

# Opinion of Engineering Students Towards Dental Advertisements in Khammam City, Telangana – A Cross Sectional Questionnaire Based Study

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**Abstract: Background:** Advertising is a means of communication with users or service. In today's world, advertising uses every possible media to get its message via television, print (newspapers, magazines) etc. So, advertising in Dentistry can empower people to make good decisions regarding oral health; increases awareness in community; encourage better quality services. The question of whether the dental advertisements would really benefit an individual/public to bring awareness of dental problems and treatments. **Aim:** To assess the opinion of Engineering students towards Dental advertising, with objectives: a) To assess the opinion of Engineering students towards Dental advertising among males b) To assess the opinion of Engineering students towards Dental advertising among females c) To compare the opinion of Engineering students towards dental advertising among males and females. **Material and Methods:** The study was conducted among Engineering students of Khammam; it includes convenience sampling and sample consisting of 372 students who were administered a questionnaire consisting of 11 questions regarding Dental advertisements. The data which is collected was entered into excel sheet and analysed using SPSS software version 21. Demographic data are analysed using Descriptive statistics and chi-square test was used to compare opinion towards dental advertisements based on gender. Significance was set at  $P < 0.05$ . **Results:** Out of 372 participants males were 249 and females were 123. Majority of the participants are in favour of Dental advertisements. **Conclusion:** The study concluded that the opinion of Engineering students was very positive towards Dental advertisements.

**Keywords:** Opinion, Dental advertisements, Engineering students.

## 1. Introduction

Advertising is a marketing communication that employs an openly sponsored, non-personal message to promote or sell a product, service or idea. Advertising is differentiated from public relations in that an advertiser pays for and has control over the message [1]. Advertising is communicated through various mass media, including newspapers, magazines, television, radio, outdoor advertising or direct mail and newer methods such as search results, blogs, social media, websites or

text messages. The actual presentation of the message in a medium is referred to as an advertisement: advert or ad for short [1], [2].

Professional advertising merely, is a relatively recent phenomenon. Professionals who offer their services are facing with many of the problem areas encountered by traditional business firms, e.g., a changing economic environment, social and cultural forces, political and legal factors, and increased competition. Many professionals find themselves ill-equipped to handle the dynamics of a changing environment, especially without some form of ongoing marketing plan [3], [4].

Opinion towards advertising is an important concept as it is one of the determinants of attitude towards specific advertisements and can influence the way a consumer will respond to any advertising [5], [6].

Youth are passive observers of many things, who tend to capture every message from the advertisements including Dental advertisements which directly or indirectly compel them to think on an agenda leading to positive or a negative consequence [7].

As, there are very few studies about assessing the opinion of Engineering students towards dental advertising in India. This study was undertaken with an aim to assess the opinion of Engineering students towards dental advertising, with objectives: a) To assess the opinion of Engineering students towards Dental advertising among males b) To assess the opinion of Engineering students towards Dental advertising among females c) To compare the opinion of Engineering students towards dental advertising among males and females.

## 2. Materials and Methods

**Ethical Clearance:** Ethical clearance was obtained from institutional ethical research committee.

**Study participants:** Participants were 1st, 2nd, 3rd year students of engineering college, Khammam, Telangana.

**Scheduling the study:** Study was scheduled from 15th September 2019 to 15th October 2019. Approval from college

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authority was taken and informed consent was obtained from students who are willing to participate.

*Study design:* Study was cross sectional in design and was conducted among engineering students. A convenience sampling method was followed.

*Study Tool:* The questionnaire contained closed ended questions assessing demographic characteristics along with participants' attitude on Dental advertisements. The study questionnaire was reviewed by a group of experts to ensure content validity. Then the pilot study was conducted on 40 participants (who were not a part of main study) by Investigator to check for the feasibility, relevance of proforma, regarding the time estimation to record the questionnaire for each study participant and to plan the survey accordingly. There was no difficulty faced by the participants during the entire pilot study procedure. Thus, the same questionnaire was re-administered after 2 weeks on the same sample for measuring test-retest reliability. The questionnaire was found to be suitable for application among the study population as there was high occurrence with the answers to the items on both the occasions (kappa test coefficient for all questions - 0.90). The questionnaire used in the pilot study was finalized and the same

was used in the main study.

### 3. Data collection and Data Analysis

Questionnaire was given to participants in their respective lecture halls during their break time and collected after completion. Students who are present on the day of survey and willing to participate are included. Students who are not present on the day of survey were excluded.

