

# The Psychological Clinic

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VOL. XXII, No. 2

JUNE-AUGUST, 1933

## THE ONLY CHILD OF AGE FIVE

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Opinionated judgment resulting from empirical observation and from popular quasi-scientific endeavor characterizes much of the literature about only children. Nevertheless, two groups of investigators, holding disparate positions, exemplify the present-day attitude. The first, the mental hygienists, psychoanalysts and psychiatrists, characteristically allege that the only child is maladjusted and nervously unstable; they seem to feel that to be "an only child is a disease in itself." Academic psychologists, however, find these sweeping generalizations unwarranted because of: the doubtful validity of methods used in studying only children, the lack of adequate control groups, the lack of unanimity in defining only children, and the paucity of cases studied.

### *Some Opinions and Studies of Only Children*

Recently, one review and analysis of the literature has appeared, and several studies of small numbers of only children have been published. In addition, a recently published book concerning birth order and intelligence includes data regarding only children and eldest children. Thurstone and Jenkins (20) redact some interesting studies of only children. The results of several will be commented on briefly.

Friedjung (7) studied the pathology of the only child. He found neuropathological traits particularly frequent among his patients, 87 of 100 only children being neuropathic whereas only 31 of 100 children having siblings were neuropathic.

Cyril Burt (3) reported 12.2 per cent of a delinquent group and

only 1.7 per cent of a comparable non-delinquent group to be only children. Slawson (16) found that 4.5 per cent of a group of delinquents in New York State were only children. Reynolds (15) set forth the following distribution of 400 habit clinic cases: 11.8 per cent, only children; 27 per cent, eldest children; 20.8 per cent, youngest children; 6.0 per cent, adopted children.

Breckenridge and Abbott (2) studied the families of 584 delinquent boys. One hundred and thirty-eight of the delinquents were eldest children; 70 were youngest; 30 were only children; the rest were intermediates. Eldest children of course were only children for varying periods of time; their high frequency among delinquents is striking.

Von Hentig and Vierstein (23) are reported by Thurstone and Jenkins to have proved that only children are more likely to be incestuous than are children who have brothers or sisters. Of von Hentig's 92 incestuous persons 9.8 per cent were only children, while the "control" group of 1,660 soldiers contained but 4.1 per cent who had been only children. "This is a difference of  $5.7 \pm 2.13$  per cent," says Thurstone, "and so may be considered practically established"<sup>1</sup> (p. 102).

Stein (17) has alleged that the fertility of the only girl is less than that of children who have siblings, the probability of issue being 60 and 90 per cent, respectively.

Wexberg (24), A. Adler, and Neal (13) have been emphatic in stating that the only child, because of his place in the family, is deprived of certain relationships, without which normal adjustment is unlikely to take place.

Goodenough and Leahy (8) investigated the effect of family relationships upon the development of personality in order to test the statements of certain psychoanalysts. The first of their two studies dealt with 322 Minneapolis behavior clinic cases, 75 per cent of whom were of I.Q. 100 or above; the second with 350 kindergarten children. They concluded that only children may show a tendency to be aggressive and self-confident. Most of the cases of extreme physical demonstrativeness of affection are found among such children. Only children are said to be highly gregarious, unstable of mood, excitable, flighty, and destructive. The writers properly regard their results and conclusions as suggestive.

<sup>1</sup> Mr. Howard Lane reports 7.4 per cent of only children among 585 cases at St. Charles Illinois Reformatory in 1933. Unpublished report of Howard A. Lane, School of Education, Northwestern University.

A more extreme attitude is frequently exhibited toward the only child. The only child is alleged by some to be "jealous, selfish, egotistical, dependent, aggressive, domineering, or quarrelsome." In addition he is spoiled and unpopular (13).

Psychologists have recently attempted to ascertain the validity of these diatribes. Fenton characterized the literature upon only children as "popular, quasi-scientific, and psychiatric." He attempted therefore to secure more valid data (5). Two groups were studied: first, a group of 193 children from the kindergarten to the sixth grade (containing 34 only children); and second, two groups of university students, 512 in all—the two university groups together having 73 only children therein. Each subject was rated upon a scale (that which Blanton published in *Child Guidance*) of twelve traits.

