High School Drop-out Rate for Cleft Palate Patients

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A major topic of discussion in the United States, both in lay and professional circles, relates to the drop-out rate among high school students. It has become the focus of considerable investigation and, ostensibly, preventive and rehabilitative planning. Some of the personal and social implications of this problem have been well documented; much remains to be known and done, however, before any basic or long-term changes can be anticipated.

Children with congenital clefts present problems of cosmetic disorder and communication dysfunction operating against a varying psychosocial background of individual personality, family patterns, and community structure. This study was designed to obtain information about the following questions. What is the high school drop-out rate for cleft palate patients in the late adolescent and early adult age group? How does this compare with the high school drop-out rate of their non-affected siblings and with the state and national rates? Is there any systematic relationship between drop-out rate and the severity of the cleft palate syndrome?

Design of the Study

All patients from the University of Illinois Cleft Palate Clinic files whose birthdates were between January 1, 1942 and December 31, 1947 were selected as potential subjects for the study. This initially-selected group consisted of 85 subjects; 17 subjects were excluded from further study because of additional severe congenital anomalies, such as cranial stenosis, primary neurological deficiencies, and other involvements, on the basis that such subjects would significantly bias the findings and might result in conclusions which were not applicable to a population whose *primary condition* involved cleft lip and/or cleft palate. Of the remaining 68 patients available for study, 4 could not

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be located. Thus, the sample on whom the study was conducted consisted of 64 subjects.

For purposes of comparative analysis, a noncleft group was also studied, consisting of all siblings of the cleft palate subjects who were seventeen years old or older. The total number of siblings was 98. Eighteen of the cleft palate subjects either had no siblings or had siblings too young to be included in the study, and so the 98 siblings came from 46 of the 64 families.

The data were secured from a questionnaire sent to the family address of each cleft palate subject, with the request that information be supplied about the child with the cleft and about all other children who met the criteria for the control group. The following information was requested: age at terminating formal education; reason for leaving high school (in cases where the subject did not graduate); a description of any further education and/or training beyond the high school level; and a description of the father's occupation. Eighty per cent of the families responded to the initial request for information. Data were secured for the remaining 20% by follow-up letters, contact by telephone, or by personal interview.

Since social-class factors have a direct relationship to educational aspirations and accomplishments, paternal occupation was used to secure an estimate of the social-class composition of this sample. Using the occupational classification scheme of Warner *et al.* (*2*), it appears that the social-class background for approximately 88% of the patients may be characterized as from the "working class," or, in more formal terms, as occupying mainly the social class levels often described as the upper-lower and lower-middle social classes. The specific findings were: professional, 2.0%; semi-professional, 6.1%; farming, 4.1%; supervisory and foreman, 18.4%; skilled labor, 28.6%; semi-skilled labor, 36.7%; unskilled labor, 16.3%. Ninety-five per cent were urban dwellers; 5% were rural. All were residents of Illinois.

Mean age of the cleft palate subjects was 19.5 years with a range from 17.3 to 23.1 years. There were 35 females and 29 males. The difference between the mean age of males and females was 0.2 years. Age data were secured for 71 of the 98 persons in the sibling group. The mean age was 24.8 years with a range from 17 to 44 years; 10 of these 71 subjects were over 30 years of age. There were 33 females and 38 males in the group of 71 siblings for whom age data were available and the mean age difference between the sexes was 0.8 years. Table 1 presents the data for cleft palate type and number of subjects. Table 2 presents the hearing and speech status of the cleft palate group. Ratings of speech and hearing adequacy were made by a speech pathologist and an audiologist, using a four point classification scheme.

TABLE 1. Diagnostic classification of the cleft palate subjects.

cleft type	*males*	*females*	*total*
bilateral lip and palate	5	6	11
left only	9	8	17
right only	5	3	8
palate only	4	10	14
submucous	2	7	9
velopharyngeal incompetency (no cleft)	3	1	4
cleft lip with submucous cleft palate	1	0	1
total	29	35	64

TABLE 2. Ratings for speech and hearing impairment for the 64 cleft palate subjects. Ratings for speech impairments were made regarding the intelligibility during connected speech: *none*, normal speech; *mild*, speech is tolerable but with noticeable difference from normal; *moderate*, unmistakably noticeable, needs habilitation; *severe*, unacceptable speech, patient's speech cannot be followed. Ratings for hearing impairments were based on audiometric pure tone, re ASA 1951, bilaterally: *none*, less than 20 db loss; *mild*, 20–35 db loss; *moderate*, 35–60 db loss; *severe*, 60 db loss or greater.

