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Insight, demeanor and practice of mothers towards their child's oral health- A questionnaire survey among sub-population of Jammu District

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ABSTRACT

Background: It is widely acknowledged that the behaviour of the parents affect their children's health. Young children's oral health maintenance and outcomes are influenced by their parents' knowledge and believes, which affect the oral hygiene and healthy habits. Dental caries is the most common oral disease affecting the children. Early childhood caries is one of the most common and severe forms of dental caries affecting the children less than 3 years. This is because of the lack of oral health education of their parents. Parent's knowledge and positive attitude towards good oral health care are very important for the prevention of dental disease. If the parents have positive attitude towards dentistry, the child will have better dental health. Mothers, who play the primary role models for their children act as a significant predictor of their oral health by showing their attitude towards their child's oral health.
Aim: To examine the relationship between mother's knowledge, attitude and practice towards their child's oral health.
Methodology: In this study, 3–6-year-old children were examined. A validated questionnaire was used to evaluate maternal knowledge, attitude and practice regarding the importance of oral health of their children.
Result synthesis: The overall knowledge and attitude of mothers regarding the oral health care was poor which reflected in the poor oral practices they follow.
Conclusion: Maternal knowledge for oral health, attitude and behaviour may be considered as contributing factors to the oral health status of their children. Therefore, an oral health education programmes for parents especially for mothers must be recommended in order to improve the oral health of the future generation.

Key Words: *Insight, child's oral health*

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INTRODUCTION:

Preschool children form an innocent part of the society and their oral health care should be given the priority as it determines the oral health status of the future generations.

Young children's oral health maintenance are influenced by their parent's knowledge and beliefs. The oral health care provided by the parents at this age is of crucial importance. It forms the backbone of attitudes and practices that a child should adopts in this age later which he/she carries over in his or her adulthood.

This is the time when they involve in "primary socialization" during which the childhood routines and habits are acquired which includes dietary habits and healthy behaviour. These are dependent on the knowledge and behaviour of their parents and elder siblings.

Parent's knowledge and positive attitude towards good dental care are very important. Studies have shown that that the more positive the parents' attitude towards dentistry, the better will be the dental health of their children. Oral health status of the child reflects the behaviour of their parents.

Improvement in children's oral health depends on the parents awareness and knowledge.

Children under the age of 6 years spend most of their time with their parents, especially with their mothers. Mothers are the primary role model for their children's developing behaviour.

The foundation of the oral health is formed in under 6-year-old children. Dental health of young children depends on their parents knowledge, involvement and support of dental services.

Considering this crucial and sensitive role of mothers, this study was conducted so as to assess the knowledge, attitude and practices of mothers in Jammu district towards the oral health of their children and the association of their knowledge, attitude and practices with other potential determinants such as age, socioeconomic status and educational level.

Materials and methods:

The study was carried out in the Department of Pedodontics and Preventive Dentistry IGGDC Jammu, with an aim to evaluate the knowledge, practice and attitude of the mothers on their respective child's oral health. It is a questionnaire study which was conducted for 8 months time period among mothers of 3-6 years old children who visited in the Department of Pedodontics and Preventive Dentistry of Indira Gandhi govt dental college and hospital from April 2022 to November 2022. Ethical clearance was obtained from Institutional Board and an informed consent was obtained from the study participants. 421 study subjects were included in the study. Interview was taken by the single investigator.

The structured questionnaire proforma was designed in English and in Hindi, which consisted of two parts. The first part consisted of general information such as the name, gender of the child age, education of mothers, occupation and total family income. The second part was the questionnaire, which consisted of 30 questions about children's oral health knowledge, attitude and practices.
11of the questions were related to knowledge, six were about attitude and nine were about practices and four were general questions.

