

The Use of a Series of TV Programs to Educate Parents in Child Care

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SOON after the establishment in Pittsburgh, Pa., of the country's first community sponsored educational television station, WQED, its management requested the Pittsburgh Department of Public Health to cooperate in the presentation of a series of programs on child care. This article describes the content of the series and the results of a survey which was conducted among mothers with young children.

The series was entitled "At Home With Your Child." It included 13 half-hour programs, presented weekly during the first 3 months of 1955. The programs consisted of an exposition of normal physical and emotional growth from birth through the fifth year of life. More fully stated, each program attempted to describe and demonstrate how normal babies and children look and act at each key stage of development, what their needs are, and ways of meeting these needs.

In all but three of the programs, infants and

young children were used on the set to illustrate points of discussion. Children who participated were selected with a view to demonstrating the wide variation in size and motor abilities at each age level. The youngest infants were completely undressed in order to demonstrate physical appearance. Older babies, up to the age of 2 years, were stripped except for diapers. Children beyond 2 years of age were dressed in sunsuits because their emerging sense of modesty might otherwise have provoked unnatural behavior.

None of the subjects displayed uncontrollable crying or other refractory behavior which would have necessitated their removal from the studio. Fears that the lights and cameras might produce apprehension and stilted reactions proved groundless. After a cursory inspection of the studio and cameras, the youngsters devoted themselves to playing with the toys provided, and none of the subjects, from the tiniest, 10 days of age, through the 6-year-olds, paid the least attention to the lights.

The following material outlines the program titles, the various casts, and the material covered. The physician who served as narrator was the only person who appeared on every program.

1. *Preparing the Home for the Baby*

The physician and a public health nurse described, and demonstrated where possible, the nursery and its furnishings, heating in the

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Kinescopes of the programs discussed in the article are available from the National Educational Television Center, Ann Arbor, Mich.

home, refrigeration, and the health of the family as a whole and its influence on the new baby.

2. *The New Baby Comes Home*

With the use of a doll model, the physician and a public health nurse discussed and demonstrated a typical layette. The physician then pointed out the physical characteristics of a newborn and of a 6-week-old baby and discussed the kind of behavior to be expected through the first 6 weeks of life.

3. *Baby Gets a Bath*

The physician discussed the skin and its care. The nurse then bathed a 2-month-old baby. In preparation for this program, the nurse bathed the infant several times in his home so that she and the baby would be accustomed to each other.

4. *Feeding and Formula Making*

Breast and bottle feeding and the need for vitamin supplements were discussed by the physician. A public health nurse then demonstrated the terminal heating method of formula preparation.

5. *Mother's Night Out*

The physician discussed and demonstrated the physical and behavioral characteristics of a 3-month-old child. Then, while the physician spoke of the "introduction of solid foods," the mother demonstrated how to feed a baby with a spoon. The second half of the program dealt with the mother's need for recreation, how to choose a baby sitter, and what the baby sitter should know.

6. *Baby Visits His Doctor*

This program opened with the physician telling of the need for regular medical supervision of the well infant. A pediatrician, a mother, and her 4-month-old baby then demonstrated a typical well-baby visit to the doctor. Emphasis was placed on the importance of regular health supervision, immunization, anticipatory guidance, and a permissive atmosphere in which the mother feels free to raise questions and discuss her problems. The mother had been attending the child health conference in which

the pediatrician worked. Therefore, she was quite at ease before the cameras and brought up for discussion traditional beliefs in child care held by older mothers in her subculture. Also, the second diphtheria-pertussis-tetanus inoculation was given on the program.

7. *Baby Graduates to the High Chair*

The physician opened the program with a discussion of the physical, motor, and emotional characteristics of the average 6-month-old infant, demonstrating her points with two 6-month-old babies. One child was then placed in a high chair and was offered milk from a glass while the physician talked about weaning, learning to drink from a cup or glass, teething, and thumbsucking. Later, the physician discussed and demonstrated, by offering toys to the babies, safe and suitable toys.

8. *Baby Starts to Crawl*

This program began with one 9-month-old baby seated in a playpen while the physician talked about the characteristics of this age group. Fraternal twins were then introduced, and the physician and mother discussed the special problems of a mother with twins. The three babies were permitted to demonstrate their own modes of crawling in free play on the nursery floor, while the physician suggested how the home can be made safe for the creeping baby.

9. *Baby's First Step*

Using three 1-year-old babies as models, the physician demonstrated and discussed the physical characteristics and motor abilities of that age group, with special emphasis on normal variations, proper weight-bearing on the feet, and the importance of well-fitted shoes. The children were then permitted to play on the nursery set as the physician talked about the changes in eating habits and other behavior patterns to be expected in the age group.