In aggressiveness, there is some evidence in the data pointing to the fact that only children as a group are a little more likely than other children to be aggressive, to bully, and to insist upon having their own way, but the proportional amount is small . . . (p. 550). . . . In emotional response, stability, and attention-type, the two groups are again very similar (p. 550).

The children were observed by teachers for evidence of nervous symptoms:

. . . though there are fewer only children who were noted as nervous, those who were seemed to have more symptoms than other cases (p. 551).

The college students checked 101 of 116 items on the Woodworth Psychoneurotic Inventory:

On the anonymous returns students who were only children gave more positive responses (that is, responses indicative of psychopathic or neurotic tendencies) than did the others. On the returns containing names, however, the findings were reversed, the only children giving, on the average, fewer positive answers than the others (p. 551).

In addition the median percentile rank on the Ohio State University Psychology Test was 69.5 for the only children as compared with 50 for unselected students. In consideration of these data, Fenton was convinced of the hyperbolic, invalid nature of the speculations concerning only children.

In an attempt to verify or reject Fenton's conclusions, Guilford and Worcester (9) studied 21 only children and 141 other children, the only children ranging in age from eleven through fifteen, averaging 12.86; the non-only children ranging the same, averaging 12.99 years. Their results can be briefly summarized: In I.Q.

(Terman Group Test) the only children averaged 108, the non-only children, 103. The occupational status of fathers of only children (Barr scale) was 12.54; of fathers of non-only children, 10.63. The only children were "definitely superior . . . in average of school marks."

The only children were equal to the non-only children in: personal health; school leadership; school cooperation; community service; industrial, vocational, and civic information; practical arts; fine arts; special interests.

The only children were superior upon eleven character "traits": courtesy, truthfulness, industry, initiative, self-control, cooperation, dependability, health attitudes and habits, personal orderliness and cleanliness, conformity to law and order, and fairness.

The small number of only children in this study leaves doubt as to its validity, but the careful comparisons with the control group make the results suggestive.

Worcester (28) followed this with a study of the attitudes of only children during an entire school year. Only and non-only children were compared on 306 different items and ratings; only children were superior to non-only children in 221 comparisons. Especially noticeable was the only child's superiority in school work.

Hooker (10) studied 30 pairs of only and non-only children (14 of girls and 16 of boys). From his data he concluded: (1) The current belief that only children in general are sure to present serious behavior problems because of their "onliness" is not substantiated by the results of this investigation. (2) Only children in general are not necessarily nervous, hysterical and "spoiled." (3) Considered as a group and on the basis of chronological age, the only children in this study were not retarded at school. (4) According to the results obtained in this study, only children at school as a group probably differ little, if at all, from those with siblings.

Hooker's data were of four types: mental test data; returns upon a shortened form of the Woodworth Psychoneurotic Inventory; a rating scale for personality development; and a rating scale for school behavior.

By-products of other investigations have thrown further light upon the only child. Hurlock and Burstein (11) report that only children are not more likely than other children to have imaginary playmates. Lehman and Witty (12) state that "the only child is but slightly less social than the average child."

The conclusions from all these studies may prove misleading. Extraneous factors are so numerous that generalizations must be made with extreme care. In the studies reported to date, the number of subjects is so small and the control of variables so inadequate that the conclusions at best are merely suggestive. These criticisms apply equally to the two types of studies—those of the psychoanalyst and those of the academic psychologist. For example, Hooker studied 30 only children; Fenton, 34 only children from kindergarten to sixth grade; Worcester reports results for 21 only children. And, several of the conclusions of the psychoanalysts are based upon clinical observations of single cases.

Nearly all the studies were conducted in urban communities. Ogburn (14) giving the most recent and most exact figures available, shows that of every 1,000 urban families, 229 consist of husband, wife, and one child, 5 consist of husband and one child, and 31 consist of wife and one child. In other words 265 of every 1,000 urban families are families with only children. Incidentally the average number of children per family is growing smaller: in 1900 there were 3.22 persons per family; in 1920, 3.12; in 1930, 2.85. It appears therefore that many factors make the conclusions of the several studies cited of doubtful validity.

