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Parental Knowledge of Preventive Dentistry Procedures and Its Utilization.

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ABSTRACT

Preventive dentistry is the area of dentistry that focuses on those procedures and life practices that help people to prevent the beginning or progression of oral disease. It includes at-home dental care performed by patients, as well as dental care and education by professional dental staff in the office or clinic. To assess the knowledge & utilization of preventive dentistry procedures among parents. A household survey was conducted on mothers of school children belonging to 6 to 10 year's age. A multistage sampling is used to include 800 in the study. **Results:** 91.13% of subjects are aware of importance of primary dentition and permanent dentition but not aware about preventive dentistry procedures to maintain the oral health. The information about the self utilizable preventive measures was obtained mainly by the media. Knowledge of preventive dentistry procedures and utilization rate among parents is very less. Less than 30% of the parents know about Preventive dentistry procedures.

Key words: Preventive dentistry, utilization, Knowledge, dental caries

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INTRODUCTION

Dentistry as a profession has been relying on a curative approach for nearly a century (Hjorting-Hansen, 1996). Following the obvious decline in caries occurrence in many western industrialized (Downer, 1996; Petersson & Bratthall, 1996) and Nordic countries (Von der Fehr, 1994) and in the USA (Burt, 1994), more knowledge has emerged as to methods of preventing caries lesions (Rozier, 2001). Dental prevention has been given preference in many countries by legislation (Brennan et al., 1998) with substantial resources allocated for it, although random use of preventive measures, inadequate focusing on prevention (Vehkalahti et al., 1991), and predominance of the curative approach (Kelly et al., 2000) have still been reported.

Tooth decay in young children is of particular concern for a number of reasons. It is painful for the child, disturbs eating and sleeping patterns and is distressing for both child and parent. Treatment is challenging and often requires secondary and specialist care under conscious sedation or general anesthesia. It may impact on the developing permanent dentition, self esteem and aesthetics. It highlights that an opportunity has been missed to prevent what should have been preventable. Early intervention provides an opportunity to prevent many diseases including oral diseases (Johnsen 1988). Preventive dentistry is the area of dentistry that focuses on those procedures and life practices that help people to prevent the beginning or progression of oral disease. It includes at-home dental care performed by patients, as well as dental care and education by professional dental staff in the office or clinic.

Preventive dental care should begin in infancy, within the first year of life before teeth first appear and continue throughout life. Even before teeth erupt, parents can clean infants' gums after feeding. Preventive care in adolescence includes brushing and flossing, as well as wearing custom-made mouth guards to protect the teeth during contact sports. Utilization of preventive dentistry is dependent on the knowledge of parents about preventive dentistry procedures. Parents are usually educated in a nursing home or hospital during their routine visit to the physician for their infants check up where they will get information about vaccination, diet and nutrition and prevention of injuries and accidents, where as in case of oral health the attitude is entirely different which make them to visit the dentist at a later stage of caries progression or malocclusion etc.

Many a time, people responsible for the oral care of children feel or believe that since primary teeth will any way shed, it is not worthwhile to spend time/money on providing good oral health to children. Even in developed nations, most parents still take their children to the dentist for curative and not for Preventive treatments. The American Academy of Pediatric Dentistry (AAPD) emphasizes the importance of prevention, diagnosis and treatment necessary to restore and maintain the oral health of infants, children and adolescents. Comprehensive health care cannot be achieved unless dental care is a strong priority in all health service programmes. (American Academy of Pediatric Dentistry 2004). With consideration to all the aspects a study was designed to assess the parental knowledge of available preventive dentistry procedures and their utilization.

OBJECTIVE OF THE STUDY

1. To assess the knowledge of preventive dentistry procedures.
2. To assess the utilization of preventive dentistry procedures.

MATERIAL AND METHODS

The study was a household survey conducted on parents (mothers only) of school children belonging to 6 to 10 year's age.

