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HEADSTART OPERATIONAL FIELD ANALYSIS. PROGRESS REPORT II.

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DURING THE PERIOD OF OCTOBER 1, 1965 TO JANUARY 1, 1966 AT THE HEADSTART OPERATIONAL FIELD ANALYSIS IN CLEVELAND, OHIO THE FOLLOWING ACTIVITIES TOOK PLACE. (1) THE METHODOLOGY FOR CLASSROOM OBSERVATION OF HEADSTART (HS) AND NON-HEADSTART (NHS) CHILDREN AND INTERVIEWS WITH THEIR CLASSROOM TEACHERS WAS REVISED. THE HS GROUP OF 125 WAS SELECTED FROM 8 SAMPLE CENTERS. AN INTENSIVE SAMPLE OF 50 CHILDREN WAS USED FOR A DETAILED EXAMINATION OF HOW THIS GROUP MOVED FROM ONE LEVEL OF A CONCEPT TO ANOTHER. THE EXTENSIVE SAMPLE SHOWED HOW THE CHILD REACTED TO ACADEMICALLY RELATED MATERIAL AS MEASURED BY THESE CONCEPTS. TEACHER INTERVIEWS AND EVENT SAMPLING IN THE CLASSROOM WERE THE 2 RATING APPROACHES. (2) PRELIMINARY RESULTS PERTAINING TO THE HS AND NHS CHILDREN WERE FOUND. AN ANALYSIS SUGGESTED THAT HS CHILDREN WERE EXCEEDING THE NHS CHILDREN IN CONCEPT ATTAINMENT EVEN IN THOSE AREAS IN WHICH SIGNIFICANCE WAS NOT ACHIEVED. (3) A FULL REPORT OF THE EFFECTIVENESS OF HS PARENTS AS ADMINISTRATORS OF PSYCHOLOGICAL TESTS WAS MADE. SEVEN PARENTS (4 NEGRO AND 3 WHITE), WITH FROM NINTH TO TWELFTH GRADE EDUCATIONS WERE RANDOMLY SELECTED FROM AMONG 30 VOLUNTEERS. CLINICAL PSYCHOLOGY GRADUATE STUDENTS WHO SERVED AS CONTROL TEST ADMINISTRATORS WERE ALL WHITE AND WERE GENERALLY EXPERIENCED IN TESTING PROCEDURES. FOUR TABLES WERE USED TO COMPARE RESULTS OF PARENT TESTERS AND GRADUATE STUDENT TESTERS. THE MOST SIGNIFICANT DIFFERENCE RESULTED NOT FROM THE TESTER, BUT FROM THE TIME OR ORDER THE PRE-SCHOOL INVENTORY TEST WAS GIVEN. THIS STUDY SHOWS THAT UNTRAINED PEOPLE MAY BE UTILIZED FOR TESTING IF THEY ARE HIGHLY MOTIVATED. (4) OTHER DEVELOPMENTS INCLUDED DISCUSSING SECOND AND THIRD YEAR FOLLOWUP STUDIES, DEVELOPING SERVICE JOB OPPORTUNITIES FOR THE POOR, AND PRESENTATIONS OF PAPERS DEALING WITH A BROADENING OF THE FIELD OF PSYCHOLOGY TO INCLUDE COMMUNITY AND GROUP PROBLEMS. (CO)

Headstart Operational Field Analysis*

PROGRESS REPORT II

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This report will cover the following activities during the period from October 1, 1965 to January 1, 1966:

a) Revisions in methodology for classroom observation of Headstart and Non-Headstart children and interviews with their classroom teachers.

b) Preliminary results pertaining to the Headstart and Non-Headstart children.

c) Final report on the study of effectiveness of Headstart parents as administrators of psychological tests.

d) Other developments.

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*This is the second progress report related to Contract No. OEO-512; PR No. 353; Appropriation 1160500.

A. Revisions in methodology for classroom observation of Headstart and Non-Headstart children and interviews with their classroom teachers.

1. Final revision of rating forms and manual for the measuring of concept attainment.

Prior to the assignment of the final ratings in the six concept areas, a final revision was made of the sequence of achieving each concept as related to theoretical and research information (See Appendix I). A manual (See Appendix II) was developed with many examples that were taken from the actual kindergarten classroom situations to increase the direct applicability of this particular series of measures of the concept areas. The final form of manual and rating sheet became central in the meetings with observers with an effort to increase the inter-observer reliability.[1] In order to maintain the level of the group agreement, a regular portion of the weekly staff meetings is devoted to a discussion of the 'difficult to rate' examples that the observers have witnessed during the preceding week. The sequence that is now established will be utilized for the remainder of the study; and, as will be indicated later, there will be a comparison between these a priori scales based more on studies of middle class children[2] and the unfolding of concept attainment by our sample of children living within the disadvantaged circumstances.