*The Source of Data for and Nature of This Study of Only Children of Age Five*

This paper represents an effort to ascertain more accurately the status of one group of only children—those of chronological age five.

About three hundred only children were first selected. The criterion for "onliness" was considered to be of great import. After much thought, the following was used: an "only" child is one who not only has no brothers or sisters but who *never* has had brothers or sisters. Adherence to this criterion therefore eliminated several children from the original group but gave a more valid selection of only children in so far as the concentration of forces that attend "onliness" is concerned. The children furthermore are those of native-born white parents in Kansas City, Missouri. The data were secured through the courtesy of the Children's Bureau, and through the offices of Superintendent George Melcher in Kansas City, Missouri, during the interval January to May, 1933.

The following data and examination results were assembled for each child:

1. A short case history of birth and early development.
2. A thorough physical and medical examination.
3. Stanford-Binet Mental Test results.
4. Questionnaire returns concerning social development and adjustment.
5. Reports and observation of play.

At the time of the investigation, all children were attending kindergarten or were candidates for entrance to the first grade in September, 1933. Miss Rosamond Losh, executive secretary of the Children's Bureau, exercised great care in insuring that the final selection would be a truly representative sampling of five-year old white children of native-born parents in Kansas City, Missouri. Complete data were secured for 153 children, of whom 82 are girls and 71 are boys.

#### *Mental Status of Only Children*

The mean chronological age of the boys is 67.48 months, S.D. = 4.14; the mean chronological age of the girls is 67.2, S.D. = 3.79. The mean mental age of the boys is 72.15 months and the S.D. is 9.3; the mean for the girls is 72.99 with a S.D. of 7.47 months.

The children are a little more mature mentally than chronologically as the data in Table I, containing a distribution of intelligence quotients, reflect. The average intelligence quotient of the boys is 107, and of the girls, 108.

#### *Occupational and Social Status of Parents*

The only child comes from a home somewhat above the average, although not markedly so. The median Barr rating scale values given the occupations of the fathers were 12.5 for the boys and 12.6 for the girls. The means correspond closely to those of only children studied by Guilford and Worcester (9). These ratings are between 12.74 assigned by Barr to the position of chef in a first-class hotel and 12.06, the rating for a masseur or nurse (graduate). L. M. Terman's gifted group was assigned an average rating of 12.77, while the mean for the general population is 7.92 (18) (p. 71). When one recalls that these only children are chosen from representative populations of the entire city, one recognizes the superiority of their homes. The education as reflected in formal schooling of the parents averaged 9.6 years for the fathers and 9.2 for the mothers. Comparable data are not

TABLE I

DISTRIBUTION OF INTELLIGENCE QUOTIENTS OF PRESCHOOL ONLY CHILDREN

I.Q.	Boys	Girls	Both
140	1		1
135		1	1
130	3		3
125	3		3
120	6	4	10
115	7	16	23
110	9	20	29
105	11	16	27
100	13	10	23
95	5	10	15
90	3	2	5
85	5	2	7
80	3		3
75	1		1
70		1	1
65			
50	1		1
N =	71	82	153
Range =	63.2-141.5	72.4-135.5	
Md. =	107.04	110	
Mean =	107.01	108.66	
S.D. =	14.45	9.57	

directly available. Terman (18) reported an average of about 12 years for the parents of gifted children, while the median amount of schooling for the native born white draft of the United States army was 6.9 years.<sup>2</sup> Obvious is it that the only child comes from a somewhat superior social-economic milieu.

#### *Physical Development of Only Children*

The average weight of only boys at birth was 7 lbs. 3 oz.; the S.D. was 1 lb. 6 oz.; for the only girls, the average was 7 lb. 5 oz., and the S.D. was 1 lb. 3 oz. The average obtained from the results of the work of Faber, Holt, Bowditch, and Hollingworth is 7 lbs. 8.75 oz. for boys, and 7 lb. 3.23 oz. for girls. (Cited by Terman (18), p. 180.) These only boys weigh a little less and the only girls a little more than the average. The differences can not be considered significant in light of the S.D.'s and in terms of the data for unselected children in Kansas City, Missouri.

