

## Psychosocial Challenges of Orofacial Cleft

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### Abstract

Orofacial clefts result from a failure during embryonic development. Specifically, between the fourth and seventeenth weeks of embryonic development, the closure mechanisms for the facial and oral cavity fail. As a cleft child grows to adult through adolescence he comes across many people and situations which can make him psychologically weak or strong. Hence the psychological factors associated with cleft lip and palate is very much concerned with each parent.

**Keywords:** Orofacial clefts; Psychosocial challenges; Neuropsychological functioning and Learning

### Introduction

Very often people look at the mirror before make a move from the room or home. why? ...Facial appearance is very much concerned with each individual. All are ready to make any compromise for facial beauty. Any birth marks or abnormal colour or even a colour change on the babies face make parents uncomfortable. Cleft in the lip and palate are considered to be the most common birth defects involving facial appearance. People from different culture claim different reasons for the development of cleft lip and palate; the ancient people claim that a pregnant woman who ate hare's flesh would bear a child with a hare-lip and some others says the occurrence of Orofacial clefts to an act of God, witchcraft or evil spirits. In reality Orofacial clefts result from a failure during embryonic development. Specifically, between the fourth and seventeenth weeks of embryonic development, the closure mechanisms for the facial and oral cavity fail. Note that at the very beginning of embryonic development, the embryo is particularly sensitive to adverse substances, and that women are not always aware of being pregnant at this early stage of pregnancy.

Cleft in the lip and palate affect not only aesthetically but also affects different functions. Feeding, hearing, nasal breathing, and phonation have a complete effect

on long term effect. All these aspects are addressed as part of an integral treatment. Though the physical aspects are taken care well, but psychological issues are always neglected. For the positive outcome of the treatment along with proper treatment the patient should be psychologically strong with high self esteem to term the treatment as success. As a cleft child grows to adult through adolescence he comes across many people and situations which can make him psychologically weak or strong. Hence the psychological factors associated with cleft lip and palate is very much concerned with each parent [1].

### Psychological Issues and Learning

Entrance into elementary school gives important opportunities for all children to begin to acquire the self-concept and social skills necessary for building healthy relationships with authority figures (e.g., teachers) and same-aged peers. The years between school entry and puberty are also characterized by advances in executive control, or emotional and behavioral regulatory skills (i.e., self-control, inhibition, self-monitoring) important for learning and developing peer relationships [2]. In contrast to this Parent and teacher ratings of internalizing and externalizing behaviour problems are significantly higher in children with CL/P than same-age peers [3].

## Common Behavioural Problems among Cleft Lip and Palate Children

### Externalizing Behaviours

- Opposition,
- Noncompliance,
- Hyperactivity,
- Impulsivity

### Internalizing Behaviours

- Anxiety,
- Somatisation
- Social Inhibition
- Withdrawal

Children with CL/P in the school-age group (i.e., ages 4 to 11) exhibited three times the normative rates of problems in school competency. This age group showed higher rates of school problems than older adolescents with CL/P. Though the presence of academic or school difficulties in children with CL/P is well-documented, the reasons for these difficulties are complex and not fully understood [4].

Additionally, peer interaction also plays an important role in maintaining psychosocial limitations. Many children with cleft lip and palate may have a less attractive facial appearance or speech than their peers. A high incidence of teasing over facial appearance is reported among those with cleft lip and palate. A self report research study on determining the psychosocial functioning related to cleft lip and palate, showed participants with cleft lip and palate reported greater behavioural problems; were teased often and less happy with their facial appearances [5]. Difficulties are also experienced in relation to behavioural problems and satisfaction with facial appearances perceived speech problems, and use of avoidant coping strategies [6].

In a recent study comparing language and reading skills in 42 neurologically and genetically normal 5- to 7-year-old children with CL/P to demographically similar children without cleft, found significantly lower word identification, sound blending and reading fluency in children with cleft relative to comparisons [7]. In contrast, a study was published shortly thereafter failed to find statistically significant differences between CLP (n =29) and CP (n =28) groups and a demographically similar

contrast group (n =77) in vocabulary and language functioning in both case and contrast groups was within the average range relative to test norms, with the exception that reading scores, were significantly higher for children with cleft than those without [8].

