

Self-concept and parental evaluation of peer relationships in cleft lip and palate children*

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Abstract

This investigation examined the relationship of the self-concept of children with cleft lip and palate to the self-concept of noncleft children. Fifty cleft lip and palate children between the ages of 8 and 18 were individually matched by age, sex, and race with 50 noncleft children. Each child was given the Piers-Harris Children's Self-Concept Scale. The scale evaluates the development of children's self-attitudes and correlates of these attitudes. Children with clefts, regardless of sex, reported significantly lower global self-concept than noncleft subjects ($p < .005$).

A questionnaire was completed by the parents of the cleft and noncleft subjects evaluating their child's relationship with family and peers and progress in school. In general, parents of both groups reported positive ratings of their child's social interactions. Parents of cleft subjects reported more negative responses than the parents of noncleft subjects concerning the teasing the child experienced because of his facial appearance ($p < .05$) and the effect that the child's facial appearance had on school progress ($p < .05$).

An individual's appearance is an important personal characteristic which helps to determine how that individual interacts with society and, in turn, how society perceives and accepts him. Facial esthetics, as a specific component of body image, is especially important in the development of an individual's self-concept. The child who is born with a serious congenital anomaly or has sustained an injury during infancy or childhood may find adaptation to his environment difficult.¹⁻⁴ A striking example of such a developmental anomaly is the child born with an extensive cleft of the lip and palate. The psychological sequelae of this disfigurement may have as great an impact on the individual as the strictly physical aspects of the defect.⁵

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Literature Review

The emphasis on physical appearance and the intolerance for difference in our society lead to the expectation that a facial disfigurement can affect personality. The term facial disfigurement signifies a deviation from the normal physiognomic form that is sufficiently negatively marked as to set that individual apart from the general population.

Marinelli⁶ stressed that interactions with the facially disfigured have been shown to increase the anxiety of nondisabled persons. The role of the face in the interaction with others, especially with society's emphasis on external appearance, physical attractiveness, and conformity, places many of the problems associated with cleft lip and palate in the area of mental health.⁷ The disability does not impede normal functioning, but negative social attitudes may have sociological and psychological implications. Research in this area often reflects authors' personal attitudes and clinical observations of the emotional effects of cleft lip and palate. Many conclusions were reached without the aid of adequate statistical analysis and documentation. These studies often reflected the desire to find a personality unique to the cleft lip and palate individual.

When Billig⁸ evaluated personality adjustment in 60 cleft patients up to 17 years of age, only 5% were judged as having unsatisfactory personality adjustment. It was emphasized that the 5% with unsatisfactory adjustment all exhibited severe scarring and a noticeable speech defect. Sidney and Matthews⁹ tested the hypothesis that there were no significant differences in social adjustment between children born with cleft palate and other children. Twenty-one children with cleft palate were matched on the basis of sex, age, race, and class grade with 21 noncleft children. Social adjustment was measured by means of five testing instruments. The results showed that, in general, whatever differences did occur between the

experimental and control group were inconsistent. The authors concluded that their data did not support the assumption that the social adjustment of cleft palate children is markedly inferior to that of other children.

Watson¹⁰ conducted a study to determine whether boys with clefts of both lip and palate would display more personality maladjustment than boys without clefts. The Rogers Personal Adjustment Inventory was administered to 93 boys between the ages of 8 and 14. The subjects were divided into three groups: (1) 19 boys with chronic physical handicaps which did not involve speech or cosmetic appearance; (2) a cleft lip and palate group of 34 boys; and (3) a control group of physically normal boys. No significant differences in personal adjustment were reported on the basis of the scores obtained.

Goodstein,¹¹ in evaluating Watson's¹⁰ work, suggested that the study be extended to include girls, for whom the effects of the cleft may be more serious.

The above studies, along with those of Palmer and Adams,¹² Corah and Corah,¹³ Ruess,¹⁴ and Wirls and Plotkin,¹⁵ using structured personality tests and objectively scored projected techniques, support the contention that children with cleft lip and/or palate do not display significant emotional maladjustment.