The data which is collected was entered into excel sheet and analysed using SPSS software version 21. Demographic data are analysed using Descriptive statistics and chi-square test was used to compare opinion towards dental advertisements based on gender. Significance was set at  $P < 0.05$

### 4. Results

#### A. Demographic characteristics of the study population

The study population consisted of 372 students. Table 1 depicts the distribution of study population based on Age, Gender and Year of study. The participants with mean age  $\pm$  SD of  $19.19 \pm 2.91$ . Majority of the students were from first year-158, 43% followed by third years -119, 32% and second years

Table 1  
Demographic characteristics of the study population

	Gender		Year of study			TOTAL
	M	F	I	II	III	
N	249	123	158	95	119	372
%	67%	33%	43%	25%	32%	100%
Mean age $\pm$ SD	19.19 $\pm$ 2.91					

Table 2  
Responses on research questions about dental advertising among males

S.No.	Questions	Males					
		Yes	%	No	%	Not Sure	%
1	In your view, is there any need for Dental advertising?	157	63.05	92	36.94	-	-
2	Did you gain information by watching dental advertisements?	152	61.04	97	38.95	-	-
3	Have you used any toothpaste based on advertisement in newspaper?	134	53.81	115	46.18	-	-
4	Did you find any dental advertisements in face book and Instagram?	53	21.28	195	78.31	1	0.40
5	Advertisements disclosing treatment plans, treatment costs and offers should be allowed in your view?	71	28.51	63	25.30	115	46.18
6	Did you visit Dentist after watching any advertisements?	45	18.07	203	81.52	1	0.40
7	Do you think advertisements provide awareness about Dental health?	202	81.12	46	18.47	1	0.40
8	Did you come across any newer Dental techniques by watching advertisements?	52	20.88	130	52.20	67	26.90
9	By watching advertisements, have you under-gone any advanced treatments?	60	24.09	189	75.90	-	-
10	Did you browse about any clinic to visit Dentist in Google after watching the advertisements in your local area?	34	13.65	215	86.34	-	-
11	Did you motivate your neighbours about Dental treatments after watching Dental ads?	89	35.74	160	64.25	-	-

Table 3  
Responses on research questions about dental advertising among females

S.No.	Questions	Females					
		Yes	%	No	%	Not Sure	%
1	In your view, is there any need for Dental advertising?	96	78.04	27	21.95	-	-
2	Did you gain information by watching dental advertisements?	88	71.54	35	28.45	-	-
3	Have you used any toothpaste based on advertisement in newspaper?	59	47.96	64	53.03	-	-
4	Did you find any dental advertisements in face book and Instagram?	34	27.64	89	72.35	-	-
5	Advertisements disclosing treatment plans, treatment costs and offers should be allowed in your view?	28	22.76	21	17.07	73	59.34
6	Did you visit Dentist after watching any advertisements?	15	12.19	108	87.80	-	-
7	Do you think advertisements provide awareness about Dental health?	104	84.55	19	15.44	-	-
8	Did you come across any newer Dental techniques by watching advertisements?	16	13	73	59.34	34	27.64
9	By watching advertisements, have you under-gone any advanced treatments?	18	14.63	105	85.36	-	-
10	Did you browse about any clinic to visit Dentist in Google after watching the advertisements in your local area?	10	8.13	113	91.86	-	-
11	Did you motivate your neighbours about Dental treatments after watching Dental ads?	36	29.26	87	70.73	-	-

Table 4  
Responses on research questions about dental advertising

S.No	Questions	Male						Female						P-Value
		Yes	%	No	%	Not Sure	%	Yes	%	No	%	Not Sure	%	
1	In your view, is there any need for Dental advertising?	157	42.2	92	24.4	-	-	96	25.8	27	7.2	-	-	0.004*
2	Did you gain information by watching dental advertisements?	152	40.8	97	26.0	-	-	88	23.6	35	0.88	-	-	0.046*
3	Have you used any toothpaste based on advertisement in newspaper?	134	36.0	115	30.9	-	-	59	15.8	64	17.2	-	-	0.288
4	Did you find any dental advertisements in face book and Instagram?	53	14.2	195	52.4	1	0.2	34	9.13	89	23.9	-	-	0.317
5	Advertisements disclosing treatment plans, treatment costs and offers should be allowed in your view?	71	19.0	63	16.9	115	30.9	28	7.5	21	5.6	73	19.6	0.036*
6	Did you visit Dentist after watching any advertisements?	45	12.0	203	54.5	1	0.2	15	4.0	108	29.0	-	-	0.266
7	Do you think advertisements provide awareness about Dental health?	202	54.3	46	12.3	1	0.2	104	27.9	19	5.1	-	-	0.594
8	Did you come across any newer Dental techniques by watching advertisements?	52	13.9	130	34.9	67	18.0	16	4.3	73	19.6	34	9.1	0.167
9	By watching advertisements, have you under-gone any advanced treatments?	60	16.1	189	50.8	-	-	18	4.8	105	28.2	-	-	0.035*
10	Did you browse about any clinic to visit Dentist in Google after watching the advertisements in your local area?	34	9.1	215	57.7	-	-	10	2.6	113	30.3	-	-	0.121
11	Did you motivate your neighbours about Dental treatments after watching Dental ads?	89	23.9	160	43.0	-	-	36	9.6	87	23.3	-	-	0.214

\*- Statistically significant, Chi-square test

- 95, 25%. Based on the gender, males were -249, 67%, and females were -123, 33%.