10. *Toddlers*

While the physician talked about growth and development in children between the first and third years, three children, 2-3 years old, were permitted free play on the set. Mothers intervened only to settle altercations over possession



of a toy. Midway in the program the children were seated at a small table and served fruit juice and crackers, while the physician demonstrated and discussed development of handedness and coordination, parallel play, and vocabulary development. The children returned to their play activities and the physician concluded with a discussion of toilet training.

11. *Community Help for Families*

The physician interviewed representatives of a public health nursing agency, of a family and children's social service agency, and of the local chapter of the American Red Cross to bring out what services each organization offered and how requests for service are made. Since this program was not considered germane to a growth and development series, it was omitted from a subsequent series.

12. *Playmates*

Three children, aged 4-5, were permitted to examine play materials provided on the set while the physician discussed physical and emotional characteristics at this age. A nursery-school teacher then led the children in a demonstration of cooperative play. During the latter part of the program, the physician talked about the control of communicable disease in the preschool child.

13. *Getting the Child Ready for School*

This final program opened with the physician pointing out the importance of careful physical evaluation of the child about to enter school.



Using two 6-year-old children as models, the physician demonstrated a vision screening test for a child of this age and the audiologist demonstrated use of the pure-tone audiometer in a screening test for hearing. The audio-engineer put on the air notes of approximately the same frequencies used in the test. The program ended with a discussion by the physician of emotional preparation of the child for school and the value of a preenrollment visit to school.

Since "At Home With Your Child" was the first program of its kind in Pittsburgh, both of its sponsors were interested in assessing the size and reactions of the audience. Both organizations preferred a survey which represented all mothers of preschool children in the Pittsburgh metropolitan area. This was not feasible. It was possible, however, to carry out a mail survey limited to recent mothers in the city of Pittsburgh.

The names and addresses of women who were queried were obtained from a sample of the live-birth certificates for the 12 months preceding the close of the series. The sample was obtained by first selecting all certificates with file numbers ending in the digits 2 or 7. Certificates for extramarital children and those who died in infancy were then excluded and questionnaires were sent by mail to the mothers of the remainder.

Followup of nonrespondents consisted of a reminder which was sent 7 to 10 days after the original questionnaire, described below, and a second questionnaire which was mailed 2 to 3 weeks after the original. Further followup by mail, the only type of followup feasible, was



not attempted for two reasons. First, there was a 70-percent response which was considered sufficient to satisfy purposes of the survey. Second, it was felt that further mail inquiry might result in criticism of the health department or the television station.

The questionnaire asked whether the family owned a television set, whether the mother saw any of the programs, and, if so, which of the programs she found helpful. All other data, such as those concerning race of mother, age of mother, size of family, and place of residence, were obtained from the birth certificate. In this report only the race, age of mother, and size of family are considered. The age groups used are: under 20 years, 20-29 years, and 30 and over. Family sizes have been described according to the number of children, namely: 1 child, 2 or 3 children, 4 or more children.

The sample included 2,476 mothers. Of these, 141 or 5.7 percent could not be reached through the mail. In these cases, the original questionnaire was returned by the post office with the notation that the person was not known at the address or that the person had moved and had left no forwarding address.

As in most surveys of this kind, the relative number of persons not reached through the mail was greater for the nonwhite. While 4.8 percent of the letters to white mothers were returned by the post office, 10.1 percent of the letters to nonwhite mothers were not delivered. The number of questionnaires not delivered also varied with the age of the mother and the size of the family. For example, the proportion of white mothers not reached de-

creased as the age of the mother increased or as the size of the family increased. In other words, within a given age group, the proportion of questionnaires delivered increased as there were more children in the family; and, for given family sizes, the proportion increased as the age of the mother increased. Among the nonwhite mothers, a slightly different pattern was observed. As with white mothers, the number not reached by mail decreased as the age of the mother increased; but, unlike the white, the number of nonwhite mothers who did not receive the questionnaire increased as the size of family increased.

Women who presumably received the questionnaire numbered 2,335. Of these, 1,646 or slightly more than 70 percent responded. White mothers responded better than nonwhite mothers, older mothers better than young mothers, and women with 2 or 3 children better than those with only 1 child or with 4 or more children (table 1). Since only 20 percent of the respondents reported they had watched the series, the response was remarkably high. Three factors may have contributed to the good response. First, the Pittsburgh area has not been subjected to many surveys of this type, and so residents may still be tolerant of mail questionnaires. Second, it is logical that recent mothers would have a strong interest in the subject of child care. And third, pamphlets on child care were offered to respondents.

