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# KNOWLEDGE, ATTITUDE, PRACTICE TOWARDS PRIMARY PREVENTION OF DENTAL DISEASES Among oral health professionals in India

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## ABSTRACT

*Aim:* To assess knowledge, attitude, practice towards primary prevention of dental diseases among oral health professionals.

*Material and Methods:* It is cross-sectional questionnaire study. The study was conducted among dental professionals running private dental clinics. Among these 141 clinics, 202 dentists had given their informed consent to be included in the study.

**Results:** Knowledge of dental health professionals towards primary health care was significantly (p=0.04\*) below average among all age groups. Attitude of study participants towards primary health care shows that most of study participants in all age groups had significantly (p=0.00\*\*\*) good attitude towards primary health care. Females study participants 36 (45%) practice primary prevention technique significantly (p=0.00\*\*\*) more than the male study participants.

*Conclusions:* It is concluded that knowledge among dental professionals regarding primary health care was low. Attitude towards primary prevention among the oral health professionals was positive. Dentist included in present study, practice techniques of primary preventive technique less frequently.

*KEYWORDS:* attitude, dental diseases, knowledge, primary prevention, practice *http://dx.doi.org/10.19177/jrd.v4e52016150-156* 

### INTRODUCTION

"Preventive dentistry" has different connotations to different people. As a result, it can be arbitrarily classified into three different levels. Primary prevention, Secondary prevention, and tertiary prevention. Primary prevention employs strategies and agents to forestall the onset of disease, to reverse the progress of the disease, or to arrest the disease process before secondary preventive treatment becomes necessary<sup>1</sup>.

For the patient who thinks in terms of economic benefits and enjoyment of life, prevention pays. Many studies document the prevalence of dental disease, but behind these numbers there is little mention of the adverse affects on humans caused by dental neglect. One study points out that 51% of dentate patients have been affected in some way by their oral health, and in 8% of the cases, the impact was sufficient to have reduced their quality of life<sup>2</sup>. If preventive programs are started early by the patient (or, preferably, by the parents of young children) long-range freedom from the plaque diseases is possible a sound cost-benefit investment. After all, the teeth are needed over a lifetime for eating. Speech is greatly improved by the presence of teeth. A pleasant smile enhances personality expression.

Possibly the first benefit of preventive dentistry is the fulfillment of the moral commitment to the Hippocratic Oath that was taken by health professionals at graduation "to render help to those in need, and to do no harm." Through ethics and training, the dentist should derive a deep sense of satisfaction by helping people maintain their oral structures in a state of maximum function, comfort, and aesthetics. A well-balanced practice that actively seeks to prevent disease but is also able to care for those individuals where prevention has failed should prosper. Patients can be outstanding public relations advocates if they are convinced that their dentist and staff are truly interested in preventing disease. If for no other reason, a dentist should consider prevention to avoid possible legal problems. A now strongly supported law for medicine, but to a lesser extent for dentistry, requires that prior to treatment, all options preventive as well as treatment should be explained to secure informed patient consent. This discussion should include a comparison of health benefits and hazards, as well as the economic and the oral-health benefits of prevention. Long-term patients, the lawyers and the court system are taking a more unsympathetic attitude toward practitioners who have permitted a disease to progress over many years without having taken some accepted primary preventive actions to have

slowed, or halted its progress. Patients no longer tolerate supervised professional neglect<sup>3</sup>. Private dental practitioners have an important role in imparting dental health education to public, influencing patients' preventive oral health behavior and providing preventive dental care to lower the burden of oral diseases. Besides this a large number of Dental Health Professionals ignored the importance of Primary prevention. Previous studies of dentists' knowledge of and attitudes towards preventive dental care have not produced clear-cut results. Although dentists generally seem to be knowledgeable of preventive matters <sup>4</sup> and have positive attitudes towards prevention,<sup>5,6</sup> deficiencies in their knowledge have been reported<sup>7-9</sup>. Therefore the main aim of this study is to assess Knowledge, attitude, Practice towards primary prevention of Dental diseases among Oral health Professionals.

### MATERIAL AND METHODS

It is cross-sectional questionnaire study designed to assess Knowledge, attitude, Practice Dental Professionals towards primary prevention of Dental diseases. The study was conducted among Dental professionals running private Dental clinics for more than 5 years. There are 250 Dental clinics in the Jodhpur city. Out of that 141 clinics were running for more than 5 years. In these 141 clinics, survey was conducted. Dental professionals who were present on the day of survey and given their consent were included in the study. Among these 141 clinics, 202 dentists had given their informed consent to be included in the study.

