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Knowledge of mothers regarding importance of oral health in down syndrome children

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Abstract

Background: A disabled child is one who has a mental, physical, medical or social condition that prevents the child from achieving full potential when compared to other children of the same age. Down syndrome or down's syndrome, also known as trisomy 21, is a genetic disorder caused by the presence of all or part of a third copy of chromosome 21. Parents' knowledge has a very important role in the maintenance of young children's oral health.

Aim: To assess the knowledge of mothers regarding importance of oral health in down syndrome children.

Objective: To assess the knowledge among mothers about oral health status of their children with down syndrome using pre-validated questionnaire.

Materials and methods: Data were collected using a self-administered questionnaire addressing various aspects of knowledge of parents toward oral health.

Result: A total of 53 participants were included in the study. A poor knowledge was seen among the mothers.

Conclusion: The current study presented findings that

mothers of children with Down Syndrome had poor knowledge regarding the importance of oral health of their children.

Keyword: Down syndrome, Knowledge, Oral health, Mothers.

Introduction

A disabled child is one who has a mental, physical, medical or social condition that prevents the child from achieving full potential when compared to other children of the same age. American Academy of Pediatric Dentistry (AAPD) defines special health care needs (SHCN) as "any physical, developmental, mental, sensory, behavioral, cognitive, or emotional impairment or limiting condition that requires medical management, health care intervention, and/or use of specialized services or programs.

Down syndrome or Down's syndrome, also known as trisomy 21, is a genetic disorder caused by the presence of all or part of a third copy of chromosome 21. [1] It is usually associated with physical growth delays, mild to moderate intellectual disability, and characteristic facial features. [2] The incidence ranges from 1 in 650 to 1 in 1,000 live-births. The average IQ of a young adult with Down syndrome is 50, equivalent to the mental ability of an 8- or 9-year-old child, but this can vary widely [3]. There is no cure for Down syndrome [4]. Children with Down syndrome have poor oral hygiene and high levels of periodontal diseases. They require delivery of dental care beyond what is customary because of their medical condition or limitations. Hence, appropriate oral health education should be tailored to the needs of these children with the support of their teachers and parents [5]. Education and proper care have been shown to improve quality of life [6].

It is evident that the more positive is the parents' attitudes toward dentistry, the better will be the dental health of their children.[7] Infant oral health care is the foundation on which a lifetime of preventive education and dental care can be built up to help acquire optimal oral health into child and adulthood.[8] These conditions indicate the need for a more in-depth understanding of the health beliefs and practices of caregivers with respect to their children's oral health care.[9] Hence this study is to assess the knowledge of mothers regarding importance of oral health in down syndrome children.

Methodology

Initially, a special school was identified, and permission was taken from school and college authority respectively. The sample size was estimated by convenience sampling technique with a time period from December to July. The study was conducted after obtaining a proper Institutional ethical clearance from KVG Dental college and hospital. Before the start of the study, an informed consent was obtained. The criteria for inclusion were mothers who have a Down syndrome children. Mother's using WhatsApp and having mail address. Those who are willing and co-operative. The exclusion criteria were a Children who are under tutelage of a legal guardian who is not his/her mother. There was no gender, educational, and occupation-based discrimination. The content of the questionnaire was validated by a pediatric and public health dentist. The Reliability was checked for 10 samples using Cronbach's alpha. The value was 0.758. So, it was considered to be reliable. They were asked to answer questions regarding the oral health of the child. They were asked about their oral health, food practice and importance of oral health. Data obtained from the questionnaire were coded and analyzed using the SPSS version 20. Data were displayed as a number (n), percentage (%), and frequency. The Pearson Chisquare test was used to measure the association between

variables of interest. A p value less than 0.05 was considered statistically significant.

Results

Table 1: Frequency Table.