Sample size was calculated by using the formula

$$n = \frac{Z^2 PQ}{d^2}$$

From the result of pilot study, knowledge of preventive dentistry among the parents was 25%. The confidence interval was kept at 95% and a 3% of precision was considered, by substituting all the values a sample size of 800.33 was obtained. Hence a total of 800 parents (mother only) from 4 urban centres (200 parents from each centre) were randomly selected for the study. The study was conducted from June 2013 to December 2013. The sampling technique considered was multistage sampling technique. Initially, all primary schools in each centre were shortlisted and then number of children in the schools was listed. After obtaining permission from the school authorities a random selection of 200 parents who also agreed to participate in the study were considered.

Parents were requested to fill out an objective type of anonymous questionnaire without providing any oral health information. Questions related to personal information (age and educational status) and preventive dental procedures in dentistry, source of information and utilization of preventive procedures were asked. Educational status was considered as up to secondary schooling, diploma graduate, degree graduate and with master degree. Descriptive statistics were computed and data was statistically analyzed using chi square analysis with a p value <0.05 considered as statistically significant. Statistical analysis was done by using SPSS software Version 17.

RESULTS

The study was carried out to evaluate the present knowledge of preventive dentistry among parents and its utilization trend. Table I shows the distribution of study subjects based on educational status. Majority of mothers had a graduation level of education. Table II shows awareness of mothers about preventive dentistry procedures. 91.13% of subjects are aware of importance of primary dentition and permanent dentition. Among preventive dentistry, high information was about mouth rinses (94.37%), oral prophylaxis (93.37%) and followed by fluoridated dentifrices (71%). The information about the self utilizable preventive measures was obtained mainly by the media. Among preventive procedures done by the professionals 16.25% and 17.25% of subjects were aware about mouth guards and pit and fissure sealants respectively. 27.62% and 31.87% of subjects were aware of fluoride varnish and topical fluoride application. These information was obtained mainly by the dentist.

Table III shows the influence of educational status on knowledge of preventive dentistry procedures. Educational status had an influence on all preventive dentistry procedures listed except pit and fissure sealants which was non significant. Table IV shows the utilization of preventive dentistry procedures and the results were statistically significant as there was influence of educational status on utilization of procedures.

Table I Shows study population and educational status.

Education	Number Of Subjects	Percentage
Up to Secondary Schooling	124	15.5%
Diploma Graduate	120	15%
Degree Graduate	487	60.87%
Master degree Graduate	69	8.62%

Table II awareness about preventive dentistry

Questions	Percentage (No)
Importance of primary dentition and permanent dentition	91.13 (729)
Fluoridated dentifrices	71.00 (568)
Mouth rinses	94.37 (755)
Oral prophylaxis	93.37 (747)
Information about preventive dentistry	38.25 (306)
Serial extraction	27.50 (220)
Topical fluoride application	31.87 (255)
Fluoride varnish	27.62 (221)
Mouth guards	16.75 (134)
Pit and fissure sealants	17.25 (138)

Table III: Awareness about preventive dentistry based on educational status

Questions	Up to Secondary Schooling	Diploma Graduate	Degree Graduate	Master degree Graduate	Chi square and p value
Importance of primary dentition	76.61 (95)	73.33 (88)	98.35 (479)	97.10 (67)	113 (0.000) HS
Information about preventive dentistry	12.09 (15)	40.00 (48)	40.45 (197)	66.66 (46)	60.65 (0.000) HS
Serial extraction	09.67 (12)	11.66 (14)	30.80 (150)	63.76 (44)	83.020 (0.000) HS
Topical fluoride application	12.09 (15)	15.00 (18)	37.78 (184)	55.07 (38)	63.00 (0.000) HS
Fluoridated and non fluoridated dentifrices	33.06 (41)	34.16 (41)	86.44 (421)	94.20 (65)	240.22 (0.000) HS
Fluoride varnish	10.48 (13)	14.16 (17)	30.59 (149)	60.86 (42)	69.38 (0.000) HS
Mouth guards	5.645 (07)	8.33 (10)	21.56 (105)	17.39 (12)	25.16 (0.000) HS
Pit and fissure sealants	12.09 (15)	17.5 (21)	18.27 (89)	18.84 (13)	2.793 (0.425) NS
Mouth rinses	87.09 (108)	82.5 (99)	98.35 (479)	100.00 (69)	62.911 (0.000)HS
Oral Prophylaxis	84.67 (105)	80.83 (97)	97.74 (476)	100.00 (69)	65.580 (0.000) HS