The Questionnaire consists of 4 parts. First part consists of eight questions which were pertaining to general information of the participants. Eight questions were included to assess the knowledge of dentists on primary prevention, seven items in the questionnaire estimated the attitude of dentists towards primary prevention, and eight questions were related to the dentists' preventive dental practice. Another set of eight questions enquired about the dentists' preventive oral selfcare habits and Blank lines were provided at the end of the questionnaire for the participating dentists to add or suggest any uncovered aspect related to preventive dental practice. The questionnaire was pretested for the validity and reliability on 10% of study samples. Reliability of the Questionnaire was assessed by using Test-Retest and the values of measured Kappa (k) =0.86Weighted Kappa  $(k_w) = 0.8$ . Internal consistency of questionnaires was assessed by applying Chronbachs-Alpha (a) and the value of  $\alpha$ =0.82 was measured. Knowledge of study participants was tested and those participants who gave five to seven correct answers out of seven questions were having above average knowledge. And those study participants who had given three to four correct answers were having average knowledge and participants giving only one to two correct answers were having below average knowledge regarding primary prevention.

Association between knowledge, attitude and practice regarding primary practice and Demographic details was analyzed by applying Chi-square test. Data was entered in Microsoft excel 2007 and analyzed using SPSS 20 version. Descriptive analysis was used to record demographic details of study participants and total number and percentages were presented. P-value is kept at 0.00, 0.01, and 0.05 to be significant.

### RESULTS

Table 1 shows that majority of study majority of study participants {82(41%)} belongs to age group of 30 to 40 years of age group. Males {121(60%)} are more in number than females {81(40%)} among the study participants. Most of study participants {73(36%)} were having BDS degree as there educational qualification. Among the study participants most of them were doing private practice for 5 to 10 years.

Table 2 shows that knowledge of Dental health professionals towards primary health care was significantly ( $p=0.04^{\circ}$ ) below average among all age groups. Among all study participants, significantly ( $p=0.00^{***}$ ) below average knowledge regarding Primary Health Care was reported among those with only BDS degree.

Table 3 Attitude of study participants towards Primary Health Care shows that most of study participants in all age groups had significantly ( $p=0.00^{***}$ ) good attitude towards primary health care. Attitude towards primary Health care among females was significantly ( $p=0.00^{***}$ ) better as compared to males. Among the study participants with duration of practice of 5-10 years, significantly ( $p=0.01^{**}$ ) more positive attitude towards primary health care was seen.

Table 4 shows that females study participants 36 (45%) practice primary prevention technique significantly (p=0.00<sup>\*\*\*</sup>) more than the male study participants. Study participants having BDS/MDS with Diploma or Certificate practice significantly (p=0.01<sup>\*\*</sup>) more primary prevention technique, than others with only BDS or MDS degree. More the duration of private practice more frequently the study participants significantly (p=0.01<sup>\*\*</sup>) practice primary prevention technique.

### DISCUSSION

In the present study males study participants were more than the females study participants. The results were same in the study conducted by Sushanth et al<sup>10</sup> and Premnath et al<sup>11</sup>, Ahuja et al<sup>12</sup>. Contrary results were seen study done by Ramya R et  $al^{13}$  in which the females study participants were more that the male study participants. In the present study, most of the study participants were having BDS degree as there educational qualification. Same results were seen in the study done by Ramya R et al<sup>13</sup> in Vadodara, India. While in study done by Premnath et al<sup>11</sup>, study participants with MDS degree were more than with BDS degree. In the present study most of the study participants were having experience of 5-10 years. Same results were seen in the study by Ramya R et al <sup>13</sup> in which majority of study participants were having experience of 1-10 years. In a cross- sectional study conducted by Sushanth et al<sup>10</sup> among dentists in Davangere city, Karnataka. Most of the study participants were having experience of less than 5 years or more than 10 years.

In the present study knowledge scores were significantly (p=0.04<sup>\*</sup>) higher among study participants in age group of 30- 40 years of age group. In the study done by Premnath et al<sup>11</sup> The mean score for knowledge was found to be more in 21-30 years of age group (0.110  $\pm$  0.44) followed by 31-40 years (0.321  $\pm$  0.611). However, statistical analysis showed no significant difference in the mean knowledge score to different age groups (*P* = 0.086). This can be justified by the fact that preventive dentistry as a subject was introduced recently and did not form part of academic curriculum of the older age groups. Knowledge scores were significantly higher among study participants with experience of 5-10 years, but the result was not statistically significant (P=0.14). In a study conducted by Sushanth, et al<sup>10</sup> knowledge scores were higher among dentists with 5-10 years of professional experience. In the study by Ramya R et al<sup>13</sup> significantly (p=0.016) higher knowledge scores were recorded among study participants with work experience of 1-10 years. The main reasons for negative association between professional experience and knowledge towards preventive care may be due to the fact that preventive dentistry as a subject was introduced recently and did not form part of academic curriculum of the older age groups. In the present study significantly higher above knowledge scores were present among the study participants with MDS degree, same results were seen in study by Ramya R et al<sup>13</sup>. This may be attributed to the exhaustive and comprehensive postgraduate curriculum which calls for an in depth knowledge on every aspect of subject of specialization including prevention. McGlone P et al <sup>14</sup> have stated that post-graduate education, if provided in a manner it should be, is bound to increase the knowledge of dentists in all dimensions.

