cent of the residential group, 47.1 per cent of the Chicago group, 52.5 per cent of the third group, and 59.1 per cent of the fourth group following this pattern. The lower percentage of non-residential respondents entering employment was a result of a larger percentage of those respondents continuing their education than was the case for the residential group. The data show that 39.6 per cent, 52.4 per cent, 50.0 per cent, and 46.4 per cent of the four groups, respectively, continued their education in some type of educational or vocational program upon leaving school.

In addition to differences among the groups in the extent to which education was continued, there were obvious differences in the types of programs they attended. For the residential group attendance at a vocational or trade school was most common (20.8 per cent), while for the other three groups it was attendance at a college or university (27.2 per cent, 37.5 per cent, and 40.9 per cent, respectively). Differences among the four groups in attendance at a college or university were significant by chi-square at the .01 level. Types of colleges or universities attended also reflected differences among the groups. Of the 31 residential respondents who entered college or university, 22 (71.0 per cent) attended Gallaudet College. The percentages for the other three groups in order were 46.0, 27.0, and 22.0. The reverse situation was true of attendance at colleges or universities other than Gallaudet with the percentages of attendance for the four groups being 29.0, 54.0, 73.0, and 78.0, respectively, of those who had attended any institution of higher education.

The percentages for the Chicago group and for the group who attended no special programs for deaf students contained a number of respondents who attended junior colleges (19.0 per cent and 22.0 per cent). Since these two

TABLE 16

Activity in Immediate Post-School Period, by Type of Program

After leaving school, Respondent:	Residential program No.=211		Chicago day programs No.=191		Other day programs No.=40		No special program No.=22		Total No.=464	
	no.	%	no.	%	no.	%	no.	%	No.	%
Attended vocational/trade school	44	20.8	20	10.5	1	2.5	0	0	65	14.0
Attended business school	9	4.2	28	14.7	4	10.0	1	4.5	42	9.0
Attended college/university *	31	14.6	52	27.2	15	37.5	9	40.9	107	23.0
Type:										
Four year college/university	(9)	(29.0)	(18)	(35.0)	(11)	(73.0)	(5)	(56.0)	(43)	(40.0)
Junior college	(0)	(0)	(10)	(19.0)	(0)	(0)	(2)	(22.0)	(12)	(11.0)
Gallaudet College	(22)	(71.0)	(24)	(46.0)	(4)	(27.0)	(2)	(22.0)	(52)	(49.0)
Got married	36	17.0	24	12.6	5	12.5	4	18.2	69	13.0
Found employment	133	63.0	90	47.1	21	52.5	13	59.1	257	55.0
Remained at home	16	7.6	17	8.9	3	7.5	1	4.5	37	8.0
Other	1	0.5	4	2.1	0	0	0	0	5	1.0
No answer	6	2.8	4	2.1	0	0	1	4.5	11	2.0

Note: Multiple responses were possible.

*Significant at .01 level.

groups were concentrated in Chicago and nearby areas where junior colleges were readily accessible, proximity may have influenced attendance by the respondents. As pointed out by Quigley, Jenné, and Phillips (1968), increasingly higher standards for admission to and continuance in four-year colleges and universities might make it more and more difficult for deaf students to enter and survive in such institutions in the future, therefore, it might be well to note that the junior college may offer one possible solution to this problem, the advantages of which should be further explored. The study cited also found that students who attended combined system residential schools were more likely to attend Gallaudet College than other types of institutions, with the reverse being true for students who had attended other types of programs. The same situation was found in the present study, but it was also found that the group who had attended the residential school reported lower hearing ability and lower socioeconomic backgrounds for their families than respondents in the other three groups, which may have been a factor.

The current college status of those who reported attendance at an institution of higher education was explored. It was found that 40.5 per cent of the residential groups had left college without obtaining a degree, and 31.7 per cent, 31.6 per cent, and 30.0 per cent of the other three groups, respectively. Most of the other respondents were still attending or had received a degree, but there were some who did not answer this question (24.3 per cent, 4.8 per cent, 10.5 per cent, and zero per cent for the four groups).