2. Sampling.

a) Restrictions on generalization from sample.

Dr. Margaret Fleming, assistant chief of the Bureau of Educational Research of the Cleveland Public Schools has supplied the following information:

Enrollment in Cleveland Public Schools HS Program--
Summer 1965.....3,370
Enrollment in kindergarten, entire city--September 1965.....14,958
Enrollment in kindergarten, 11 social planning areas designated as having high poverty index--September 1965.....7,515

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[1] Training sessions for observers in order to produce a "group mean" has been strongly supported in the following works: Allerhand, M.E., Weber, Ruth, and Haug, Marie. Adaptability and Adaptation: Viewed through the Bellefaire Follow-up Study. New York: Child Welfare League of America, In Press; Bales, F. Interaction Process Analysis. Cambridge; Addison-Wesley, 1950; Hunt, J. McVicker, Blenkner, Margaret, and Kogan, Leonard S. Testing Results in Social Casework: A Field Test of the Movement Scale. New York: Family Service Association, 1950; and Wright, H.F. "Observational Child Study" in Handbook of Research Methods in Child Development, edited by P. H. Mussen. New York: Wiley, 1960.

[2] A review of the relevant literature, practical and clinical experience was applied to establish the ordering in the scales.

In addition to the 3370 children in the Cleveland Public Schools' Headstart Program, there were approximately 1000 children serviced by the four other agencies involved in Headstart Programs during the summer. These children would also be potential candidates for the kindergartens of the Cleveland Public Schools. This data indicates that approximately 29% of the potential kindergarten enrollment was involved in Headstart in the summer and that of the potential kindergarten enrollment in the poverty areas, about 58% had been involved in the Headstart Program.

b) Other sampling considerations.

As was indicated in the previous report, the Headstart group of 125 would be selected from the eight Sample Centers out of the 63 Census Tract sampling program used in the HeadStart Project. In order to insure smaller numbers of children in each teacher's classroom, it was necessary to also include child development centers that were proximal to the Sample Centers. The 125 NHS children were chosen from the same group of classes to which the HS children were assigned in the fall of 1965. The number of schools was increased from 13 to 17, and the number of classes from 25 to 29 since four of the children moved from the original class to classes in different schools. The effort has been to retain the original sample within the limits of reality.

The information about the sample would suggest that we have a satisfactory representation of the majority of the potential kindergarten children within the poverty areas. We cannot conclude, of course, that the 58% of the children who attended Headstart are necessarily representative of the full range of potential candidates for kindergarten in 1965. Our study will actually help clarify whether or not the HS children come from the same supply as their comparison group, the NHS children who were randomly selected from the same group of classrooms into which the HS children were placed.

c) Utilization of the Extensive and Intensive Samples (Areas of Exploration and Data Collection).

1) Total Sample.

Firstly, it should be pointed out that both the extensive and intensive groups will be utilized in comparing whether or not the HS and NHS children come from the same supply. For these comparisons, the test results on the Pre-school Inventory and the Peabody Picture Vocabulary Test as well as a selected number of bibliographic items will be utilized. In addition, the information from both groups will be used in the analysis of the instrument. We seek the empirical clarification for the setting of the levels within each concept. This will be accomplished through frequency counts of the levels attained by members of both groups at the different points of measurement. In this way, we can compare the attainment by this group of culturally deprived children with the established a priori sequence. Finally, there will be an examination of the first and final testing on both the PI and the PPVT. As a supplement to this later examination, the HS group will be divided into those children who showed a considerable change on the PI from the first administration

in the summer to the second administration during the summer and those who showed minimal or no change.

2) Intensive Sample.

The intensive sample of 50 children will be examined in considerable detail for any suggestions of typologies in their development within each concept area and, along with, for some intensive case studies. There will be a total of 15 comparable ratings on the intensive group which will permit for a rather detailed examination of how this group of children moved from one level of the concept to another. The data will be exclusively total recording for a period of 45 minutes per observation.

3) Extensive Sample.

The extensive sample will be particularly useful in detecting the impact of summer stimulation on how the child becomes oriented to academic related material as measured by this series of concept measures. There are two rating approaches, viz. teacher interview and event sampling in the classroom. The first approach will be ratings based on the results of interviews with the teacher at the beginning of the year, the middle of the year, and the end of the year. The second approach involves an exclusively observer rating. The observers average about 3/4 of an hour per child to collect the data for each rating. A series of five ratings will be interspersed throughout the year. The change scores will be a based both on a first and last measurement as well as a consideration of types, viz., predominantly regressive, predominantly no change, predominantly positive change. Comparison of the two measures of concept attainment and change will offer an interesting demonstration of "concurrent reliability".