Clifford et al.¹⁶ evaluated 98 cleft lip-palate adult patients whose cleft anomalies had been surgically corrected 22-27 years earlier. The mean level of accomplishment and self-satisfaction was high. Ninety-five per cent were very satisfied, satisfied, or somewhat satisfied with their appearance. The authors stressed that such high self-esteem could have been affected by the passage of time, which lessens the recall of any painful experiences. Ideally, by recognizing and dealing effectively with those areas of conflict which cleft lip and palate individuals experience during childhood and adolescence, the negative effects of the anomaly can be minimized. Positive self-concept, an integral component of improving interpersonal contact, is based on an individual's perception of the way others respond to him.¹⁷

Kapp¹⁸ compared the self-concepts of children with cleft lip and/or palate and noncleft children. Thirty-four cleft lip and/or palate children (9 of whom had isolated cleft palate) were matched individually with 34 noncleft school children. Each child was given the Piers-Harris Children's (PHC) self-concept scale. No significant differences were found in self-concept scores between the cleft and noncleft groups. Kapp also reported that children, regardless of sex, reported a significantly greater dissatisfaction with physical appearance. A significant interaction effect between sex and presence or absence of cleft was found, with cleft girls reporting greater unhappiness and dissatisfac-

tion, less success in school, and more anxiety than noncleft peers.

Clifford,^{16,19,20} using two separate measures, evaluated the self-concepts of 39 cleft lip and palate children (26 cleft lip and palate, 10 cleft palate only, 3 cleft lip only) and 68 asthmatics. Differences between the cleft palate only and the cleft lip and/or palate subgroups on the two self-concept measures were insignificant. Nor were there differences between the total lip-palate groups and asthmatics. The tendency was for all of the cleft children to rate themselves in a positive, self-accepting manner. Sinko²¹ obtained the self-concept score, using the Tennessee Self-Concept Scale, of 20 speakers with clefts of the lip and/or palate. The results demonstrated that the cleft individuals scored within the range of normalcy.

Richman²² compared mothers', fathers', and teachers' perceptions of behavior of 136 cleft lip and/or palate children between the ages of 7 and 12. The comparisons were made on the behavioral dimensions of inhibitions and acting out. The results indicated that teachers viewed cleft males and females as significantly more inhibited in the classroom than the parents observed at home.

Tiza et al.,²³ in interviewing the parents of cleft lip and palate children, reported that all parents tended to minimize their child's speech problems and maximize their estimates of his intelligence. They concluded that the majority of mothers experienced difficulty in accepting the deformity and were unaware of the child's sensitivity and emotional conflicts.

Brown²⁴ and Johnson²⁵ stated that children with clefts often have a sense of inadequacy which, when combined with the rejection of teachers, peers, and other parents, renders the child socially maladjusted. Spriesterbach's²⁶ comprehensive investigation of psychological influences of cleft palate supports the picture of the cleft child as less confident, less aggressive, and less independent than noncleft peers.

Schweckendiek and Danzer²⁷ used questionnaires to evaluate 200 students with clefts ranging in age from 7 to 14 years, as to their behavior at home and school. Only 20% of all children with clefts showed behavior disorders or poor social adaptation to school or family. The 20 children demonstrating the most negative behavior possessed the most severe facial disfigurement.

Methods and Materials

The purpose of this study was to compare the self-concepts of 50 children and young adolescents with extensive cleft lip and palate, excluding isolated cleft palate, with the self-concepts of an equal number of noncleft individuals when matched by age, sex, and race. To accomplish this, the PHC self-concept scale was administered to each cleft lip and palate and con-

Table 1. Identifying Data of Cleft and Noncleft Groups

	<i>Cleft Group</i>	<i>Noncleft Group</i>
Number of children	50	50
Sex: male	33	33
female	17	17
Average age (years)	11.7	11.7
Race*—caucasian	50	50

* No races were excluded from the study; only caucasian patients presented for the evaluation.

Table 2. Parents' Questionnaire

1. My child has had an essentially normal family life.				
Strongly Agree	5			
Agree	4	Please Circle		
Undecided	3	Only One Choice		
Disagree	2			
Strongly disagree	1			
2. My child has a good feeling about himself/herself.				
	5	4	3	2
		1		
3. My child gets along well with other children his/her age.				
	5	4	3	2
		1		
4. My child would rather play with other children than at home.				
	5	4	3	2
		1		
5. My child seldom has been the subject of teasing by other children because of his/her facial appearance.				
	5	4	3	2
		1		
6. My child's progress in school has not been affected by his/her facial appearance.				
	5	4	3	2
		1		

trol individual. This scale has been designed primarily to assess the development of children's self-attitudes and correlates of these attitudes. A questionnaire also was completed by the parents of both cleft and control groups evaluating their children's relationships with family and peers, and their progress in school.