Table 17 shows the current employment status of the respondents, by sex

---

Insert Table 17 about here

---

and type of school. One thing which should be noted is the unemployment rate, which seemed to be considerably higher than for the general population. This

TABLE 17

Current Employment Status, by Sex and Type of Program

Current Status	Residential program No.=211		Chicago day programs No.=191		Other day programs No.=40		No special program No.=22		Total No.=464	
	no.	%	no.	%	no.	%	no.	%	No.	%
Full-time employee										
Male	101	75.4	68	66.0	12	60.0	4	40.0	185	69.3
Female	33	42.9	49	55.7	10	50.0	8	66.7	100	50.8
Part-time employee										
Male	14	10.4	10	9.7	3	15.0	2	20.0	29	10.9
Female	2	2.6	6	6.8	1	5.0	0	0	9	4.6
Unemployed										
Male	9	6.7	7	6.8	1	5.0	0	0	17	6.4
Female	13	16.9	12	13.6	1	5.0	0	0	26	13.2
Housewife										
Male	0	0	1	1.0	0	0	0	0	1	0.4
Female	21	27.3	11	12.5	5	25.0	3	25.0	40	20.3
Disabled										
Male	4	3.0	1	1.0	0	0	1	10.0	6	2.2
Female	1	1.3	1	1.1	0	0	0	0	2	1.0
Student										
Male	4	3.0	13	12.6	2	10.0	3	30.0	22	8.2
Female	4	5.2	6	6.8	2	10.0	1	8.3	13	6.6
Trainee										
On-the-job program										
Male	0	0	0	0	0	0	0	0	0	0
Female	1	1.3	0	0	0	0	0	0	1	0.5
Rehabilitation program										
Male	0	0	1	1.0	0	0	0	0	1	0.4
Female	0	0	0	0	0	0	0	0	0	0
No answer										
Male	2	1.5	2	1.9	2	10.0	0	0	6	2.2
Female	2	2.6	3	3.4	1	5.0	0	0	6	3.0

might reflect a higher unemployment rate for deaf people, or it might be a reflection of the age of the respondents. A number of these were in the teenage category where unemployment rates tend to be high for the general population also.

Occupations of respondents are shown in Table 18. It can be seen there were differences among the groups in type of occupation, and these differences were significant by chi-square at the .01 level. In general the respondents

---

Insert Tables 18 & 19 about here

---

who had attended the residential school were more concentrated in the skilled, semi-skilled, and service occupations than were the other groups. Differences in income can also be seen in Table 19 which reports weekly income of respondents by sex and type of educational program; however, the differences among the groups were not marked and were not statistically significant.

Table 20 reports the opinions of the respondents concerning their working conditions, opportunities for promotion, and their wages. A majority of each group considered their working conditions to be good, and very few reported them as being poor. The situation was somewhat different for promotional opportunities where the residential and Chicago groups tended to differ from the other two groups. Whereas 59.4 per cent of the third group and 80.0 per cent of the fourth group considered their opportunities for promotion to be good, this was true for only 39.2 per cent of the residential group and 39.4 per cent of the Chicago group. There were no striking differences among the groups in terms of their opinions concerning wages. It can be seen from Table 20 that most of the respondents considered their wages to be eigher fair or

TABLE 18

Occupations of Respondents, by Type of Program

Occupational Category*	Residential program No.=211		Chicago day programs No.=191		Other day programs No.=40		No special program No.=22		Total No.=464	
	no.	%	no.	%	no.	%	no.	%	No.	%
Professional and technical	2	0.9	11	5.8	7	17.5	0	0	20	4.3
Managers, officials, proprietors	0	0	7	3.7	0	0	3	13.6	10	2.1
Clerical workers	15	7.1	71	37.2	6	15.0	3	13.6	95	20.4
Craftsmen, foremen	35	16.6	10	5.2	3	7.5	1	4.5	49	10.5
Operative workers	44	20.9	31	16.2	9	22.5	3	13.6	87	18.7
Private household workers	3	1.4	0	0	0	0	0	0	3	0.6
Service and protective services	37	17.5	5	2.6	3	7.5	1	4.5	46	9.9
Farm laborers	2	0.9	0	0	0	0	0	0	2	0.43
Unskilled laborers	29	13.7	20	10.5	2	5.0	3	13.6	54	11.6
Sales workers	0	0	0	0	0	0	1	4.5	1	0.21
No answer	9	4.3	5	2.6	2	5.0	0	0	16	3.44
Not applicable[a]	35	16.6	31	16.2	8	20.0	7	31.8	81	17.4

[a]Students in post-school training or higher-education programs.

