

Assessment of Personal Dental Visit Experience and Knowledge About Oral Health Awareness Amongst Various Students Pursuing Health Care Profession

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ABSTRACT

Background: To assess personal dental visit experience and knowledge about oral health awareness and to evaluate the need for awareness programs about oral health.

Material and Method: A cross sectional survey was conducted to assess personal dental visit experience and knowledge about oral health awareness amongst various students including undergraduates of medical, dental and Ayurvedic institutions situated in Durg, Chhattisgarh, India, from June 2018 to July 2018 after obtaining ethical clearance for the study from Institutional ethical committee and dean of the respected institutions. A total of 450 participants, out of which 150 Medical, 150 Dental and 150 Ayurvedic undergraduate students were selected for this study. A pre-tested 10 item questionnaire was distributed among all the students. The questionnaires were then collected immediately after the completion following which the results were statistically analyzed.

Result: Based on the individual questions in the questionnaire, the results were interpreted. It was observed that 72.7% students of dentistry, 34.0% of Ayurvedic and 44.0% Medical students visited the dentist and only (7.33%) Dental and (1.51%) Medical students visited at an early age whereas none of Ayurvedic student visited to dentist at early age, i.e. 0 to 5 year.

Conclusion: Thus, from present study, it was evident that the awareness regarding the importance of the first dental visit is very low in the study population.

Keywords: First dental visit, Oral health awareness, Health care profession.

INTRODUCTION

The oral cavity has been described as “the window to general health.” The benefits of good oral health are well studied and include economic, social, psychological, and physical health. Poor oral health

and untreated oral diseases and conditions can have a significant impact on quality of life. They can affect the most basic human needs, including the ability to

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eat and drink, swallow, maintain proper nutrition, smile, and communicate.¹

Medical practitioner plays an active role in oral health promotion. Proper knowledge of oral diseases is crucial in medical practice due the following reasons (a) A large number of systemic diseases has oral manifestations. (b) Many drugs are associated with oral adverse drug reactions and majority of the population approach medical practitioners for their oral health problems. Hence, early assessment of oral health and proper referral by these professionals may benefit to improve the access to oral health problems and to reduce the associated morbidity and mortality.²

American Academy of Pediatric Dentistry (AAPD) and the American Dental Association (ADA) recommend that "a child should visit the dentist within 6 months of eruption of the first primary tooth and no later than 12 months of age whereas American Academy of Pediatrics recommends oral health risk assessment by 6 months of age and establishment of Dental Home for all infants by 12 months.³

The need of the hour is for general practitioners to have adequate knowledge about oral health as they are the one to whom majority of the population approach. To create this awareness dentist has to work synchronously with pediatricians, general practitioners, various government and nongovernment aided organizations. Implementation of oral health programs among medical and ayurvedic students will not only improve their personal oral health care, but also potentially influence their ability to motivate patients to undertake preventive oral health measures.^{4,5}

Hence, the purpose of this study was to evaluate personal dental visit experience and knowledge of oral health awareness amongst various students pursuing health care profession.

MATERIALS AND METHODS

A cross sectional survey was conducted to assess personal dental visit experience and knowledge about oral health awareness amongst various students including undergraduates of medical, dental and Ayurvedic institutions situated in Durg, Chhattisgarh, India, from June 2018 to July 2018

after obtaining ethical clearance for the study from Institutional ethical committee and dean of the respected institutions. A total of 450 participants, out of which 150 Medical, 150 Dental and 150 Ayurvedic undergraduate students were selected for this study. A pre-tested 10 item questionnaire was distributed among all the students. Questionnaire consisted questions related to: (a) Demographic details including name, age, gender, name of institution etc. (b) First section consisted of four questions related to personal dental experience. Second section consisted of six questions related to their knowledge of oral health awareness. Before the distribution of questionnaire, an informed consent taken from all the participants. Each subject was given 5-10 minutes time for completing the questionnaire. The questionnaires were then collected immediately after the completion following which the results were statistically analyzed.

