



“JOURNEY TO ATTITUDE AND KNOWLEDGE OF PEDIATRICIANS AND GYNAECOLOGISTS TOWARDS ORAL HEALTH IN ROHILKHAND REGION : AN OBSERVATIONAL STUDY”

Dental Science

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ABSTRACT

Background- In dentistry, clinical practice is directed towards attitudes that promote oral health and the Pediatricians and Gynaecologists occupy a privileged position in this process.

Aim- To Assess the knowledge, attitude and practice of oral health amongst Pediatricians and Gynaecologists in Rohilkhand region.

Design- A cross-sectional study was carried out in Rohilkhand region, Uttar Pradesh. A specific, close ended questionnaire was prepared to collect the information. The data was statistically analyzed and Chi-square test was used to assess the associations.

Results- Among all participants, only 21% Gynaecologists said that first visit to a Pedodontist should be before 6 months of age followed by 28.5% Pediatricians and. Approximately 62.5% Pediatricians stated that the first milk teeth appear at the 6 months of age whereas 79.5% Gynaecologists for the same.

Conclusion- In this study, though the dental awareness and the attitude about oral health were found to be satisfactory but awareness alone cannot make it certain that it will be implemented effectively.

KEYWORDS

Oral health knowledge, Pediatricians and Gynaecologists

INTRODUCTION:

Oral Health is an integral component of general health in infants and children which can impact the quality of life and health outcomes. It has also become clear that causative and risk factors in oral diseases are often the same as those implicated at the major general diseases (WHO 2003). There has been a considerable improvement in the oral health of children in the last few decades, but still children in the developing nations are being affected by tooth decay and most of the time their oral treatment is given the last priority owing to limited access to oral health services.¹

The American Academy of Pediatric Dentistry (AAPD) recommends the first dental visit by the age of one year, and the American Academy of Pediatrics (AAP) recommends that a dental home be established by age one year for those children at caries risk. Based on the data, it is evident that there is little or no restorative care delivered to children under the age of three years who have dental diseases.²

Pediatricians are the next individual to come in contact with the children, more frequently than dentists, see children for (1) Well-child care; (2) Vaccinations; (3) Treatment of childhood infections etc. Therefore, they are in a unique position to address dental disease in these children and hence, can play an important role in improving the dental health of their patients.³ Pediatricians are responsible for the primary care of the child as they can recognize and encourage good preventive habits and refer appropriately hence, anticipation of Pediatrician can definitely bring about positive change in the outlook of dental health.⁴

Gynaecologists, Obstetricians and other medical professionals are more likely to see expecting mothers and infants much earlier than dentists. Thus, it is essential for these specialists to be aware of the infectious nature of oral diseases and its associated risk factors and make appropriate decisions regarding timely and effective intervention.⁵

The purpose of this study is to determine the knowledge, attitude and practice of oral health promoting factors in children amongst Pediatricians, and Gynaecologists. The absence of exact statistics on the Pediatricians and Gynaecologists. awareness concerning children oral health in Rohilkhand region led us to conduct this study.

MATERIALS AND METHODS

The present study was aimed to reveal the knowledge, attitude and practice of oral health among Pediatricians and Gynecologists in Rohilkhand region.

SAMPLE SIZE

Total 400 sample size was taken in the study out of which, 200 People in each group was determined to constitute the sample size. The ethical approval was obtained from the Ethical Research committee, Institute of Dental Sciences, Bareilly.

INCLUSION CRITERIA:

- Care restricted exclusively to the pediatric population

EXCLUSION CRITERIA:

- Gynaecologists and Pediatricians who were not willing to participate in the study & who did not respond, and returned back the questionnaire or who gave the incomplete filled questionnaire were excluded from the study.

QUESTIONNAIRE PREPARATION

The study was conducted in Rohilkhand region, Uttar Pradesh. A study specific, close ended questionnaire was prepared to collect information regarding knowledge, Attitude and Practice of Pediatricians and Gynaecologists in Rohilkhand region.