Although the only boys weigh slightly less than average at birth, the average increase in weight was normal for 93.5 per cent

<sup>2</sup> Psychological examining in the U. S. Army. *Memoirs of the National Academy of Science*, Vol. 15, p. 761.

of the boys and for 87.7 per cent of the girls during a two-year period. The health during the first year was reported to be good or excellent for 82 per cent of the boys and 70 per cent of the girls.

According to U. S. Public Health Service, the average boy of six weighs 47.5 pounds, and the average girl, 45.5 (Baldwin gives 42.6 for girls and 45.2 for boys). The means and S.D.'s for these only children are tabulated below:

	Only Girls	Only Boys
Mean.....	40.84	43.12
S.D.....	1.845	1.835

At six years, the average girl is 44.8 inches in height (Baldwin 44.3) and the average boy is 45.4 inches in height (Baldwin's figures also are identical). The means and S.D.'s for the only children follow:

	Only Girls	Only Boys
Mean.....	42.99	43.61
S.D.....	2.5	2.04

The average age of walking is somewhat earlier than that given by Mead for unselected children.

	Average Age in Months for Boys	Boys S.D.	Average Age in Months for Girls	Girls S.D.
Only children.....	12.55	2.82	12.36	2.45
Terman's gifted.....	14.16	2.97	14.08	2.83
Witty's gifted.....	13.01	2.18	12.59	2.01

Mead gives the average age of walking as 13.88 months.<sup>3</sup> Only children appear to walk at somewhat earlier ages than do gifted or normal children.

Although Raymond Franzen has shown quite clearly that physicians are too variable in their judgment of nutrition to make their judgments meaningful, the nutrition ratings are here included for sake of completeness:

	Only Boys Per cent	Only Girls Per cent
Good or excellent.....	71.7	65.6
Fair.....	17.3	22.5
Poor.....	10.8	11.7

The only children have had children's diseases somewhat less frequently than normal children and decidedly less often than the

<sup>3</sup> Cited by Terman in Genetic studies of genius. Vol. I, p. 187.

gifted children studied in Kansas City (27), and in California (18) (p. 190).<sup>4</sup>

	Gifted Per cent	Only Per cent
Measles.....	92	52
Chicken pox.....	84	23
Whooping cough.....	72	25
Mumps.....	66	5
Scarlet fever.....	14	2
Diphtheria.....	6	.05
Smallpox.....	6	—
Pneumonia.....	6	2
Infantile paralysis.....	2	—

No serious after-effects of these diseases appeared in 79 per cent of the girls and in 88 per cent of the boys. Five children only have had serious after-results, and ten have experienced minor but chronic disturbances.

Ninety-two per cent of the girls and 85 per cent of the boys have had no serious accidents. Eight of the children have had serious falls or automobile accidents; two boys were badly burned. Recovery from injury or infection is complete, but permanent physical impairment is reported for five children. Accidents and infectious diseases have not impaired greatly the physical development of these children.

In addition to the reports given above, there are ancillary data which reveal essential physical superiority in the early development of only children. For 95.9 per cent of the girls and 96.6 per cent of the boys, no difficulty in hearing is reported. At age six, two per cent of unselected children have serious defects in vision, according to Collins (19) (p. 248). Two per cent of the only girls, 1.15 per cent of the only boys have serious defects.

Frequent headache is a symptom of disease, and is commonly found in children having poor health. According to Terman and Almack (19) (p. 275) data upon frequency of headache are not very reliable. Percentages of children reporting headache in different populations range from 3.7 to 27. The percentage for the only children is three.

