

# FIRST BORN AND LAST BORN CHILDREN IN A CHILD DEVELOPMENT CLINIC<sup>1</sup>

BRUCE CUSHNA, MITCHELL GREENE, AND BILL C. F. SNIDER

*State University of Iowa*

The Adlerian hypothesis that birth rank has an influence on life style (2, pp. 376-382) has been re-emphasized with the appearance of Schachter's work (10). He conducted experiments with female college students which demonstrated greater affiliative needs among the first born. Subsequent studies by others have also used academic populations (e.g., 3-9, 11, and 13).

The present study examines the frequency and other variables of first born and last born children in various diagnostic categories in a child development clinic.

## PROCEDURE

The study was conducted from the records of the 1255 children whose families sought (first visit) diagnostic evaluation at the Child Development Clinic, State University of Iowa, between July 1, 1960 and June 30, 1963.

Among these, 327 first born and 325 last born children were found. In contrast to Schachter's procedure, we omitted only children from the first borns, because we found significantly more congenital defects among the only children than among the first borns from multichild families. (See below.) The size of the families was close to an average of three children, which is typical for this predominantly rural, Midwestern region.

The Clinic is an outpatient function in the Department of Pediatrics, particularly concerned with mentally retarded children. But many children with other neurological disorders, or with psychological in addition to medical problems, are also seen. Children with serious behavior disorders without concomitant medical problems are referred, after their evaluation, to a psychiatric facility for treatment.

Eight diagnostic categories are used in the present study, of which four are found in association with mental deficiency and four, otherwise. The first four are encephalopathy (cerebral dysfunction) associated with (a) infection, intoxication, disorder of growth, of metabolism, of nutrition, and new growths; (b) trauma or physical agent; (c) congenital defect and anomalies of the brain such as hydrocephaly, microcephaly, mongolism; (d) unknown cause. The categories are adaptations from the 1959 classification system of the American Association on Mental Deficiency.

The remaining four categories are (a) behavior disorders without medical problems; (b) psychophysiological disorders, consisting of psychosomatic disorders and organ neuroses; (c) normal; (d) deferred diagnosis.

Total frequencies of first born and last born children were compared by means of chi square tests with their frequencies according to sex, social class (as measured on a modified Warner scale), and the above categories. In addition, *t* tests of the significance of differences were carried out with regard to age, family size, and intelligence (as measured by the Stanford-Binet or the Cattell Infant Intelligence scales).

<sup>1</sup>This study was furthered by the assistance of the staff of the Child Development Clinic, especially Mrs. Erica Opitz, and Miss Ellen Smith and Mr. Richard Aldrich. Appreciation is expressed to the University Computer Center for processing the data.

## RESULTS AND DISCUSSION

First born and last born children did not differ significantly in terms of sex, age, family size, intelligence, or social class. This is true for the entire population and for each of the diagnostic categories, with the exception of congenital defect, where a difference in family size is found. In this case the first borns came from smaller families than the later borns. It would not be surprising to learn that parents who have had a child with congenital defect are strongly inclined to have no more children. This would also account for our finding, above, that there are significantly more congenital defects among only children than among first borns from multichild families.

The frequencies of first and last born children with regard to the various diagnostic categories, as well as their mean IQs, are shown in Table 1. The significant findings are:

TABLE 1. DIAGNOSTIC CATEGORIES WITH THEIR TOTAL FREQUENCIES, FREQUENCIES AND PERCENTAGES FOR FIRST BORN AND LAST BORN CHILDREN, AS WELL AS THEIR MEAN IQ'S

Diagnostic category	Total	Number		Percent		Mean IQ	
		first	last	first	last	first	last
Encephalopathy, with							
Infection, and others	133	40	36	30	27	72	64
Trauma	251	66	70	26	28	78	70
Congenital defect*	239	49	84	21	35	54	55
Unknown cause	282	68	66	24	23	77	74
Others							
Behavior disorder**	191	64	32	34	17	100	99
Psychophysiol. disorder	50	13	11	26	22	107	108
Normal	68	14	17	21	25	101	94
Deferred diagnosis	41	13	9	32	22	76	94
Total	1255	327	325	26	26	—	—

\*First and last born frequency difference significant at .005 level;  $\chi^2 = 10.05$

\*\*First and last born frequency difference significant at .001 level;  $\chi^2 = 12.26$

1. Among children with congenital defect, there were significantly more last borns than first borns (84 or 35% versus 49 or 21%). This finding is confirmed in the medical literature. The explanation would be, as mentioned above, the voluntary restriction of family size after a congenitally defective child has been born.

