

Observable Stigmata and Perceived Maternal Behavior

LYNN C. RICHMAN, Ph.D.
DENNIS C. HARPER, Ph.D.

Iowa City, IA 52242

Introduction

It is generally assumed that physical disfigurement in children may be an important contributing factor in the development of parental child-rearing attitudes (Cummings, Bayley, and Rie, 1966; Klebanhoff, 1959; Waldrop, Pederson, and Bell, 1968). Traditionally, researchers in this area have studied maternal attitudes in child rearing chiefly through parental self-report techniques. The complexities of investigating parent-child relationships have resulted in numerous contradictory findings and confusion (Becker and Krug, 1965). Among the sources of this confusion are the varied research designs, methodologies, and samples investigated. It is not surprising, therefore, that research on child rearing which examines either "normal" or atypical children remains equivocal. Nevertheless, there is clinical evidence that children with cleft lip and/or palate (or other physical anomalies) experience a different social response from parents and society in general. As noted by Clifford (1973), the effects of a physical anomaly are reciprocal in nature. More specifically, the child born with an observable congenital anomaly experiences both the direct influence of self-perception and the influence related to the social response of others. The paucity of data, or more accurately, its equivocal outcome in the study of the relationship between a child's congenital anomaly and parenting behaviors, may signify a need for new approaches for examining these issues.

The authors are affiliated with the Department of Pediatrics, University of Iowa, Iowa City, Iowa 52242. Dr. Richman is Assistant Professor and Investigator Cleft Palate Research Program and Dr. Harper is Assistant Professor and Director, Psychological Services, University Hospital School.

This study was presented in part at the Third International Congress on Cleft Palate and Related Craniofacial Anomalies, Toronto, June, 1977.

The study was supported in part by PHS Grant DE-00853, the National Institute of Dental Research.

One relatively recent approach is the Child's Report of Parental Behavior Inventory (Schaefer, 1965). This instrument attempts to study the child's perception of parent's child-rearing behaviors. The approach suggests that perceived parental behavior may be a more relevant determinate of the child's behavior than the externally measured stimulus content to which it refers. While it is acknowledged that there may be differences between external criteria of parenting behavior and the child's perception, the child is at least partially affected by the manner in which the parent is perceived.

The literature reviewing the impact of physical impairment such as cleft palate and cerebral palsy on maternal child rearing behaviors has not yielded results strongly consistent with theory or clinical speculations (Goodstein, 1968; Harper, 1977; Clifford, 1973; Wright, 1960). Furthermore, attempts at documenting syndrome-specific disability reaction or personality type have revealed more negative data than is generally acknowledged (Shontz, 1975). Numerous authors (Barker, 1948; Barker et al., 1953; Meyerson, 1948, 1955; Wright, 1960; Clifford, 1973; Shontz, 1975) who have examined the general problem of disability conclude that there are classes of behaviors that arise as a result of being disabled which appear common to many physical conditions. In view of this, it would appear worthwhile to compare dissimilar types of disabilities (cleft palate and cerebral palsy) to examine the possible homogeneity of their responses to the maternal child rearing process.

Purpose

The purpose of this investigation was to study the relationship between observable physical impairment and perceived maternal childrearing behaviors. Two different disability types (cleft palate and cerebral palsy) were

examined. The research question was: When cleft palate children are compared to cerebral palsy and control children of similar sex, age, intelligence, grade, and socioeconomic status, will the cleft child report different maternal rearing behaviors?

Procedure

SUBJECTS

The subjects were 204 children comprising three samples of cleft palate ($N=68$), cerebral palsy ($N=68$), and normal children ($N=68$). Each of the three samples included 34 boys and 34 girls between the ages of 9 and 18. The children were attending regular school classes and were enrolled in grades four through 12.

Cleft sample. The cleft sample included 36 children with cleft of the palate only and 32 children with cleft of the lip and palate. This cleft sample displayed mild degrees of speech impairment and hearing difficulties. The cleft children were heterogeneous with respect to facial disfigurement. All children in the cleft sample were selected from those available in the Cleft Palate Research Program at the University of Iowa Hospitals.

Cerebral palsied sample. The cerebral palsied sample was selected from those children diagnosed as having cerebral palsy at the University of Iowa Hospitals. This sample is somewhat different from a random sample of cerebral palsied children since they represent a higher level of intellectual functioning than is typically found in the cerebral palsied population (Klapper and Birch, 1967). Selection of these higher functioning cerebral palsied children was necessitated because of the requirements for regular classroom attendance. The cerebral palsied children were heterogeneous with respect to the severity of their physical impairment.