### B. Opinion responses on dental advertising

Table 2, 3 & 4 depicts responses on questions about Dental advertising among males and females.

Most of students were in favour of Dental advertising. Out of 123 female participants 96 (78.04 %) were in favour with Dental advertisements and out of 249 male participants 157 (63.05%) were in favour with Dental advertisements. On comparison among males and females it was found to be statistically significant ( $p=0.004$ ) (table 4).

With regard to whether the information on Dental health was gained by watching Dental advertisements, 152 (61.04%) of the males and 88 (71.5%) females agreed for the same. On comparison among participants (males and females) it was found to be statistically significant  $p=0.046$  (table 4).

The male participants 134 (53.8 %) and female participants 59 (47.96 %) had used toothpaste, based on the Dental advertisements in newspaper. This showed no significant difference between males and females (table 4).

Most of the participants in males 195 (78.35%) and females 89 (72.35%) did not notice any kind of Dental advertisements in Facebook and Instagram. This did not show any significant difference between males and females (table 4).

More than half of the female participants 73 (59.34%) and nearly half of the male participants 115 (46.18%) in their view, were not sure if treatment plans, costs of the treatment and offers given for the treatments must be disclosed in the advertisements. This has shown significant difference between males and females  $p=0.036$  (table 4).

Most of the participants in males 203 (81.52%) and females

108 (87.80%) agreed that they did not visit a Dentist after watching Dental advertisements. This did not show any significance between males and females (table 4).

The male participants 202 (81.12%) and female participants 104 (84.55%) were in agreement that Dental advertisements provide Dental health awareness among public. This has not shown any significant difference among males and females (table 4).

130 (52.20%) male participants and 73 (59.34%) female participants did not find any new dental techniques by watching dental advertisements.

Males 60 (24.09%) and females 18 (14.63%) participants have undergone advanced Dental treatments after watching the Dental advertisements. On comparing between males and females' significant difference was noticed  $p=0.035$  (table 4).

The males 215 (86.34%) and females 113(91.86%) did not browse for any Dental clinic in google to visit a Dentist after watching Dental advertisements in their local area. This has not shown any significant difference between males and females (table 4).

Males 89 (35.74%) and females 36 (29.26%) have motivated their neighbours about various Dental treatments after watching the Dental advertisements. No significant difference was found between males and females (table 4).

## 5. Discussion

The purpose of the study was to assess the opinion of engineering students. towards dental advertising. This cross-sectional Questionnaire based study was conducted on 372 Engineering students including both males and females aged 18-25 years old from Khammam city, Telangana state.

Majority of participants were in favour of Dental advertising which was in accordance with the study conducted by S. Jalan et al (2020)<sup>7</sup>, Dable et al (2011)<sup>8</sup> and majority of them gained information and awareness by watching Dental advertisements. This attributes to the reason that youth are passive observers in capturing every message from the advertisements which compel them to think on an agenda interesting for them.

Most of the participants did not find any Dental advertisements in Facebook and Instagram. Probably they did not face any Dental health problem until then and also reason for this could be that the students were not particularly searching for Dental Health.

Most of the participants did not visit a Dentist after watching Dental advertisements may be because, they did not suffer from any Dental Health problem in their lifetime.

According to the current study the opinion towards usage of a toothpaste based on the Dental advertising was more among the participants as the students are passive observers who tend to capture and have great influence of the celebrities who promote dental products in the Dental advertisement.

In the present study the opinion towards gaining information after watching Dental advertisements was more in females. This may be because females in general are more active in watching Television.

In the current study most of the participants mentioned that they did not undergo any advanced Dental treatments by watching Dental advertisements. The probable reason could be that they have not experienced any serious dental problems until then or maybe they would prefer meeting the Dentist personally and then take a decision regarding the Dental treatment.

## 6. Conclusion

The current study concluded the opinion of Engineering students towards advertising is very positive. Advertising can be a powerful tool in resulting awareness among students. But to be effective, Dentists must utilize media and different advertising methods. Very less research has been conducted on this topic, hence there is a need for further research.

### *Limitation of the study:*

As the study was conducted in a single institution with a small sample, the generalization of findings should be done with caution.

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