

Sociological Aspects of Cleft Palate Adults:

II Education

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Introduction

This paper, the second in a series on adult social functioning, assesses the educational attainment and aspiration of adult cleft subjects. Our goal was to determine the degree of independence achieved from any limiting effects which might be associated with having a cleft. Results of this study assess drop-out rates at both high school and college levels, comparisons of cleft subjects with their parents education, educational attainment of spouses, marriageability in relation to education, and educational aspiration.

A self administered questionnaire¹ with 62 areas of inquiry was used in data collection. The educational attainment of 195 cleft subjects, 190 of their siblings and 209 nationally drawn random control subjects between the ages of 24 and 54 were compared for achievement levels² (11).

Studying high school drop-out rates, Demb & Ruess (4) found a lower drop-out rate for cleft patients as compared with their siblings but a similarity in achievement levels of the two groups. They suggested that family patterns were the basis for high school completion. McWilliams & Paradise (10) similarly reported no overall differences between clefts and siblings in educational achievement. They found a high school drop-out rate for cleft subjects comparable to the rate reported by Demb & Ruess but a significantly lower drop-out rate for siblings. The differences in attained educational levels occurred at the lower end of the scale with no significant difference between cleft palate patients and their nearest age sibling at the college level. Conversely, Lahti, Rintala & Soivio (9), reporting on the educational levels of Finnish cleft lip and palate patients,

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¹ The authors would be pleased to supply a copy of the survey questionnaire upon request.

² For a detailed description of research population, sample selection, controls, and methodology refer to Sociological Aspects of Cleft Palate Adults: I Marriage. John P. Peter & Rosalie R. Chinsky, Cleft Palate Journal, in press.

concluded that clefts performed slightly higher than controls at the lower end of the scale but that they performed slightly lower than controls at the higher end of the scale. Crocker, Clifford & Pope (2) concluded that there was no significant difference in educational attainment that could be attributed to type of cleft or the sex of the subjects.

Results

GENERAL EDUCATIONAL ATTAINMENT. The mean educational attainment for clefts, siblings and random controls was 12.01 years, 12.32 years and 12.00 years respectively. Differences among the three groups were not significant. The median for all three groups was 12.5 or unity. This compares with the 1970 Census for whites twenty-five years and older with a median of 12.1. The U.S. median is slightly lower, possibly, because it includes the fifty-four and above age group which was not included in our sample.

HIGH SCHOOL DROP-OUT RATE. In evaluating the rate at which subjects did not complete high school, Demb & Ruess found that 25 % of the cleft group and 42 % of the sibling group did not complete high school as compared with the 30 % indicated by the U.S. Census. McWilliams & Paradise reported a 23 % high school drop-out rate for clefts and a 13 % drop-out rate for siblings. While Demb & Ruess cited a drop-out rate for siblings 17 % higher than for clefts, McWilliams & Paradise reported a 10 % lower drop-out rate for siblings. Our findings were more closely grouped with a drop-out rate of 27 % for clefts, 25 % for siblings and 31 % for random controls. These differences were not significant (see Table 1).

In an analysis by sex, Demb & Ruess found a high school drop-out rate of 31 % for cleft males and 20 % for cleft females. In our study, cleft subjects were again more closely grouped with a 29 % drop-out rate for cleft males and a 26 % drop-out rate for cleft females. For the sibling group, we found a drop-out rate of 23 % for males and 26 % for females. The rate for the random control group was 26 % for males and 35 % for females.

TABLE 1. Educational attainment of cleft palate subjects, their siblings, and random controls.

achievement levels	cleft subjects		sibling controls		random controls	
	N	%	N	%	N	%
high school dropouts	53	27	47	25	65	31
high school graduates	91	47	88	46	73	35
attended college but did not complete	23	12	29	15	42	20
completed college	28	14	26	14	29	14
totals	195	100	190	100	209	100

In an analysis by cleft type, 25 % of the cleft lip and palate (CLP) group and 27 % of the cleft palate only (CPO) group did not complete high school; a nonsignificant difference.

COLLEGE ATTENDANCE AND COMPLETION. Of the 195 cleft subjects, 26 % had attended one year or more of college; 29 % of the 190 siblings, and 34 % of the 209 random controls had attended college. Comparisons of the three groups failed to meet tests of significance at the .05 level. While 3 % more siblings than clefts, and 8 % more random controls than clefts attended college, the percentage of subjects who completed college was the same for the three groups, 14 %.

In analyzing college attendance by cleft type, we found that CLP subjects completed college more frequently than did CPO subjects ($\chi^2 = 5.03$, $>.05$). We also found that CLP females completed college more frequently than did female CPO subjects (Yules $Q = +.72$, a very strong positive association) (3, 5, 6, 7, 8). For the male group, CLP subjects also completed college more frequently than did male CPO subjects ($Q = +.42$, a moderate positive association).