Dentists' attitudes towards prevention have received much attention in recent years. Attitudes are a prerequisite for performance and action. Overall, the dentists in the present study showed positive attitudes towards preventive dental care. This can be considered as a positive sign of interest towards preventive dental care among the dentists. In the present study attitude towards primary health care was significantly (p=0.00\*\*\*) positive among study participants with age between 30 to 40 years. While in a study done by were higher among study participants Premnath et al<sup>11</sup> mean attitude scores with age group of 21-30 years.

Table 1. Demographic detail of study participants.

DEMOGRAPHIC DETAILS	NUMBE	R (%)
AGE GROUP		
30-40 years	82 (41%)	
41-50 years	69 (34%)	
More than 50 years	51 (25%)	
Total	202 (100%	6)
GENDER		
Male	121 (60%)	
Female	81 (40%)	
Total	202 (100%	6)
EDUCATIONAL QUALIFICATION		
BDS	73 (36%)	
MDS	69 (34%)	
BDS/MDS With Diploma Or Certificate	60 (31%)	
Total	202(100%	6)
DURATION OF PRIVATE PRACTICE		
5-10years	109 (54%)	
11-15 years	52 (26%)	
More than 15 years	41 (20%)	
Total	202	(100%)

Ramya et al<sup>13</sup> conducted study in Vadodara in which highly favorable attitude was observed among majority of the individuals in groups namely, 24-33 and 34-43 year olds. This reflects that the younger dentists are more enthusiastic and inclined to preventive dentistry than the older groups. In the present study significantly (p=0.00\*\*\*) more females were having positive attitude towards primary prevention than males. Same results were seen in a study by Premnath et al<sup>11</sup> but were not significant (p=0.553). In the study done by Ramya R et al<sup>13</sup>, a greater percentage of females were found to have highly favorable and greater percentage of males was found to have unfavorable attitudes. This may be due to the different beliefs and values, personal needs, and behavior among men and women as described by Schafer and Tait. These attitudes among women towards preventive dental care are in line with study findings reported by Ghasemi H et al<sup>15</sup> and may indicate their greater interest in preventive care compared to their male colleagues. In the present study positive attitude towards primary prevention was significantly  $(p=01^{**})$ higher among study participants with experience of 5-10 years. In the study done by Ramya R et al<sup>13</sup> which states that Participants in <1 year and majority of the 1-10 year experiences had favorable and highly favorable attitudes respectively. This indicates that the new generation practitioners are more oriented to prevention as compared to the highly because of greater exposure to knowledge on preventive dentistry at the early stages of practice which could be incorporated at the very start of practice.

Table 2. Knowledge of oral health professionals regarding primary prevention.

DEMOCRAPHIC DETAILS	KNOWLEDGE OF STUDY PARTICIPANTS					
DEMOGRAPHIC DETAILS	Above Average	Average	Below Average	Total	Significance	
AGE GROUP						
30-40 years	19 (23%)	21(26%)	42(51%)	82 (41%)	P=0.04*	
41-50 years	11 (16%)	25 (36%)	33 (58%)	69 (34%)		
More than 50 years	7 (14%)	18 (35%)	26 (51%)	51 (25%)		
Total	37 (18%)	64 (32%)	101 (50%)	202 (100%)		
GENDER						
Male	22 (18%)	48 (40%)	51(42%)	121 (60%)	P=0.03*	
Female	23 (28%)	19 (23%)	39 (48%)	81 (40%)		
Total	45 (22%)	67 (33%)	90 (45%)	202 (100%)		
EDUCATIONAL QUALIFICATION						
BDS	15 (21%)	20 (27%)	38 (52%)	73 (36%)	P=0.00***	
MDS	20 (29%)	19 (28%)	30 (43%)	69 (34%)		
BDS/MDS With Diploma Or	18 (30%)	21 (35%)	21 (35%)	60 (31%)		
Certificate						
Total	56 (28%)	60(30%)	86 (42%)	202(100%)		
DURATION OF PRIVATE PRACTICE						
5-10years	22 (20%)	29 (27%)	58 (53%)	109 (54%)	P=0.14	
11-15 years	12 (23%)	15 (29%)	25 (48%)	52 (26%)		
More than 15 years	10 (24%)	11 (27%)	20 (49%)	41 (20%)		
Total	44 (22%)	55 (27%)	103 (51%)	202 (100%)		