There is the recognized criticism regarding bias affecting the ratings. There is no way to conceal the child's HS or NHS identity. We can only assume that there are some teachers and observers who remember the classifications and also that there will be a certain bias on the part of some of these people to tend toward decreasing the HS or NHS child consistent with that bias. As such, this is a factor which we must consider as a part of the unreliability of the ratings included.

Another way in which the extensive sample will be utilized will be to compare the impact of HS and NHS teachers. As previously indicated, the classrooms are divided almost in halves between teachers who taught during the summer HS program and those who did not. Without any relevance to teachers' styles, the HS and NHS samples will be grouped together to see whether there is any differential impact on their concept attainment which might be related to the factor of having a HS teacher.

Except for the results that are reported in this pregress note, all of the data on the extensive sample will be handled through the IBM computers in the Western Reserve Documentation Center.

B. Preliminary Results of the Headstart and Non-Headstart Children.

1. Total Sample.

At this time we have the results of the comparison of HS and NHS children on the first PI. The HS children had the PI administered in the first two weeks of the summer program; and of the 125 children in this sample, we have initial testing on 76. The disappointing loss of 50 resulted when the original random sample choice of the 125 HS children was depleted by moves from the community or the essential need to balance the numbers of children so no teacher would have an untoward demand on her time or excessive interruptions in class. In most instances these children did not have Summer Head Start testing. However, it is felt that the sample is still large enough so that useful comparisons on test scores can be made.

Table I indicates that the mean score on the PI[3] for the HS group was 151.33 and for the NHS group was 150.42. This is not a significant difference on the basis of achievement on a variety of tasks. The HS and NHS groups may be considered comparable. Other comparisons will be reported in the future.

2. Head Start Sample.

A comparison was made[4] of the pre and post PI test scores for the 75 HS children within our follow-up group for whom we have completed results. It is very evident that the group reflected change during the summer project. The level of significance is well beyond the .001 level. There were some cases of minimal change, and in fact some children had a poorer showing on retest. Actually nine children showed a decrease beyond -1. An examination of the variables of amount of change during summer program and concept attainment will be presented at some future time.

3. Extensive Sample.

In this progress report, a comparison of the attainment in the six concept areas will be made between the HS and the NHS groups. At this writing, there was available data on 64 of the 100 HS children and on 66 of the 100 NHS children. It should be recognized that for chi-square calculations indicated in Tables II through VII, combining of cells was necessary because of the lowered frequencies particularly at the extremes of the sequences. It is likely that, with the complete data, more of a cell to cell comparison will be possible.

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[3]The scoring of the Pre-school Inventory followed the manual distributed by Dr. Bettye Caldwell deleting Item 3 (Draw a Person) and the Personal Care items. Thus, the total possible score was 241.

[4]A difference test of significance yielded the following results:

$N = 75$

Mean $(\bar{D}) = 16.84$ (Median = 13; Mode = 11)

$S_{\bar{D}} = 1.46$

$CR = 11.53 \quad p < .001$

TABLE I

Comparison of the total score on Pre-school Inventory (PI) for HS and NHS samples.

	N	Mean	S.D.
Head Start (HS)	76	151.33	35.79
Non-Head Start (NHS)	126	150.42	34.36

C.R. = .18 not significant

TABLE II

Comparison of HS and NHS groups in the attainment of the COLOR concept within the first two months of kindergarten.

Level	HS	NHS
0	0 } 9[a]	0 } 10
1	0	1
2	2	4
3	7	5
4	8	19
5	7	11
6	7	7
7	17	13
8	14 } 16	6 } 6
9	2	0
	N = 64	N = 66

[a]Where cell frequencies were below 5, contiguous cells were grouped.

$x^2 = 10.44$
df = 5
$p \approx .06$

TABLE III

Comparison of HS and NHS in the attainment of FORM-SPACE Concept within the first two months of kindergarten.

Level	HS	NHS
0	0 } 13[a]	2 } 12
0	2	1
2	11	9
3	12	22
4	10	12
5	16	14
6	13	5
7	0	0
8	0	0
	N = 64[b]	N = 65[b]

$x^2 = 6.88$
$n = 4$
$p \approx .15$

[a]Where cell frequencies were below 5, contiguous cells were grouped.

