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COMPARISON OF PERCEPTIONS OF ORAL HEALTH RELATED QUALITY OF LIFE IN CHILDREN WITH AND WITHOUT ESTHETIC RESTORATION AFFECTED WITH EARLY CHILDHOOD CARIES

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ABSTRACT

AIM- To compare the Perceptions of parents of Oral Health Related Quality of life in Children with and without Esthetic Restoration affected with Early Childhood Caries. **Material And Method:** It was an intervention study which showed how ECC and its treatment can affect Oral-Health Related Quality of life in children. It consisted of 120 child-Parent (Either Mother or Father) pairs. Children with ECC and their parents(mother/ father) participated in face-to-face interviews before dental treatment was started. One of the parents of the children was invited to respond to questionnaires of OHRQoL of the child (ECOHIS). Interviews were carried out orally by interviewer in language understood by the parents. Children with ECC then participated in full-mouth rehabilitation in several appointments under local anaesthesia with or without nitrous oxide sedation. 2 months after

the completion of treatment, children with ECC and their parents returned for a follow-up face-to-face interview. Wilcoxon rank-sum test were used to compare total OHRQoL and individual domain scores by gender, socioeconomic status and educational status. Mann-witney test were used to compare the difference. **Results:** Highly significant difference was obtained when comparing the overall esthetic and domain specific score of pre treatment and post treatment questionnaire in characteristic of child(male and female), sociodemographic criteria (High and low educational and socioeconomic status) (p=0.000). **Conclusion:** Early childhood caries effects the children oral health related quality of life, so early management and proper counselling about factors that causes ECC should be taken into consideration. **Clinical Significance:** Primary teeth are best space maintainer so they should be preserved and their early loss can severly effect the general health and oral health of the children.

INTRODUCTION

Dental caries affects humans of all ages throughout the world and remains the major dental health problem among school children globally.[1] It is a disease that can never be eradicated because of the complex interaction of cultural, social, behavioral, nutritional, and biological risk factors that are associated with its initiation and progression.[2]

Early Childhood Caries (ECC) has been defined by the American Academy of Pediatric Dentistry as ‘the presence of one or more decayed, missing due to caries, or filled tooth surfaces in any primary teeth in children under 6 years of age. In children younger than 3 years of age, any sign of smooth-surface caries is indicative of severe early childhood caries (S-ECC). ECC at very young age change child’s attitude by affecting quality of life ranging from being ashamed to smile and speak, to difficulty in eating and malnutrition. While not life-threatening, its impact on individuals and communities is considerable, resulting in pain, impairment of function, deleterious influence on the child’s growth rate, body weight, and ability to thrive, thus reducing quality of life.[3]

Despite the decline in the incidence of dental caries in many countries, the condition remains a significant problem in underdeveloped countries. Children from low socioeconomic status communities have worse dental health than their more privileged counterparts.[4]

Oral disease is a universal problem, but it is often a low priority for health policy-makers because it is rarely life-threatening. However it can have a significant impact on both the social and the psychological aspects of an individual's life. Oral health problems can affect an

individual's quality of life by impairing physical and social functioning, as well as their self-esteem.[5]

Traditional methods of assessment of oral health did not take into account the impact of oral health status, this led to concept of Oral health-related quality of life (OHRQoL). It is a multidimensional construct that includes a subjective Evaluation of Individuals oral health, functional well-being, Emotional well-being, expectations and satisfaction with care and sense of self. It is recognized by the World Health Organization (WHO) as an important segment of the Global Oral Health Program (2003).

This study was, therefore, designed to asses parent's/guardian's perception of their child's oral health-related quality of life.

To assess the perceived oral health-related quality of life(OHQoL) of children aged 3 to 5 years using parent care giver perception questionnaire (PCPQ) before and after oral Rehabilitation.

MATERIAL AND METHOD

The study was conducted at The Department of Pedodontics and Preventive Dentistry, I.T.S Centre for Dental Studies and Research, Muradnagar.