	speech impairment			
	none	*mild*	*moderate*	*severe*
males	16	9	3	1
females	14	11	9	1
total	30	20	12	2
	hearing impairment			
males	27	1	1	0
females	29	5	0	1
total	56	6	1	1

Results

As indicated in Table 3, there was a high school drop-out rate of 25% for the 64 cleft palate subjects and a rate of 42% for the sibling group. Thus, in comparison to the United States high school drop-out rate of 30% (*1*), which is also the same for Illinois[1], the affected group is 5% below and the sibling group 12% above both norms. The high

[1] Personal communications: Illinois Dept. of Education, Springfield, Illinois; and Bureau of Statistics and Research, Chicago Board of Education, Chicago, Illinois.

TABLE 3. Educational status of the cleft palate subjects and their siblings.

	cleft palate subjects		*siblings*	
	N	%	*N*	%
high school drop-outs	16	25.0	41	42.0
still in school				
high school seniors	14	22.0	4	4.0
college	10	16.0	4	4.0
high school graduates	24	37.0	46	47.0
college graduates	0	0	3	3.0
total	64		98	

school drop-out rate for male cleft palate subjects was 31% and for females the rate was 20%. For the sibling group, the high school drop-out rate of 42% was virtually identical for males and females.

The data did not suggest that the type of cleft or the presence of a speech or hearing impairment at any level of severity related in any significant manner to the fact of non-graduation from high school. In other words, those cleft palate subjects who dropped out of high school were not necessarily those with more involved clefts, more severe speech problems, or greater hearing loss.

It had been requested in the questionnaire that the drop-outs indicate the reason for their discontinuing high school. Responses to this question were made by only 9 of the 16 cleft palate drop-outs. The reasons given for drop-out were: unable to do high school work successfully, 1; no interest in high school, 5; asked to leave by the principal, ostensibly because of inability to succeed in the curriculum, 1; left for financial reasons, 1; and left high school to attend a business training school, 1.

Of the 16 cleft palate drop-outs, 2 had no siblings or had siblings too young to be included. In 11 families, one or more of the siblings was a drop-out and in 6 of these cases all of the siblings were drop-outs. The number of sibling drop-outs in these 11 familes was 27, which accounts for 66% of the total number of drop-outs in the entire sibling group. In the remaining 3 families all of the siblings graduated from high school leaving the cleft palate subject as the only high school drop-out.

Of the 48 cleft palate high school graduates, 16 had no siblings or had siblings too young to be included. Of the remaining 32 subjects, 26 were from families where all the siblings also graduated from high school. In 6 families, the cleft palate subject graduated and one or more of the siblings was a drop-out; in 3 of these cases all the siblings dropped out, leaving the cleft palate subject as the only high school graduate.

Table 4 shows the number of cleft palate subjects who were high school graduates and those who were drop-outs, as compared to their

TABLE 4. Comparison of cleft palate high school graduates and drop-outs in relation to the occurrence of one or more sibling drop-outs in the family (N = 46). Of the 27 graduates with no sibling drop-outs, 14 were seniors in high school. They were included in the graduate group since it is assumed that the drop-out rate for these subjects will be extremely low, if it occurs at all.

	cleft palate high school graduates		*cleft palate high school drop-outs*	
	N	%	*N*	%
no sibling drop-outs	26	81.0	3	23.0
one or more sibling drop-outs	6	19.0	11	77.0
total	32	—	14	
chi-square	17.64; P < .001			

siblings of comparable educational status. Thus, in families where the siblings graduated from high school, the overwhelming number of cleft palate subjects graduated, too. Conversely, in families where there were sibling drop-outs the overwhelming number of cleft palate subjects were drop-outs, also. These data suggest, therefore, that the high school drop-out rate among cleft palate patients is affected predominantly by the same sociological factors affecting school experience in "normal" individuals, such as family patterns of educational attitudes and values and the actual accomplishments of family members, rather than by the cleft palate syndrome, *per se*.