[b]Discrepancies from $N_{HS} = 64$ and $N_{NHS} = 66$ result from lack of sufficient ratable evidence.

TABLE IV

Comparison of HS and NHS in the attainment of GROUPING concept within the first two months of kindergarten.

Level	HS	NHS
0	1 } 7[a]	3 } 26
1	3	13
2	3	10
3	19	12
4	6	5
5	10	8
6	9	7
7	6	1 } 8
8	3 } 21	0
9	2	0
10	1	0
N	63[b]	59[b]

$x^2 = 18.52$
$df = 4$
$p < .001$

[a]Where cell frequencies were below 5, contiguous cells were grouped.

[b]Discrepancies from $N_{HS} = 64$ and $N_{NHS} = 66$ result from lack of sufficient retable evidence.

TABLE V

Comparison of HS and NHS in the attainment of ORDERING concept within the first two months of kindergarten.

Level	HS	NHS
0	1 } 15[a]	7 } 27
1	14 }	20 }
2	8	9
3	9	3
4	10	11
5	9 }	4 }
6	3 }	1 }
7	3 } 16	0 } 5
8	0 }	0 }
9	1 }	0 }
N	58[b]	55[b]

$x^2 = 12.24$
$df = 4$
$p < .02$

[a]Where cell frequencies were below 5, contiguous cells were grouped.

[b]Discrepancies from N_{HS} and N_{NHS} (64, 66) result from lack of sufficient ratable evidence.

TABLE VI

Comparison of HS and NHS in the attainment of TIME SEQUENCE concept within the first two months of kindergarten.

Level	HS		NHS	
0	0	6[a]	3	8
1	6		5	
2	22		33	
3	3	15	1	11
4	10		10	
5	8		1	
6	11	22	6	7
7	0		0	
8	3		0	
9	0		0	
N	63[b]		59[b]	

$x^2 = 10.24$
$df = 3$
$p < .02$

[a]Where cell frequencies were below 5, contiguous cells were grouped.

[b]Discrepancies from $N_{HS} = 64$ and $N_{NHS} = 66$ result from lack of sufficient ratable evidence.

TABLE VII

Comparison of HS and NHS in the attainment of TIME DURATION concept within the first two months of kindergarten.

Level	HS		NHS	
0	11		14	
1	41	48[a]	42	44
2	6		1	
3	1		1	
N	59[b]		58[b]	

$x^2 = .48$
$df = 1$
$p < .50$

[a]Where cell frequencies were below 5, contiguous cells were grouped.

[b]Discrepancies from $N_{HS} = 64$ and $N_{NHS} = 66$ result from lack of sufficient ratable evidence.

The basic question that was considered in each of these analyses was: Does the Headstart sample differ from the Non-Headstart sample with respect to attainment in each of the concept areas? In the null form, the hypothesis would be stated that there is no difference between the distributions of the two samples on attainment of the various concepts.

Prior to the examination of the data, the reader should recall the previous reported conclusion that on the basis of Pre-school Inventory scores, the HS and NHS samples seem to come from the same supply. Thus, assuming no bias consistently favoring either HS or NHS subjects, any significant differences would be related to the Summer Headstart Program.

Now, as an overview, there were two of the six concept areas, viz., Form-Space and Time Duration, which did not approximate or exceed the usual significance level of .05. The most evident difference was seen in the achievement of the grouping concept followed rather closely by the ordering and the time sequence concepts. The analysis would definitely suggest that the HS children were, at the time of these ratings, exceeding the NHS group in concept attainment even in those comparisons where significance was not achieved. For example, in the Form-Space concept (Table III), 29 of the 64 children were able to achieve at the level of 5 or beyond whereas 19 of the 65 NHS children were able to similarly achieve. The 5 and 6 levels require more of a move towards proportional considerations; whereas the preceding levels only reach the point of extensive use of space with intentional representations of objects. The modal level for the NHS group was the articulation of interrelated objects (the stick figure type person); whereas the modal level for the HS subject was the delimitation of space using object or line which begins the idea of proportional representations.

It is interesting to examine the development within the Grouping concept in Table IV. Close to 50% of the NHS group have only reached the point of being able to pair a particular object with the appropriate location within the room, or another way of considering this is that they are able to realize that something is missing when the usual area for it is not filled. However, the HS children, for the greater part, have at least become aware of the manner in which things can be paired on the basis of perceptual qualities, and more than half of them are able to pair linguistic symbols with actual objects or events.