The subjects, 100 male and female children between the ages of 8 and 18, were regular dental patients of the James Whitcomb Riley Hospital for Children, Indianapolis, Indiana. All children attended regular school classes. The cleft group contained 50 children, 33 males and 17 females. All children in this group had either a repaired unilateral or bilateral complete cleft of the lip and palate. Facial scarring was evident in each cleft child. Children with isolated cleft palate were excluded from the study because of their lack of facial disfigurement.

The noncleft group included 50 children, 33 males and 17 females. The children in both groups were known to the examiner, which facilitated subject

Table 3. Mean and Standard Deviations of Self-Concept and Cluster Scores*

<i>Variable</i>	<i>Cleft Group</i>		<i>Control Group</i>	
	<i>Mean</i>	<i>(S.D.)</i>	<i>Mean</i>	<i>(S.D.)</i>
Self-concept:				
Males	55.82	10.73	60.00	9.61
Females	50.88	13.11	59.59	14.37
Total	54.14	11.69	59.86	11.30
Behavior:				
Males	11.91	2.28	12.87	2.91
Females	12.17	3.12	13.06	2.98
Total	12.00	2.57	12.94	2.91
School status:				
Males	12.03	3.61	12.97	2.91
Females	10.65	3.61	13.06	4.22
Total	11.56	3.63	13.00	3.36
Anxiety:				
Males	8.48	2.87	8.33	2.97
Females	6.88	2.57	8.88	3.02
Total	7.94	2.85	8.52	2.97
Popularity:				
Males	9.33	3.07	11.36	2.68
Females	8.24	3.11	8.71	2.80
Total	8.96	3.09	10.46	2.98
Happiness & satisfaction:				
Males	6.69	2.23	7.49	2.14
Females	5.88	2.80	8.12	1.73
Total	6.42	2.44	7.70	2.01
Physical attributes & appearance:				
Males	7.42	2.07	8.69	1.36
Females	7.00	2.15	8.82	1.87
Total	7.28	2.09	8.74	1.53

* Higher scores indicate a more positive rating.

matching. Each cleft child was matched individually with a noncleft child on the basis of age, sex, and race (Table 1).

Self-Concept Testing Instrument

The instrument used to evaluate self-concept was the PHC self-concept scale.²⁸ The scale contains 80 declarative sentences to which the child responds "yes" or "no." It is concerned primarily with the development of children's self-attitudes and correlates of these attitudes. The scale provides a global score for self-concept as well as six cluster scores designed as factors. The cluster scores provide insight into the individual's behavior, intellectual and school status, physical appearance and attributes, anxiety, popularity, happiness, and satisfaction. For all cluster scores, as well as the global score, the higher the score, the more positive the attribute. The author administered the scale to each cleft and noncleft child individually.

The PHC self-concept scale was chosen for children at this age level, because it provides a global score

Table 4. Analysis of Variance for Global Self-Concept

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs female	1	160.4	0.99	
Between pairs within sex	48	162.4		
Within pairs:	(50)			
Cleft vs noncleft group	1	931.8	9.13	<.005
Group × sex interaction	1	114.8	1.13	
Group × pair within sex	48	102.0		
Total DF	99			

Table 5. Analysis of Variance for Behavior

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs female	1	1.12	0.11	
Between pairs within sex	48	10.71		
Within Pairs:	(50)			
Cleft vs noncleft group	1	19.24	4.13	<.05
Group × sex interaction	1	0.04	0.01	
Group × pair within sex	48	4.65		
Total DF	99			

Table 6. Analysis of Variance for School Status

	Degrees of Freedom	Mean Square	F	P
Between pairs:	(49)			
Male vs female	1	9.40	0.76	
Between pairs within sex	48	12.37		
Within pairs:	(50)			
Cleft vs noncleft group	1	63.00	5.15	<.05
Group × sex interaction	1	12.16	0.99	
Group × pair within sex	48	12.23		
Total DF	99			