*Significant at .01 level.

TABLE 19

Weekly Income, by Sex and Type of Program: Employed Respondents

Weekly Income	Residential program No.=176		Chicago day programs No.=160		Other day programs No.=32		No special program No.=15		Total No.=383	
	M	F	M	F	M	F	M	F	M	F
Under $40										
No.	12	11	3	6	1	1	0	0	16	18
%	9.7	21.2	3.4	8.5	6.7	5.9	0	0	6.8	12.1
$40-$60										
No.	23	13	13	15	2	8	1	0	39	36
%	18.5	25.0	14.6	21.1	13.3	47.1	16.7	0	16.7	24.2
$61-$84										
No.	32	13	26	31	1	1	2	2	61	47
%	25.8	25.0	29.2	43.7	6.7	5.9	33.3	22.2	26.1	31.5
$85-$114										
No.	13	8	25	15	7	3	1	6	46	32
%	10.5	15.4	28.1	21.1	46.7	17.6	16.7	66.7	19.7	21.5
$115-$144										
No.	23	4	16	1	2	2	0	0	41	7
%	18.5	7.7	18.0	1.4	13.3	11.8	0	0	17.5	4.7
$145-$174										
No.	6	0	5	1	1	0	1	0	13	1
%	4.8	0	5.6	1.4	6.7	0	16.7	0	5.6	0.7
$175-$224										
No.	5	0	1	0	1	1	0	0	7	1
%	4.0	0	1.1	0	6.7	5.9	0	0	3.0	0.7
No answer										
No.	10	3	0	2	0	1	1	1	11	7
%	8.1	5.8	0	2.8	0	5.9	16.7	11.1	4.7	4.7

good, although only the group who had attended no special programs had a majority (60.0 per cent) reporting them as being good.

Insert Table 20 about here

When asked to identify the sources through which they found initial employment, the respondents reported as shown in Table 21. With the exception of the fourth group, the largest percentage of each group identified relatives as being their major source of assistance. Self-initiative ranked second, and the Division of Vocational Rehabilitation third. These were the major sources except for the fourth group, 13.6 per cent of whom listed the school as a source. The number in this group was small, and thus the percentages may be a distortion of the true situation.

Insert Tables 21 & 22 about here

Table 22 presents data on the respondents' perception of the difficulty they experienced in obtaining employment. It can be seen that 47.8 per cent of the residential group, 37.0 per cent of the Chicago group, 37.5 per cent of the third group, and 40.0 per cent of the fourth group experienced either some or considerable difficulty in finding a job. Since these persons left school between the years 1957 and 1967, when the economy was in a state of rapid expansion, these figures could be a cause for some concern.

It is a truism that minority groups, including the disabled, are the first to feel the impact of rising unemployment rates during periods of economic contraction, so it is likely that the percentages of those reporting difficulty in finding employment would be much larger in a period of economic recession or even during normal economic conditions.

The chief reason, in the opinions of the respondents, for the difficulty

TABLE 20

Opinion of Working Conditions, by Type of Program
Employed Respondents

Opinion of Working Conditions	Residential program No.=176 no.	%	Chicago day programs No.=160 no.	%	Other day programs No.=32 no.	%	No special program No.=15 no.	%	Total No.=383 No.	%
Working conditions										
Good	125	71.0	111	69.4	27	84.4	14	93.3	277	72.3
Fair	38	21.6	38	23.7	3	9.4	1	6.7	80	20.9
Poor	3	1.7	8	5.0	0	0	0	0	11	2.9
No answer	10	5.7	3	1.9	2	6.2	0	0	15	3.9
Opportunity for promotion										
Good	69	39.2	63	39.4	19	59.4	12	80.0	163	42.6
Fair	58	32.9	55	34.4	8	25.0	3	20.0	124	32.4
Poor	36	20.5	34	21.2	1	3.1	0	0	71	18.5
No answer	13	7.4	8	5.0	4	12.5	0	0	25	6.5
Wages										
Good	75	42.6	70	43.7	14	43.7	9	60.0	168	43.9
Fair	67	38.1	64	40.0	14	43.7	6	40.0	151	39.4
Poor	24	13.6	24	15.0	2	6.3	0	0	50	13.0
No answer	10	5.7	2	1.3	2	6.3	0	0	14	3.7

