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Sara Hughes

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A STUDY OF THE REASONS FOR NON-PARTICIPATION IN THE SALK VACCINE PROGRAM

SARA HUGHES, M.S.W.*

The following is a descriptive statistical analysis based on a study of 30 polio patients and their families to determine their reasons for non-participation in the Salk vaccine program. The information was gathered from person-to-person interviews conducted by the interviewer who used a standardized questionnaire. The survey was not designed to probe deeply for underlying factors in motivation, but rather to assess, from the questions asked, the attitudes and opinions of these families toward polio vaccination.

The 1958 Detroit polio epidemic affected most severely the pre-school children under four years and the Negro population as a whole. Also, there were more paralytic cases this year than in any year since the Salk vaccine program started in 1955; in addition, the paralytic status of Negro cases exceeded those of the White group.

In examining the 30 cases studied, the following table shows the age incidence, sex, race, and paralytic status of the polio patient.

Table 5
Age, Sex, Race, and Paralytic Status of 30 Polio Patients

Total	Age Group	Female	Male	Race		Paralytic	Non-Paralytic
				White	Negro		
13	0-4	7	6	1	12	12	1
10	5-9	5	5	1	9	5	5
2	10-14	1	1	0	2	2	0
2	15-19	2	0	2	0	1	1
3	20 plus	3	0	0	3	1	2
30		18	12	4	26	21	9

In the age group 0-4, two of the paralytic cases were the bulbar type of polio. The remaining ten in the paralytic group had some type of spinal-paralytic polio.

In the age group 5-9, the paralytic cases were spinal. Two of the children in this group had had two vaccine inoculations but had never been given the third dose.

In the age group 10-14, there was one case of spinal-paralytic polio and one case of bulbar polio. The children in this group were severely disabled, the bulbar case having had to be transferred to the Respirator Unit of University Hospital in Ann Arbor, Michigan. Neither child had had the Salk vaccine.

In the age group 15-18, one was a 17-year-old mother with spinal-paralytic polio and the other was a 19-year-old girl with non-paralytic polio. None had had the polio vaccine.

*Social Service Division.

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In the 20 plus age group, all three were mothers, ranging in ages from 30-32. The one paralytic case was spinal in nature. One mother had had two doses of the vaccine, but the other two had never been inoculated.

One of the leading questions in the interviews was: "Did you know of the Salk vaccine program?" Out of the 30 persons interviewed, all but two had known of this program prior to the 1958 epidemic. The sources of information given by the remaining 28 families are listed in the table below:

Table 6
Publicity

Source of Information	Number
Newspapers	17
School	12
Friends	0
Posters and leaflets	0
Radio	3
Television	3
Church	0
Doctor	2
Meetings	0
Other	2

Some informants gave more than one source of information, which accounts for the excess number. The newspaper, given by seventeen, was the most common source. However, the name of the newspaper was not mentioned specifically in any of these cases.

The next common source was the school with twelve. Out of this number, six also listed the newspaper. Those giving the school as the only source were six.

Those mentioning the radio as a source of information also mentioned hearing about the program over their television sets.

As only five families had their own private physician, the doctor did not seem to be a key source of information.

Other sources of information given by two informants were: Health Clinic and a car with loud speakers which combed the neighborhood from time to time.

As many leaflets written about the Salk vaccine had been given by the public schools to children to be passed on to the parents, it was felt that this might have been a source of information, although no person recalled this. The interviewer was of the opinion that in many cases there was such little interest in the program that the informant would not put forth the effort to try to recall various sources of information.

Although the 28 individuals of the 30 families contacted knew of the Salk vaccine, the following table lists the stated reason for non-vaccination.

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Table 7

Reasons for Non-Participation in Salk Vaccine Program

	Number
Knew of program	28
Did not know of program	2
No interest in program	0
Fear, uncertainty of vaccine	6
Time and place not clearly understood	3
General opposition to all shots	1
Wrong age group for polio shots	1
Unable to get out (ill or confined by other duties)	9
Cost	10
Vaccine not available	1
Lack of clinics in neighborhood	6

Some of the informants gave several reasons as to why either they or their children were unvaccinated or incompletely vaccinated prior to the 1958 epidemic and subsequent thereto — hence the duplication in numbers.

Other reasons given and comments made concerning the program were:

“I just neglected it — never got around to it.”

“My doctor didn’t talk much about those shots.”

“We didn’t know there were free clinics.”

“There’s too much red tape at clinics.”

“I just kept putting it off.”

Although no one expressed *No interest in the program*, it seemed a far greater number exhibited this attitude in the interview but gave other reasons instead.

The six persons who mentioned fear and uncertainty of the vaccine further expressed their feelings by stating:

“If you took those shots you were sure to get the polio.”

“We knew kids who got real sick after the shots.”

“The newspapers even said that people who took the shots died with polio.”

