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IMPACT OF EARLY CHILDHOOD CARIES ON QUALITY OF LIFE IN 3 - 5 YEARS OLD CHILDREN AND THEIR PARENTS - A CROSS SECTIONAL STUDY

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ABSTRACT:

Dental pain impacts the pleasant lifestyles of an adult hindering their social life and also traumatizes their every day routine. Even though it has been found that neonates and infants have a high pain threshold naturally, dental pain in a child definitely affects his or her quality of life. The objective and aim of this study is to enumerate the problems faced by the parents and the children with ECC which thereby affects their quality of life. The study consisted of 200 children-parent pairs. A standardized questionnaire containing 10 questions for parents and 9 questions for the children was used. The questionnaire used was the Michigan Oral Health related Quality of Life scale. 75% of the children had pain and discomfort; 68% of them had disturbed sleep; 61 % of the children were unable to play joyfully. Regarding the QOL of the parents, 65% had problems during work; 65% had disturbed sleep and 40% of them had expenditure issues because of early childhood caries in their wards. Thus children with early childhood caries have a poor quality of life with various problems hindering their daily routine

Parents of such children also suffer with various issues affecting their quality of life.

INTRODUCTION

Managing and preventing dental caries successfully, especially early childhood caries is the chief goal of a pediatric dentist and also it demands an esteemed knowledge to provide treatment with a good prognosis¹. Both developing countries and industrialized countries across the world are dealing with a serious community dental hassle that is Early Childhood Caries². The quality of life of both the children who have ECC and also that of their parents are affected³. Just as it has been always started from the historic days, "Prevention is better than cure", Early childhood caries ought to be averted at all value and that have to be the primary priority of every pediatric dentist and the parent thereby stopping many detrimental condition in the primary dentition and also sparing many disturbing and invasive treatment tactics in children. It is important to regain the characteristic of the teeth after rendering the treatment required to encounter the symptom which the kid feels disturbing such as pain, sensitivity and swelling. Rendering a full coverage restoration to the teeth which has passed through an invasive remedy like pulp therapy or multi-surface restorations, serves excellent in durability of treatment and also regains the masticatory function⁴

Among Odontogenic ache, dental pain i.e, pain because of the inflammation of dental pulp is the most common and it may present in numerous ways⁵. Dental pain impacts the pleasant lifestyles of an adult hindering their social life and also traumatizes their every day routine⁶. Even though it has been found that neonates and infants have a high pain threshold naturally⁷, dental pain in a child definitely affects his or her quality of life³. One of the most common causes of dental pain in children with primary dentition is Early Childhood Caries (ECC). The worldwide incidence of ECC is found to be 1.76 billion⁸. If left untreated, these carious lesions have high possibility to development into oro-facial swellings⁹. Oro-facial swellings result from various causes like, trauma, dental abscess, cysts and tumors. Among this, the most commonly happening oro-facial swelling in kids is because of dento-alveolar abscess.

The term ECC is defined as the presence of one or more decayed (non cavitated or cavitated lesions), missing (because of caries) or filled surfaces in any primary tooth¹⁰. Recently, various studies have been carried out to demonstrate the impact of early childhood caries on the child's quality of life (QOL)¹¹. Our department is passionate about child care, we have published numerous high quality articles in this domain over the past 3 years¹²⁻³⁰. With this inspiration we planned to pursue research on the quality of life of both the children with early childhood caries and their parents. The objective and aim of this study is to enumerate the problems faced by the parents and the children with ECC which thereby affects their quality of life.

MATERIALS AND METHODS

The study consisted of 200 children-parent pairs. The study was performed at a hospital setting in Chennai, India. The inclusion criteria of selection was healthy children of 3 to 5 years of age with Early Childhood Caries (ECC). Those children having no dental caries and children who have special health

care needs and medically compromised are excluded from the study. A standardized questionnaire containing 10 questions for parents and 9 questions for the children was used. The questionnaire used was the Michigan Oral Health related Quality of Life scale. The questions were made available both in English and the local language which is Tamil. Those who understood and were able to answer in English were given the English version and the Tamil version was given to those who were not comfortable with English. The questionnaire included physical, psychological and social aspects of QOL. The questionnaire was distributed to the parent-child pairs entering the department of Pediatric and Preventive dentistry. As the age group of the children included in the study was 3 to 5 years old, most of the children were unable to fill the answers on their own and hence their questionnaires were also given to be filled by their parents. Once the questionnaires are answered and returned, the results were evaluated.

