

DOCUMENT RESUME

ED 096 003

PS 007 438

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TITLE Early School Entry: A Study of Some Difference in Children Remaining at Home and Those Attending School.
PUB DATE Mar 74
NOTE 17p.
EDRS PRICE MF-\$0.75 HC-\$1.50 PLUS POSTAGE
DESCRIPTORS Age Differences; *Child Development; *Early Childhood Education; *Early Experience; Emotional Development; *Family Environment; Intelligence Quotient; Reading Readiness; *School Environment; Socioeconomic Status; Standardized Tests
IDENTIFIERS *Early School Entry

ABSTRACT

The present study was developed in order to help clarify some issues concerning the "at home" or "early entry" effect upon the child's development. The special problems that this study identified as valuable in the child's development were reading readiness and emotional "well-being". Five groups of young children matched for age, socioeconomic status, and intelligence were provided with differential schooling experiences. One group remained at home, while the other four groups were at school either in a mixed age classroom or in a non-mixed age classroom. After six months the results indicated no difference in reading readiness between groups, but all groups made significant advances on the Pintner-Cunningham Primary Test. Further, the "at home" group showed the most emotional growth when compared with the "at school" children. (Author/CS)

ED 096003

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EARLY SCHOOL ENTRY: A STUDY OF SOME DIFFERENCE
IN CHILDREN REMAINING AT HOME AND THOSE ATTENDING SCHOOL

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March, 1974

PS 007438

ABSTRACT

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Five groups of young children matched for age, socioeconomic status, intelligence were provided with differential schooling experiences. One group remained at home, while the other four groups were at school either in a mixed age classroom or in a non-mixed age classroom. After six months the results indicate no difference in reading readiness between groups, but all groups made significant advances on the Pintner-Cunningham Primary Test. Further, the at home group showed the most "emotional growth" when compared with the "at school" children.

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EARLY SCHOOL ENTRY: A STUDY OF SOME DIFFERENCE
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O. Weininger

A survey of the literature on early childhood education since the late 1960's indicates a considerable attempt to evaluate the effects of early admission to a school program. Much of the work has been described (Stennett, 1969) as inconclusive if not conflicting, with concern expressed about the experimental design, interpretations, sampling techniques and data analysis.

The studies do, however, indicate that the mental growth of the handicapped child is stimulated by pre-school educational programs (Elkind, 1970; Hodges, McCandless and Spicker, 1971; Anderson and Hanrahan, 1972; Halasa, 1972 and White, 1972). Children who are "gifted," or are "middle class non-problem children" show up as well in academic or on non-academic achievement factors no matter whether they were admitted to a school program at an early admit-age, a normal admit-age, or a late admit-age (Braga, 1969; 1971). However the research in this area of early entry to schools by "normal" children is conflicting. The recent literature is critical of children being admitted early to school programs. Ames (1966) indicates that bright but immature children will underachieve and drop out if admitted to school at too early an age. This work is supported and extended by the researches of Moore and Moore (1972) who warn that it is unwise both psychologically and

neurologically to admit a child under six years of age to a formal school program. They point out that children below this age are not "ready" to cope with the demands made upon them. Elkind (1970) points out that the child does not attain the "logical and linguistic structures" that underlie such formal skills as reading and arithmetic until he is six or seven years of age. Perhaps as White (1972) emphasizes and Elkind (1969) and Moore and Moore (1971) support, formal education should be delayed, and young children would be better off if they were to remain at home. Children seem to acquire information and experience in their play and formal training exercises does not seem to quicken the process (Goodnow and Bethon, 1966; Mermelstein and Shulman, 1967 and Mermelstein and Meyer, 1969).

The present study was developed in order to help clarify some possible issues concerning the "at home" or "early entry" effect upon the child's development. The special problems that this study identified as valuable in the child's development were the problem of reading readiness and emotional "well-being." These variables were chosen because of the recent emphasis being placed upon reading and emotional well-being.

Method

Subjects. Five groups of children, boys and girls, were selected on the basis of age, grade placement, socioeconomic status and racial background. Three groups of four-year-olds were matched as far as possible on the above variables, so that the composition of these three groups of four-year-olds varied as little as possible. Their level of general intelligence, as measured on the basis of the Denver Developmental Test and the Kent Scales, did not reveal any significant difference in intellectual functioning. The children showed average to high average intelligence (I.Q. = 100-110).

The two groups of five-year-olds were matched on the basis of age, grade placement, socioeconomic status and racial background. These children showed a high average level of general intelligence.