#### *Present Health Status*

Data concerning amount of sleep, condition of teeth, and so forth show that only children approach very closely the standards

<sup>4</sup> The writer is fully aware of the unreliability of these data; the gifted children were older, therefore analogies are not reliable. Reliability is lessened also by the inaccuracy of retrospective accounts.

given by various authorities for preschool children. Another comparison deserves mention in revealing the essential normality or superiority of only children. According to the Lausanne report, 7.8 per cent of boys and 9.7 per cent of girls at age eight display spinal irregularity (19). Nine per cent of the only girls and five per cent of the boys exhibited defects of posture; five per cent only showed serious defects.

The general health index was obtained through the physician's judgment which was based upon the physical-medical examination. Present health status follows:

	Only Boys Per cent	Only Girls Per cent
Good or excellent.....	81.6	78.7
Fair.....	17.2	19.4
Poor.....	1.1	1.8

From the data given previously, it is clear that in height and weight these children approach the norms closely. A further analysis of the data in reference to the Baldwin-Wood norms reveals the essential normality of these children.

TABLE II  
WEIGHT DEVIATION OF ONLY CHILDREN IN TERMS OF HEIGHT

Deviation in lbs.	Only Boys Per cent	Only Girls Per cent
+ 10 to + 14.99.....	1	1
+ 5 to + 9.99.....	4	7
+ 5 to - 5.....	89	85
- 5 to - 9.99.....	5	6
- 10 to - 14.99.....	1	1

Collectively, these data upon physical development show that the only child is characteristically superior to the normal child in his growth history and present health status. The superiority is not always conspicuous, but it is consistent in almost every index for which data were assembled.

#### *Language Development of Only Children*

No case of serious speech defect was reported, yet Terman and Almack (19) (p. 348) report that between 5 and 6 per cent of children have speech defects. Three per cent of the only children had minor defects, and 4 per cent "stutter occasionally."

The age when talking first occurs is an important item in evaluating the general development of children. The mean age for the utterance of the first words (at least three) is 11.91 months for girls; 12.75, for boys. The average for Terman's gifted are

11.01 months for girls and 11.74 for boys. According to Mead, the average age for talking for normal children is 15.32 months. Precocity in language development is characteristic of these children. That this precocity is not marked is shown by the fact that only 8 per cent of the girls and 6 per cent of the boys can read.

#### *Nervous Stability and Emotional Adjustment*

It is difficult for nervous stability and emotional adjustment to be discerned reliably. Physicians were asked to answer the question "Is the child especially nervous?" Symptoms of nervousness were listed if an affirmative answer was given. The responses were made after careful observation of the child had taken place, and after interviews with parents had transpired. Seventy-seven per cent of the girls and 76 per cent of the boys were reported "not especially nervous." For 100 children with siblings the per cent reported as free from nervousness was 72. The frequencies of temper tantrums, biting of finger nails, placing of fingers in mouth, tendency to worry, and so forth, were slightly greater for the control children than for the only children. The difference in no case was large.

Sleep was reported as "sound and undisturbed" for 89 per cent of the girls and 90 per cent of the boys. Seven per cent of the boys and 5 per cent of the girls exhibited enuresis, and defecation disturbances occurred in 5 per cent both of boys and of girls. Night-terrors were checked as characteristic of 3 per cent of the girls and 7 per cent of the boys. Only 30 per cent of the girls and 28 per cent of the boys were alleged by their parents to have developed specific fears. Whitley reports that 40 to 50 per cent of unselected children develop specific fears (25). The fears of only children related to darkness, menacing people, menacing animals, and water. Excessive timidity was reported for two per cent of the only boys and three per cent of the girls. (Miss Whitley gives 4 or 5 per cent as the average.) No child was alleged to steal and only 5 per cent were said to "lie excessively."

#### *The Play of Only Children*

The play of 100 only children was studied to ascertain the frequency of participation in solitary and sedentary activities. Whitley (25) states that the games and play activities enjoyed at this age are largely individual and solitary. Children of five are intent upon their own toys, their own construction and endeavor.

Five year old children seldom seek the companionship or co-operation of other children.

The only children were asked to name five things they liked best to do at home and five they liked best at school. This technique emphasizes the things uppermost in the child's mind, and not perhaps the genuine preferences. The question was asked once only, but excellent rapport was established and full response appeared to have been obtained.