To assess the responses for the questionnaire, a scoring system was developed; scores were based on the number of correct/favorable answers given by mothers. [1,2]
(Knowledge and practices – good: >7, fair: 4–6, poor: 5, Attitude – good: >5, fair: 3–4, poor

Inclusion criteria:
Mothers with children age between 3 and 6 years. (Figure 1) Those who fill consent form.
Mothers reported to the Department of Pedodontics and Preventive Dentistry IGGDC Jammu

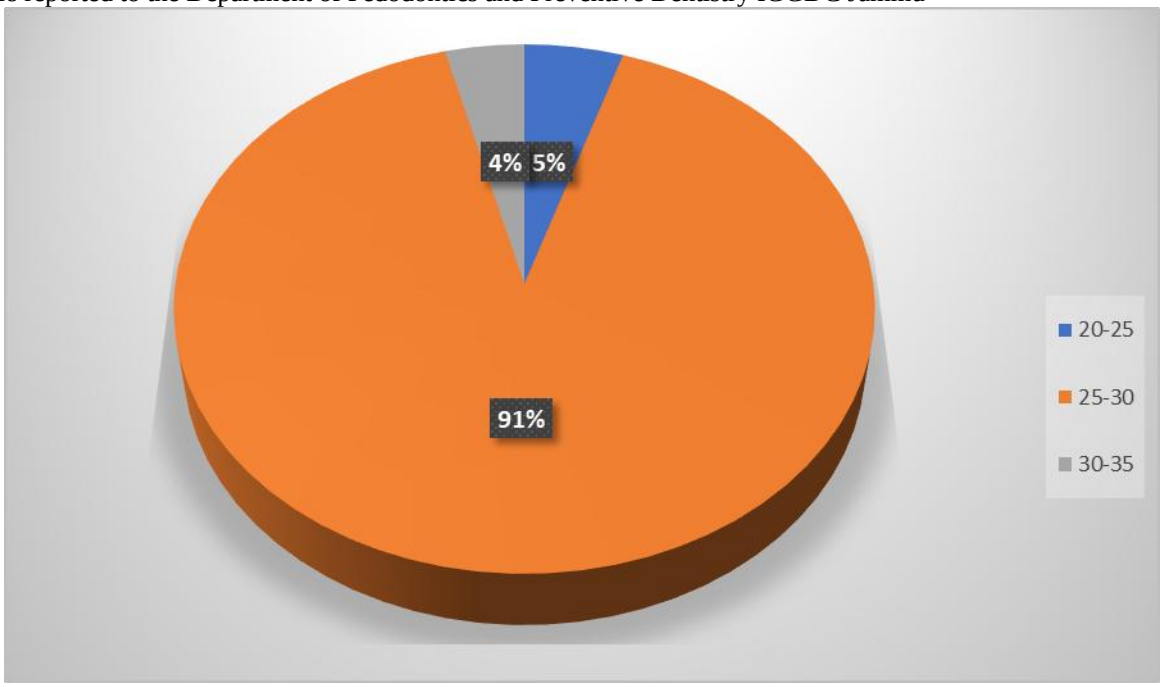

Figure 1: Sample distribution according to mother's age in years

Exclusion criteria: Those who have not given consent.

STATISTICAL ANALYSIS:

Data were analyzed using SPSS version 17. P value less than 0.05 with 95% confidence interval was considered

to be significant. Descriptive statistics was performed to calculate the responses for each question. One way ANOVA and Pearson's correlation coefficient was used for further analysis.

RESULTS:

In this study, a total of 421 mothers completed the questionnaire. Their mean age was 28 ± 1.2 years. Tables along with figures are used to present data in concise and effective manner.

[Table 1-3] presents the distribution of study participants according to their responses to the questions related to knowledge, attitude, and practices.

In this study, we also asked our participants to rate their oral health as good, fair and poor. Around 51% mothers rated their oral health as fair, 41.5% rated good, and 7.5% rated as poor oral health.

To know the awareness of mothers regarding their children's oral health, questions were asked about the number of decayed teeth and alignment of teeth in their children's mouth. Around 56% mothers reported 7 decayed teeth, 20 % found 4 carious anterior teeth and about 24% were not aware about decayed posterior teeth.

About the teeth alignment, 59.3% reported well aligned teeth, 24% reported malaligned teeth, whereas 16.7% said that they have never checked.

Knowledge, practice and attitude scores are compared with educational qualification [Table 4]. Mothers belonging to higher socioeconomic status showed better knowledge (3.84 ± 2.4), attitude (4.27 ± 1.4) and practices (4.18 ± 1.5) than those of lower socioeconomic status [Table 5].

