Original Article

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Quick Response Code:

Website: www.jehp.net

DOI: 10.4103/jehp.jehp_63_18

# Parents outlook on preventive dental modalities for their children in Udham Singh Nagar, India

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**Abstract:**

**AIM:** The aim is to evaluate the knowledge, attitude, and practices of parents toward preventive dental treatment modalities.

**METHODOLOGY:** A convenient sample of parents was selected randomly from four schools of Udham Singh Nagar, India. The data were collected through questionnaire on dental preventive modalities. The questionnaire includes questions pertaining to knowledge and practices toward pit and fissure sealants, fluoride application, and dental visits. Questions pertaining attitude toward the same were asked after the motivational program.

**RESULTS:** The majority of the parents were unaware that dental caries could be prevented by preventive treatment modalities. None of their children had undergone preventive procedures. Even after visiting dentist, 70% of parents were not informed about the preventive treatments by their respective dentists. Even after our motivational program, around one-third of the parents were reluctant to accept preventive procedures for their children.

**CONCLUSION:** Parent's knowledge about the preventive dental procedures for their children was insufficient. Dentists are not encouraging parents about the benefits of preventive treatment modalities. Based on our findings, promotional efforts encouraged 64% of parents to embrace preventive procedures for their children. The present study emphasizes the need to educate parents and their children.

**Keywords:**

Dental caries, knowledge, parents, preventive treatment modalities

## Introduction

Child's oral health is the foundation on which preventive education and dental care must be built to enhance the opportunity for life-time freedom from preventable oral diseases.[1] Dental preventive procedures must be commenced in early years of life.[2] The utilization of preventive treatment modalities in European and other developed countries is >50%,[3] whereas there are very few published report on the utilization of preventive dental modalities in India.[3] Although according to Gambhir and Gupta in 2016, there is limited access to preventive oral health services in India.[4]

As parents are the care takers of their children and make crucial decisions about their general health, therefore it may be right to believe that they would opt for the most favorable treatment with respect to their child's oral health. Such treatments include pit and fissure sealants and fluoride application that are proven to prevent caries, so that their child may achieve the best possible outcome i.e. caries free and healthy teeth[5] It can be anticipated that the behavior and attitude of parents toward preventive treatment modalities for their

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Received: 07-03-2018
Accepted: 03-04-2018



**How to cite this article:** Kaur S, Telgi RL, Tandon V, Kaur R, Bhattacharyya S. Parents outlook on preventive dental modalities for their children in Udham Singh Nagar, India. J Edu Health Promot 2019;8:60.

children will ultimately impact their child in receiving those modalities hereafter.[6]

It is the responsibility of dental professionals to motivate parents regarding preventive treatment modalities to achieve optimum oral health in their children.[7] This teachings and behaviors that are maintained in early childhood are deeply implanted and are difficult to alter in later stages of life.[8] Therefore, parents must have precise knowledge regarding preventive treatments and oral hygiene practices for their child's dental health. This can be achieved by dentists only by motivating parents about preventive procedures such as pit and fissure sealants and fluoride applications, regular dental visits, and other oral hygiene measures. There are many scientific evidence which shows that preventive procedures effectively prevent dental caries.[9-11] Ahovuo-Saloranta *et al*.[12] in a review concluded that after the placement of pit and fissure sealants, the incidence of dental caries was reduced from 86% at 1 year to 58.6% after 4 years.

Taking everything into account, we considered that parents' contribution in maintaining child's oral health is indispensable. Therefore, it is necessary to investigate the knowledge, attitude, and practices (KAP) of parents as it influences the dental care and guidance the child receives at homes. Hence, our study was aimed to evaluate the KAP of parents through questionnaire toward preventive dental treatment modalities on child oral health. The knowledge and attitude of parents might have impact on the acceptance of these preventive modalities for their children.

## Methodology

The present study was conducted to assess the knowledge of parents regarding preventive treatment modalities in dentistry for their children. This study comprised of a convenient sample of 250 parents of children aged 11–14 years. Parents who gave their voluntary informed consent on the day of parent–teacher meeting were included in our sample. They were selected from four different schools of Udham Singh Nagar to participate in the study. Approval to conduct this study was obtained from the Institutional Ethics and Review Board of Kothiwal Dental College, Moradabad, and prior permission was also obtained from the respective school authorities.

A questionnaire was prepared in the local language (Hindi) and used in this study. The questionnaire was validated. On assessment of face validity in 20 participants, it was observed that 90% of the participants found that the questionnaire to be easy. The mean content validity ratio was also calculated and found to be 0.99, based on the opinions expressed by a panel of five academicians. Reliability of questionnaire was satisfactory.