The description of the five groups is presented in Table 1.

Insert Table 1 about here

Procedure. All four and five-year-old children were administered the Pintner-Cunningham Primary Test, the Human Figure Drawing Test. The tests were administered in January (Pre-testing), and again in June (Post-testing). The Pintner-Cunningham Form A (Pre) was administered in January and Form B (Post) was administered in June.

The four-year-old children were administered the Denver Developmental Test at the pre-testing; while the five-year-old children were administered the Kent Scale.

TABLE 1

COMPOSITION OF THE FIVE GROUPS

Group	N Females	N Males	Total N	Age in Years	Description
1	9	6	15	4-0 to 4-11	Children living at home not having attended school and not attending school during this study.
2	7	5	12	4-0 to 4-11	Children in a Junior mixed-age grouping classroom. This was their first public school class experience. The four year olds combined with the five year olds are referred to as the Junior mixed group.
3	8	7	15	4-0 to 4-11	Children in a non-mixed age classroom. This was their first public school class experience.
4	7	5	12	5-0 to 5-11	Children in a senior mixed-age grouping classroom. This was their first public school class experience. The five year olds, combined with the four year olds are referred to as the senior mixed group.
5	8	6	14	5-0 to 5-11	Children in a non-mixed age grouping classroom. This was their first public school class experience.

All testing was individually carried out. The children who were not at school were seen in their homes; while the children at school were seen in a small room.

Test Material

The Pintner-Cunningham Primary Test: This test "is composed entirely of pictures which are marked by the pupils according to the examiner's verbal directions. It contains seven different subtests, covering as many different aspects of general mental ability" (Pintner-Cunningham Manual, 1966, p. 3).

The Denver Developmental Screening Test: This test is a technique "to provide a simple method of evaluating the development of infants and preschool children. It is made up of 105 test items (consisting of gross motor items, fine motor adaptive items, language items, personal social items) which were administered to 1,036 healthy Denver children who approximated the racio-ethnic and occupational group characteristics of the Denver population. The children ranged in age from two weeks to 6.4 years" (Frankenburg and Dodds, 1967, p. 190) (Reliability and validity studies are described by Frankenburg, et al 1971a and 1971b).

The Human Figure Drawing Test: This test is a projective technique to measure the "emotional maturity" of young children. Each child is asked to draw a person on a white sheet of paper 8 x 11 1/2" using a soft lead pencil having an attached rubber. The child is asked to draw the "opposite sex" after he has completed his first drawing

(Koppitz, 1967). The test is scored by totaling the number of emotional indicators noted in the child's drawing (Koppitz, 1969). These emotional indicators "are not primarily related to a child's age and maturation but reflect his anxieties, concerns and attitudes" (Koppitz, 1969, p. 35).

The Kent Scales: The Kent Series Scales consist of "four overlapping scales with independent norms. Their coverage is as follows: Scale A, ages 5-7; Scale B, ages 6-8; Scale C, ages 7-10; and Scale D, ages 9-14" (Kent, 1946). These scales consist of a series of questions, with the correct answer given a specific weighting. The total correct weightings are cumulated and norms for total score are provided. In the presenting study, only Scale A was used (Kent, 1946 and Buros, 1953).

Results

A. Pintner-Cunningham Test

The findings on the Pintner-Cunningham Test indicates that general hypothesis that the children who remained at home performed as effectively on the Pintner-Cunningham Test as the children who were at school is acceptable at the 1% level of confidence.

The findings indicate that the home group of children did significantly "better" on pre-testing on the Pintner-Cunningham Primary Test than either the children in the Junior mixed group (group 2) or the children in the non-mixed group (group 3) (See Table II).

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Insert Table II about here

The findings further indicate that there is a significant improvement on the post-testing results of the Pintner-Cunningham Primary Test in all five groups, i.e., all groups of children improved on the test performance, whether they were at home, in a mixed classroom, or in a non-mixed classroom (See Table II).

Interestingly, the children who remained at home and did not attend school did not perform less effectively on the Pintner-Cunningham Test in the post-testing when compared with either the Junior mixed or group three, the four-year-old non-mixed group. There was no significant difference in test performance.

Further, there are no significant differences in the mean scores of the pre and post results on the Pintner-Cunningham Primary Test when the mixed age or non-mixed age students are compared. There is however a significant difference in the mean score difference on the Pintner-Cunningham, Form A when the home group is compared with the Junior mixed or the non-mixed group. The home group performed better than the non-home group of children.

These findings are summarized in Table III.