RESULTS AND DISCUSSION

The cross-sectional study consisted of 200 children-parent pairs. Out of the 200 children, 118 were males and 82 were females. Among the parent respondents 29.5% were fathers, 23% were mothers and 47.5% of the respondents were father and mother duo (Fig 1). When questioned about pain due to dental caries, 75% of the children had pain and discomfort which compromises their quality of life. When questioned about the sleep of the children, 68% of them had disturbed sleep. 61% of the children were unable to play joyfully because of toothache and 83% of them couldn't eat properly (Fig 2). Regarding the QOL of the parents, 65% had problems during work; 65% had disturbed sleep and 40% of them had expenditure issues because of early childhood caries in their wards (Fig 3).

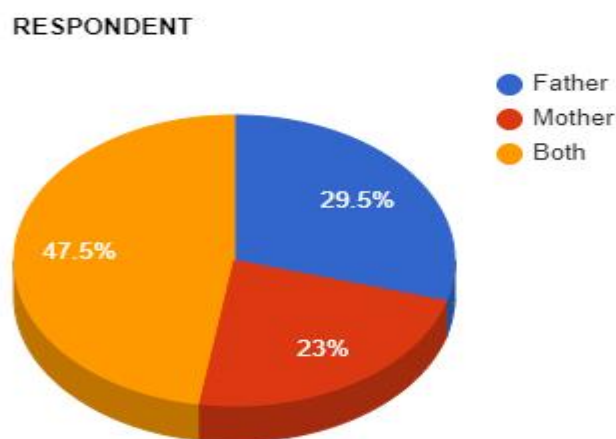


Figure 1: Pie-chart showing the distribution of the Parents responded to the questionnaire. Among the parent respondents 29.5% were fathers, 23% were mothers and 47.5% of the respondents were father and mother duo.

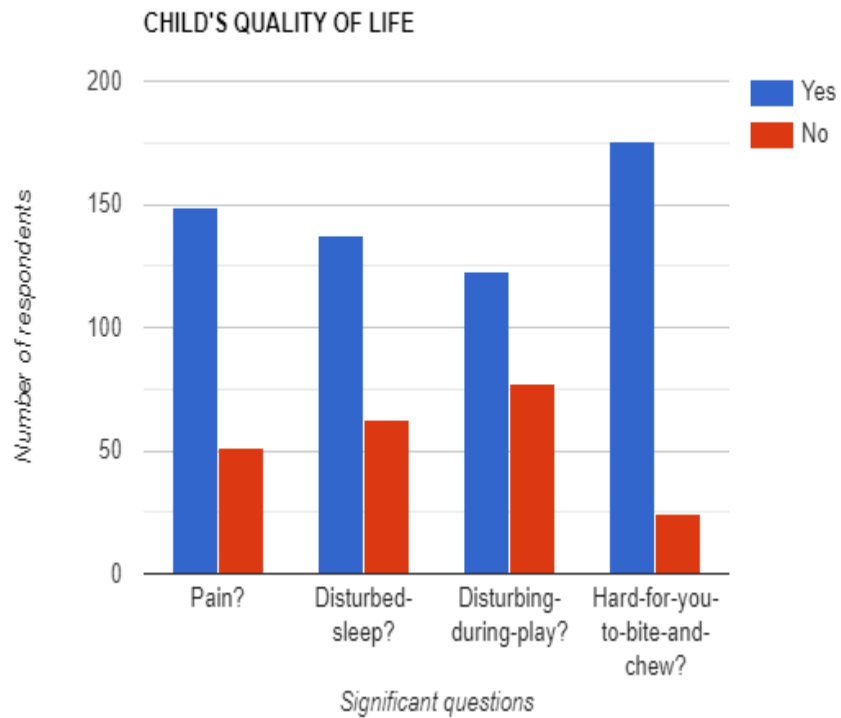


Figure 2: Bar Graph showing the frequency of answers given by the children to few significant questions. 75% of the children had pain and discomfort; 68% of them had disturbed sleep; 61 % of the children were unable to play joyfully and 83% of them couldn't eat properly.