TABLE 21

Source of Current Employment Assistance, by Type of Program

Source	Residential program No.=211		Chicago day programs No.=191		Other day programs No.=40		No special program No.=22		Total No.=464	
	no.	%	no.	%	no.	%	no.	%	No.	%
Relatives	88	41.7	56	29.3	13	32.5	1	4.5	158	34.0
School	3	1.4	14	7.3	2	5.0	3	13.6	22	4.7
State employment agency	8	3.8	6	3.1	0	0	0	0	14	3.0
Division of Vocational Rehabilitation	23	10.9	13	6.8	4	10.0	1	4.5	41	8.8
Private employment agency	0	0	15	7.9	1	2.5	1	4.5	17	3.6
Self-initiative	48	22.7	55	28.8	11	27.5	9	40.9	123	26.5
Other	1	0.5	0	0	0	0	0	0	1	0.2
No answer	5	2.4	1	0.5	1	2.5	0	0	7	1.5
Not applicable	35	16.6	31	16.2	8	20.0	7	31.8	81	17.4

TABLE 22

Respondents' Perception of Difficulty in Finding Employment by Type of Program: Employed Respondents

	Residential program		Chicago day programs		Other day programs		No special program		Total	
	No.=176		No.=160		No.=32		No.=15		No.=383	
Amount of difficulty	no.	%	no.	%	no.	%	no.	%	No.	%
No difficulty	85	52.1	97	63.0	18	56.3	9	60.0	209	57.7
Some difficulty	46	28.2	43	27.9	10	31.2	5	33.3	104	28.7
Considerable difficulty	32	19.6	14	9.1	2	6.3	1	6.7	49	13.6
Source of difficulty										
Employer's reluctance to hire deaf employees	36	50.0	18	51.4	8	80.0	2	66.7	64	53.3
Respondent's lack of experience	8	11.1	6	17.1	1	10.0	0	0	15	12.5
Respondent's inability to meet physical requirements	1	1.4	2	5.7	0	0	0	0	3	2.5
Respondent's having multiple handicaps	1	1.4	1	2.9	0	0	0	0	2	1.7
Wages offered were deemed insufficient	0	0	0	0	0	0	1	33.3	1	0.8
Employer claimed inability to obtain insurance on deaf employees	7	9.7	0	0	0	0	0	0	7	5.8
Respondent's inability to find suitable employment	6	8.3	5	14.3	1	10.0	0	0	12	10.0
Communication problems, including inability to use telephone	13	18.1	3	8.6	0	0	0	0	16	13.3

Note: Multiple answers were possible. Also, some respondents did not answer the question.

they experienced in obtaining employment was reluctance on the part of employers to hire deaf individuals. This opinion was held by 50.0 per cent of the residential group, 51.4 per cent of the Chicago group, 80.0 per cent of the third group, and 66.7 per cent of the fourth group. Most of the other opinions accounted for only small percentages or the responses. Apparently many of the respondents saw employer reluctance as being a very real problem confronting them in their search for employment.

Respondents were asked to indicate if they had attempted to join a labor union and if they had experienced any difficulty in obtaining membership. Only small numbers reported having made such attempts: 17.5 per cent of the residential group, 19.4 per cent of the Chicago group, 22.5 per cent of the third group, and 31.8 per cent of the fourth group. Contrary to the expectations of the investigators, very few of the respondents who attempted to join a union reported having any difficulty in obtaining membership: 1.9 per cent, 1.6 per cent, 2.5 per cent, and zero per cent or the four groups, respectively. Of the total of 90 respondents who sought union membership, it is notable that only 8 reported experiencing any difficulty. It is a matter for conjecture whether this was due to the small number of respondents involved or to actual lack of obstacles in the process of joining unions.