The questionnaire was divided into two parts:

1. The first 10-15 questions varying in each group pertained to the specialty.
2. The next 16 questions were pertained to the Dental Awareness, knowledge, Attitude and Practice of the Pediatrician and Gynecologist in Rohilkhand region.

The first set had questions concerning the source of information regarding dental health, their role in promoting oral health, assessment of dental problem during the physical examination, knowledge of dental problem, effect of oral habits on alignment of teeth, level of infant oral health education in health professionals curriculum, weaning of bottle, first dental visit, dietary habits of child, number and importance of deciduous teeth, preservation of stem cells, etc.

The second part consisted of children oral health related questions like first visit to Pedodontist, questions related to brushing, type of food which causes tooth decay, night time bottle or breast feeding causes tooth decay, importance of deciduous teeth, counsel the child for going to the dentist, importance of dental unit, mode of payment to the dentist and about the dental insurance etc.

SURVEY PATTERN

After getting the consent of the selected Pediatricians & Gynaecologists they were made to answer the questionnaire. The list of gynaecologists/obstetricians and Pediatricians, private practitioners in the city was obtained, and verbal consent was taken. Out of listed approximately 524 doctors, 312 gynaecologists and 212 Pediatricians only 200 Pediatricians & Gynaecologists each participated, rest were either not available or were not approachable. All the participating subjects agreed for the survey. The data obtained through the questionnaire were entered into Microsoft Office Excel Sheet 2007, and statistical analysis was carried out for the data.

RESULTS:

The results of this study are in the descriptive form. Only proportions were considered and no comparison was done. (Table 1, Table 2, Table 3)

Table1: Questions asked to the Pediatricians-

<i>Does Pediatricians have a role in promoting oral health?</i>	Yes 200(100%)	No 0	Total 200
<i>Do you assess for dental problems during the physical examination?</i>	Yes 197(98.5%)	No 3(1.5%)	Total 200
<i>Do you think that knowledge of pediatricians regarding various dental problems (like loosening of teeth, dental decay, abscess, mottling of teeth or ulcers) is important?</i>	Yes 196(98%)	No 4(2%)	Total 200
<i>Do you have any idea regarding effect of oral habits an alignment of teeth?</i>	Yes 155(77.5%)	No 45(22.5%)	Total 200
<i>When should the bottle feeding be stopped?</i>	6 month 150(75%)	1 year 35(17.5%)	2 year 3(1.5%)
<i>Do you think the level of infant oral health education in your curriculum in satisfactory?</i>	Yes 171(85.5%)	No 29(14.5%)	Total 200
<i>When do you normally refer a child to the dentist?</i>	When they are healthy 23(11.5%)	When they have a problem 177(88.5%)	Total 200
<i>At what age do you currently refer children for their first dental visit?</i>	6 month 55(27.5%)	1 year 20(10%)	2 year 4(2%)
<i>Do you have problem locating dentist for your 0-5 year old patients?</i>	yes, for all my 0-2 years old patients 6(3%)	yes, but for only for 0-2 years old patients 23(11.5%)	No 164(82%)
<i>Do you think saliva has any affect in the pathogenesis of dental caries?</i>	Yes 198(99%)	No 2(1%)	Total 200
<i>Should Pediatrician prescribe medication on emergency dental situations?</i>	Yes 187(93.5%)	No 13(6.5%)	Total 200
<i>Can dental caries lead to serious disease, if not treated?</i>	Yes 200(100%)	No 0	Total 200