On an a priori basis, the investigator felt that particularly the Time Duration concept would represent the most difficulty for kindergarten children. If, in Time Duration, we are actually measuring the sensing of passage of time, Table VI would suggest that there is a very limited recognition of this particular experience throughout the samples. Research data strongly supports this finding and generally suggests that children do not have a Time Duration concept consistent with adults', until about the age of eight. It was in this particular concept area that the HS and the NHS children look the most alike.

It was felt that since the analysis is based on incomplete data, only a limited amount of commentary would be made concerning these results. However, there is no reason to believe that the remaining data would include any other bias that would not be reflected in the data already under discussion.

4. Intensive Sample.

No analyses have been completed on the Intensive Sample except that the children's scores on the PI were included in the comparison of results of the pre- and post- Head Start program. The next progress note will report some of the recognized gradual changes in concepts that should be revealed through the closer examination resulting from the intensive observation of these 50 (25 HS and 25 NHS) children.

C. Final Report on the Study of Effectiveness of Headstart Parents as Administrators of Psychological Tests.

The full report of this particular pilot study is included as Appendix III in this progress note. Suffice to say in the body of this report that parents of HS children seem capable of administering the Pre-school Inventory and Peabody Picture Vocabulary Test in a manner consistent with sophisticated testers. It is requested of the Director of Research that permission be granted to submit this report for publication. Please indicate in a subsequent correspondence whether or not permission is granted.

D. Other Developments.

1.Second and Third Year Follow-Up Study.

There is a compelling feeling to continue the follow-up study into first and second grade. This would not be carried on in the intensive manner with which the first-year follow-up is being handled. There is such fascinating baseline material through the observational approach that comparisons between the first year follow-up data and some other measures should be made. It is requested of the Director of Research that such a proposal be considered; and if there is interest, a more extensive statement will be submitted.

2. Developing Service Job Opportunities for the Poor.

As indicated in the last progress note, the investigator has become very concerned with the selection, training, placement and evaluation of particularly parents of children within the delimited poverty areas. As such, a working draft of a proposal was developed (Appendix IV) discussing such a process in reference to an "educational child care

assistant." This proposal is being very seriously considered for implementation in Februaxy, 1966 as a joint operation between Western Reserve School of General Studies, the Cleveland Public Schools, and the Cuyahoga County Welfare Department, Economic Opportunities Branch. The more extensive implications of such procedures have been spelled out in a draft of a position paper entitled "Training for Service to Self and Others: A possible solution to the economic problems of the poor". This particular statement is being revised for more extensive consideration by the Council for Economic Opportunities of Greater Cleveland and other relevant agencies within the Cleveland area. The final paper will be attached to the next progress report.

3. Professional Presentations.

The investigator has sought to find professional audiences particularly within the psychological groups to discuss the appropriate demand on psychologists to lend their expertise in assuring the success of "war on poverty". Towards this end, the investigator presented a paper at the American Psychological Association Meetings, September 1965 entitled: "Convergence--A Moment of Role Fixing in the Development of the Clinical Child Psychologist" (Appendix V). The primary force within this paper was to accelerate the move away from the more traditional, one-to-one approach in psychology to a broader examination and handling of community and group problems.

Further programming has been suggested and very likely accepted for the Spring Ohio Psychological Association meetings and for the American Psychological Association meetings in September, 1966. The OPA theme is entitled "The Psychologist's Changing Role: Training for New Community Responsibilities". This will involve a keynote speaker from the federal government, a symposium topic entitled "Innovative Responsibilities in Psychology", and simultaneous workshops entitled "Towards Achieving Innovation in the Training and Functioning of the Psychologist".

The program theme for the APA meetings is "Training the Economically Disadvantaged for Professional Tasks". The sequence here would include a major address, hopefully by Dr. John Gardner, "Training for Careers in Health, Education, and Welfare". This would be followed by a symposium discussing "Experiences Utilizing Non-Professionals in Currently Conceived Professional Tasks" and then three simultaneous workshops entitled "Towards the Effective Selection and Training of the Economically Disadvantaged for Professional Tasks".

4. Psychology and Pediatrics.

Although communication has been maintained with Dr. Charles McClelland, Medical Director of the Council of Churches and Community Action for Youth HeadStart programs, no implementation of the ideas described in the past progress report has been carried out.

EFFECTIVENESS OF PARENTS OF HEADSTART CHILDREN AS ADMINISTRATORS OF PSYCHOLOGICAL TESTS[1]

(A Pilot Study)

by:
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Introduction:

In very recent years, much consideration has been given to the area of training non-professionals in tasks currently viewed as in the professional range. These have included the works of such people as Hallowitz and Riessman (2), Rioch et al (4) and a number of efforts in urban centers in the United States and in such countries as Israel. The end products of these studies and demonstration projects suggest a range of clearly defined, specific tasks that, with appropriate training and supervision, may very effectively be carried out by individuals indigenous to the situation.