A pilot survey was conducted among 40 parents to assess their KAP regarding preventive treatment modalities for dental caries. Surprisingly, most of the questions regarding the knowledge toward pit and fissure sealants and fluoride applications were negatively answered and questions on attitude were left unanswered by majority of the parents. Due to this reason, the questionnaire was modified and split into two separate questionnaires. One questionnaire included questions only pertaining to knowledge and practices of the parents concerning preventive treatment modalities. The other questionnaire included questions concerning only the attitude of the parents toward these preventive modalities. The parents were then asked to fill the questionnaire which included questions regarding the knowledge and practices of the parents only. Later, an 8–10 min motivational program was organized for the parents to provide them basic knowledge regarding dental caries, preventive treatment modalities in dentistry, and importance of regular dental visits. After the completion of the program, the parents were asked to fill the questionnaire which included questions pertaining the attitude of the parents regarding the same. The questionnaire was designed such that the whole procedure would not take >10 min for an individual, so that the interest and cooperation of the parents is maintained. Later the questionnaire was collected back from the parents after 15 min on the same day.

Data were analyzed using Chi-square test to determine the influence of parents pattern visit to dentist on their child's dental visits. $P < 0.05$ was considered statistically significant.

## Results

A total of 250 parents (mothers and fathers) participated in this study. The number of children in a family ranged from one to four. The sampling group of parents involved 180 mothers and 70 fathers. The prevalence of parents who knew that regular visit to the dentist is necessary was 94.8%. However, if comparing with their practice, only 36.8% of children have ever visited dentist. Only, 10.4% of parents knew about the fact that dental caries can be prevented by preventive modalities in dentistry such as pit and fissure sealant, fluoride application, whereas 70% of parents were never told about these modalities by their respective dentist. Even the other 30% of the parents who were told about these modalities, still none of their children had undergone these modalities. Around 52.0% of the parents would like to take their child to the dentist "only when the problem arises" [Table 1].

After the educational program, 64% of parents would prefer to go for preventive treatment for their children. About 54.37% parents agreed because they are worried about their child's health and other 45.62% wants to prevent their child from dental caries. Other 36.0% parents do not agree for preventive treatment modalities for their children even after attending a motivational program. Among them, 91.11% parents think that their child is healthy and other 8.88% parents do not feel its necessity. Around 64.8% parents preferred pit and fissure sealants over fluoride application [Table 2].

Parents dental visit influences their child's dental visits, parents who themselves visit dentist regularly their children are also found to visits dentist regularly this was statistically significant [Table 3].

## Discussion

Dental caries is a preventable disease in children, undergoing preventive treatments, can save valuable time and money for parents spent later on treatments after the disease process has occurred. The prevention of dental caries at its root level is very important as this reflects children's optimal oral health. Sufficient knowledge and right attitude of the parents regarding the preventive modalities is necessary. Many studies including the results of our pilot survey have shown inadequate knowledge regarding the role of pit and fissure sealants and fluoride applications in caries prevention. Therefore, in the current study, we included an 8–10 min educational program which aimed at providing basic knowledge regarding dental caries and preventive modalities such as pit and fissure sealants and fluoride applications. Later, the parents' attitude regarding the use of these modalities on their children was assessed through questionnaire.

In the present study, the majority of the parents were found to have correct knowledge that regular visit to dentist is necessary, but only 36.8% of children had ever visited dentist. Similar to our result, several other studies have also found that good knowledge toward oral health does not necessarily produce good practices.[13-15] Al-Rowily *et al*.[16] also reported the discrepancy between the knowledge and the actual practice among parents. The mean age of first dental visit in the present study was found to be much higher

**Table 1: Parents knowledge, attitude, and practice toward preventive dental treatment modalities**

| Questions | Options | Response (%) |
|---|---|---|
| Knowledge | Yes | 94.8 |
| Do you feel that regular visit to dentist is necessary? | No | 5.2 |
| Did you know that preventive dental treatment (pit and fissure sealants, fluoride application) can prevent dental caries in future? | Yes | 10.4 |
| | No | 89.6 |
| Have your dentist ever told you about pit and fissure sealants and fluoride application | Yes | 30 |
| | No | 70 |
| Attitude | | |
| When would you like to take your child to dentist? | When problem arises | 52.0 |
| | Regularly | 48.0 |
| Practice | | |
| Have your child visited dentist ever? | Yes | 36.8 |
| | No | 63.2 |
| At which age your child visited dentist? | Between 4-8 years | 58.69 |
| | Between 9-12 years | 41.31 |
| Have your child undergone any preventive dental treatment? | Yes | 0 |
| | No | 100 |
| How many times have you (parents) visited dentist? | Regularly | 18.4 |
| | Irregularly | 38.4 |
| | Never | 43.2 |