In an attempt to gain some information on the extent to which deaf persons might perceive themselves as being underemployed, the respondents were asked to indicate what type of jobs they would like to be trained for if they could start over again. Table 23 reports the responses to the question. As will be

---

Insert Table 23 (2 pages) about here

---

seen by examining the table, in only one category was the shift noticeably in the direction of a change from actual toward aspired-for occupation; the

TABLE 23

Actual Occupation Versus Aspired-for Occupation "If Beginning Again", by Type of Program: Employed Respondents

Occupational Category	Residential program No.=176		Chicago day programs No.=160		Other day programs No.=32		No special program No.=15		Total No.=383	
	no.	%	no.	%	no.	%	no.	%	No.	%
Professional and technical worker										
Actual occupation	2	1.2	11	6.8	7	21.7	0	0	20	5.2
Aspired-for occupation	16	9.7	33	20.5	2	6.2	4	26.8	55	14.3
Manager, official, proprietor										
Actual occupation	0	0	7	3.3	0	0	3	20.0	10	2.6
Aspired-for occupation	4	2.4	4	2.5	1	3.1	1	6.7	10	2.6
Clerical worker										
Actual occupation	15	8.8	71	44.0	6	18.6	3	20.0	95	24.7
Aspired-for occupation	16	9.7	25	15.5	6	18.6	2	13.4	49	12.7
Craftsman, foreman										
Actual occupation	35	20.6	10	6.2	3	9.3	1	6.7	49	12.7
Aspired-for occupation	33	19.4	15	9.3	2	6.2	0	0	50	13.0
Operator										
Actual occupation	44	26.0	31	19.2	9	27.9	3	20.0	87	22.6
Aspired-for occupation	6	3.5	9	5.6	1	3.1	1	6.7	17	4.4
Service, protective service worker										
Actual occupation	37	21.8	5	3.1	3	9.3	1	6.7	46	12.0
Aspired-for occupation	7	4.1	3	1.9	0	0	1	6.7	11	2.9
Farm laborer										
Actual occupation	2	1.2	0	0	0	0	0	0	2	0.5
Aspired-for occupation	1	0.6	0	0	0	0	0	0	1	0.3

TABLE 23, continued

Actual Occupation Versus Aspired-for Occupation "If Beginning Again", by Type of Program: Employed Respondents

Occupational Category	Residential program No.=176		Chicago day programs No.=160		Other day programs No.=32		No special program No.=15		Total No.=383	
	no.	%	no.	%	no.	%	no.	%	No.	%
Unskilled laborer										
Actual occupation	32	18.8	20	12.4	2	6.2	3	20.0	57	14.8
Aspired-for occupation	0	0	1	0.6	0	0	0	0	1	0.3
Salesworker										
Actual occupation	0	0	0	0	0	0	1	6.7	1	0.3
Aspired-for occupation	0	0	1	0.6	0	0	0	0	1	0.3
Not sure what occupation to aspire for	2	1.2	0	0	1	3.1	0	0	3	0.9
Satisfied with present occupation	82	48.4	75	46.5	18	55.8	9	60.1	184	47.8
No answer to question about										
Actual occupation	9	5.3	5	3.1	2	6.2	0	0	16	4.2
Aspired-for occupation	44	26.0	25	15.5	9	27.9	4	26.8	82	21.3

top-ranked professional and technical category, where fewer respondents reported occupations in this category than aspire to be in it (5.2 per cent versus 14.9 per cent). The other categories received either similar percentages in both actual and aspired-for occupations, or there were higher percentages reported as actually engaged in an occupation than would prefer to be so employed. The latter trend was most marked in the unskilled laborer category, in which 57 of the respondents reported employment, as compared with a single respondent who aspired for such an occupation (14.8 versus 0.3 per cent). It will also be noted that an average of 47.8 of the respondents reported themselves satisfied with their present occupations, with a low of 46.5 per cent (Chicago day group) and a high of 60.1 per cent (group which attended no special classes). The data, therefore, indicated that on the whole, substantial percentages of the respondents are not satisfied with their present occupations, and insofar as the results can be considered indicators of occupational satisfaction, the group tendency was to aspire to occupational levels higher than those held by the respondents.