In all, two hundred and five different activities were cited by the only children and approximately the same number were mentioned by the children having brothers and sisters.

Individual and sex differences are conspicuous at this age; they posit recognition by the curriculum maker. The preference rank order for the boys and for the girls are set forth in Tables III and IV.

TABLE III  
ACTIVITY PREFERENCES OF BOYS

	Only Boys	Control
Ball.....	1	1
Blocks.....	2	6
Airplane.....	3.5	3
Listening to radio.....	3.5	2
Playing with wagon.....	5	4
Tag.....	6	5
Hide and seek.....	7	7.5
Play horse.....	8	9
Cowboy and robber.....	9	7.5
Indian.....	10	10
Playing school.....	11	15
Drawing.....	12.5	12.5
Sliding.....	12.5	14
Playing store.....	14	12.5
Playing house.....	15	15

TABLE IV  
ACTIVITY PREFERENCES OF GIRLS

	Only Girls	Control
Playing house.....	1.5	2
Doll play.....	1.5	1
Listening to radio.....	3	4
Playing school.....	4	5
Hide and seek.....	5	6
Drawing.....	6	3
Skiping.....	7	8
Jacks.....	8	9
Making things.....	9	10.5
Cooking.....	10	7
Drop the handkerchief.....	11	10.5
Reading.....	12.5	12
Jumping rope.....	12.5	14
Writing on black-board.....	14	13
Blocks.....	15.5	18
Playing store.....	15.5	16
Picking and tending flowers.....	17	15

The exact significance of the differences set forth above is unknown. To the writer, the data reveal marked similarity in the play of the only and the non-only children. Both for the only and for the non-only children, undefined groups, with little purpose, form and disband quickly and frequently. Cooperation of others is infrequently sought (except when the adult sets the standard and goal for play).

The preferred activities are primarily spontaneous play; seldom are they organized games. The range of activities, and the time devoted to them are, according to the reports of parents and teachers, strikingly similar for only and for non-only children.

One teacher and one observer rated the only and the control children upon seven traits; the scale allowed a spread for thirteen degrees. Values of 10-130 were assigned the ratings. The practice is identical with that employed by Turney (22) and by Witty (26) for older children. The traits considered were: courtesy, truthfulness, self-control, initiative, orderliness and cleanliness, cooperation, and dependability. The percentages of only children reaching or exceeding the median of the control are as follows: courtesy, 61; truthfulness, 63; self-control, 65; initiative, 62; orderliness, 55; cooperation, 59; dependability, 56.

Significant differences were not revealed in these trait ratings. Nevertheless, the consistent superiority of the only children is suggestive, adding one more bit of data to the cumulative evidence showing normal or superior adjustment for only children.

#### *Summary and Remarks*

This study marks an attempt to ascertain whether the only child is "unmistakably below the average in health and vitality," as one writer has stated, whether the only child is, as one mental hygienist avers, jealous, selfish, and egotistical, and whether he is seclusive and unpopular in his play-life.

Bohannon (1) stated that only children are unmistakably below the average in health and vitality. Neither to the early development nor to the present health status of only children does this statement apply. The data in this study, supporting those of Worcester (28) show, beyond peradventure, that only children are superior physically to unselected children.

Social maladjustment is alleged by Wexberg (24), Bohannon (1), Neal (13), and others to be characteristic of only children. Character ratings, observation and study of play negate

this allegation in so far as the five year old children herein studied are concerned.

The provenance of the belief that only children are maladjusted is apparent enough. Like many other false beliefs, it is based largely upon the cumulative effect of observations of single cases of maladjusted only children, and upon the common tendency of the scientist as well as the layman to oversimplify a complex phenomenon and to attribute the cause to a single, tangible, and easily discernible phenomenon. Some only children are maladjusted; *ergo* all only children are maladjusted. Further comment upon the origin of this common superstition is unnecessary.

Certainly, the general superiority of the only children can not be attributed solely to the onliness factor. One must be impressed by the influence of the somewhat superior social-economic status, by the apparent mental superiority of the parents of only children, and by the mental superiority of only children themselves.

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