It was an intervention study which showed how ECC and its treatment can affect Oral-Health Related Quality of life in children. It consisted of 120 child-Parent (Either Mother or Father) pairs.

The study when fulfilled the following criteria:

INCLUSION CRITERIA

1. Children between 2-5 years of age.
2. No systemic and /or mental developmental disorders in participating subjects.
3. ECC affecting Incisors or children suffering from ECC.
4. Children reporting to department for 1st visit
5. Children accompyaning either of the Parent. (Father or mother)

EXCLUSION CRITERIA

1. Children not accompanied by their parents

2. Children who reported to department with guardian.

DATA ACQUISITION

ECC was assessed according to World Health Organization criteria [WHO, 1997] and calculated in terms of decayed, indicated for extraction, and filled primary teeth (dmft). Active decay was detected at the cavitation level by careful visual inspection. Teeth with white spot lesions were considered healthy.

Children with ECC and their parents (mother/ father) participated in face-to-face interviews before dental treatment was started. One of the parents of the children was invited to respond to questionnaires of OHRQoL of the child (ECOHIS). Interviews were carried out orally by interviewer in language understood by the parents.

The characteristics of child include age and gender. Sociodemographic information included educational level of mother and father (High or Low educational status) and family Income (High or low socioeconomic status).

Children with ECC then participated in full-mouth rehabilitation in several appointments under local anaesthesia with or without nitrous oxide sedation. 2 months after the completion of treatment, children with ECC and their parents returned for a follow-up face-to-face interview.(FIGURE 1).

Early Childhood Oral Health Impact Scale

Self made Parent care giver perception questionnaire (PCPQ) based on Michigan Oral Health-related Quality of Life Scale was used to assess the OHRQoL of children. It consist of 16 question from 4 domains: Emotional symptoms, social symptoms, functional symptoms and oral symptoms. The questionnaire is scored using answer on basis of responses: never=0, Once/twice= 1, sometimes= 2, often= 3 and everyday/almost everyday= 4.

Statistical Analyses

Statistical Analyses were performed using the SPSS 10.0 statistical software program.

Overall esthetic and domain specific scores for each care giver were created by summing the response codes for questions. Wilcoxon rank-sum test were used to compare total OHRQoL and individual domain scores by gender, socioeconomic status and educational status. Mann-witney test were used to compare the difference.

RESULTS

A total 120 children (aged 2-5 years) and their parents participated in the study. 70 children were females and 50 were males. All the parents interviewed in this study completed the PCPQ questionnaire before dental treatment. 8 children oral rehabilitation was not completed as they did not return on follow up appointments. They were excluded from the study.14 parents failed to return at follow up face-to-face interview.

Highly significant difference was obtained when comparing the overall esthetic and domain specific score of pre treatment and post treatment questionnaire in characteristic of child(male and female), sociodemographic criteria (High and low educational and socioeconomic status) (p=0.000).

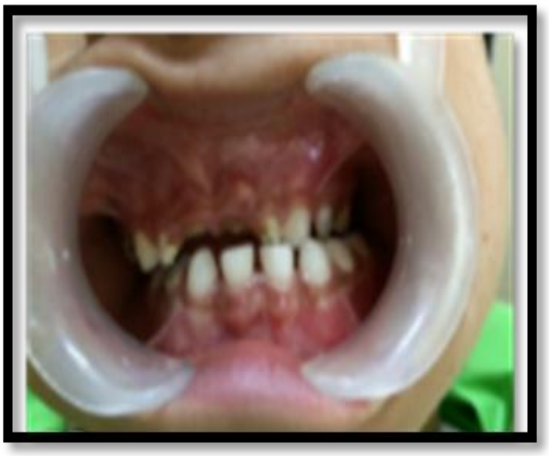
Female showed more post-operative changes, highest in emotional domain (p=0.027) (Mean Rank- 34.94).