### Neuropsychological Functioning

Consistent evidence of slight deficits in neuropsychological functioning is evident across all ages in individuals with CL/P, particularly with respect to speech and language abilities. These deficits are often related to cleft type, with CP groups and male patients in particular exhibiting the greatest impairment. Recent neurobiological data documenting structural brain differences between cleft and noncleft groups provide compelling support for the potential influence of genetic/biological factors on cleft type, severity, and related longitudinal outcomes and for the role of brain structure abnormalities in neuropsychological dysfunction. Abnormalities in brain structure have been directly correlated to cognitive, speech, and behavioral deficits. For example, abnormal thickening of the ventral frontal cortex is directly correlated with inattention and hyperactivity [8]. The structural abnormalities observed in adult males with CL/P are distinct and suggest a potentially unique developmental pattern in cleft groups that warrants further examination. Recent research has shown that there are neuropsychological patterns of specific strengths and weaknesses associated with clefting, and some of these have been related to direct neuromaturation differences through brain imaging [9]. Although the early literature tended to give the behavioral, learning, and neuropsychological characteristics mentioned above more of an environmental explanation, more recent studies have been demonstrating a greater relation to biologically based neuronal differences for some children with cleft.

Recent research on the neurobiological aspects of cleft has provided support for decreased in children with CL/P. Within the smaller brain, there is specific reduction in volumes of the cerebellum, cerebral frontal lobe, and subcortical nuclei and gender differences in brain structure in boys exhibiting increased gray but decreased white matter volumes [10]. More recent comparison of verbal and performance intelligence quotients (VIQ and PIQ, respectively) in children with CLP, CP, and CL demonstrated an interaction of IQ and cleft type. Children with CLP had equal VIQ and PIQ scores (similar to healthy controls) and these findings provide potential evidence that cleft type may be associated with neurobiologically distinct conditions that are in turn associated with

distinct neuropsychological, academic, and behavioral profiles. Such comparisons on verbal and perceptual skill between cleft types warrant further study and replication before conclusions can be drawn [11].

### Best Predictor of Adolescent Adjustment with Social Experiences

- Frequency of Social Events/Interactions,
- Availability
- Helpfulness of Parental behaviour
- Family Support and Maternal Well-Being
- Level of Life Stress Present outside the Parent-Child Relationship
- Social Experiences and feelings of Distress
- Psychological Well-Being
- Speech Difficulties,
- Satisfaction with appearance,
- Social Withdrawal [2,6].

### Assessment Areas for Adjustment and Empowerment

- Self-concept; including self-esteem and self-confidence.
- Body image and satisfaction with facial appearance.
- Satisfaction with speech and Learning.
- Emotional problems and attachment.
- Behavioural problems and social functioning.
- Anxiety and depression.
- Psychosocial strain and conduct problems.
- Sleep patterns
- Development

### Supporting Steps

- As children enter adolescence, they may rebel against time-consuming visits to the craniofacial team that interfere with other activities. It is important that children be allowed to gradually assume a larger role in shared decision-making regarding cleft-related care

- Encourage the children to become increasingly more involved in cleft-based care, treatment planning, and medical decision-making.
- Take a more active role in their medical care
- Equip the adolescents and young adults with additional knowledge and skills to better prepare them for later independent management of their condition.
- Develop social skills to have positive first impressions on others.
- Educate the parents and teachers of children and adolescents, who are growing in both independence and cognitive sophistication over the course of their development.
- Helps to adjust with appearance and speech deficits and reduce the teasing by peers [4].
- Adolescence is a good time to learn more about the genetics of CL/P and, specifically, more about their own chance of having children with CL/P; genetic counseling can be beneficial in facilitating this process [12].

### Conclusion

Cleft lip and palate present different challenges throughout child development, identifying the common psychosocial factors related to cleft lip and palate remains a major challenge. Although the early literature tended to give the behavioral, learning, and neuropsychological characteristics, more recent studies have been demonstrating a greater relation to biologically based neuronal differences for some children with cleft. Studies do predict some amount of difficulties in psychosocial functioning among cleft lip palate individuals, however there is limited information on the severity and the duration of the same. More research is required to evaluate patient and family issues and provide them with relevant information on psychosocial issues.

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