Marital Preference and Practice

Table 24 shows the marital status of the respondents. It can be seen that a majority of each group had never married, which probably reflects the relatively young age of the respondents (mean age 24.5 years, standard deviation 3.15 years for the unweighted total of 350). The residential group had a somewhat higher percentage of married respondents than any of the other three, but it will be recalled that this group was also the oldest (mean age 25.4 years, standard deviation 3.46 years) by over a year than any of the other three groups.

Insert Table 24 about here

TABLE 24

Marital Status of Respondents, by Type of Program

	Residential program		Chicago day programs		Other day programs		No special program		Total	
	No.=147		No.=147		No.=36		No.=20		No.=350	
Marital Status	no.	%	no.	%	no.	%	no.	%	No.	%
Never married	89	60.5	98	66.7	27	75.0	13	65.0	227	64.9
Married	54	36.7	42	28.6	9	25.0	6	30.0	111	31.7
Separated	1	0.7	4	2.7	0	0	1	5.0	6	1.7
Divorced	1	0.7	0	0	0	0	0	0	1	0.3
No answer	2	1.4	3	2.0	0	0	0	0	5	1.4

When asked to state their preference for a marriage partner on the basis of the partner's hearing ability, there were highly significant differences (.001 level) among the groups, with 64.4 per cent of the residential group expressing a preference for marriage partners who are deaf or hard-of-hearing persons as compared to 34.6 per cent, 12.5 per cent, and 9.0 per cent for the other three groups respectively. The differences were also manifested by the percentages of those preferring partners with normal hearing. As would be expected, 4.7 per cent of the residential group expressed a preference for a marriage partner with normal hearing, while 9.9 per cent of the Chicago day group, 27.5 per cent of the other day programs group, and 22.7 per cent of those attending no special program expressed similar preferences. However, substantial percentages of the groups were in the "no opinion" category, with the percentages being 23.7, 45.0, 57.5 and 63.6 respectively.

Those respondents who were or had been married were asked to state the hearing ability of their current or former spouses in an effort to elicit information on patterns of marriage preference versus actual practice. In general, the results showed that there was consistency between preference and practice, with the percentages of deaf or hard-of-hearing spouses being 85.5, 65.2, 66.6 and 57.1 respectively. The corresponding percentages having spouses with normal hearing were 14.5, 32.6, 33.3, and 42.9 respectively. The greatest consistency between stated preference and actual practice was shown by the residential group where a substantial majority stated a preference for a deaf or hard-of-hearing spouse and followed this in practice.

Areas of Perceived Educational Need

Respondents were asked if they had any specific needs for future occupational training or for general education. Those who responded "yes" were asked to check from a list what those needs were, and to write in a space

provided any needs which were not on the checklist. Table 25 shows the responses for "specific job training" and "general education". It can be seen that substantial percentages felt a need for further specific job training: 45.0 per cent, 46.1 per cent, 40.0 per cent, and 31.8 per cent in the four groups, respectively, indicated a need for training in one or more occupational fields.

Insert Table 25 about here

The most commonly expressed need of the residential group was for training as "craftsman and foreman" (15.6 per cent); of the Chicago group, "clerical work" (14.7 per cent) and "professional and technical" (14.1 per cent); of the other day programs group, "professional and technical" (10.0 per cent) and "operative" (10.0 per cent); and of the group from no special programs, "professional and technical" (18.2 per cent). The differences in expressed need might reflect different levels of occupational aspiration on the part of the respondents in the four groups, with increasing level of aspiration from the low of the residential group to the high of the group which attended no special program. This may be related to the different socioeconomic backgrounds and hearing levels of the groups as was discussed earlier. It is just as possible, however, that the expressed needs reflect the occupational opportunities of the areas of the state in which respondents were located. The residential group tended to be dispersed throughout the state, including a number of manufacturing centers, while the other three groups were centered in or around Chicago or a few areas (such as Champaign-Urbana where one campus of the University of Illinois is located) where clerical and professional opportunities would be more abundant.