We also found significant positive correlation between knowledge and attitude as well as attitude and practices. [Table 6]

Association between age, educational qualification and socioeconomic status with knowledge, attitude and practices are scored.

Mothers in the age group of 25-30 years showed significantly higher mean attitude scores (4.30 ± 1.3) [Table 7]. Mothers with high educational qualification (graduates and postgraduates) scored significantly higher mean knowledge (5.14 ± 2.6).

TABLE 1: Knowledge

KNOWLEDGE	Number	Percentages
1. Do you know how many milk teeth are present in the child's mouth?		
a) 10	41	9.7
b) 20	154	36.5
c) 12	58	13.7
d) 28	44	10.4
2. What is the most common dental problem you see in the child's mouth?		
a) Cavity	311	73.8
b) Staining of teeth	17	4.03
c) Bleeding from gums	40	9.5
d) I don't know	53	12.5
3. Does your child's tooth paste contain fluoride in it?		
a) Yes	113	26.8
b) No	71	16.8
c) I don't know	237	56.2
4. Do you know the role of fluoride in the tooth paste?		
a) Freshens mouth	24	5.7
b) Prevent cavity	96	22.8

c)	Prevent gum diseases	23	5.4
d)	I don't know	278	66.0
5.	What is the main reason of tooth decay?		
a)	Candies / Toffies	240	57.0
b)	Cold drinks	17	4.03
c)	Cakes	15	3.5
d)	All of above	134	31.8
e)	I don't know	25	5.9
6.	How do you prevent tooth decay?		
a)	By restricting sugary food	90	21.3
b)	Fluoridated tooth paste	24	5.7
c)	Brushing 2 times a day	181	42.9
d)	Regular dental visits	22	5.2
e)	All of the above	101	23.9
f)I don't know		3	0.7
7.	Do you know the most common cause of irregularly placed teeth?		
a)	Mouth breathing, Tongue thrusting, Thumb sucking	195	46.3
b)	Runs in the family	45	10.6
c)	All of above	59	14
d)	I don't know	121	28.7
8.	Can irregularly place teeth be corrected?		
a)	Yes	275	65.3
b)	No	34	8.07
c)	Not aware	112	26.6
9.	Do you know the Causes of gum disease?		
a)	Improper brushing	181	42.9
b)	Plaque accumulation	23	5.4
c)	All of above	108	25.8
d)	Not aware	109	25.89
10.	How could you prevent gum problems?		
a)	Professional cleaning	188	44.5
b)	Brushing 2 times a day	46	10.9
c)	All of the above	117	27.7
d)	I don't know	70	16.6

TABLE 2 : Attitude

ATTITUDE	Number	Percentages
Healthy milk teeth are important for children to chew the food properly.	97	22.9
a) Agree	54	12.8
b) Uncertain	180	42.7
c) Disagree	91	21.6
2. Does bottle feeding /breast feeding at night cause dental caries?		
a) Yes	91	21.6
b) No	55	13.06
c) I don't know	275	65.3
3. Do you think primary teeth are important?		
Yes	34	8.1
No	275	65.2
I don't know	113	26.2
4. Regular dental visit of the child is necessary?		
a) Agree	318	75.5
b) Disagree	78	18.5
c) Not aware	27	6.4
5. Cleaning of teeth should be done by mothers		
Agree	324	76.9
Disagree	63	14.9
Not aware	34	8.07
6. Good oral health means good general health		
Agree	305	72.5
Disagree	18	4.3
Not aware	98	23.2

TABLE 3: Practices

PRACTICES	Number	Percentages
When should be the child's first dental visit?		
After the eruption of first milk tooth	70	16.6
After eruption of all milk teeth	41	9.7
When the child is having pain or discomfort	67	15.9
Not yet visited	243	57.7
How often do you visit the dentist ?		