The interviewer was of the opinion that there were more than six individuals who feared the vaccine but who were too embarrassed to express their feelings. It was noted that a few informants seemed to be quite defensive in this respect. One adult stated, at the close of the interview, that she might as well confess “she was afraid of that needle.”

General opposition to all shots was given by one person who mentioned that her husband and his family were healthy and didn’t believe in any vaccinations, and she usually went along with her husband’s opinion.

The one adult who thought she was in the wrong age group for polio shots was a 31-year-old mother with spinal paralytic polio, now confined to a wheelchair.

Three mentioned *time and place not clearly understood*, one informant stating that she didn’t know the day and time you would be taken at a free clinic.

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Unable to get out was expressed by nine persons. Two of the mothers said they were pregnant at the time and did not think of taking the vaccine. Some mentioned being confined at home by illness of their children; others stated that it was difficult to get to clinics or to doctors' offices because of transportation facilities; others mentioned they had no one to watch their children in their absence from the home.

The *Cost* factor was mentioned by ten of the informants, several stating that they thought the doctors charged too much. When questioned as to their knowledge of free health clinics, two or three persons replied that they had never been on charity before and didn't know where to go for free medical services. Several mentioned the unemployment picture in Detroit and how it had affected their economic status.

One person stated that at the time she took her children to the health center, they had run out of vaccine and she had never bothered to check back.

The six who mentioned *lack of clinics in the neighborhood* were not aware that these existed at all.

In general, most of the persons questioned were favorable toward polio vaccination with the exception of the six, who feared the safety and effectiveness of the vaccine, and the one person who was opposed to all shots. However, despite the objections of these persons, all children in the 30 families (exclusive of the polio patient) have now been immunized against polio or are in the process of completing same. In helping to bring this about, much credit can be given to the polio immunization program in the Detroit Public Schools where, since September 1958, the vaccine was given in 243 schools. The majority of these schools are located in the areas covered by this study and the areas most seriously affected by the epidemic.

Table 8 shows the number of persons who had some previous understanding of the nature and prevalence of polio and those who had little or no knowledge about the disease itself.

Table 8

Knowledge about polio	18
Little or no knowledge about polio	12

The majority who knew about polio stated that they had had prior contact with some friend or member of their family who had contracted this disease. One mother mentioned that she had had polio as a child and another mother said that she had come in contact with it while she was employed as a nurses' aide in a hospital.

It was felt that, on the whole, there was little knowledge among the group about the disease entity itself and about any protective measures that might have been suggested in the past. Several persons made the comment: "They didn't know how serious it was." Others referred to the disease as "infantile paralysis," and there might have been a lack of awareness that "polio" and "infantile paralysis" were one and the same disease.

It would appear, also, from responses made to the interviewer, that the lack

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of understanding about polio and the value of immunization was not confined to this one disease itself. For example, one or two mothers had confused diphtheria or smallpox shots with the polio vaccination, believing that if their child had been vaccinated against one or the other, he or she might be immune to polio.

The interview questionnaire contained several questions concerning the occupation of the wage earner in the family, present and previous economic status of same, and family composition. Table 9 indicates the breakdown of this data.

As indicated in Table 9, eight of the mothers interviewed were separated from their husbands and were receiving either alimony or Aid for Dependent Children, or both. The three unmarried mothers were also on ADC grants, and the fourth was receiving a weekly income from a common-law husband.

Table 9
Family Economy of Study Group

Occupation of Wage Earner	Present Income	Previous Income	No. of Children
Housewife ^a	Receiving alimony and ADC		6
Press operator	\$3,400 per annum	Same	5
Crane operator	Unemployed	\$150 per week	6
Housewife ^a	Receiving ADC		3
Housewife ^a	Receiving ADC		6
Post office clerk	\$3,900 per annum	Same	2
Housewife ^b	Receiving ADC		1
Steel worker	\$65 per week	Same	8
Construction work	Unemployed	\$100 per week	4
Housewife ^b	Receiving ADC		2
Assembler	\$66 per week	\$70 per week	6
Sanitation Dept. Laborer	\$86.00 per week	Same	4
Mechanic	\$60 per week	Same	5
Housewife ^b	Receiving ADC		3
Truck driver	Unemployed	\$75 per week	9
Stock clerk	\$75 per week	Same	3
Construction work	\$90 per week	Same	2
Housewife ^b	\$50 per week	Same	3
Car polisher	\$86 per week	Same	5
Housewife ^a	Receiving alimony and ADC ^c		5
Mechanic	Unemployed	\$80 per week	4
Auto foreman	Employed part time	\$6,000 per annum	4
Housewife ^a	Receiving ADC		3
Housewife ^a	Receiving ADC		5
Real Estate	Not furnished		3
Housewife ^a	Receiving alimony		5
Construction work	Unemployed Husband ill	\$87 per week	1
Mechanic	Unemployed	\$125 per week	1
Mechanic	\$3,200 per annum	\$5,000 per annum	3
Housewife ^a	Receiving ADC		5

^aSeparated from husband

^bUnmarried

^cAid to Dependent Children Assistance

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The wage earners who are presently unemployed are either receiving unemployment compensation or public welfare assistance.