With the exception of the Chicago group (58.6 per cent answering "yes")

TABLE 25

Areas in which Respondents Indicated Need for Further Training or Education, by Type of Program

Area of Need (in Descending Order of Frequency)	Residential program No.=211		Chicago day programs No.=191		Other day programs No.=40		No special program No.=22		Total No.=464	
Specific Job Training	no.	%[a]	no.	%[a]	no.	%[a]	no.	%[a]	No.	%
Respondents answering "yes"	95	45.0	88	46.1	16	40.0	7	31.8	206	44.4
Types of occupation for which training was most frequently mentioned										
Craftsman and foreman	33	15.6	15	7.9	2	5.0	1	4.5	51	24.8
Clerical work	19	9.0	28	14.7	3	7.5	0	0	50	24.3
Professional and technical	12	5.7	27	14.1	4	10.0	4	18.2	47	22.8
Operative	5	2.4	12	6.3	4	10.0	0	0	21	10.2
General Education[b]										
Respondents answering "yes"	78	37.0	112	58.6	15	37.5	2	9.1	207	44.6
Subjects most frequently checked										
Reading	80	37.9	82	42.9	12	30.0	4	18.2	178	86.0
Writing	87	41.2	69	36.1	9	22.5	4	18.2	169	81.6
Lipreading	77	36.5	54	28.3	17	42.5	4	18.2	152	73.4
Speech	42	19.9	85	44.5	17	42.5	6	27.3	150	72.5

Note: Multiple answers were possible.

[a]Percentage of total within each school group.

[b]See text for other specific subjects mentioned.

only a minority of the respondents expressed a need for further educational preparation. The areas most frequently checked were reading, writing, lipreading, and speech, which are all language and communication areas. Perhaps the most notable difference among the groups was in the area of speech, where 10.9 per cent of residential respondents expressed a need for further training, as compared to 44.5 per cent, 42.5 per cent, and 27.3 per cent for the other groups, respectively. The residential group ranked speech as fourth in order of priority, whereas the other three groups ranked it as first. It will be recalled (Table 11) that the residential group ranked lowest in speech ability and the other three groups progressively higher. The four areas of perceived need emerged from a lengthy check list including: academic subjects; vocational preparation; the language of signs; and fingerspelling, all of which received lesser percentages of responses than the four areas just named.

When asked to express an opinion of how well their respective schools had prepared them for their current occupation, the percentages were about equally divided between "considerable help", "some help", and "no help" for all four groups with the exception of the two groups from day programs, which were slightly more favorable in their opinions than the other two groups, with 12.5 per cent and 13.6 per cent answering "no help" in the Chicago group and other day programs group respectively, as contrasted to 24.6 per cent and 24.1 per cent for the residential group and the group which attended no special program respectively. The corresponding figures for "considerable help" were 31.8 per cent, 35.1 per cent, 45.0 per cent, and 36.4 per cent, with the balance of the responses falling in the "some help" category.

Respondents were asked to list what they thought to be the five most important things which should be included in educational programs for deaf students. The responses were placed in rank order, from one to five, on the

basis of frequency of selection. On the basis of this ranking, the first choice recommendations were English, reading, mathematics, speech, and lipreading. Second choice rankings were almost identical to the first: mathematics, English, reading, speech, lipreading. Through the remaining three rankings of choices, the only new ones which emerged were writing and spelling, which were two of the third choice items; science, which was one of the fourth and fifth choices; and history and vocational preparation, which were two of the fifth choices. Thus, it can be seen that the recommendations of the respondents for educational programs were very similar to their perceived needs for further training in their own situations. The low ranking given to inclusion of courses for vocational preparation in educational programs is notable, and it was low for all four groups: residential, 0.9 per cent; Chicago, 3.1 per cent; other day programs, 2.5 per cent; and no special programs, 4.5 per cent. Both the perceived needs of the respondents for further training and their recommendations for educational programs were concerned almost exclusively with the common language and communication skills of reading, writing, speech, and lipreading.

It is of interest to note that the language of signs and fingerspelling, which were included in the checklist of perceived needs for further training, received low rankings by all four groups. They also were rarely listed by the respondents in their recommendations for things which should be included in educational programs for deaf children. It had been anticipated these areas would have ranked high in the recommendations. Perhaps the low level of response was due to the wording of the question on recommendations which probably elicited suggestions for specific skills and subjects in which the respondents thought deaf students should be trained. If the wording had been such as to elicit opinions on the use of manual communication as a teaching

method, rather than a course or a skill to be taught the students, the response might have been quite different. This is, of course, speculation on the part of the writers.