Table 7. Analysis of Variance for Popularity

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs female	1	79.13	8.05	<.01
Between pairs within sex	48	9.83		
Within pairs:	(50)			
Cleft vs noncleft group	1	35.09	4.96	<.05
Group × sex interaction	1	13.65	1.93	
Group × pair within sex	48	7.08		
Total DF	99			

Table 8. Analysis of Variance for Happiness and Satisfaction

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs female	1	0.19	0.03	
Between pairs within sex	48	6.43		
Within pairs:	(50)			
Cleft vs noncleft group	1	51.27	14.45	<.001
Group × sex interaction	1	11.75	3.31	
Group × pair within sex	48	3.55		
Total DF	99			

Table 9. Analysis of Variance for Physical Attributes and Appearance

	Degrees of Freedom	Mean Square	F	P
Between Pairs:	(49)			
Male vs female	1	0.05	0.15	
Between pairs within sex	48	3.31		
Within pairs:	(50)			
Cleft vs noncleft group	1	53.78	15.32	<.001
Group × sex interaction	1	1.70	0.48	
Group × pair within sex	48	3.51		
Total DF	99			

Table 10. Analysis of Variance for Anxiety

	Degrees of Freedom	Mean Square	F	P
Between pairs:	(49)			
Male vs female	1	6.23	0.70	
Between pairs within sex	48	8.87		
Within pairs:	(50)			
Cleft vs noncleft group	1	19.17	2.47	
Group × sex interaction	1	25.97	3.34	<.01
Group × pair within sex	48	7.77		
Total DF	99			

and cluster scores which have been derived through factor analysis. The scale's designers report split-half reliability coefficients of .90 and .87 and a test-retest reliability coefficient of .77.²⁹ These correlations indicate good internal consistency and adequate temporal stability. According to Wylie,³⁰ the test's reliability and validity have proven sufficient for research purposes.

Parental Questionnaire

A questionnaire was developed for the parents of the cleft and noncleft children to determine how they

viewed their child's relationships with family and peers, and progress in school (Table 2). The parents were asked to complete the questionnaire while their child took the self-concept scale. Before the tests were administered an informed consent was obtained.

Results

Piers-Harris Children's Self-Concept Scale

Table 3 gives the mean and standard deviations for the global and cluster scores of cleft and noncleft subjects. The statistical evaluation utilized in each of the seven analyses was multifactor analysis of variance with repeated measures.³¹

Cleft subjects reported significantly lower global self-concept than noncleft subjects ($p < .005$). Further significant differences between cleft and noncleft subjects were found in five of the six cluster scores. These include: behavior ($p < .05$), school status ($p < .05$), popularity ($p < .05$), happiness and satisfaction ($p < .001$), and physical attributes and appearance ($p < .001$). Additionally, a significant effect was found on the popularity score ($p < .01$), with cleft males feeling less popular than their noncleft peers.

A significant effect relating to sex was found on the anxiety score, with cleft females reporting significantly more anxiety ($p < .01$) than their noncleft peers. Tables 4-10 present the results of the statistical analysis demonstrating significance.

Parents' Questionnaire

A sign test³² was utilized to ascertain significant differences between the parents of cleft and noncleft subjects, establishing their child's relationship with family and peers, and progress in school. Of the six statements to which responses were requested, only two demonstrated significant differences, with the parents of cleft subjects reporting more negative responses. The statements were: "My child has seldom

been the subject of teasing by other children because of his facial appearance" ($p < .05$) and "My child's progress in school has not been affected by his facial appearance" ($p < .05$). Figures 1 and 2 provide graphic representation of these differences.

Discussion

The findings of this study demonstrated a significant difference ($p < .005$) between the study and control groups (Table 4). These results differ from those of Kapp,¹⁸ who reported no significant difference in self-concept between 34 cleft lip and/or palate school children matched individually with 34 noncleft children. Similar results, demonstrating no significant differences in self-concept between cleft lip and/or palate individuals, have been reported by Clifford^{16,17,19,20} and Sinko.²¹ In studies evaluating personality adjustment in children with cleft lip and/or palate, many studies⁹⁻¹⁵ have reported no significant emotional maladjustment in these children when compared with their noncleft peers. Of special interest is Billig's⁸ observation that in his study of 60 cleft individuals, the three individuals (5%) judged as having unsatisfactory personality adjustment all exhibited severe facial scarring. In the present study, all cleft lip and palate children had either repaired unilateral or bilateral complete cleft of the lip and palate. Facial scarring was evident in each cleft child.