A recent paper by Blum (1) points to the importance of defining service jobs relevant to the required services rather than primarily considering the professional training--in this case, of the social worker. He further indicates that to accomplish a certain task, it may be necessary to have a variety of people with a variety of expertise and special emotional qualifications. Schwartz (5) has implemented these ideas in a project with professionals and non-professionals within a public assistance agency. Such thoughts and efforts

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[1]Mrs. Evelyn Century, research associate, has aided the author in the analysis of the data and the preparation of this report.

come out of the clear recognition that there are considerable manpower shortages and, secondly, that there may be particular tasks that can be handled more effectively by individuals either closer to the actual locus of application of the service or better equipped to carry out specific aspects of a larger function.

There is another argument presented by proponents of the training of poor people to carry out services within their own community. This is an effort to upgrade the level of functioning and permit for the development of leadership within the people who are seeking to gain an economically more desirable position in society. This position has been central in such programs as Head Start; the inclusion of poor people on various boards for planning to make an assault on poverty, etc.

Although we have indications that non-professional people can be trained for certain professional tasks (1, 2), there is still a general feeling of doubt; and, understandably within professional ranks, there are rather specific questions, as to the performance of non-professionals in some particular professional tasks. It is the intent of this investigator to: 1) evaluate the potentialities of previously untrained people for filling service roles within their own primary groups; 2) locate and define the areas of service for which non-professional people can be trained; 3) investigate whether it is feasible to establish a training and supervisory program which will effectively produce such service workers; and 4) to measure the impact of such trained people on their family and community.

If it is determined that untrained people could be utilized in handling certain services which previously had been performed only

by trained professionals, a dual benefit could be realized--a benefit to those being serviced and to those doing the servicing. Underlying this approach is the belief that individuals who are part of a group may have greater effectiveness in performing services within that group.

The study now to be described is one effort in this direction.

Purpose:

The purpose of this pilot study was to assess the effectiveness of parents of Head Start (HS) children as administrators of psychological tests. There was particular consideration of such factors as identification with the poor community and similarity of ethnic and "color of skin" characteristics which might contribute to differential success of the HS children in the sample. Katz (3) referred to the impact of such variables as the kind of tester, circumstances of the testing situation, etc. on the level of functioning of particularly the Negro child. He concluded that Negro children are more vulnerable to stress in a predominantly white situation and thus are likely to have lowered achievement. Thus, we wondered whether the poor child in the urban center such as Cleveland would respond differently to a white sophisticated tester at one extreme as contrasted with a Negro unsophisticated tester.

Further, we reflected on the question of just sophistication. There are indications that unsophisticated testers at times enable a subject to achieve a higher score because of inadvertent clueing and, on other occasions, that the novice tester may cause a lowered test score because of inexperience with the test items.

Procedure:

The study is primarily concerned with comparing a group of parents of Head Start children selected to administer psychological tests with a group of experienced graduate student testers.

Seven parents (4 Negro and 3 white)[2] of Head Start children were trained in the administration of the Pre-School Inventory Test[3] (PI) and the Peabody Picture Vocabulary Test. The parents were paid two dollars an hour during their period of participation. Both tests were administered using a counter-balanced order assignment within a maximum of 5 days to 57 Negro Head Start children by the parents and clinical psychology graduate students. The students were all white and were generally experienced in testing procedures and particularly skilled in the use of these tests. The parents ranged in educational experience from 9th to 12th grades and were randomly selected from a group of 30 volunteers.

Training Procedure:

The parent testers experienced an intensive three-session training in test administration. The first session involved a description of the pilot study and an acquaintance with the Pre-School Inventory. After a discussion of the construction of the test, there was an examination of the series of items included. Wherever there was some question about the phrasing of the item or the particular method of categorising and scoring, this was discussed in some detail.

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[2]The size of the sample only permits for reasonable indications especially in the comparison of white and Negro testers.

[3]This test was developed by Dr. Bettye M. Caldwell for the evaluation of the Head Start Program, Summer 1965.

The involvement of the parents became increasingly evident. The fact that they had to construct the three boxes utilized in the PI after leaving the session was a concrete way of becoming even more a part of the process. It was strongly recommended that the parents try out any of the items on available children in the community. It was further indicated that, during these training sessions, attempts would be made to point out the kinds of errors that unsophisticated testers may make in the application of test items. This seemed to set the stage for a good-natured and frank exchange on known errors which had considerable pay off in subsequent training sessions when it became much more tolerable to hear criticism. The joy of success and accomplishment seemed to increase tolerance for such critical exchanges and resulted in an application of the suggestions in the testing approach.