GENERATIONAL TREND. In comparing mean educational attainment of cleft subjects with that of their parents, we found a mean generational increase of 2.9 years. The mean generational increase for siblings was 3.5 years. The same comparison for the random control group yielded a mean increase of 2.9 years. As expected, the generational increase was significant ($t = .001$) for clefts, siblings and random controls when each group was compared with parents educational attainment. However, the degree of generational increase did not significantly vary between any of three subject groups.

EDUCATIONAL ATTAINMENT OF SPOUSES. A comparison of the educational attainment of cleft subjects with that of their spouses indicated that cleft subjects, on the whole, married persons of equal or above educational attainment only slightly less frequently than did siblings or random control subjects. The differences were negligible.

Type of cleft did not substantively affect choice of mate in terms of educational attainment. The greatest divergence occurred in the comparison of educational attainment between CLP subjects and their spouses ($Q = +.22$, a low positive association) indicating a slight tendency of the CLP group to marry downward. At the various levels of educational attainment, cleft subjects and their spouses reached comparable levels to those of sibling and random control subjects and their spouses. Cleft females married slightly downward, whereas, sibling and control females married slightly upward although the differences failed to yield a significant t .

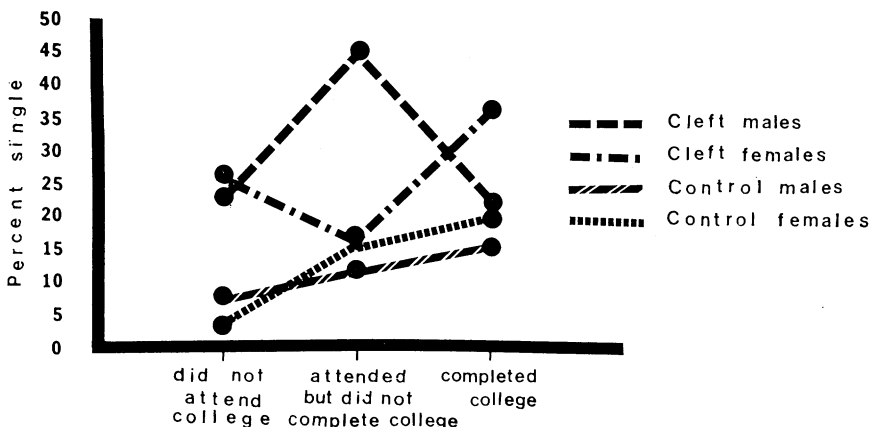
Higher education normally results in a more frequent choice of spouse with a similar educational level, however, it is negatively associated with marriageability. In this study, for example, the percent of those random controls who remained single and who did not attend college was 5.07 % while the percent of those controls who remained single and who either

attended or were graduated from college was 15.49% ($\chi^2 = 6.46, >.02$). An exception to this pattern occurred among female cleft subjects who attended college. They married as frequently as their noncollege counterparts while sibling and random control females who attended college married significantly less frequently than their noncollege counterparts (siblings $\chi^2 = 4.29, >.05$; random controls $\chi^2 = 6.62, >.02$). College attendance did not reduce marriageability for cleft females as it did for all other groups.

Males in all groups, who attended college but did not graduate, reduced rather than enhanced their marriageability. In the cleft male group, 45.45% did not marry, whereas, 14.28% of the male siblings and 11.76% of the male control subjects, who attended but did not complete college, did not marry. Yet, if the cleft male completed college, his marriageability increased both in comparison with control males who completed college and with the total cleft male group. A comparison of the proportion of male cleft subjects, single to married, who completed college with those who attended college but did not graduate, and the male control subjects along these same parameters yielded a chi square of 4.39 ($>.05$) (see Figure 1).

EDUCATIONAL ASPIRATION. Cleft subjects were compared with sibling and control subjects to measure aspirations for additional education. These aspirations were then compared with actual educational attainment. A significantly larger proportion of cleft subjects indicated no aspiration for further education when compared with random controls ($\chi^2 = 8.75, >.01$). However, a comparison of cleft subjects with siblings was not significant.

Of those subjects aspiring to further education, the highest level of



MARITAL STATUS BY LEVELS OF EDUCATION

FIGURE 1. Percent single by level of educational attainment for cleft palate and control subjects.

TABLE 2. A comparison of educational aspiration using the Kolmogorov-Smirnov test.