Further significant differences between cleft and noncleft subjects were found in five of six cluster scores. These include behavior ($p < .05$), school status ($p < .05$), popularity ($p < .05$), happiness and satisfaction ($p < .001$), and physical attributes and appearance ($p < .001$). Kapp¹⁸ emphasized that the scores of the female cleft individuals reflected the major difference from noncleft subjects although lowered school achievement was evident for both male and female cleft subjects. In this study, a significant difference ($p < .05$) was found in school status between the cleft

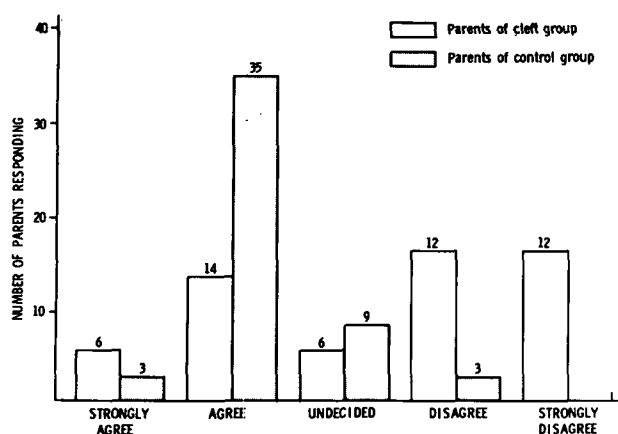


FIGURE 1. Graphic representation of parental response to the statement, "My child has seldom been the subject of teasing by other children because of his/her facial appearance" ($p < .05$).

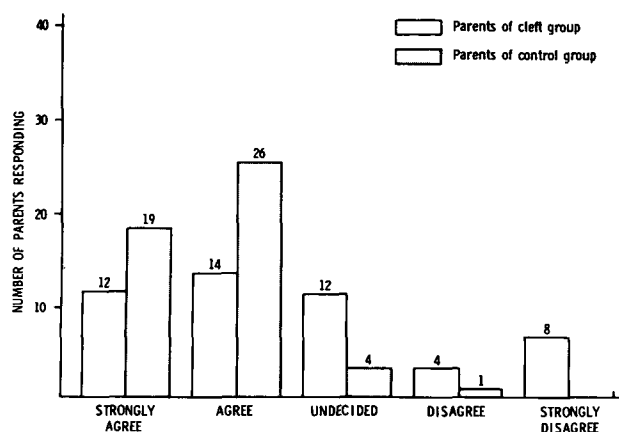


FIGURE 2. Graphic representation of parental response to the statement, "My child's progress in school has not been affected by his/her facial appearance" ($p < .05$).

and noncleft subject, regardless of sex (Table 6). Richman²² evaluated the parents and teachers of 139 cleft lip and/or palate children and indicated that the teachers believed both male and female cleft subjects were inhibited significantly more in the classroom than their parents observed at home.

In this study a significant difference ($p < .05$) in behavior was found between cleft lip and palate and noncleft subjects (Table 5). Kapp¹⁸ found no such differences in behavior between cleft lip and/or palate subjects. Schweckendiek and Danzer²⁷ reported that 20% of the 200 cleft lip and/or palate subjects in their study demonstrated behavior disorders or poor social adaptation to school or family. The 5% who exhibited the most negative behavior possessed the most severe facial scarring. Brown²⁴ and Johnson²⁵ stated that cleft lip and/or palate children have a sense of inadequacy, and often feel rejected by teachers, peers, and other parents.

Significant differences ($p < .05$) in the popularity score between cleft lip and palate and noncleft subjects also were noted (Table 7). Additionally, a significant effect ($p < .01$) was evident in that cleft males felt less popular than their noncleft peers. This again differs from Kapp¹⁸ who found no differences in popularity between cleft lip and/or palate and noncleft subjects. Spriesterbach's²⁶ comprehensive investigation of the psychological influences of cleft palate stressed that the cleft child is less confident, less aggressive, and less independent than noncleft peers.