Insert Table III about here

TABLE II

t RATIO FOR MEAN TEST SCORES ON PINTNER-CUNNINGHAM PRIMARY
TEST FORM A (PRE) AND FORM B (POST)

Group	Mean _A	Mean _B	t ratio	df	P
1. Home Group	50.3	57.1	5.82	14	0.001
2. Junior Mixed Group	38.4	52.2	4.81	11	0.001
3. Non-Mixed Group	40.3	52.8	9.08	14	0.001
4. Senior Mixed Group	52.9	61.5	4.09	11	0.01
5. Non-Mixed Group	56.0	63.0	5.05	13	0.001

TABLE III

A COMPARISON OF INTER-GROUP MEAN SCORES DIFFERENCE ON THE
PINTNER-CUNNINGHAM PRIMARY TEST FORM A AND FORM B

Inter-Group	Mean Group Difference	t ratio	df	P
Home group Form A Junior Mixed Form A	11.9	2.94	25	0.01
Home group Form B Junior Mixed Form B	4.9	1.08	25	N.S.
Home group Form A Junior Non-Mixed Form A	10.0	2.96	28	0.01
Home group Form B Junior Non-Mixed Form B	4.3	1.40	28	N.S.
Junior Mixed Form A Junior Non-Mixed Form A	-1.9	0.89	25	N.S.
Junior Mixed Form B Junior Non-Mixed Form B	-0.6	0.14	25	N.S.
Senior Mixed Form A Senior Non-Mixed Form A	-3.1	0.87	24	N.S.
Senior Mixed Form B Senior Non-Mixed Form B	-1.5	0.49	23	N.S.

B. The Human Figure Drawing Test

The child's first HFD was compared with his second HFD six months later and the change in the number of emotional indicators was calculated. If there were fewer emotional indicators noted, a plus sign denoted the change, if the number of indicators increased, a negative sign denoted the change; no change was noted by a zero sign.

The results of the HFD test indicate that the highest percentage of positive change occurred in the children who remained at home for this period of time. Similarly, as seen in Table IV the lowest

Insert Table IV about here

percentage of negative change occurred in the children who remained at home during this period. The percentage of change in the emotional indicators in the other four groups do not show such a progressive development. These percentages generally show a slight increase in negative percentage, or no change in the number of emotional indicators.

TABLE IV

PERCENTAGE CHANGE IN THE HUMAN FIGURE DRAWING TEST
EMOTIONAL INDICATOR SCORES OVER A 6 MONTH PERIOD

Change	4 year old at home	4 year old mixed classroom	4 year old non-mixed classroom	5 year old mixed classroom	5 year-old non-mixed classroom
plus (+)	57.1%	41.6%	43.7%	40.0%	28.5%
negative (-)	21.4%	50.0%	50.0%	40.0%	28.5%
zero (0)	21.4%	8.3%	6.2%	20.0%	42.8%

Discussion

The results of the present study generally support the statement that these children should begin their formal educational process later than four years of age. In general the four year old child who remained at home did significantly better on a reading preparedness test and shows a higher percentage of positive change on a test of "emotional indicators." The four year old or five year old children who were in mixed-age classrooms, or in non-mixed graded classrooms did improve significantly in their test performance, but it seems as though they did so at the expense of their emotional "well-being!"

Children of four years old who remained at home seemed to do just as well in reading readiness preparedness as did the children of the same age who were in school. This does not come as a startling statement for it follows on the statement and work presented by Elkind (1970), and Moore and Moore (1972); this study does seem to point to the need to increase our understanding as to what happens "emotionally" to the young child when he is brought into school at too early an age. One concern is that the young child will suffer emotionally, in that his energy and resources, which would ordinarily allow him to deal with his growing developmental needs and integrate them in a meaningful fashion into his general life is thwarted. When he enters a formal educational system at too early an age, his emotional resources and energy is being used to cope with the academic discipline and not his growing and constantly shifting drives and needs.

Conclusions

Children of four years of age who remained at home, when compared with matched four year olds in mixed-age classroom groupings or non-mixed age classrooms, performed as effectively in the Pintner-Cunningham Primary Test. These children performed significantly better than the school children at the time of the first testing; at the second testing, the school children have "caught up to," but they did not surpass the children who remained at home. No significant differences were noted at the time of the second testing. The five year olds gained significantly no matter what type of class setting they were in.

The children who remained at home appeared to have made the greatest gains, as measured by the emotional indicators, perhaps then, enabling them to cope more effectively later on with the demands of formal academic discipline.

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