**Table 2: Parents response to questions after Oral Health Education Program**

| Questions | Options | Response (%) | *P* |
|---|---|---|---|
| Which will you prefer as preventive treatment for your child? | Pit and fissure sealants | 64.8 | 0.043 |
| | Fluoride application | 35.2 | |
| Would you like to go for preventive treatment for your child? | Yes | 64.0 | 0.178 |
| | No | 36.0 | |
| If yes, why? | I am worried about my child's health | 54.37 | 0.724 |
| | To prevent dental caries | 45.62 | |
| If no, why? | I think my child is healthy | 91.11 | 0.00001 |
| | I don't feel it is necessary | 8.88 | |

**Table 3: Influence of dental visits of parents on their child's dental visit**

| Parents visit | Child visited, *n* (%) | Child not visited, *n* (%) | *P* |
|---|---|---|---|
| Regular | 31 (67.39) | 15 (32.60) | <0.0001 |
| Irregular | 41 (42.70) | 55 (57.29) | |
| Never | 20 (18.51) | 88 (81.48) | |

Chi-square test at $P \leq 0.0001$

than as recommended ideally. Around 52% of parents stated that they would not visit the dentist if there was no problem.[17] Similar findings were reported in the aforementioned study. On the basis of above findings of our study, we can presume that parents do not take their children regularly to visit dentist and prefer seeking oral health care only in case of emergencies.[18] This may be due the lower socioeconomic status of individuals under study, as they experience financial, social, and material disadvantages, together with fatalistic beliefs about their health and lower perceived need for dental care. These conditions and beliefs could be a cause of neglected care, and lower utilization of preventive health services for their children.[19]

Surprisingly, 89% of parents were unaware of the fact that dental preventive modalities are capable to prevent dental caries in their child. This may be due to the rural study setting where the parents are comparatively less educated and also due to lesser number of qualified dental professionals who are the crucial source of spreading awareness in their society.[20]

Even after child's visits to dentist, majority of their parents were still unaware about the fact of preventing dental caries, through pit and fissure sealants and fluoride application. This may be the cause that in the present study, none of the children has undergone any type of preventive modality till date. This might indicate that dentists are not interested in educating parents on this subject may be because of the following reasons: First, based on dentists experiences, it is difficult for parents to understand why prevention and early intervention is needed therefore, it appears as an unnecessary extra burden for parents of low socioeconomic status.[21] Second, it is difficult to manage child patient behavior on dental chair. Third, it may demands a dentist to invest additional efforts and time for education without financial incentives.

In the present study, significant influence of parent's dental visit on their child's dental visit was seen. Parents who themselves visit dentist regularly, their children are also found with regular dental visits. As dental practitioners are continually in contact with parents who visit dentist regularly and are usually accompanied by their children as well, which provides dentists a greater chance to discuss about the child's oral health and also motivate them for the required preventive modalities with their parents.[18]

There are evidence that pit and fissure sealants are superior to fluoride varnishes for the prevention of caries in pit and fissures which are the most susceptible sites for dental caries.[22,23] This was explained through our motivational program to the parents. Our results showed that 64% of the parents favored preventive treatment modalities after attending motivational program. However, majority of them preferred pit and fissure sealants over topical fluoride application. One reason why they preferred pit and fissure sealants over fluoride application could also be because sealants can be visually/physically appreciated on the teeth, as was clear through our motivational program.

However, other 36% of parents disagreed because they feel that their child is healthy, and it is not necessary for their child health. This may be due to the reason that this fraction of parents might need more or different information to influence their already existing beliefs or the information given was insufficient to make positive decisions toward preventive dental modalities for their child. The parents might be in doubt about the reliability of the information because trustworthiness develops in long-term relationships where communication is a mainstay. Based on above results, it can be presumed that, the dentists' positive communication behavior can also positively influence the acceptability toward preventive modalities for their children.[24,25]

The limitations of the present study are first, the educational level and socioeconomic status of the participants were not included though this could affect the acceptance of the preventive treatment modalities and second, clinical findings in children were not compared with parent's responses.

Therefore, it can be concluded that the parents who visit dentists regularly are still unaware of preventive dental knowledge. Hence, it should be the duty of every dentist to practice these modalities and also educate the patients regarding therapeutic as well as preventive dental health modalities at either the office and/or the community level. Such dental education programs should be actively conducted in schools not only to increase the awareness of preventive dentistry but also the utilization of the available preventive procedures that help in reducing the prevalence of dental caries.

## Acknowledgment

The authors would like to thank colleagues in the Department of Public Health Dentistry, School Authorities

of Udham Singh Nagar. We gratefully acknowledge the contribution of all participating parents.

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflicts of interest.

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