Table 2: Questions asked to the Gynaecologists-

<i>Is calcium and iron taken during pregnancy has an important role in tooth development?</i>	Yes 200(100%)	No 0	Total 200
<i>Is it necessary to preserve stem cells for future prospective?</i>	Yes 200(100%)	No 0	Total 200
<i>According to you breast feeding up to 6 months of age is sufficient?</i>	Yes 129(64.5%)	No 71 (35.5%)	Total 200
<i>Do you know caries can affect infants below 2years old?</i>	Yes 139(69.5%)	No 61 (30.5%)	Total 200
<i>Do you know caries can affect infants below 2years old?</i>	Yes 139(69.5%)	No 61 (30.5%)	Total 200
<i>Weaning should be done at what age?</i>	6month 131(65.5%)	1 year 69 (34.5%)	2 year 0
<i>Do you think that some drugs have adverse effect when they are given to expected mothers & can cause deleterious effect on the developing teeth of child?</i>	Yes 200(100%)	No 0	total 200
<i>Do you know any systemic condition affecting development of teeth during prenatal life of child?</i>	Yes 186(93%)	No 10(5%)	Specify Name 4(2%)
<i>In your practice, do you refer the expected mother for prenatal counseling?</i>	Yes 17(8.5%)	No 96(48%)	Not Required 87(43.5%)
<i>Do you know that oral bacteria have ability to cross the placenta & can affect the fetus?</i>	Yes 171(85.5%)	No 19(9.5%)	Don't know 10(5%)
<i>Do you know that correlation between poor oral health and risk of preterm delivery status?</i>	Yes 157(78.5%)	No 28(14%)	Don't know 15(7.5%)

Table3: Common questions asked to the Pediatricians and Gynaecologists about oral health Knowledge-

	Pediatricians					Gynaecologists				
	Yes	No				Yes	No			
1. First visit to a pedodontics before 6 months of age	57(28.5%)	143(71.5%)				42(21%)	158 (79%)			
2. Observe child while he/she is brushing	130(65%)	70(35%)				145 (72.5%)	55 (27.5%)			
3. Do you think that night time bottle or breast feeding can	180(90%)	20(10%)				182(91%)	18(9%)			
4. Do you use pacifier dipped in sweet liquid for your child	3(1.5%)	197(98.5%)				8(4%)	192 (96%)			
5. Do you think it is important to do treatment in baby's	163 (81.5%)	37(18.5%)				189 (94.5%)	11 (5.5%)			
6. During the past 6 months did your child have a tooth	51(25.5%)	149(74.5%)				80(40%)	120 (60%)			
7. Do you counsel the child for going to the dentist	193 (96.5%)	7(3.5%)				189 (94.5%)	11 (5.5%)			
8. Is set up of dental unit important in each hospital	200(100%)	0				197 (98.5%)	3(1.5%)			
9. Should dental insurance be given more importance	95(47.5%)	105(52.5%)				92(46%)	108 (54%)			
10. The first milk teeth appear in the child's mouth	3months 1(0.5%)	6months 125 (62.5%)	8months 32 (16%)	1year 6 (3%)	Don't know 36 (18%)	3months 2 (1.5%)	6months 149 (79.5%)	8months 45 (22.5%)	1year 1 (0.5%)	Don't know 3(1.5%)
11. For how long one should brush his her baby's teeth	1 minute 63(31.5%)	2 minute 72(36%)	3 minute 10(5%)	Don't Know 55(27.5%)		1 minute 56(28%)	2 minute 91(45.5%)	3 minute 16(8%)	Don't Know 37(18.5%)	
12. After how many months should the tooth brush be changed	3months 103(51.5%)	6months 90(45%)	1 year 0	Don't know 7(3.5%)		3months 104(52%)	6months 84(42%)	1 year 1(0.5%)	Don't know 11(5.5%)	