RESULT

In present cross-sectional study, total 450 students were enrolled for study 150 each from dental, Ayurvedic and Medical College. It was observed that 72.7% students of dentistry, 34.0% of Ayurvedic and 44.0% Medical students visited the dentist and only (7.33%) Dental and (1.51%) Medical students visited at an early age (Table 1) whereas none of Ayurvedic student visited to dentist at early age, i.e. 0 to 5 year (Table 2). It was documented that the most common reason for visiting the dentist was caries followed by tooth pain, irregular teeth, and routine dental checkup, for various other reasons, fracture/trauma, and ulcers in the oral cavity (Table 3). Among the various treatments that were delivered, maximum subjects had undergone restorations (32.3%), followed by extractions (18.1%), cleaning of teeth (17.3%), orthodontic treatment (13.3%), root canal treatment (12.8%), various other treatments (5.3%), and crowns (0.9%) (Table 4). It was observed that majority of student (30.1%) had rated their first visit to dentist as excellent, whereas 1.3% had reported it to be painful (Table 5). The majority (88.9%) of the participants felt that oral hygiene is mandatory for overall health of the body (Table 6). However, there was no statistical significance in this perception among dental, medical and Ayurvedic undergraduates. Most of the undergraduate students agreed that think that Dental diseases are

preventable (88.4) whereas 9.8% students thought that it cannot preventable of which 2.7% of dentistry, 14%, 12.7% respectively from Ayurvedic and Medical respectively which was found to be statistically highly significant with $p < 0.001$ (Table 7). There was a significant difference between Dental (91.3%) Medical (72.0%) and Ayurvedic (78.0%) undergraduates with respect to role of proper brushing and flossing in prevention of

Table 1: Visit to any dentist

	Dental	Ayurvedic	Medical	Total	p value
YES	109	51	66	226	0.001
	72.7%	34.0%	44.0%	50.2%	
NO	41	99	84	224	
	27.3%	66.0%	56.0%	49.8%	

disease (Table 8). Similarly, significant differences ($P < 0.001$) were found between the Dental, Medical and Ayurvedic students with regards to role of fluoride in prevention of dental diseases (Table 9). Approximately 55.6% knew that pea size toothpaste should be used but 48% didn't know of which 10% students of dentistry and 12% and 10% respectively from Ayurvedic and medical students (Table 10).

Table 2: Age of first visit

		GROUP			Total
		Dental	Ayurvedic	Medical	
First dental visit	1-5	8	0	1	9
	6-10	27	2	12	41
	11-15	25	14	25	64
	16-20	34	29	19	82
	21-25	15	6	9	30
Total		109	51	66	226

Table 3: Reason for first dental visit

			GROUP			Total	
			Dental	Ayurvedic	Medical		P value
Q2	Tooth Pain	Count	21	14	17	52	
		% within GROUP	19.6%	27.5%	25.8%	23.2%	0.959
	Tooth decay	Count	41	18	26	85	
		% within GROUP	38.3%	35.3%	39.4%	37.9%	
	Fracture/Trauma	Count	4	2	3	9	
		% within GROUP	3.7%	3.9%	4.5%	4.0%	
	Ulcers	Count	1	0	0	1	
		% within GROUP	.9%	.0%	.0%	.4%	
	Irregular teeth	Count	14	6	7	27	
		% within GROUP	13.1%	11.8%	10.6%	12.1%	
	Routine check up	Count	12	4	3	19	
		% within GROUP	11.2%	7.8%	4.5%	8.5%	
	Any other reason	Count	14	7	10	31	
		% within GROUP	13.1%	13.7%	15.2%	13.8%	
Total		Count	109	51	66	224	
		% within GROUP	100.0%	100.0%	100.0%	100.0%	

Table 4: Name of Treatment

			GROUP			Total	
			Dental	Ayurvedic	Medical		P value
Q3	Filling	Count	36	13	24	73	
		% within GROUP	33.0%	25.5%	36.4%	32.3%	0.466
	Ortho treatment	Count	19	3	8	30	
		% within GROUP	17.4%	5.9%	12.1%	13.3%	
	Extraction	Count	14	14	13	41	
		% within GROUP	12.8%	27.5%	19.7%	18.1%	
	Cleaning of teeth	Count	20	10	9	39	
		% within GROUP	18.3%	19.6%	13.6%	17.3%	
	Root canal treatment	Count	14	6	9	29	
		% within GROUP	12.8%	11.8%	13.6%	12.8%	
	Crown (capping)	Count	1	1	0	2	
		% within GROUP	.9%	2.0%	.0%	.9%	
	Any other	Count	5	4	3	12	
		% within GROUP	4.6%	7.8%	4.5%	5.3%	
Total		Count	109	51	66	226	
		% within GROUP	100.0%	100.0%	100.0%	100.0%	