Significant differences in the happiness and satisfaction score ($p < .001$) were found between cleft lip and palate and noncleft subjects (Table 8). Kapp¹⁸ also found that cleft lip and/or palate children reported significantly less happiness and satisfaction than noncleft children.

In this study a significant difference ($p < .001$) in the physical attributes and appearance score was reported between cleft lip and palate and noncleft subjects (Table 9). As a group, Kapp¹⁸ also reported that males and females with cleft lip and/or palate expressed dissatisfaction with personal appearance when compared with noncleft children.

The anxiety score was significant with cleft females reporting more anxiety ($p < .01$) than noncleft peers (Table 10). Similar results were reported by Kapp.¹⁸

Among the six statements which parents of cleft lip and palate and noncleft subjects responded to concerning their child's relationship with family and peers, and their progress in school, only two replies demonstrated significant differences. In general, the parents of cleft lip and palate children believed that their child's relationship with family and peers was positive and not unlike those reported by the parents of noncleft children. This corresponds well with the research of several other authors.^{8,9,12-15}

Significant differences between parental responses were found in two of six statements. The first, "My child has seldom been the subject of teasing by other children because of his/her facial appearance," ($p < .05$), is seen graphically in Figure 1. Teasing of cleft lip and/or palate children by their peers also has been reported by several authors.²³⁻²⁷

In response to the statement, "My child's progress in school has not been affected by his/her facial appearance," a significant difference ($p < .05$) was found between the parents of cleft lip and palate and noncleft subjects (Figure 2). Richman²² compared the perceptions of mother, father, and teacher regarding inhibition in cleft lip and/or palate children within the classroom and at home. Results indicated that the teachers viewed cleft males and females as significantly more inhibited in the classroom (which possibly could affect academic performance) than the parents observed at home. Similar results were reported in other studies^{23-25,27}

In this study children with cleft lip and palate demonstrated significant differences in self-concept from noncleft children. This finding disagrees with the results of most previous investigators and has important implications for members of the dental profession; these children often require frequent dental visits early in life, thereby enabling the dentist to establish rapport with both patient and parents. If the dentist believes that these patients are experiencing difficulty due to the cleft anomaly in relationships with family and peers, or in progress at school, they can be referred to mental health professionals for psychological counseling. In addition, the dentist should perform early restorative and prosthetic dental procedures which produce a more normal-appearing dentition. This will reduce further the possibility of setting the child apart from peers.

Summary and Conclusions

In the first part of this study, 50 cleft lip and palate children were matched individually with 50 noncleft children on the basis of age, sex, and race. All children completed the PHC self-concept scale. Findings and conclusions included:

1. Cleft lip and palate subjects, regardless of sex, reported significantly lower self-concept than noncleft subjects ($p < .005$). Although previous research suggests that self-concept in girls may be more affected by cleft lip and/or palate, both sexes appear equally affected in those children with cleft lip and palate.
2. Significant differences between cleft lip and palate and noncleft subjects were found in five of six cluster scores. These include behavior ($p < .05$), school status ($p < .05$), popularity ($p < .05$), happi-

ness and satisfaction ($p < .001$), and physical attributes and appearance ($p < .001$). It would appear that, when compared to noncleft peers, cleft lip and palate children, regardless of sex, are affected across a wide range of components which are important in the development of positive self-concept.

3. A significant effect ($p < .01$) was found on the popularity score, suggesting that cleft lip and palate males felt less popular than their noncleft peers.
4. Cleft lip and palate females expressed significantly more anxiety ($p < .01$) than noncleft female peers.

Results of the second part of this study, which evaluated how parents of cleft lip and palate and noncleft children specifically view their child's relationship with family, peers, and their progress in school, may be summarized as follows.

1. Parents of both cleft lip and palate and noncleft subjects believed that relationships of the child with family, self, and peers were acceptable.
2. Parents of cleft lip and palate children reported that progress in school had been affected by the child's facial appearance.
3. The parents of cleft lip and palate children believed that their child had been subject to teasing by other children because of his facial appearance.

The dentist can play an important role in improved esthetics by providing early restorative and prosthetic treatment which will give these children a more normal-appearing dentition.

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