	<i>educational aspirations</i>		<i>difference</i> $F_1 - F_2$
	<i>clefts</i> F_1	<i>controls</i> F_2	
No further.....	62 .3444	44 .2105	.1339
1 yrs. further.....	82 .4555	64 .3061	.1494 ←
2 yrs. further.....	110 .6110	104 .4974	.1136
3 yrs. further.....	123 .6833	128 .6124	.0709
4 yrs. further.....	159 .8833	172 .8229	.0604
5 yrs. further.....	164 .9110	180 .8611	.0499
6 yrs. further.....	174 .9666	193 .9234	.0432
7 yrs. further.....	175 .9721	195 .9329	.0392
total.....	180 1.0000	209 1.0000	

$$D = .1494, X^2 = 8.6264, >.01.$$

significance occurred between clefts and random controls at the point in the scale where the aspiration level was at one more year ($D = .1494$, $\chi^2 = 8.6264$, $>.01$). Lower aspiration levels were also found when comparing siblings with random controls ($D = .1024$, $\chi^2 = 3.9620$, $>.05$). High aspiration level (4 years) was characteristic of random control subjects (see Table 2).

In an analysis by cleft type, CLP subjects had significantly lower aspiration levels than did control subjects ($\chi^2 = 8.18$, $>.01$). However, CPO subjects did not significantly differ from controls. A comparison of males by cleft type yielded a chi square of 4.60 ($>.05$), indicating lower aspiration levels for the CLP male group. Since CPO males had slightly higher aspirations than control males they varied significantly from the lower aspirations of CLP males. The comparison of CPO males with controls was not significant. Like the cleft male group, sibling males were not significantly different in aspiration level from control males. Female cleft subjects had significantly lower aspiration levels when compared with control female ($\chi^2 = 10.97$, $>.001$). By cleft type, cleft females differed significantly from random controls (CPO to controls $\chi^2 = 6.68$, $>.01$, CLP to controls $\chi^2 = 7.12$, $>.01$). A comparison of sibling females with random control females indicated that sibling females also had lower aspiration levels ($\chi^2 = 9.00$, $>.01$).

Discussion

Cleft palate adults function normally with regard to educational attainment. The findings indicated that there was no substantive difference in the drop-out rate for clefts, during elementary and high school years, when compared with either siblings or random controls. The drop-out rate for clefts was 2% higher than for siblings and 4% lower than for random controls.

The rate of college attendance was slightly higher for both siblings and random controls than for clefts; 2.8% more siblings than clefts attended college, 7.8% more random controls than clefts attended college. However, 14% of each of the three groups who attended college were graduated.

Although cleft subjects completed college at the same rate as siblings and controls there was some variation by type of cleft. In the CLP group, 16% completed college while only 9% of the CPO subjects completed college. Changes in marital status for the CPO subjects during college years did not account for the lower rate of college completion.

Results indicated that, for the cleft female group, college attendance (but not graduation) was associated with higher marriage rates; while for the cleft male group, only the completion of college was associated with higher marriage rates. Cleft males who attended college (but did not graduate) had the lowest rate of marriage of any subgroup with 45.4% remaining single. In contrast, 25.7% of the entire cleft male group remained single. It is possible that college attendance might have enhanced the social status of the female group; whereas, only the completion of college increased the social and economic status for the male group.

Having a cleft does not influence the choice of marriage partners with reference to the partners educational attainment when compared with control subjects. Of course, the usual patterns of social mobility of choice, by sex and level of educational attainment, remain in force for all three groups; that is, subjects with high educational attainment more frequently married spouses with high educational attainment and females tended to be more upwardly mobile than males. Clefts were only slightly less mobile in terms of the educational attainment of the spouse; the difference was not significant.

We reported that cleft subjects had lower educational aspiration levels when compared with control subjects. We noted that the greatest difference occurred between female cleft subjects and female controls. We indicated that sibling aspiration levels were similar to those of their cleft brothers and sisters but were significantly lower than the aspiration levels of random controls. This might indicate family patterns of lower aspiration associated with lower parental expectations. Significantly lower aspiration levels occurred among female family members. Both cleft and sibling females had significantly lower aspiration levels than did control females. Although cleft and sibling males were lower in aspiration than control males, the differences failed to meet tests of significance.

Both CLP and CPO females and CLP males had significantly lower aspiration levels. These groups were previously found to marry later and less frequently (11), perhaps suggesting perceived lower levels of social acceptance.

Summary

Aspects of educational attainment were evaluated on the basis of 195 survey returns of adult cleft subjects, 190 sibling returns and 209 returns

of random control subjects. Although differences were slight, cleft subjects tended to perform higher at the lower end of the educational spectrum and lower at the higher end of the spectrum. The greatest difference occurred in the percent of cleft subjects who attended college as compared with the percentages for siblings and random control subjects. Results indicated near unity of educational attainment for the three groups. Cleft subjects tended to marry persons with equal or above educational attainment only slightly less frequently than did siblings or random controls. Cleft subjects had significantly lower aspiration levels for further education when compared with control subjects. We conclude that cleft palate subjects achieve educational levels similar to those of their siblings and random control subjects.

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