High Socioeconomic status had a more positive impact on the OHRQoL of children as compared to low socioeconomic status. (Oral symptoms, p=0.031; Functional symptoms, p= 0.000; Social symptoms, p= 0.014; Emotional symptoms, p=0.051).

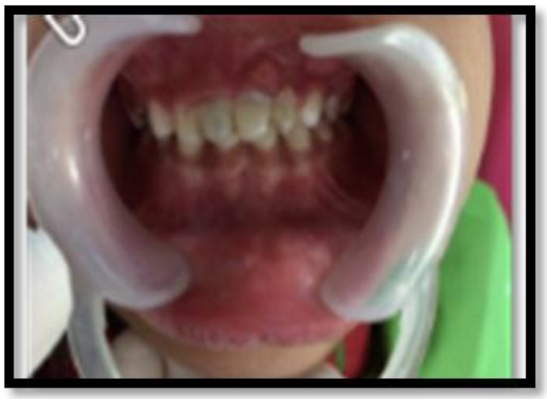
Similar results were obtained in high educational status group. (Oral symptoms, p=0.003; Functional symptoms, p= 0.002; Social symptoms, p= 0.002; Emotional symptoms, p=0.017).

FIGURE

A) PRE-OPERATIVE



B) POST-OPERATIVE



DISCUSSION

OHRQoL was originally conceptualized in 1978 and is defined as that part of a person's quality of life affected by the oral health. This concept focuses on the patient as a whole and, therefore, emphasizes the holistic model of oral health. OHRQoL is assessed by either asking patients questions regarding person's functioning (e.g., biting, chewing), sensation of pain, psychological (self-esteem), and social wellbeing. Parent scale is a reliable and valid measurement scale that could be of great use as a communication tool to alert parents to their child's need for dental care. Children in this age group are not in the position to report themselves for treatment, even when they are experiencing power symptoms and pain. Ultimately, may be parents perception of their child's oral health-related QOL, that may decide whether whether care will sought for children.[6]

Most common problem encountered in children in functional domain was difficulty in eating food, whereas in emotional problem is that child gets upset because of his/her appearance and complains of being teased by other children in school, which leads to more missed school days.

Children at age group of 2-5 years are uncooperative and requires lot of behavior management technique. In this study nitrous oxide sedation was used for children undergoing oral rehabilitation.

In this study health status were seen by computing change scores by subtracting pre-treatment scores from post-treatment scores, and by making retrospective judgments about global change in OHRQoL by asking participants at some defined period after the event (2 months) to rate whether children's OHRQoL has improved, stayed the same, or worsened.

In this study children total OHRQoL and mean difference obtained between pre-treatment and post-treatment in our study were higher for females(134.39) as compared to male(107.84), which showed that OHRQoL was more improved in females in aligment to the study done by Barbosa et al in 2009.[7] This may be explained by the perception that females are culturally more sensitive and concerned about their health and appearance.

Among 4 domains in females, mean score of emotional problems(4.97), suggest that female experience more severe emotional problems in accordance with study done by foster & thomson in 2013.[8]

Mean of difference between pre and post treatment was higher in high socioeconomic group(142.78) as compared to low socioeconomic group (99.79), which showed that children of high socioeconomic status have higher impact on OHRQoL.(p=0.000).

This can be explained by perception that children and parents of high socioeconomic status are more concerned about child social and functional health.

Similarly, Parental education is important aspect of family background that influences children dental and other health care needs.

In our study there was a significant association between children from low-income households, and with education, and the presence of ECC. These results are consistent with the literature [Abanto et al., 2011; Wong et al., 2011; Leal et al., 2012], highlighting the importance of assessing socioeconomic conditions together with clinical and OHRQoL measures. [Locker, 2007; Abanto et al., 2011].

CONCLUSION

The results of this study emphasize the importance of perceived health status and QoL assessment for evaluating ECC patients, since signs and symptoms of ECC can have a substantial functional, emotional and psychologic impact, negatively affecting the QoL of children and preadolescents.

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