Every 6 months	46	10.9
Every year	37	8.7
When the child is having discomfort	231	54.8
Not particular	107	25.4
When should you start the cleaning of your child's teeth?		
Soon after first milk tooth eruption	33	7.8
After 4-6 milk teeth eruption	165	39.1
After all milk teeth eruption	138	32.7
They donot need care	85	20.1
At what time does your child brush his /her teeth ?		
After having breakfast	150	35.6
Before going to bed	79	18.7
In the morning before having breakfast	18	4.2
Not particular	174	41.3
Which of the following aids you use to clean your child's teeth?		
Finger	37	8.7
Twig	13	3.08
Tooth brush	360	85.5
Any other	11	2.6
How many times do you brush your child's teeth?		
Once in a day	213	50.5
Twice in a day	172	40.8
After every meal	21	4.9
Not particular	15	3.5
How often do you change your child's tooth brush?		
Once in 20 days	50	11.8

Once in a month	74	17.5
Every 3 months	121	28.7
Once the bristles fray out	125	29.6
Not particular	51	12.1
What material do you use to clean your child's teeth?		
Tooth powder	35	8.3
Tooth paste	361	85.7
Any other	25	5.9
Does your child rinse the mouth after eating/drinking		
Yes	183	43.4
No	104	24.7
Sometimes	134	31.8
Once the bristles fray out	125	29.6
Not particular	51	12.1

Table 4: Mean knowledge, practices and attitude score according to education status of mothers

	Post graduadte	Graduate	Under graduate	Upper primary	Illetrate	F value(P value)
Knowledge	5.14+_2.6	4.7+_2.3	2.9+_1.4	2.26+_1.4	2.2+_1.3	29.366(0.000)
Practices	3.52+_1.2	4.35+_1.3	4.07+_1.6	4.12+_1.31	3.40+_1.1	3.509(0.008)
Attitude	4.1+_1.4	4.63+_1.2	4.19+_1.4	3.92+_1.6	3.82+_1.4	3.684(0.006)

Table 5: Mean knowledge, practices and attitude score according to socio economic status of mothers

	lower	middle	Upper	F value (P value)
Knowledge	2.98+_2.1	3.23+_2.1	3.84+_2.4	28.367(0.001)
Practices	4.05+_1.7	4.01+_1.5	4.18+_1.5	3.529(0.009)
Attitude	3.42+_1.5	4.11+_1.5	4.27+_1.4	3.674(0.005)

Table 6: Correlation between knowledge, practices and attitude of the mothers

	Knowledge	Practices	Attitude
Knowledge		0.046 P=0.002	0.553* P=0.002
Practices	0.046 P=0.250		0.667* P=0.000
Attitudes	0.553* P=0.002		0.667* P=0.002

*Correlation is significant

Table 7: Mean knowledge, practices and attitude score according to age of the mothers

	20-25 years	25-30 years	30-35 years	F value (P value)
Knowledge	3.26+_2.2	3.47+_2.1	3.94+_2.3	1.738(0.177)
Practices	4.07+_1.6	4.02+_1.4	4.17+_1.4	0.176(0.839)
Attitude	4.2+_1.5	4.3+_1.3	3.53+_1.5	5.134(0.839)

General information:

Four questions were asked in this section regarding the source of information, around 54% mothers said that they get information about oral health through newspapers and TV. Whereas 9% mothers reported dentists, 16% get information from relatives and 22% reported all of the above sources. (Figure 2)

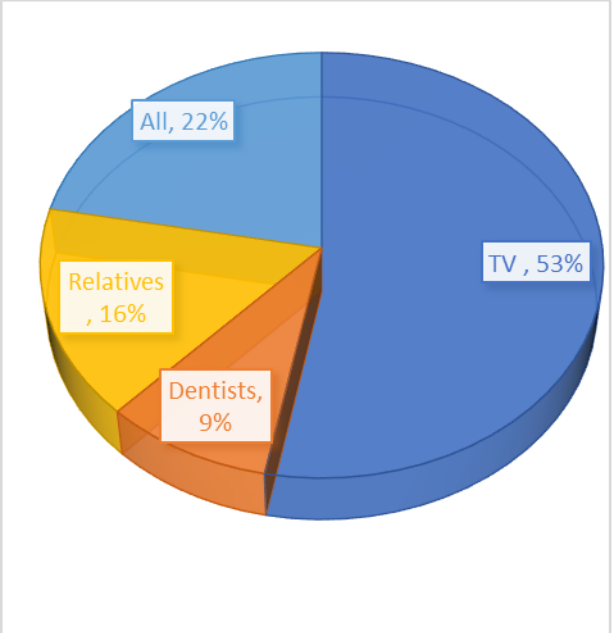

Figure 2 : Source of information

DISCUSSION:

Pediatric dentistry is a three-way interaction among the child, pediatric dentists and the parents. Knowledge and attitude of the parents especially the mothers towards maintaining good oral health of their children during childhood plays a crucial role for the future oral health status and of course for overall health and well-being.[3]

Early dental visit results in more cost-effective treatment and a positive impact on the child's oral health.[4] The AAPD recommends that the child's Ist dental visit should be within 6 months of 1st tooth eruption and not later than 12 months of age.[5] This helps for early intervention of dental problems and education of parents on oral hygiene, early childhood caries and their prevention.[6] 71% of mothers in the present study did not have the knowledge about the first dental visit for their children. It can be related to the low education level of the mothers.

In our study, knowledge regarding the role of fluoride was poor. The mothers who participated in this study exhibited a significantly lower knowledge level regarding the effects of fluoride, only 22.8% of the mothers knew that fluoride is used to prevent tooth decay. This was similar to the study done by Mohammad Alshehri and Omar Kujan whereas studies done by Gussy et al., Franzman et al., reported good knowledge about fluoride.[7,8]
Majority of the mothers find tooth decay as the most common dental disease among children. This was in line with the other studies suresh et al and wyne et al. [9,10]

Majority of the mothers agreed that the commonest reason for seeking dental care was pain and dental caries, though there were other reasons as well. This was similar to study done by Ghimireet al [11] and Nino John et al[12]

Only 21.6% of mothers responded positively that night time bottle feeding can cause dental caries. Knowledge regarding nocturnal breastfeeding/bottle feeding causing dental caries in children was significantly low amongst mothers

in our study which was in line to study done by Dull et al.[13] This throws the light on inadequate knowledge about the relationship between night bottle feeding and dental caries.

75.5% of mothers agreed that there should be regular dental visits in preventing dental problems but very few reported to follow.57.6% of mothers had not visited a dentist before and 54.8% visited dentist only when there is pain or any discomfort to the child. Reasons for lack of visit to the dentists could be lack of knowledge, high costs, accessibility or lack of motivation. It is suggested that the earlier a child visits to dentist, the greater would be his likelihood of being caries free.[14]

Mothers had partial knowledge on the importance of primary teeth. Many of them said that baby's teeth are not important. It is better to extract them rather saving them. It was in accordance with the study done by Suresh et al.[10]

Furthermore, knowledge about the caries preventive methods, cause and prevention of gum disease and malocclusion was low which was in line with the study done Suresh et al. [10]All these finding are suggestive of poor knowledge about oral health and indicates the need for effective oral health education program.[15]

More than 85% of children used tooth brush and tooth paste for cleaning their teeth. This was comparable to the other studies done by Pasareanu et al and Chan et al.[16,17]

In terms of practice 72.4% of mothers agreed that to start brushing after all the Primay teeth have erupted. Similar to studies done by Shivaprakash et al. (70 %) and Suresh et al. (56%) [10,18]

CONCLUSION:

This study showed that mothers had poor knowledge and attitude towards oral health, which could be reflected in their poor oral health practices towards their children.

Parents need to have good oral care knowledge, good habits and good practices that will positively affect the health o f their children.

RECOMMENDATIONS:

Maternal oral health knowledge, attitudes, and behaviour may be considered contributing factors to the oral health behaviour and oral health status of their children. Therefore, an oral health education programme for mothers is recommended in order to improve the oral health of the coming generation.

Based on results of this study, it is recommended that periodic screening should be provided for early detection of Dental diseases in children. Mass media should provide continuous health education on the importance of primary teeth and methods of oral hygienic practice in children.

Considering the important role of oral health is related to general well-being of an individual, attempt should be made to establish good oral health behaviour in children which can affect the general wellbeing of future generations.

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