2. Among the behavior disorders there were twice as many first borns as last borns (64 or 34% versus 32 or 17%). This is in accordance with Adler's finding, "In my experience the greatest proportion

of problem children are oldest children" (2, p. 379). It is also in agreement with Schachter's contention that first borns are more anxious under stressful conditions. Referring to normal females Schachter states, "In anxiety-producing situations, first borns and only children are more anxious than later born children" (10, p. 52).

It should be restated at this point that our category of behavior disorders was free from any organic involvement. This may be very important in considering the psychological implications of birth order, because in a family where a child is physically handicapped, the position roles may be assumed by other members of the sibship (Adler, 1, p. 233; 2, p. 377).

The Adlerian view is that the oldest child feels dethroned. The affiliative need of which Schachter speaks may well be related to the adult stimulation which the oldest child received when he was still alone with his parents. The behavior disorders embody the resentment the first born feels in being displaced from a prized position.

An alternate explanation why later borns would be less frequent behavior problems than first borns may be found in Sears et al. (12) who indicate that perhaps later borns are more fortunate in being spared parental anxieties because the parents have had previous experience with babies.

Among children who had behavior disorders in addition to congenital defect there were also more first borns than last borns (9 out of 49 or 18% versus 11 out of 84 or 13%) although this trend does not reach statistical significance.

3. The children with behavior disorders were dichotomized into those who were aggressive, acting-out or negativistic, and those who were withdrawn or overinhibited. A greater proportion of first borns was classified as aggressive (44 out of 64 or 69%), and a greater proportion of last borns as withdrawn (18 out of 32 or 56%). A chi square test showed this difference to be significant at the .02 level.

This finding, that among first borns behavior disorders are more often directed outwardly than among last borns, is in agreement with Schachter's assertion that "with the degree of anxiety analytically held constant, first borns are considered more prone to want to be with people" (10, p. 52). The observation by Sears mentioned above, while explaining the larger number of behavior disorders among the first borns, does not explain why the last borns should be more withdrawn when they have a behavior disorder.

## SUMMARY

The first born ( $N = 327$ ) and last born ( $N = 325$ ) children from multichild families, brought to a child development clinic within a 3-year time span, were compared for frequency difference among various diagnostic categories and with other variables. No significant differences were found in sex, age, family size, intelligence, or social class, except that in the case of congenital defect, first borns came from smaller families than last borns. Significant differences were found in two diagnostic categories. (a) Among children with congenital defects there were more last borns than first borns, the ratio being 7 to 4. This is assumed to be due to voluntary limitation of family size after the birth of a defective child. (b) Among functional behavior disorders there were twice as many first borns as last borns, and this is supported by a similar trend for behavior disorders accompanying congenital defects. These findings are considered to be due in some way to birth rank and agree with Adler's and Schachter's views. (c) Furthermore, there were significant differences within the behavior disorder category: the problems of first borns were more in the nature of a lashing out at the world whereas those of last borns were more of a withdrawal from it.

## REFERENCES

1. ADLER, A. *Social interest: a challenge to mankind*. New York: Putnam, 1939.
2. ADLER, A. *The Individual Psychology of Alfred Adler*. New York: Basic Books, 1956.
3. CAPRA, P. E., & DITTES, H. E. Birth order as a selective factor among volunteer subjects. *J. abnorm. soc. Psychol.*, 1962, 64, 302.
4. GERHARD, H. D., & RABBIE, J. M. Fear and social comparison. *J. abnorm. soc. Psychol.*, 1961, 62, 586-592.
5. GLASS, D. C., HORWITZ, M., & FIRESTONE, I. Birth order and reactions to frustration. *J. abnorm. soc. Psychol.*, 1963, 66, 192-194.
6. HALL, E., & BARGER, B. Attitudinal structures of older and younger siblings. *J. Indiv. Psychol.*, 1964, 20, 59-68.
7. RADLOFF, R. Opinion evaluation and affiliation. *J. abnorm. soc. Psychol.*, 1961, 62, 578-585.
8. SAMPSON, E. E. Birth order, need achievement and conformity. *J. abnorm. soc. Psychol.*, 1962, 64, 155-159.
9. SARNOFF, I., & ZIMBARDO, P. G. Anxiety, fear, and social affiliation. *J. abnorm. soc. Psychol.*, 1961, 62, 356-363.
10. SCHACHTER, S. *The psychology of affiliation*. Stanford, Cal.: Stanford Univer. Press, 1959.
11. SCHACHTER, S. Birth order, eminence and higher education. *Amer. sociol. Rev.*, 1963, 28, 757-768.
12. SEARS, R., MACCOBY, E., & LEVIN, H. *Patterns of child rearing*. Evanston, Ill.: Row, Peterson, 1957.
13. WRIGHTSMAN, L. S. Effects of waiting with others on changes in level of felt anxiety. *J. abnorm. soc. Psychol.*, 1960, 61, 216-222.