One of our interests was in determining the size of the potential audience, that is, the number of families who owned television sets. At least 61 percent and possibly as many as 91 per-

Table 1. Response by race, age of mother, and number of children in family

Size of family	White				Nonwhite			
	All ages	Under 20	20 to 29	30 and over	All ages	Under 20	20 to 29	30 and over
<i>All sizes</i>								
Number contacted.....	1, 963	112	1, 172	679	372	44	225	103
Number responded.....	1, 422	60	860	502	224	25	135	64
Percent response.....	72. 4	53. 6	73. 4	73. 9	60. 2	56. 8	60. 0	62. 1
<i>One child</i>								
Number contacted.....	581	91	421	69	80	28	41	11
Number responded.....	417	50	314	53	46	16	25	5
Percent response.....	71. 8	54. 9	74. 6	76. 8	57. 5	57. 1	61. 0	45. 5
<i>Two or three children</i>								
Number contacted.....	1, 018	21	663	334	159	16	108	35
Number responded.....	755	10	490	255	99	9	65	25
Percent response.....	74. 2	47. 6	73. 9	76. 3	62. 3	56. 2	60. 2	71. 4
<i>Four or more children</i>								
Number contacted.....	364	-----	88	276	133	-----	76	57
Number responded.....	250	-----	56	194	79	-----	45	34
Percent response.....	68. 7	-----	63. 6	70. 3	59. 4	-----	59. 2	59. 7

cent of all families with a child under 1 year of age had sets. The former figure was obtained under the assumption that all nonrespondents were without sets; the latter, under the assumption that all nonrespondents had sets. Among respondents, 86.6 percent, 1,426 of 1,646, owned sets.

There is little doubt that nonwhite families owned proportionately fewer sets than did white families. For example, while 89 percent of the white respondents owned sets, only 69 percent of the nonwhite respondents said that the family had a set. Also, when all persons who did not respond were considered as having television sets, no more than 81 percent of the nonwhite families could have owned sets compared with 92 percent of the white families.

One of the major objectives of the survey was an estimate of the number of women with infants who saw one or more of the programs. Since the sample used in the survey represented one-fifth of the recent mothers in Pittsburgh, such an estimate can be easily obtained by simply multiplying the number of known viewers, 330, by the factor 5 for a result of 1,650. This, however, must be considered a minimal estimate. It is possible that some of the nonrespondents

saw the programs. The largest unknown audience, however, was undoubtedly among mothers in the areas immediately surrounding Pittsburgh, where there are even more births than in the city proper. It is reasonable to assume that the programs were viewed also by others than recent mothers.

The relative size of the audience and whether it varied with such factors as the age of the mother were also of interest. Because some mothers saw the telecasts in homes of relatives or friends even though they did not have television sets and because of the "problems of non-response," the relative size of audience was determined by relating the number of known viewers to the number of persons who presumably received the questionnaire (table 2).

In total, at least 14.1 percent of the mothers watched one or more of the programs. Proportionately, the nonwhite audience was as large as the white audience, in spite of a poorer nonwhite response and evidence that fewer nonwhite families had television sets in their homes. Among white families, as the age of the mother increased or as the size of the family increased, the relative audience size decreased. For example, at least 18.8 percent of the white mothers

under 20 were included in the audience as compared with 12.5 percent of the mothers over 30. The largest audience among the nonwhite mothers consisted of those in their third decade of life.

The initial series of "At Home With Your Child" was produced with very little publicity. A week before the programs began one newspaper carried a feature story in a Sunday supplement. Thereafter an occasional small advertisement was used. In the daily listings of programs, the time period was designated as "Ladies Only" since "At Home With Your Child" was 1 of 5 programs presented at that time of day throughout the week.

The questionnaire included an item which asked the mother if she would have watched had she known of the program. Among 903 women who replied that they had a television set, could receive the educational station, but had not known of the series, 90 percent, 810, said they would have watched had they known of the program. If one accepts their statements at face value and adds the number of known viewers, it means that the audience might have included as many as 49 percent, 1,140 of 2,335, of the recent mothers had the series been widely publicized.

Mothers were asked to specify the number of programs they saw and to indicate which

ones they considered helpful. The 330 women who reported watching the telecasts stated they had seen 1,287 separate programs, an average of 3.9 programs per person. Mothers of only 1 child averaged 3.8 programs; of 2 or 3 children, 4.2 programs; and of 4 or more children, 3.4. Viewers also reported 78.2 percent of the programs seen as being helpful. Mothers with large families found as many programs helpful as did mothers of small families, but their interests were somewhat different. For example, while only 5.5 percent of the mothers with one infant selected "Getting the Child Ready for School" as helpful, 23.0 percent of the mothers with 4 or more children did so. The most popular programs among all mothers were "Baby Gets a Bath" and "Mother's Night Out."