Control sample. The control sample consisted of children in grades four through 12 from regular public school classes who were selected on the basis of experimental matching requirements. The sample of 68 children (34 boys and 34 girls) was selected from an initial pool of 347 children.

Experimental Matching Procedure

Each cleft child was individually matched with a cerebral palsied and a control subject on the basis of sex, intelligence, age, grade, and socioeconomic status. The criteria for matching purposes included: age within one year of the matched subject, intelligence within 10 IQ points, the same grade level, and socioeconomic status within one level on the Hollingshead Two Factor Index of Social Position (Hollingshead and Redlich, 1961). Although different intelligence tests were employed in equating the three groups—individual intelligence tests (WISC, WAIS, and Stanford-Binet) and group intelligence tests for the control sample (Lorge-Thorndike), there is evidence of adequate correlation between the group and individual tests in estimating intellectual functioning (Rowe and Thorndike, 1963). A description of characteristics of the subjects is presented in Table 1.

Instrument

Maternal child-rearing behaviors were assessed with Schaefer's (1965) Child's Report of Parental Behavior Inventory. The latest revision of this instrument (maternal form) was used, with a modification developed by Burger and Armentrout (1971). This modification reduces the items from 192 to 56 and correlates at approximately .90 with the longer version. The inventory yields scores for

TABLE 1. Subject characteristics of the cleft, cerebral palsy and control groups

Variable	Cleft Group	Cerebral Palsy Group	Control Group
Number	68	68	68
Sex			
Males	34	34	34
Females	34	34	34
Age (Mean Yr.)	14.08	14.13	14.15
Grade (Mean Yr.)	8.23	8.09	8.49
SES (Mean Level)	3.36	3.22	3.46
IQ (Mean)	103.95	102.73	105.48
(S.D.)	12.10	11.52	12.25

TABLE 2. Means and standard deviations of Factor I (Acceptance/Rejection), Factor II (Psychological Control/Psychological Autonomy) and Factor III (Firm Control/Lax Control) of cleft palate, cerebral palsy and control children.

Variable	Cleft Group		Cerebral Palsy Group		Control Group	
	Mean	(S.D.)	Mean	(S.D.)	Mean	(S.D.)
Factor I						
Males	59.68	(8.03)	55.18	(9.25)	53.24	(8.94)
Females	56.54	(8.25)	57.34	(10.50)	56.31	(11.60)
Factor II						
Males	29.50	(5.99)	25.65	(6.09)	25.06	(4.17)
Females	25.91	(6.48)	24.83	(6.85)	26.23	(8.86)
Factor III						
Males	24.85	(3.77)	26.35	(4.42)	25.44	(5.05)
Females	24.63	(4.67)	24.29	(4.96)	23.94	(5.14)

TABLE 3. Analysis of variance of Factor I (Acceptance/Rejection)

Source of Variation	df	Mean Square	F
Between subjects	68	86.79	
Sex (B)	1	25.64	.29
Error	67	87.70	
Within subjects	138	95.04	
Disability (A)	2	187.34	2.03
A \times B	2	194.07	2.10
Error	134	92.18	

TABLE 4. Analysis of variance Factor II (Psychological Control/Psychological Autonomy)

Source of Variation	df	Mean Square	F
Between subjects	68	56.96	
Sex (B)	1	60.14	1.06
Error	67	56.92	
Within subjects	138	38.33	
Disability (A)	2	118.36	3.26*
A \times B	2	98.38	2.71
Error	134	36.24	

* $p < .05$

three behavioral patterns: Factor I (Acceptance/Rejection); Factor II (Psychological Control/Psychological Autonomy); and Factor III (Firm Control/Lax Control). Each of the factors has 16 to 24 individual questions which the children answer as "like," "somewhat like," or "not like" their mothers. High scores on the Factors are in the direction of greater acceptance, greater psychological control, and more lax behavioral control.

Statistical Analysis

A subjects by treatment design (Lindquist, Type I, 1953) was utilized in each of the three statistical analyses. The main effects in each analysis were disability \times sex. The disability factor refers to presence of a cleft or of cerebral palsy or the absence of a disability. The first analysis evaluated the differences in perceived parental acceptance. The second analysis evaluated differences in perceived psychological control, and the third analysis evaluated differences in perceived laxity of behavioral control. Table 2 presents the means and stan-

dard deviations of the three factors for each of the three groups.

Results

FACTOR I (ACCEPTANCE/REJECTION). The analysis of Factor I (perceived degree of acceptance) revealed no significant differences among the groups (Table 3).

