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RESEARCH ARTICLE

PSYCHOLOGICAL IMPACT OF EARLY CHILDHOOD CARIES IN CHILDREN

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ABSTRACT

Aim: To assess the psychological impact of early childhood caries in children. **Method**: Children between 4-6years of age were selected for study and were divided into Group A- sever early childhood caries and Group B- caries free. Face image scalewas used to evaluate the children's perception of their own teeth in both the groups and children with the help of investigators were asked to fill the simple questionnaire, to evaluated psychological impact in children. **Result:** The children with severe early childhood caries felt sadder about their teeth compared to caries-free children. Severe early childhood carieschildren had toothache, ashamed of smiling, problem in eating certain food and a significant proportion of children had missed school due to pain/appointment, stopped playing with other children, teased by friends because of their teeth. **Conclusion**: Sever early childhood caries exhibited psychological impact in children. Psychological impacts on young children, suggested the need for intervention programs to address oral health problems among children.

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INTRODUCTION

Early childhood caries is a common disease of young children (Tomar, 2010). Though it is not life-threatening, yet it contributes to suboptimal health complication. Early childhood caries also affects the quality of life of preschool children. Preschool children with dental disease do complain of pain; however, they do manifest the effects of pain in their altered eating, sleep habits (Low, 1999) and also can interfere with the growth of the body, with adverse effects on body weight and height and can result in compromised psychological well-being (Acs, 1992). The child's psychology goes through a stereotypical pattern of growth as per various theories of child psychology governed by various internal and external factors like the parents and surrounding. The present generation children are found to be more observant and conscious about their looks. So the peer influence of mocking at a child's missing teeth can influence his/her psychology. The idea of aesthetics linked to health now begins to be incorporated in the mind of the child, interfering with his/her concept of self-esteem. The purpose of this study is to evaluate the psychological impact of Early Childhood caries using a facial image scale and custom made questionnaire for preschool age children (4 to 6 years old) is completed by the child with the help of investigator.

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MATERIALS AND METHODS

The study consisted of 120 children between 4-6years of age. The children's oral health was evaluated on the basis of a visual examination by a single examiner which was performed in K V G dental college and hospital, Sullia, India. Select children are divided into two groups based on inclusion and exclusion criteria as, severe early childhood caries (Group A) and caries-free children (Group B).

For inclusion in (Group A)- children had to have minimum cavitation on any surface of two maxillary incisors, one maxillary first molar, one mandibular molar, missing (due to caries) and healthy co-operative children and for (Group B) –children with caries free were selected. Those children who are medically compromised were excluded from the study. Face image scale[4] was used to evaluate the children's perception of their own teeth in both the groups- fig 1 and children with the help of investigators were asked to fill the simple questionnaire (fig 2) to evaluated psychological impact in children. After completion of the questionnaires, the results were evaluated. Incomplete questionnaires were not considered.

Fig 1

Fig 2 missing and title missing

This questionnaire consists of following questions

Child's oral health

1.You had toothache before?

( )yes ( )no

2.You ever missed your school because of your teeth (pain /appointment)?

( )yes ( )no

3.Do you feel embarrassed while smiling because of your teeth?

( )yes ( )no

4.Do you have difficulty in eating certain kinds of food (hot, cool, sweet)?

( )yes ( )no

5.Do you like playing with other children?

( )yes ( )no

6.Because of your teeth did you stop playing?

( )yes ( )no

7.Do your friend tease you because of your teeth?

( ) yes ( ) no

RESULTS

Among all the children examined, 64(53.3%) were girls and 56(46%) were boys having mean age of 4.2 years. The children with (Group A) severe early childhood caries felt sadder about their teeth compared to (Group B) caries-free children (Table 1). Children with severe early childhood caries had toothache, ashamed of smiling, problem in eating certain food and a significant proportion of children had missed school due to pain/appointment, stopped playing with other children, teased by friends because of their teeth (Table 2).

However, the prevalence of psychological impact is much higher than in the present study. This may have been due to the slightly differences in social/cultural backgrounds. The main impacts was due to symptoms from untreated dental caries that prevented from playing due to pain in children and confirms the negative effect on child psychology due to severe early childhood caries in preschool children.

Table 1. Children's perception of their teeth

Perception	Group A		Group B		Total		p value
	N	%	n	%	N	%	
Sad	42	70.0	12	20.0	54	45.0	0.0118
Happy	18	30.0	48	80.0	66	55.0	
Total	60	100.0	60	100.0	120	100.0	

Table 2. Distribution of children by group according to the question

Question	Group A		Group B		Total		p value
	N	%	N	%	N	%	
Tooth ache	46	76.6	7	11.6	53	44.1	0.184
Yes	14	23.3	53	88.3	67	55.8	
No							
Missed classes	16	26.6					
Yes	44	73.3	4	6.6	20	16.6	0.00373
No			56	93.3	100	83.3	
Ashamed to smile	24	40.0					
Yes	36	60.0	2	3.3	26	21.6	0.156
No			58	96.6	94	78.3	
Problem eating certain foods							
Yes	41	68.3	5	8.3	46	38.3	0.168
No	19	31.6	55	91.6	74	61.6	
Stopped playing with other children							
Yes	8	13.3	-	-	8	6.6	<0.001
No	51	86.6	60	100.0	111	92.5	
Teased by friends							
Yes	11	18.3	3	5.0	14	11.6	0.0048
No	49	81.6	57	95.0	106	88.3	

DISCUSSION

Over the last two decades, there has been a substantial development of an indicator known as COHQoL - child oral-health-related quality of life[5]. There are available tools that can be used to measure functional and psychosocial oral disease outcomes; most of these are targeted at adults[6]. Thus, to evaluate the well-being of a child is prime important and assessing psychology impact in pediatric populations has increased. The concept of health in regard to Health Promotion has expanded to include other issues, such as socioeconomic, environmental and behavioral factors that interfere in individual and collective health. Thus, the concept of oral health now encompasses quality of life, as well as oral symptoms, functional limitations, emotional6 and psychological well-being, factors not considered previously. Children with severe early childhood caries reported significantly high psychological impact than caries free children with mean age of 4.2 years.. Negative impacts of ECC include behavioral changes such as avoid smiling, talking and playing with friends, low self-esteem and decrease in school performance. At this age, children start comparing their physical characteristics and personality traits with those of other children. Their ability to make judgments about their appearance, the quality of their friendships, their thoughts, their emotions and the behavior of others gradually also develops at this age. The idea of aesthetics linked to health now begins to be incorporated in the mind of the child, interfering with his/her concept of self-esteem[7].

Prior research had suggested that children 4 and 5 years of age or older, provide information about their pain experiences.[8,9] However, this study shows that some younger children are also able to communicate their oral health, which was similar to the study by Filstrup et al., where they got children as young as 33 months replying about oral health[10]. It is important to explore

child perception towards oral health and improve effectively by preventive care at home and dental services provided by oral health professionals.

Conclusion

Although psychological impacts were low in this sample population, psychological effect was found to be related to sever early childhood caries. The burden of dental disease and its psychological impacts on young children, suggesting the need for strategies to address oral health among children in Sullia by interventional programs to support families in implementing positive dental care practices for their young children and include caries risk assessment, early establishment of the dental home and access to regular fluoride therapy for children at high risk for ECC, along with consistent information from dental health professionals, family physicians, pediatricians, community nurses, and preschool staff.

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