The second session, which was three days later, was primarily devoted to discussing the particular questions that parents had, regarding the Pre-school Inventory and further centered on the experiences they had in practice administrations. The questions they raised paralleled ones previously raised by sophisticated testers during an earlier training experience. For example, in item 30 on the PI, where the child is asked how many broken arms he has in order to get some type of a "none" or "not any" response, the parents suggested some stimulus phrases for this question which they found to be more effective in gaining the response. One of the suggestions was "How many tails do you have?"

The remainder of the second training session involved role playing, some of the items on the PI, and the introduction of the administration of the Peabody Picture Vocabulary Test (PPVT). There

was a demonstration of the PPVT followed by each of the parent tester's attempting to administer portions of the test. A critical discussion of the testing approaches ensued. It was then recommended that the parents administer as many PI's and PPVT's to community children as they could prior to the final training session.

During the third training session, the majority of the time was used in discussing particular problems that the parents experienced in the administration of both tests. Some of the particular interfering characteristics were brought to the attention of the parent testers. For example, one of the parents tended to use the testing as a teaching device. She persisted in probing for particular answers. The group became aware of the need to just use this as an assessing technique. In the final role play that concluded the third session, this particular parent showed a decided decrease in the probing approach.

Testing Situation:

The tests were actually administered in two Head Start child development centers. A member of the research team acted as coordinator in making arrangements for rooms and the selection of the group of children to be tested. Except for these administrative matters, the parents carried out the entire testing procedure from escorting the child from his classroom to the testing room to the return from the testing room back to his classroom.

Method of Analysis:

Similarity of results of parent and graduate student testers was compared by 1) deriving percentages of the total number of agreements on answers to items in the Pre-school Inventory Test by the

group of Head Start children; 2) correlating raw scores of the children obtained for the PI and the PPVT; 3) significance of difference tests based on the group means for the PI and the PPVT. In addition, a significance test was calculated for the test series comparing the first with the second test administration to determine possible discrepancies relating to the test-retest process. A more detailed analysis of the categories within the PI was made comparing the content and concepts involved in the test.

Results:

Table I shows an over-all examination of the amount of agreement between the parent testers and the graduate student testers. The total average of agreement was 76% for the Pre-school Inventory. It is also evident from the table that there was a high degree of general consistency amongst the parent testers since the range of agreement was from 74 to 79 percent. Further, there is no apparent difference between the results of the Negro or white parent examiners. Thus, the remainder of the analysis treats the parents as a group.

Table II shows the degree of relationship between the children's test scores achieved by the parent and graduate student testers. The correlation for the Pre-school Inventory was .88 and for the Peabody Picture Vocabulary Test was .64. Both of these relationships are significant at the less than .01 level.

Table III is an attempt to detect whether the parents were tending to increase the unreliability by either unwittingly helping the subjects get higher scores or interfering with the subjects so that they would get lower scores. Testing the difference after combining the

TABLE I

% of Agreement Between Individual Parent and Graduate Student Testers on the Pre-School Inventory Test

Parent Testers	Percentage of Agreement on Individual Tests										Number Children Tested	Average % Agreement on Ind. Tests
Student Testers	a	a	a	b	b	b	b	b	b	b		
W_1*	.67	.92	.63	.78	.76	.80	.68				8	.76
W_2	.76	.77	.86	.78	.77	.65	.81				7	.77
N_3*	.82	.77	.85	.71	.77	.73	.72	.80			8	.77
N_4	.82	.67	.78	.64	.85	.79	.75	.71	.76		9	.75
W_5	.87	.71	.82	.80	.76	.59	.71				7	.75
N_6	.73	.80	.76	.84	.77	.78	.84	.78			8	.79
N_7	.87	.67	.81	.76	.79	.74	.70	.69	.62	.72	10	.74
7											57	.76 Average

a: one student tester for all subjects

b: a panel of student testers were used with these subjects

* W indicates white parent examiners
  N indicates Negro parent examiners

TABLE II

Relationship between Combined Parents and Sophisticated Testers on Pre-School Inventory (PI) and Peabody Picture Vocabulary Test (PPVT)

Test	N	r
PI	57	.88[a]
PPVT	44	.64[b]