During the interview study, the interviewer rated the quality of the respondent's neighborhood and condition of house. Table 10 identifies the residential status of the 30 families.

Table 10
Type of Neighborhood and Condition of House

	Good	Fair	Poor
Neighborhood	1	15	14
Condition of House	1	12	17

The question dealing with the educational level of the persons interviewed, brought forth no comment nor explanation as to why they had not gone further in school. Table 11 shows grade distribution in the 30 homes.

The interviewer did not find that those persons with more education possessed a better understanding of the nature of polio as a disease and there did not seem to be any correlation between educational status and knowledge about polio.

Table 11
The Educational Level in the 30 Homes

Grade	Number
No training	0
First grade through sixth grade	3
Seventh through ninth grade	11
Completed tenth grade	6
Completed eleventh grade	3
Twelfth grade graduates	6
College graduate	1
	30

Table 12 indicates the number of parents who have had or are now in the process of being vaccinated against polio.

Table 12
Parents Who Have Taken Salk Vaccine

	Both Parents	Neither Parent	Mother Only
Vaccine taken or inoculation in process	5	15	5

Some of the reasons given by mothers for not yet availing themselves of the Salk vaccine were:

- Fear about the safety of the vaccine
- Too busy with the children
- Over-age for polio shots
- No time to get the shots
- Not sure where the clinics are
- Adults are immune to polio

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If the fathers were present during the interview, their stated reasons for non-participation in the vaccine program were:

- Can't take time out to get vaccinated
- Wrong age group or too old
- Healthy and have never been ill
- Just haven't gotten around to it
- Don't know where to go to get vaccinated

Although these parents have had their children vaccinated, some of the factors influencing their decision not to vaccinate themselves were related to procrastination, neglect, apathy, misinformation, or their conception of the safety and effectiveness of the vaccine. Many of them felt that it did not matter whether adults were vaccinated against polio nor were they aware of the severity of polio in their age group.

Table 13 shows the length of time these families have lived in the city of Detroit and their former place of residence. It may be noted in this table that six families had migrated to Detroit from Georgia; three from Mississippi; three from Tennessee; and the other southern regions from which they came were quite evenly dispersed.

Table 13
Geographical Representation of Families

No. of Families	Years Resided in Detroit	Former Residence
13	5-9	3—Georgia 1—Missouri 1—New Jersey 1—Kentucky 1—Texas 2—Mississippi 2—Arkansas 2—Tennessee
4	10-14	1—West Virginia 1—Tennessee 1—Georgia 1—South Carolina
9	20 plus	

One of the leading questions was: What type of program do you think would be effective towards stimulating others to take the Salk vaccine? Some of the comments made by those favorable toward the vaccine were:

"Give the doctors more vaccine and have them charge less."

"More doctors should give it free of charge or bring the cost down to an amount which people could afford."

"There should be more free clinics."

"More information should be given over the radio and television."

Several mothers stated that there should be more nurses visiting the homes to

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talk about polio. One mother referred to a public health nurse as being an instrumental person in getting her and her children to take the vaccine.

Others were of the opinion that nurses should make home calls to give the polio injections.

One father mentioned that after his child had been stricken with polio, he wanted to organize a group in his neighborhood to make calls on others to inform them about the vaccine. He also stated that he had written to the local office of the March of Dimes, offering his services along these lines, but had never heard from them.

Some persons stated that parents should visit hospitals or places where crippled children are so they would realize how serious polio is — that this would really wake them up.

Several referred to meetings as a good place to inform others about the vaccine. They didn't specify what types of meetings should be held, except mentioning the P.T.A. group. Only two mentioned the church as a probable source of information, stating that the local pastor could speak to mothers' groups about the importance of the vaccine.

One mother, who had previously been employed by the Bureau of Social Aid, suggested that the public welfare agencies should stress the vaccination program among the applicants.

One person suggested the vaccine be made compulsory in the State of Michigan.

One mother, who feared the inoculation, said: "If there were some other way besides having to take that needle."

Other comments made were:

"You go along thinking nothing will happen to your family or kids, and when polio strikes, you get shook-up."

"You hear about polio but you don't pay attention until someone in your family has it. This is an eye-opener."

A number of families, although they were favorable toward the vaccine, had no suggestions or ideas, mentioning they needed more time to think about this or they hadn't given it much thought.

It would appear that the majority of persons interviewed seemed to think in terms of personal or "door-to-door" contact as a means of influencing their peer group toward vaccination. Also, the process of informal communication — getting people to talk about the vaccine — seemed to be the method proposed by most of this group which might accelerate the vaccination program.