Sn.	Questions	Options	Percentage	Frequency
1	Does your child consume sugars?	A. Always	13.2	7
		B. Never	5.7	3
		C. Sometimes	81.1	43
2	Does sticky food can cause caries/decay?	A. Yes	98.1	52
		B. No	1.9	1
3	Whether the child brush himself/herself?	A. Yes	18.9	10
		B. No	81.1	43
4	Does your child use any special type of toothbrush?	A. Yes	9.4	5
		B. No	90.6	48
5	Does your child use any type of special toothpaste? (eg: fluoridated toothpaste)	A. Yes	3.8	2
		B. No	96.2	51
6	Is it important to visit a dentist for a general dental checkup?	A. Yes	79.2	48
		B. No	20.8	11
7	Is it important to brush twice a day?	A. Yes	94.3	50
		B. No	5.7	3
8	Is it important to wash your mouth after having food	A. Yes	100	53
		B. No	0	0
9*	Is it important to treat milk tooth?	A. Yes	34	18
		B. No	66	35
10	Do you think that problems in primary teeth can affect the permanent teeth?	A. Yes	43.3	23
		B. No	56.6	30
11*	Will you be agreeing if root canal treatment has to be done in milk teeth?	A. Yes	39.6	21
		B. No	60.4	32
12&	Is oral health is also important as general health?	A. Agree	90.6	48
		B. Disagree	9.4	5
13*	Did you know poor dental health can be a cause of other health diseases?	A. Yes	35.8	19
		B. No	64.2	34

A total of 53 participants were included in the study. For the question whether child consume sugar most of mothers had answered sometimes (81.1%, 43). For the question does sticky food causes caries most of mothers had answered yes (98.1%, 52). For the question whether child brush himself/ herself most of mothers answered no (81.1%, 43). For the question whether child use any special type of toothbrush most of mothers answered no

(90.6%, 48). For the question does your child use any special type of toothpaste most of mothers answered no (96.2%, 51). For the question is it important to visit a dentist for general dental check-up most of mothers answered yes (79.2%, 48). For the question whether it is important to brush twice a day most of mothers answered yes (94.3%,50). For the question is it important to wash your mouth after having food every mother answered yes (100%,53). For the question is it important to treat milk tooth most of mothers answered no (66%,35). For the question whether the problems in primary teeth can affect the permanent teeth most of mothers answered no (56.6%,30). For the question will you be agreeing if root canal treatment has to be done in milk teeth most of mothers answered no (60.4%,32). For the question is oral health is also important as general health most of mothers answered agreed (90.6%,48). For the question whether poor dental health can be a cause of other health diseases most of mothers answered no (64.2%,34).

Discussions

DS is characterized by central growth deficiency with delayed mental and physical development ranging from mild to severe There are health complexities with dental manifestations in patients with Down syndrome, many of them are related to oral health and quality of life.[10] This disease affects one in every 700 newborns approximately. [11,12]

There are many Studies that have assessed systemic conditions [13,14,15] oral hygiene status [16-28] and practices [29-33,16,18,19,14] dental caries [16,17,19,30,20,21,34,35,23,24,27,28,30,33-45] dental anomalies [29,17,19,13,29,35,36] dental visits patterns [46,47,14] and reasons [47,14] among DS children. Limited studies have assessed the maternal knowledge on oral health. This study sheds light on the impact of maternal knowledge regarding importance of oral health in down syndrome children.

The result of the present study regarding the knowledge that sticky food can cause caries, majority of them have come in line with other studies done by Maulana et al, 2012.[9] The present study has shown that it is important to have a general dental check-up (79.2%), but studies have shown the pattern of dental visits among DS group is due to referral by physicians for routine dental checkup, toothache and curative treatment.[48] Individuals with DS may have great limitations in oral hygiene performance due to their manual dexterity, sensory, and intellectual disabilities and so are prone to poor oral health. [30,34,49,50] Most of mothers had inadequate knowledge regarding the importance of treating milk teeth (66%) which is similar to study done by Suresh et al, 2010.[51] The present study findings suggests that there is poor knowledge regarding the importance of oral health. This study suggests that it is important for an effective oral health education programme among the mothers of down syndrome children.

Conclusion

The current study presented findings that mothers of children with Down Syndrome had poor knowledge regarding the importance of oral health of their children.

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