[a] r = .34 significant at the .01 level

[b] r = .38 significant at the .01 level

TABLE III

Differences between Test Results Relative to Order of Testing by the Parents

Test	N	$\bar{D}$	$S_{\bar{D}}$	T-test
Pre-school Inventory				
Parent (combined, first & second)	57	.97	1.62	NS
Parents First	25	3.09	2.27	S
Parents Second	32	4.12	2.04	S
Peabody Picture Vocabulary Test				
Parents (combined, first & second)	44	2.1	1.05	NS
Parents First	25	1.79	1.60	NS
Parents Second	19	.32	1.32	NS

(NS - not significant; S - significant level < .05)

scores whether the parent administered the test first or second, we find no significant difference between the means for either PI or PPVT. Significant differences were found in favor of the second testing whether the tester was parent or student on just the PI. The test-retest condition or just the passage of the five days seem to increase the score on this test. However, with the PPVT, there was no significant increase in the score when the tests were administered within 5 days of one another.

It is possible to divide the Pre-school Inventory into 21 categories (See Table IV). In an attempt to detect whether there may be certain particular areas where the parents are enabling the subjects to be more or less successful, Table IV was developed to show the frequency of success on the given items under each category for the combined first and second testing.

In nine categories, the parents and students were getting about equal accuracy. In four areas, the parents were achieving more accurate responses, viz., naming meal time objects, counting out loud and understanding the concept of numbers, naming children in group, and performing personal directions. The sophisticated student testers were evidently achieving more accuracy in three areas, viz., personal identification, knowledge of freight train, and discrimination of form.

Discussion:

Two factors have clearly emerged from this study. First we have seen a demonstration of effective administering of psychological tests by the parents. It must be kept in mind that the parents were compared with a highly sophisticated group of students skilled in manipulative techniques

TABLE IV

Differences between Number of Accurate Responses Obtained from HS Children by Parent and Student Testers within Categories of the PI

Classification of Categories	# of Items Within Category	More Accurate Response Elicited by Parent	More Accurate Response Elicited by Student	% of More Accuracy Attributed to Parents
Personal Identification	8	29	47	38*
Naming children in group	2	32	19	63*
Identifying Body Parts	10	42	56	42
Number concepts of body parts and objects	15	26	32	45
Counting aloud and understanding the concept of corners	3	25	13	67*
Checker grouping, more and less	4	38	31	55
Ordering of # of checkers	5	52	39	57
Knowledge of freight train	4	24	38	39*
Discrimination of Form	4	28	57	33*
Drawing of form	4	15	17	47
Similarities and Differences	19	118	117	50
Performing personal directions	12	34	20	63*
Naming mealtime objects	1	25	9	73*
Color Identification using crayons	8	43	56	43
Color Identification using imagination	6	60	42	59
Knowledge of movement of objects	5	60	54	53
Time concepts	8	47	33	59
Reasoning	5	24	19	56
Order and Color concepts of Boxes & Cars	11	145	177	45
Identifying functions of people	8	56	51	52
Tracing line from one picture to another	5	30	24	56

*Indicates marked difference by inspection.

and keenly aware of the need for objectivity in testing situations. Despite these factors, very significant correlations, particularly on the Pre-school Inventory Test, were obtained. Secondly, there was evidence of the efficiency for the parents as a group as shown by their high consistency on the Pre-school Inventory Test (74%-79%) considering both differences in their educational background and "color of skin" variables. The fact that there was a significant difference resulting from the order in which the Pre-school Inventory was given regardless of which group tested last suggests even greater similarity in effectiveness between the students and parents and demonstrates that the children learned to be more accurate through either the passage of time and/or the test-retest procedure. The PPVT scores evidently were not so affected.

With the very limited sample of Negro and white parents, generalizations must be even more restricted. There is the possibility that the more similar environmental background based on socio-economic factors may reduce the lowered effectiveness noted in other studies of intellectual performance of Negroes within a white environment. Pursuance of this consideration utilizing a larger sample would prove most useful.

The results suggested that the parents had more and less effectiveness in certain categories within the Pre-school Inventory. Items involving the recall of specific information as contrasted with manipulations within the immediate situation seemed more accurately handled by the children when tested by the parents. The consideration of probing for answers, better understanding of language, more comfortable exchange, etc. may be a sample of possibilities explaining this observation.

In summary then, the effectiveness revealed by the parents in this study leads us to believe that there is a potential corps of untrained people who may be utilized for services requiring some areas of testing skill. Highly motivated individuals indigenous to the particular setting may very well provide the traits needed for negating the handicaps inherent in lack of professional training. Additional training of the parents for building-in-objectivity and manipulative skill is indicated and would help to reduce some of the differences found in this study. It is likely that the qualities demonstrated by the parents as testers may also be utilized in other aspects of currently viewed professional services such as observers, handlers of data, and teacher-aides.

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