FACTOR II (PSYCHOLOGICAL AUTONOMY/PSYCHOLOGICAL CONTROL). The analysis of Factor II (perceived degree of parental control through domination and inducement of guilt and/or anxiety) revealed no significant interaction or sex differences. However, there was a significant effect for disability ($F = 3.27$ $p < .05$) suggesting that cleft children perceive their mothers as exerting greater psychological control or intrusiveness than do cerebral palsied children or the controls. Multiple comparison tests (Tukey) were performed to identify the source of individual mean differences. This analysis indicated that the cleft palate male group mean was signifi-

TABLE 5. Analysis of variance Factor III (Firm Control/Lax Control)

<i>Source of Variation</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>
Between subjects	68	33.72	
Sex (B)	1	82.57	2.50
Error	67	32.99	
Within subjects	138	16.42	
Disability (A)	2	8.18	.49
A × B	2	15.36	.93
Error	134	16.56	

cantly different from all other means. There were no other significant differences among the groups on this factor (Table 4).

FACTOR III (FIRM CONTROL/LAX CONTROL). The analysis of Factor III (perceived degree of parental control through rule making and limit setting) revealed no significant differences among any of the groups (Table 5).

Discussion

The findings indicate few apparent differences in the way cleft children perceive their mothers' parenting characteristics and the way controls and cerebral palsied children view their mothers. These findings are generally consistent with previous reports of the relative normalcy of parents of cleft palate children (Goodstein, 1960; Spriestersbach, 1973). While there remains a question regarding the relationship between the child's perception of parenting characteristics and an external validation of parenting behaviors, it is nevertheless felt to be important to evaluate parenting as viewed by the child.

The finding that cleft boys perceive their mothers as exerting greater intrusiveness and subsequently encouraging less independent development than controls or cerebral palsied boys yields several interpretations. One interpretation might view the cleft boys' perception of maternal intrusiveness as indicating that these mothers provide a heightened degree of positive reinforcement for dependent behavior. This rationale is consistent with Bandura and Walters' (1959) finding that mothers of highly dependent adolescent boys displayed more warmth and nurturance than mothers of nondependent boys. Such an interpretation is further substantiated by the finding of a positive relationship between parental reward of dependency and inhibited

behavior (Bandura and Walters, 1963). This finding is consistent with previous reports of increased inhibition of impulse in cleft palate children (Richman, 1976; Richman and Harper, 1978). Parental nurturance is typically considered to be a positive characteristic in the emotional development of the child. However, boys may view continuation of attempts to nurture dependency during adolescence as an intrusive characteristic. The finding that the cleft boys did not perceive their mothers as significantly less accepting than the control or cerebral palsied boys is consistent with the above interpretation. The continuation of the mothers' dependency nurturance previously viewed as a positive characteristic is now perceived negatively.

Mothers of children with observable physical stigmata may feel a need to remain protective and nurturant in order to assist their child in coping with potential outside sources of negative feedback such as peer teasing. Female adolescents with cleft palate or cerebral palsy may not view this maternal response as overly intrusive. The increased concern of adolescent females regarding physical attractiveness may not yield differential perceptions of maternal encouragement of dependence. This maternal response may be welcomed by the young adolescent female whether she has a cleft or cerebral palsy. Normal adolescent females may also welcome this maternal nurturance because of their heightened concerns regarding physical attractiveness. The same maternal response may exist for boys. However, there may be differential external psychosocial influences operating for the early adolescent males. Cerebral palsied boys may have been required to adjust to a somewhat dependent existence because of their physical disabilities. They may, therefore, not view their mothers as exhibiting intrusiveness since they may be physically prevented from developing certain aspects of male peer group prestige related to physical prowess. Conversely, the cleft palate boys are capable of participating in male peer group activities and of developing prestige related to physical prowess. The subsequent increased peer acceptance, along with a desire to become independent of maternal intrusiveness, may conflict with the previously established trait of maternal encouragement of dependency. The cleft boys may, therefore, view their

mothers as exhibiting an unnecessary degree of dependency-fostering behaviors.

The expressed concerns and subsequent maternal behaviors may yield a differential effect on the maternal perception of cleft boys versus cleft girls. The previous finding of increased inhibition in cleft girls and boys (Richman, 1976) is consistent with the development of child characteristics resulting from the fostering of dependency (Sears, Maccoby and Levin, 1957; Bandura and Walters, 1959, 1963). A previous longitudinal study suggests that dependency remains relatively stable for girls into adulthood, while for boys dependence is moderately stable through age 10 but less predictable after age 10 (Kagan and Moss, 1962). Cleft boys may become less accepting of maternal fostering of dependency during early adolescence and perceive this maternal behavior as restrictive and intrusive.

These findings suggest a need for further investigation of the interaction between mothers and their cleft boys, especially during early adolescence. While this study analyzed maternal behaviors via the child's perception, further documentation of external criteria of the cleft adolescent male's perception of maternal behaviors appears warranted.