Table IV: Utilization of preventive dentistry procedures

Questions	Percentage	Chi square and p value	Overall utilization (800)
Up to Secondary Schooling (124)	02.41 (03)	98.203 (0.000) HS	13.00 (104)
Diploma Graduate (120)	05.83 (07)		
Degree Graduate (487)	12.32 (60)		
Master degree Graduate (69)	49.27 (34)		

DISCUSSION

Parents have a unique position to address dental disease in children. The result of the present study suggests that although parents know that both primary and permanent dentition are important they do not have knowledge of various preventive procedures in dentistry. This study is of its kind as there are very few studies which tried to evaluate the knowledge of preventive dentistry among mothers of school children in India. Knowledge, attitude towards, and practice of preventive dentistry and different preventive measures among dentists and dental auxiliaries have been assessed in several studies (Chen, 1990; Gonzales et al., 1991; Main et al., 1997).

Use and choice of preventive measures by dental practitioners can differ between countries and among individual dentists, with the ultimate common goal of improving oral health. The differences are, perhaps, due to oral health care legislation, acceptance and appreciation of preventive approaches by patients and by the dental community, availability of preventive agents, and work load of restorative care, as well as dentists' location of practice, years in practice, age, and income (Chen, 1990; Helminen et al., 1999; Helminen & Vehkalahti, 2003).

A gap seems, however, to exist between what is known about preventing oral diseases and what is provided in private practice, public clinics, dental schools, and community-based programs in many countries (Horowitz, 1995). In India as such there is no separate oral health policy which might influence on knowledge and attitude of preventive dentistry utilization. Public knowledge of oral diseases and their prevention is assessed in several studies, with a gap between the general public's and current scientific knowledge of the

prevention of dental diseases (Horowitz, 1995; Kim, 1998). In general, people are aware of the importance of oral hygiene for prevention of oral diseases. The results are similar in our study.

A lower educational level is consistently associated with a low level of knowledge (Roberts-Thomson & Spencer, 1999). This is also reflected in the present study. In a study conducted to know the caries-preventive knowledge and reported behaviour among Japanese parents resident in London showed their knowledge and behaviour to be generally lower than those reported by English parents (Mikami et al., 1999). This difference was also seen between British expatriates in Tokyo compared to the Japanese, the former knowing more about dental caries (Mikami et al., 2003).

In a study conducted on mothers of schoolchildren in Wuhan, China, less than 50% of mothers knew the caries-preventive effect of fluoride compared to 89% of school teachers (Petersen & Esheng, 1998), and less than half of both mothers and schoolteachers in Wuhan did not believe that tooth-brushing prevents gum bleeding. The result in the present study also reflects in the same way where less than 30% of mothers know about preventive dentistry procedures.

CONCLUSIONS

Knowledge of preventive dentistry procedures and utilization rate among parents is very less. Less than 30% of the parents know about Preventive dentistry procedures. Use of fluorides in different ways is almost non-existent. One of the reasons for the same could be practice of preventive procedures by the dentists. Dental professionals hence they need to make full use of preventive rather than curative approaches, to achieve better oral health outcomes, this would potentially be further reflected as improvement in the oral health of the general public especially concerning various forms of fluoride and sealant use.

RECOMMENDATIONS

The use of preventive measures should be recommended among dentist's daily duties. Various teachers training programmes and parental education programmes should be conducted. Emphasis on preventive dentistry should be increased in the current dental curriculum and in continuing education programmes in order to help the learning environment to support adoption of preventive measures. In training of dental professionals, outcomes of oral health care especially of preventive approaches should be emphasized, rather than procedures. Research should be encouraged on strategies designed to gain more widespread individual, professional, and community adoption of preventive measures.

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