Comments

One of the most obvious features of these results is the large percentage difference, 17%, in the high school drop-out rates between the cleft palate subjects and the sibling group. It is apparent, however, that this difference is at least to some extent an artifact produced by results from a few families with a large number of sibling drop-outs. In addition, there was a sizable number of cleft palate high school graduates who have no siblings for comparison. Further analysis reveals essentially three groups in the population of cleft palate patients studied. The largest group, encompassing the majority of subjects, is described by a matching of cleft palate subject and sibling performance: the cleft palate high school graduates come from families of graduates, the cleft palate high school drop-outs come from families of drop-outs. This may be best explained by cultural factors of family traditions and expectations and, consequently, may raise some questions about the more traditional view of the handicapping effects of the cleft palate syndrome.

A second group, considerably smaller in number yet judged significant, consists of cleft palate subjects who did poorer than their siblings: that is, they were drop-outs when their siblings tended to complete high

school. As previously stated, there is no evidence to suggest that these cleft palate subjects are the more involved physically, have more serious speech disorders, or greater hearing loss than do the other subjects. One explanation of their academic failure is that they may all have low intelligence although no such data were available. A second and perhaps more plausible explanation is that there are other complex psychological factors operating.

The third group, roughly the size of the second and also judged significant, consists of cleft palate subjects who graduated from high school where the siblings tended to drop-out. Since this finding is counter to the usual view of the debilitating effects of handicaps, it warrants comment. Once again it may be that these particular cleft palate subjects are of high intelligence. (A separate study is being planned to investigate the characteristics of this group and the contrasting poor performing group.) It seems reasonable to suspect, however, that this group may quite well represent the effects of other psychosocial phenomena. There are numerous complex, subtle, and ongoing patterns of behaviors, expectations, and attitudes that form the basis of the relationships among the parents, the affected child, and other family members. The necessary long-term professional care and the resulting attention from involvement with a variety of treatment agencies is an additional factor in the environmental makeup of these children. To the extent that these interactional processes are enhancing to the child, then it is more likely that he will make the maximum use of his abilities. The small amounts of "extra" encouragement, support, indulgence, and rewards that many of these children receive over a long period of time may quite well be the difference that makes a difference in the establishment of "compensatory" mechanisms with regard to motivation, goals, levels of aspiration, self-confidence, uses of energy, and the myriad other complex factors involved in personality formation and expression. Conversely, to the extent that the cleft palate child's relationships and experiences are discouraging, degrading, stifling, and rejecting, then it seems likely that he will make the minimal use of his abilities. In one situation, the child is being equipped to meet challenges. In the other, he is learning to play the role of the cripple. Though these notions are not new, their application to the areas of the cleft palate syndrome is speculative, indeed highly speculative; they may have the virtue, however, that they will generate hypotheses to be tested in future research.

In reviewing the history and development of the cleft palate patients in this study, a curious fact became apparent: that during the past 20 years there has been a paucity of systematic studies or reports regarding the psychosocial functioning of cleft palate persons beyond the adolescent stage. Virtually all workers in this field would probably agree that the goal of any, and all, habilitative procedures is to maximize the child's potential and minimize the effects of the congenital disability in order to obtain optimum psychosocial functioning at *maturity*. Yet,

there are no extant data to show whether this goal is being attained, or whether existing habilitative techniques or procedures are in fact as efficacious as their proponents would undoubtedly claim. Cleft palate habilitation as a comprehensive endeavor has hopefully reached the stage of maturity and sophistication that many of its practitioners may now be motivated to explore these unknown dimensions. When, and if, future studies are completed, it may be found that some of the current practices, assumptions, and emphases of treatment may not always enhance or maximize the potential of many cleft palate children for coping with the developmental tasks of adulthood.

The data in this study were obtained by a questionnaire technique and, consequently, the findings, the analysis, and the inferences to be drawn are all closely related to the inherent limitations of such questionnaire methodology. The conclusions are, strictly speaking, only applicable to populations of adolescents and young adults with cleft palate and to their siblings with characteristics similar to those of the subjects in this study. Whether they apply in whole, or in part, to other or more widely defined groups of cleft palate subjects can be only determined by future studies.

Summary

Data were secured by questionnaire method on the high school drop-out rate for 64 cleft palate patients and a contrast group of 98 of their siblings. The drop-out rate was 25% for the cleft palate patients and 42% for the sibling group. There was no apparent correlation between the patient drop-out rate and the type of cleft or severity of speech or hearing problems. There was a similarity between the educational achievement levels of the cleft palate patients and their siblings. It is suggested that family patterns form the primary basis for whether or not a cleft palate child will ultimately complete high school rather than the fact that he has a cleft palate. It is hypothesized that the numerous relationships between the cleft palate child, his family, treatment facilities, and other environmental agents act either to maximize or minimize the child's potential.

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