Table 5: Rating of the treatment

			GROUP			Total	
			Dental	Ayurvedic	Medical		P value
Q4	Excellent	Count	30	14	24	68	
		% within GROUP	27.5%	27.5%	36.4%	30.1%	0.565
	Very good	Count	33	14	21	68	
		% within GROUP	30.3%	27.5%	31.8%	30.1%	
	Good	Count	38	19	19	76	
		% within GROUP	34.9%	37.3%	28.8%	33.6%	
	Satisfactory	Count	5	4	2	11	
		% within GROUP	4.6%	7.8%	3.0%	4.9%	
	Pain	Count	3	0	0	3	
		% within GROUP	2.8%	.0%	.0%	1.3%	
Total		Count	109	51	66	226	
		% within GROUP	100.0%	100.0%	100.0%	100.0%	

Table 6: Do you know that oral health has an influence on the overall quality of general health?

			GROUP			Total	P value
			Dental	Ayurvedic	Medical		
Q5	Agree	Count	137	131	131	399	
		% within GROUP	91.9%	87.3%	87.3%	88.9%	0.334

	Disagree	Count	7	7	10	24	
		% within GROUP	4.7%	4.7%	6.7%	5.3%	
	Dont know	Count	5	12	9	25	
		% within GROUP	3.4%	8.0%	6.0%	5.6%	
Total		Count	150	150	150	450	
		% within GROUP	100.0%	100.0%	100.0%	100.0%	

Table 7: Do you think dental diseases are preventable?

			GROUP			Total	
			Dental	Ayurvedic	Medical		P value
Q6	Yes	Count	146	125	127	398	0.001
		% within GROUP	97.3%	83.3%	84.7%	88.4%	
	No	Count	4	21	19	44	
		% within GROUP	2.7%	14.0%	12.7%	9.8%	
	Dont know	Count	0	4	4	8	
		% within GROUP	.0%	2.7%	2.7%	1.8%	
Total		Count	150	150	150	450	
		% within GROUP	100.0%	100.0%	100.0%	100.0%	

Table 8: Do you think proper brushing of teeth and flossing will enable to prevent oral diseases?

			GROUP			Total	P value
			Dental	Ayurvedic	Medical		
Q7	Agree	Count	137	117	108	362	0.001
		% within GROUP	91.3%	78.0%	72.0%	80.4%	
	Disagree	Count	11	21	29	61	
		% within GROUP	7.3%	14.0%	19.3%	13.6%	
	Dont know	Count	2	12	13	27	
		% within GROUP	1.3%	8.0%	8.7%	6.0%	
Total		Count	150	150	150	450	
		% within GROUP	100.0%	100.0%	100.0%	100.0%	

Table 9: Do you know that fluoride in toothpaste helps in preventing dental caries?

			GROUP			Total	P value
			Dental	Ayurvedic	Medical		
Q8	Agree	Count	144	89	104	337	0.001
		% within GROUP	96.0%	59.3%	69.3%	74.9%	
	Disagree	Count	5	25	29	59	
		% within GROUP	3.3%	16.7%	19.3%	13.1%	
	Dont know	Count	1	36	17	54	
		% within GROUP	.7%	24.0%	11.3%	12.0%	

Total	Count	150	150	150	450	
	% within GROUP	100.0%	100.0%	100.0%	100.0%	

Table 10: What size of toothpaste should be placed on a child's toothbrush?

			GROUP			Total	P value
			Dental	Ayurvedic	Medical		
Q9	Pea size	Count	107	68	75	250	0.001
		% within GROUP	71.3%	45.3%	50.0%	55.6%	
	Bean size	Count	20	36	37	93	
		% within GROUP	13.3%	24.0%	24.7%	20.7%	
	Half the length of tooth brush	Count	7	25	19	51	
		% within GROUP	4.7%	16.7%	12.7%	11.3%	
	Entire length of tooth brush	Count	1	3	4	8	
		% within GROUP	.7%	2.0%	2.7%	1.8%	
	Dont know	Count	15	18	15	48	
		% within GROUP	10.0%	12.0%	10.0%	10.7%	
Total		Count	150	150	150	450	
		% within GROUP	100.0%	100.0%	100.0%	100.0%	

Table 11: Do you think that we should visit a dentist for routine dental check-up which will help in preventing the oral diseases and reduce the cost of the treatment?