For all family sizes, approximately 84 percent of the respondents requested the pamphlets offered. Mothers who owned television sets requested materials more often than those who did not, 85 percent to 79 percent. Among those with sets, mothers who saw the programs requested pamphlets more often than did those who did not watch, 95 percent to 82 percent. Although this difference suggests that the programs may have stimulated interest in educational materials, there is the possibility that whatever caused the mothers to watch the programs also caused them to request materials.

Table 2. Number of mothers who watched one or more programs

Number of children and age of mother	Number contacted			Watched one or more programs					
	Total	White	Non-white	Number			Percent		
				Total	White	Non-white	Total	White	Non-white
All families.....	2, 335	1, 963	372	330	278	52	14. 1	14. 2	14. 0
Mothers under 20.....	156	112	44	26	21	5	16. 7	18. 8	11. 4
20-29.....	1, 397	1, 172	225	208	172	36	14. 9	14. 7	16. 0
30 and over.....	782	679	103	96	85	11	12. 3	12. 5	10. 7
One child.....	661	581	80	109	95	14	16. 5	16. 4	17. 5
Mothers under 20.....	119	91	28	20	17	3	16. 8	18. 7	10. 7
20-29.....	462	421	41	79	70	9	17. 1	16. 6	22. 0
30 and over.....	80	69	11	10	8	2	12. 5	11. 6	18. 2
Two or three children.....	1, 177	1, 018	159	160	134	26	13. 6	13. 2	16. 4
Mothers under 20.....	37	21	16	6	4	2	16. 2	19. 0	12. 5
20-29.....	771	663	108	110	90	20	14. 3	13. 6	18. 5
30 and over.....	369	334	35	44	40	4	11. 9	11. 9	11. 4
Four or more children.....	497	364	133	61	49	12	12. 3	13. 5	9. 0
Mothers 20-29.....	164	88	76	19	12	7	11. 6	13. 6	9. 2
30 and over.....	333	276	57	42	37	5	12. 6	13. 4	8. 8

In other words, they would have asked for the pamphlets without having seen the programs.

Discussion

Until recent years, education on child care offered by health departments was somewhat limited to that given in child health conference service and in the public health nurse home visit. For obvious reasons, these services are usually restricted to the low-income segment of the population and to families where intensive service is required. Within the last few years, however, it has become evident that many parents at the middle- and higher-income levels, using private physicians as their source of medical care and having some knowledge of child growth and development, welcome further information on child care, especially through mass media. The popularity of child care articles in newspapers and magazines is one indication of this kind of interest.

Television, the newest of the mass media of communication, differs from the others in several important ways. Although it is capable of reaching a large number of people at one time, it is also capable of stimulating an intensely personal reaction, second only to a face-to-face situation. It gives the viewer the illusion of being spoken to directly and hence a feeling of close personal contact. The combination of sound and sight, plus the availability in one's own home, contribute to the viewer's feeling of being part of what is being observed.

In the foregoing study of an audience which watched a series of television programs on child care there are indications that television reaches many families who do not receive medical or nursing care from the health department. The estimated television audience slightly exceeded the number of mothers with young babies who attended child health conferences during this same period. Also, the geographic distribution of viewers differed from that of families utilizing child health conference service. Of the mothers in the known television audience, 84 percent were white; but during the period the

programs were telecast, only 50 percent of the mothers who attended child health conferences and 52 percent of the mothers with infants who were visited by public health nurses were white.

The economy of effort possible through the use of television when the goal is solely education is reflected by the fact that 1 physician and 1 nurse produced this series of programs. In order to provide well-child care for a slightly smaller number of children in the same age group, 499 sessions of child health conference were held during the same period of time, staffed by 1 physician and 2 or more public health nurses for each session.

Inasmuch as both the television station and the health department benefit by having as large an audience as possible, it seems logical that both agencies share in the publicity effort. Before the series was repeated in the fall of 1955, the department and the station combined efforts to publicize it as widely as possible throughout the Pittsburgh area. A feature story was carried by one of the large daily newspapers, in addition to the listing in the television section of each of the metropolitan newspapers. Flyers advertising the program were prepared and distributed to new mothers in the maternity divisions of hospitals, to PTA and other parent groups associated with the schools, to women's club groups, and to customers in infants' wear sections of local department stores. The Carnegie Library prepared an attractive leaflet containing a reading list on child care. The leaflets were placed near a poster advertising the program in all Carnegie branch libraries throughout the area.

When the series was telecast the second time, each program was recorded by kinescope, so that the films would be available not only for periodic daytime telecasting but also for showing at other times and to other groups. It is intended to telecast the films during the evening hours when working mothers and fathers are free to view them. The films are also being offered for use in teaching normal growth and development to medical students and nurses and as background material for parents' discussion groups.