13. <i>What are the main type of food that can cause tooth decay</i>	<i>Sweets</i>	<i>Fruits & vegetables</i>	<i>Junk food</i>	<i>Don't know</i>	<i>Sweets</i>	<i>Fruits & vegetables</i>	<i>Junk food</i>	<i>Don't know</i>
	190(95%)	2(1%)	6(3%)	2(1%)	194(97%)	0	6(3%)	0
14. <i>What do you think how many times should a child brush his her teeth</i>	<i>Once daily</i>	<i>Twice daily</i>	<i>Irregular</i>	<i>Don't know</i>	<i>Once daily</i>	<i>Twice daily</i>	<i>Irregular</i>	<i>Don't know</i>
	6(3%)	194(97%)	0	0	31(15.5%)	168(84%)	1(0.5%)	0
15. <i>What was the main reason that you could not get dental care for your child</i>	<i>Could not afford it</i>	<i>Not serious enough</i>	<i>Don't like/trust/believe in dentist</i>	<i>Didn't Know where to go</i>	<i>Could not afford it</i>	<i>Not serious enough</i>	<i>Don't like/trust/believe in dentist</i>	<i>Didn't Know where to go</i>
	6(3%)	187(93.5%)	3(1.5%)	4(2%)	32(16%)	164(82%)	3(1.5%)	1(0.5%)
16. <i>How do you pay for the dentist</i>	<i>Family or self pay</i>	<i>Medicaid, medical crad, medical HMO, Healthy Start</i>	<i>Dental Insurance</i>	<i>Free Camps/ Trust schemes</i>	<i>Family or self pay</i>	<i>Medicaid, medical crad, medical HMO, Healthy Start</i>	<i>Dental Insurance</i>	<i>Free Camps/ Trust schemes</i>
	175(87.5%)	14(7%)	7(3.5%)	4(2%)	179(89.5%)	12(6%)	6(3%)	3(1.5%)
17. <i>When should the bottle feeding stopped</i>	<i>6months</i>	<i>1year</i>	<i>2year</i>	<i>Don't Know</i>	<i>6months</i>	<i>1year</i>	<i>2year</i>	<i>Don't Know</i>
	150(75%)	35(17.5%)	3(1.5%)	12(6%)	131(65.5%)	69(34.5%)	0	0

DISCUSSION:

Oral health of the children is associated with oral health knowledge of their mothers and guardians, as oral health related habits (such as those related to oral hygiene and diet) are established during infancy and maintained throughout early childhood.⁶ This study provides important information to the evidence base related to knowledge, attitude and practice of Pediatricians and Gynaecologists towards oral health of children.

PEDIATRICIANS

The prevention of oral disease and maintenance of oral health are the major challenges of dentistry. Thus early intervention on the part of health professionals is necessary, as the eruption of the first teeth. Early professional intervention can substantially reduce or totally eliminate the effects of oral diseases.⁷ There is a limited amount of oral health subject matter and importance in the medical education; therefore pediatricians need to be updated about the oral health care needs of the children.⁸ Pediatric visits present crucial opportunities to counsel families, identify high-risk children, initiate timely dental referrals and ensure delivery of preventive interventions. As with immunizations, pediatricians can help construct the first line of defence against oral diseases. Training can allow pediatricians to achieve an adequate degree of precision in identifying dental caries.⁹

In this study 100% Pediatricians agreed that they have a role in promoting oral health this is in accordance with the study conducted by Douglass AB.¹⁰ About 90% Pediatricians think that night time bottle or breast feeding can cause tooth decay, this findings concurs with other studies by Murthy GA et al in which 52% Pediatrician felt that only bottle fed children get ECC.⁴ Almost 99% Pediatricians think that saliva has effective role in the pathogenesis of dental caries which is much higher percentage than the study by Balaban R et al¹¹ in which only 56% Pediatricians believes that saliva is the factor which is involved in the process of caries and bacteria and carbohydrates are the most cited factors involved in the process of caries. 95% Pediatricians believes that sweets are the main cause of tooth decay, which is higher than the study conducted by Balaban R et al.¹¹ in which 67% Pediatricians reported orientating their patients to avoid the consumption of sweets.

The study showed that, 75% Pediatricians think that bottle feeding should be stopped at 6 months of age, because it is a "SILENT KILLER" for a child. This is much higher ratio in comparison with the study conducted by Shivaprakash PK et al³ in which more than half of the medical students were unaware of the correct weaning period.