References

- BANDURA, A., and WALTERS, R. H., *Adolescent Aggression*. New York: Ronald, 1959.
- BANDURA, A., and WALTERS, R. H., *Social Learning and Personality Development*. New York: Holt, Rinehart, and Winston, 1963.
- BARKER, R. G., The social psychology of physical disability. *J. Soc. Issues*, 4, 28-38, 1948.
- BARKER, R. G., WRIGHT, B. A., MEYERSON, L., and GONICK, M. R., Adjustment to Physical Handicapped and Illness: A Survey of the Social Psychology of Physique and Disability. Bulletin 55 (Revised). New York: Social Science Research Council, 1953.
- BECKER, W. C., and KRUG, R. S., The parent attitude research instrument: a research review, *Child. Devel.*, 36(2), 329-355, 1965.
- BURGER, G. K., and ARMENTROUT, J. A., A comparative study of methods to estimate factor scores for report of parental behavior. *Proceedings, 79th Annual Convention of the Amer. Psychol. Assn.* 6(Pt. 1), 149-150, 1971.
- CLIFFORD, E., Psychosocial aspects of orofacial anomalies: speculations in search of data, *ASHA Reports*, No. 8, 1973.
- CUMMINGS, S., BAYLEY, H., and RIE, H., Effects of the child's deficiency on mothers' of mentally retarded, chronically ill, and neurotic children, *Amer. J. Orthopsych.*, 36, 595-608, 1966.
- GOODSTEIN, L. D., MMPI differences between parents of children with cleft palates and parents of physically normal children, *J. Speech Hear. Res.*, 3, 31-38, 1960.
- GOODSTEIN, L. D., Psychosocial aspects of cleft palate. In D. Spriestersbach and D. Sherman (Eds.), *Cleft Palate and Communication*. New York: Academic Press, 1968.
- HARPER, D. C., Perceived maternal child-rearing behavior among disabled and non-disabled adolescents, *Perceptual Motor Skills*, 44, 1095-1105, 1977.
- HOLLINGSHEAD, A. H., and REDLICH, F., *Social Class and Mental Illness, A Community Study*. New York: Wiley, 1961.
- KAGAN, J., and MOSS, H. A., *Birth to Maturity, A Study in Psychological Development*. New York: John Wiley & Sons, Inc., 1962.
- KLAPPER, Z. S., and BIRCH, H. G., A fourteen year followup study of cerebral palsy: intellectual change and stability, *Amer. J. of Orthopsychiatry*, 37, 540-547, 1967.
- KLEBANOFF, L. B., Parents of schizophrenic children 1958:1 parental attitudes of mothers of schizophrenic, brain-injured and retarded and normal children, *Amer. J. of Orthopsychiatry*, 29, 445-454, 1959.
- LINDQUIST, E. F., *Design and Analysis of Experiments in Psychology and Education*. Boston: Houghton-Mifflin, 1953.
- MEYERSON, L., Physical disability as a social psychological problem, *J. Soc. Issues*, 4, 2-7, 1948.
- MEYERSON, L., Somatopsychology of physical disability. In W. N. Cruickshank (Ed.), *Psychology of Exceptional Children in Youth*. Englewood Cliffs, N. J.: Prentice-Hall, 1955.
- RICHMAN, L. C., Behavior and Achievement of Cleft Palate Children, *Cleft Palate J.*, 13, 4-10, 1976.
- RICHMAN, L. C., and HARPER, D. C., School adjustment of children with observable disabilities, *J. Abnormal Child Psych.*, 6, 11-18, 1978.
- ROWE, R. R., and THORNDIKE, R. L., Virgin Islands Intelligence Testing Survey. New York: Teachers' College Institute of Psychological Research, 1963.
- SCHAFER, E. S., Children's report of parental behavior: an inventory. *Child Devel.*, 36, 413-424, 1965.
- SEARS, R. R., MACCOBY, E. E., and LEVIN, H., *Patterns of Child-Rearing*. Evanston: Row & Peterson, 1957.
- SHONTZ, F. C., *The Psychological Aspects of Physical Illness and Disability*. New York: MacMillan Publishing Company, Inc., 1975.
- SPRIESTERBACH, D. C., *Psychosocial Aspects of the "Cleft Palate Problem"*. Iowa City, Ia.: University of Iowa Press, 1973.
- WALDROP, M., PEDERSEN, F., and BELL, R. Q., Minor physical anomalies and behavior in preschool children, *Child Development*, 38, 391-400, 1968.
- WRIGHT, B. A., *Physical Disability—A Psychological Approach*. New York: Harper & Brothers, 1960.