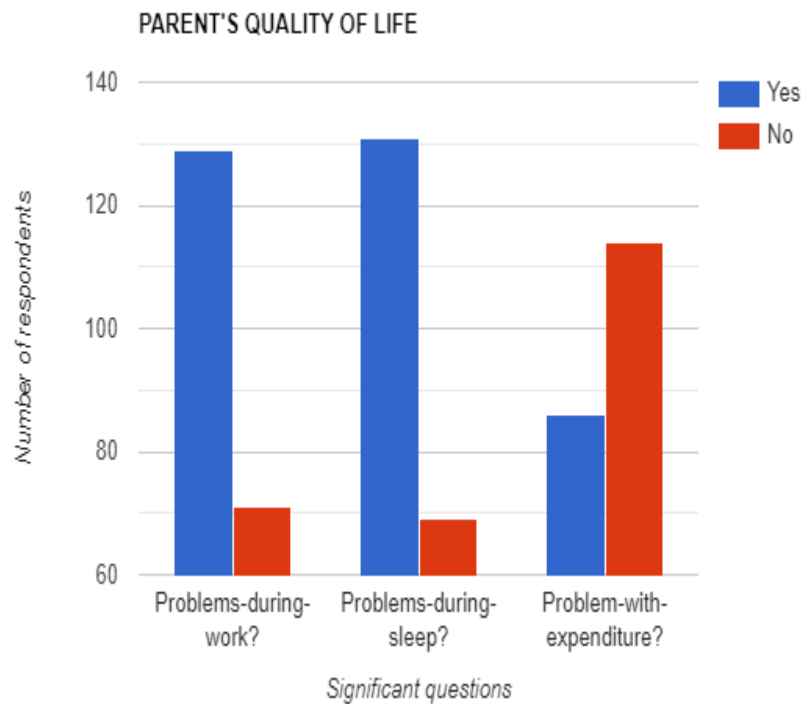


Figure 3: Bar Graph showing the frequency of answers given by the parents to few significant questions. 65% had problems during work; 65% had

disturbed sleep and 40% of them had expenditure issues because of early childhood caries in their wards

From the above results and statistical analysis, it is obvious that oral health status can compromise one's quality of life and especially Early childhood caries in a child less than 71 months of age can disturb their own and their parent's QOL to a great extent. Even though there were lots of QOL studied regarding ECC available in literature, which were conducted by various researchers across the world, every survey is unique in a way that it is focused on that particular geographic region categorizing a particular group of children and parents in a society. In this study, the majority of the participants were from the city, Chennai and also most probably belonging to the middle class of economy.

Pain is the most commonly occurring and most highly disturbing symptom experienced by the children. In this study 73% of the children had pain and 83% of them couldn't sleep properly because of the pain. In a similar study conducted by Filstrup et al, 53% of the study population had disturbed sleep due to dental pain³¹. In another study, it was observed that 35% had sleep issues and 8.7% had significant weight loss due to disturbance in eating because of the toothache³². Playing cheerfully with other kids is the most enjoyable doing for a child, but early childhood caries and its clinical features are capable of disturbing the regular routine of the children thereby compromising their quality of life. In this study 61% of the children experienced disturbance while playing, because of dental pain. This is similar to the results obtained in another recent study where it has been observed that early childhood caries can affect a child's everyday joyful routine³³.

Early childhood caries are not only capable of diminishing the quality of life of children but also it affects the daily schedule and normal routine of their parents³⁴. In this current study, 65% of the parents have experienced disturbance during work and sleep because of the dental pain in their children which is already discussed with various similar studies^{33,35}. In this study only 40% of the parents admitted that they are having expenditure issues due to the early childhood caries in their children whereas the remaining 60% didn't consider spending money for their children's oral health as a serious issue. There was a common idea among the people that dental treatments are expensive and many patients leave their oral health issue untreated because of this³⁶. Conducting more similar studies to determine the effect of early childhood caries on the quality of life of children and their parents will help to evaluate the severity of the disease in relation to its psychological attributes on the patient and their closely related individuals.

CONCLUSION

- Thus children with early childhood caries have a poor quality of life with various problems hindering their daily routine
- Parents of such children also suffers with various issues affecting their quality of life

- More awareness should be spread to prevent the occurrence of ECC thereby avoiding these problems and to render a happy and healthy life to both the children and their parents.

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CONFLICT OF INTEREST

No conflict of interests were declared by the authors.

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