In this study, 98.5% Pediatricians don't use pacifier dipped in sweet liquid for their child, this is in agreement with the study conducted by Shivaprakash PK et al³ in which most of the medical students refused to use pacifiers, sweetened liquid/ fruit juices in bottle at night and was considered harmful. 82% Pediatricians did not have any problem in locating dentist for their 0-5 year old patients which is much higher ratio than the study conducted by Douglass AB et al. in which 52% Pediatricians don't have any problem in locating dentist for their 3-5 year old patients.¹⁰

GYNAECOLOGISTS

Gynaecologists/Obstetricians and other medical professionals are more likely to see expecting mothers and infants much earlier than

dentists. Thus it is essential for these specialists to be aware of the infectious nature of oral diseases and its associated factor and make appropriate decisions regarding timely and effective intervention. Even though they are qualified in the medical field their knowledge about oral diseases, relationship of oral health with systemic diseases and life threatening oral diseases is very limited. Since the association of poor oral health of pregnant females with adverse pregnancy outcomes have been well established, it has become essential for medical practitioners to be aware of risk factors for timely intervention and prevention.⁵

In this study 97% Gynaecologists said that sweets are the main type of food that can cause tooth decay which is much higher in percentage than the study conducted by Bhalla A et al⁵ in which only 46.7% Gynaecologists believed that "Sugar contained food consumed per day" is the most responsible factor for causing tooth decay. Only 21% Gynaecologists believed that child's first dental visit to a pedodontist should be before 6 months of age which is variance with the study conducted by Shivaprakash PK et al³ in which 52% Medical students said that child's first dental visit 6 months/ at least 12 months of age. About 94.5% Gynaecologists think that it is important to do treatment in baby's teeth, our result corroborates with the study conducted by Shivaprakash P K et al³ in which 74% Medical students said that milk teeth needs dental care as permanent teeth. Around 91% Gynaecologists think that night time bottle or breast feeding can cause tooth decay and 96% Gynaecologists does not use Pacifier dipped in sweet liquid for their child which is in accordance with the study done by Shivaprakash P K et al³ in which 68% Medical students said that use of sweetened Pacifier in the night can effects child's teeth and 23% Medical students said that night time breast feeding can cause tooth decay.

All 100% Gynaecologists were aware regarding the side effect of drugs used during pregnancy were higher than the study conducted by Shah et al¹² in which 84.2 % of Gynaecologists were aware regarding the side effect of drugs used during pregnancy. 93% Gynaecologists stated that there are some systemic conditions affecting development of teeth during prenatal life of child and only 2% of them has specified the name such as, congenital Syphilis, Bacterial and viral diseases. In the present study 100% Gynaecologists are aware about the calcium and iron taken during pregnancy has an important role in tooth development and recommended preservation of stem cells for future prospective.

The variation of opinion between the medical student, Pediatricians and Gynaecologists can be explained on the basis of age, experience and more exposure of these health professionals. They come in contact with the children and Parents more frequently than the medical students and also had more knowledge towards the preventive strategies. The results of the present study indicate that Mothers, School Teachers, Pediatricians and Gynaecologists attitude towards oral health and dental care needs to be improved. The outcome of the study is that it gives an insight into a far unknown domain.

CONCLUSION:

Pediatricians receive very little education on oral health during their medical training and numerous barriers exist to incorporating oral

health into practice. Gynaecologists should be encouraged to refer the pregnant patients for oral health examination. Pediatricians & Gynaecologists need to update themselves on recent recommendations, regarding infant oral health so as to ensure that all their patients receive timely preventive and restorative dental care.

The results of this study indicate that Pediatricians & Gynaecologists attitude towards oral health and dental care needs to be improved. The positive outcome of the study is that it gives us an insight into a so far unknown domain.

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