			GROUP			Total	P value
			Dental	Ayurvedic	Medical		
Q10	Agree	Count	140	128	105	373	0.001
		% within GROUP	93.3%	85.3%	70.0%	82.9%	
	Disagree	Count	8	14	33	55	
		% within GROUP	5.3%	9.3%	22.0%	12.2%	
	Dont know	Count	2	8	12	22	
		% within GROUP	1.3%	5.3%	8.0%	4.9%	
Total		Count	150	150	150	450	
		% within GROUP	100.0%	100.0%	100.0%	100.0%	

DISCUSSION

Most of the People believe that dental treatment is expensive, but it is not the dental treatment, but the neglect toward oral health accounting to the added expenditure. This dental neglect stems from lack of awareness among the population in developing as well as developed countries regarding the need for establishment of dental home, importance of early dental visits and, thereafter, regular routine dental

visit. Early dental visits aid in the early diagnosis of risk factors, provide effective parental counseling, allay anxiety, instill a positive behavior toward dentistry, provide anticipatory guidelines, and establish a dental home.

In present cross-sectional study, total 450 students were enrolled 150 each from dental, Ayurvedic and Medical College. It was observed that 72.7% students of dentistry, 34.0% of Ayurvedic and

44.0% medical students visited the dentist and only (7.33%) dental and (1.51%) Medical students visited at an early age (Table 1) whereas none of Ayurvedic student visited to dentist at early age, i.e. 0 to 5 year (Table 2), thus exhibiting low awareness of oral health among the study population. Considering other studies carried by Meera R et al. (2008)⁶, this estimated the age of first dental visit to be more than 6 years). According to Furze and Basso (2008)⁷, the first dental visit should be around the fourth month of intrauterine life. During this visit by the expectant mother, the dentist has an opportunity to explain the importance of the dental visit at 6 months of age, educate the mother on eruption of teeth and preventive procedures, and to provide parent counseling. The American Academy of Pediatric Dentistry also advocates a dental visit within the first year of life, which is strongly supported by the American Dental Association.⁸ The American Academy of Pediatrics recommends oral health risk assessment by 6 months of age and establishment of Dental Home for all infants by 12 months.⁹

It was documented in the present study that the most common reason for visiting the dentist was caries followed by tooth pain, irregular teeth, and routine dental checkup, for various other reasons, fracture/trauma, and ulcers in the oral cavity (Table 3) indicating that the visits were for interception rather than prevention of diseases. Similar results were reported by Meera et al. (2008)⁶, Nino et al (2010)¹⁰, Masiga et al (2004)¹¹.

We also evaluated the experience of first dental visit; majority of student (30.1%) had rated their first visit to dentist as excellent, whereas 1.3% had reported it to be painful (Table 5). Thus, a pleasant experience during first dental visit can serve as an effective measure to reduce anxiety and uncooperative behavior during subsequent dental visits.

In present study we also tried to evaluate oral health awareness amongst student of various health care professions. Oral health awareness found to be poor in among undergraduate Medical, Ayurvedic students. The results of the present study are in agreement with the study conducted by Usman et al (2007)¹², Doshi et al. (2007)¹³, where clinical Medical and Paramedical students and medical, engineering students showed poor oral health

knowledge respectively, and it is also in agreement with the study conducted by Aljrais MM et al. (2018), where pharmacy student showed less knowledge about oral health as compared to dental students.

Present study showed a low awareness level in the population, this could be due to less clinical exposure of the Medical and Ayurvedic students to oral health problems as they are occupied with their own academic activities and also because of negative attitude of the student towards oral health care.

The oral health awareness of Medical and Ayurvedic students can be improved by incorporating basic information about oral health in their academic curriculum, conducting various inter-disciplinary workshops, Continuing dental education programs and conferences, increasing the clinical exposure of the students to oral findings as most of the systemic diseases manifests in the oral cavity, special study modules or electives in oral health and disease should be created by involving the dental faculty, emphasizing the importance of oral health.

CONCLUSION

1. It is evident that the awareness regarding the importance of the first dental visit is very low in the study population, with an average age of the child's first dental visit being at > 6 years of age.
2. Students report for the first dental visit with complaints like pain and dental caries. Orientation to prevention is not considered and preventive dentistry is yet to reach the common population.
3. The present pioneer study shows poor oral health awareness among undergraduate Medical and Ayurvedic students, and Dental students were found to have better knowledge compared to Medical and Ayurvedic students.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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