As a final note, one item on use of the questionnaire might be of interest. Although the language of the instrument was kept as simple as possible, it was considered desirable to instruct the potential respondents to seek help, if necessary, in completing it, and to indicate if they had done so. For the final group used in the study, 57.3 per cent of the residential group indicated they had received help; 48.2 per cent of the Chicago group, 50.0 per cent of the group who had attended other programs, and 31.8 per cent of those who had attended no special programs.

SUMMARY

The study was conducted to obtain information about the occupational status of young deaf adults who had previously attended educational programs in the state of Illinois; and to determine, if possible, any relationship between types of educational programs attended and later occupational achievement. A total of 942 names of former students was obtained from the various educational programs for hearing impaired students in the state with the initial criteria for potential subjects being: (1) hearing impairment; and (2) termination in an educational program between the years 1957 and 1967, inclusive. Of the 942 names obtained, 33 were selected at random and used as a sample to pre-test the questionnaire for the study. The final form of the questionnaire was mailed to the other 909 potential subjects, with follow-up letters being sent one month later to non-respondents, and a second questionnaire and letter being sent another month later to those who had still not responded. By these procedures, a return of 477 completed questionnaires was achieved, 402 of which were useable for the study. It was decided to attempt to contact through personal interview a sample of the 311 potential subjects who had apparently received questionnaires but had not returned them. Interviewers were employed for this purpose who were skilled in the use of manual communication and they were trained in interviewing techniques by personnel of the Survey Research Laboratory of the University of Illinois. An additional 89 respondents were obtained by the personal interview procedure. When statistical tests revealed significant differences on most of the questionnaire items between the respondents who replied by mailed questionnaire and those who were interviewed, a weighting

factor was introduced to make the total respondent group more nearly representative of the target population.

Since the study was primarily concerned with individuals who had received all of their education solely within one or other of the various types of educational programs for hearing impaired students in the state, it was decided beforehand to exclude all respondents who had attended more than one type of program. When this was done, 350 respondents remained who had attended exclusively one of these four types of programs: (1) the Illinois School for the Deaf; (2) day class or day school programs in the city of Chicago; (3) day class programs in the state other than those in Chicago; and (4) public school classes for the general school population. The weighting factor which was applied had the effect of increasing the number of respondents for analysis to 464.

In preparing the questionnaire, care was taken to make the language as simple as possible; however, there are limitations on the simplification of language which can take place without distorting the information sought. The pre-test sample and the suggestions of a number of individuals familiar with the language problems of deaf people were used in preparing the final form of the questionnaire. In addition, potential respondents were encouraged to seek help in completing the instrument and about half of them indicated that they did so. In spite of all these efforts, it is possible that difficulties in interpretation of items were still a problem for some of the respondents.

The results of the study revealed no differences among the groups in the wages they received from their occupations, and no differences in their satisfaction with their jobs and working conditions. There were other differences among the groups, however, which indicate they were different kinds of populations. The group which had attended the residential school reported hearing

ability which was lower than that reported by the other three groups. This group also came from homes where the general socioeconomic level, including education, income, and type of occupation, was lower than for the other three groups. Respondents in this group also differed from those in the other groups in being scattered throughout the state whereas the other groups tended to be clustered in particular, usually urban, areas. Besides reporting better hearing ability and higher socioeconomic backgrounds, the non-residential groups, in contrast to the residential group, reported: (1) more employment in the professional, technical, and clerical occupations; (2) more involvement, socially and maritally with persons of normal hearing; (3) better oral communication skills and greater use of those skills; and (4) a higher opinion of the importance of oral communication for job functioning and promotion.

As stated in the body of the report, this was not a controlled study comparing the effects of different types of educational environment, but simply a comparison of the products of the various educational programs to see in what ways they differed. Many of the factors on which the residential and non-residential groups differed could be due to differences in the characteristics of the populations of the programs, such as differences in hearing ability and socioeconomic level. With such differences being apparent, it is likely that the populations in the various programs would also have differed on such factors as IQ and educational achievement if these data had been available. The differences among the populations served by the various educational programs should be kept in mind when interpreting the results of the study.