### CONCLUSIONS

According to the results of the present study, it is concluded that knowledge among dental professionals regarding primary health care was low. Attitude towards primary prevention among the oral health professionals was positive. Dentist included in present study, practice techniques of primary preventive technique less frequently. However among female study participant knowledge regarding Primary prevention was high, attitude was positive and female dentist practices primary preventive techniques more frequently. In order to diminish barriers to the provision of preventive dental care, factors that influence dentists' preventive practice must be investigated. Table 3. Attitude of oral health professionals regarding primary prevention

DEMOGRAPHIC DETAILS	ATTITUDE OF STUDY PARTICIPANTS				
	POSITIVE	NEUTRAL	NEGATIVE	Total	Significance
AGE GROUP					
30-40 years	34 (42%)	24(29%)	24(29%)	82 (41%)	p=0.00***
41-50 years	30 (44%)	20 (29%)	19 (27%)	69 (34%)	
More than 50 years	23 (45%)	17 (33%)	11 (22%)	51 (25%)	
Total	87 (18%)	61 (32%)	54 (50%)	202 (100%)	
GENDER					
Male	52 (43%)	40 (33%)	29(24%)	121 (60%)	p=0.00***
Female	60 (74%)	11 (14%)	10 (12%)	81 (40%)	
Total	112 (55%)	51 (25%)	39 (20%)	202 (100%)	
EDUCATIONAL QUALIFICATION					
BDS	36 (49%)	22 (30%)	15 (21%)	73 (36%)	p=0.43
MDS	40 (58%)	18(26%)	11 (16%)	69 (34%)	
BDS/MDS With Diploma Or	28 (47%)	22 (37%)	10 (16%)	60 (31%)	
Certificate					
Total	104 (52%)	62(31%)	36 (17%)	202(100%)	
DURATION OF PRIVATE PRACTICE					
5-10 years	74 (68%)	21 (19%)	14(13%)	109 (54%)	p=0.01 <sup>**</sup>
11-15 years	29 (56%)	12(23%)	11 (21%)	52 (26%)	
More than 15 years	30 (73%)	6(15%)	5 (12%)	41 (20%)	
Total	133(66%)	39 (19%)	30 (15%)	202 (100%)	

Table 4. Frequency of primary prevention technique practiced by study participants.

DEMOGRAPHIC DETAILS	FREQUENCY OF PRIMARY PREVENTION TECHNIQUE PRACTICED BY STUDY PARTICIPANTS					
	MORE FREQUENT	LESS FREQUENTLY	NOT PRACTICING	Total	Significance	
AGE GROUP						
30-40 years	15 (18%)	40(49%)	27(33%)	82 (41%)	p=0.11	
41-50 years	12 (17%)	35 (51%)	22 (32%)	69 (34%)		
More than 50 years	12 (24%)	27(53%)	12 (23%)	51 (25%)		
Total	39 (19%)	102 (51%)	61 (30%)	202 (%)		
GENDER						
Male	28 (23%)	48 (40%)	45 (37%)	121 (60%)	p=0.00***	
Female	36 (45%)	23 (28%)	22 (27%)	81 (40%)		
Total	64 (32%)	71 (35%)	67 (33%)	202 (100%)		

EDUCATIONAL QUALIFICATION						
BDS	18 (49%)	26 (30%)	29 (21%)	73 (36%)	p=0.01 <sup>**</sup>	
MDS	23 (58%)	15(26%)	31 (16%)	69 (34%)		
BDS/MDS With Diploma	28 (47%)	13 (37%)	19 (16%)	60 (31%)		
Or Certificate						
Total	69 (34%)	54 (27%)	79 (39%)	202(100%)		
DURATION OF PRIVATE PRACTICE						
5-10 years	16 (15%)	55 (50%)	38(35%)	109 (54%)	p=0.01 <sup>**</sup>	
11-15 years	22 (42%)	19(37%)	11 (21%)	52 (26%)		
More than 15 years	27 (64%)	11(27%)	3 (9 %)	41 (20%)		
Total	65(32%)	85(42%)	52 (26%)	202 (100%)		

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