

Awareness of orthodontic treatment need in young adults between 18-25 years

Anirudh K Mathur¹, Swaroopa Ponnada^{2,*}, NKS Aravind³, T.V. Pavan⁴, Prasad Chitra⁵

^{1,3}Reader, Dept. of Orthodontics, Army College of Dental Sciences, Telangana, ²Reader, Dept. of Orthodontics, Panineeya Dental College, Telangana, ⁴PG Student, ⁵Professor and Head, Dept. of Orthodontics, Army College of Dental Sciences, Telangana, India

***Corresponding Author:**

Email: swaroopaponnada@gmail.com

Abstract

Introduction: Health is defined by WHO as 'a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

Objectives: There is a need to identify levels of awareness with respect to Orthodontic treatment need in the adult group of patients who comprise the majority of orthodontic patients.

Materials and Methods: A survey of 14 questionnaire was conducted among the students of various colleges in Hyderabad and Secunderabad, India. A total of 808 young adult patients of age group of 18-25 years were included in the study.

Data Analysis: Chi-square test, unpaired t test and one way ANOVA were performed.

Results and Discussion: Most of the students participated in the survey responded that they noticed people with crooked teeth and had seen people wearing braces (76.73% and 83.91% respectively). However, when asked the need for wearing braces, most of them responded as not required (74.13%). Around 52% felt that the orthodontic treatment is longer. 73.39% felt that the treatment is costly. Around 52% felt that the orthodontic treatment is longer. 73.39% felt that the treatment is costly.

Conclusion: The study's main purpose was to know the levels of awareness of orthodontic treatment need among young adults, there by educating them by posing these questions as this age group is considered to be potential orthodontic patients.

Keywords: Awareness, Survey, ANOVA.

Introduction

Health is defined by WHO as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. It is influenced by various factors such as genes, lifestyle, environment, socio-economic status. Oral health is an important component of Health. It can affect the general health, social well-being, development and education. The social target of WHO is to attain a level of health that enables people to lead a socially and economically productive life.^{1,2}

Awareness is defined as the state or quality of being aware of something. There is a need to identify levels of awareness with respect to Orthodontic treatment need in the adult group of patients who comprise the majority of orthodontic patients. Earlier studies were conducted to assess the awareness levels of oral health and need for orthodontic treatment among pre- adolescent and adolescents.³⁻⁶ The present study was undertaken to study the levels of awareness among young adults.

Materials and Methods

A survey was conducted among the students of various colleges in Hyderabad and Secunderabad, India. A total of 808 young adult patients of age group of 18-25 years were included in the study.

Ethical committee clearance was obtained from ethical committee of Army College of Dental Sciences to conduct the study and prior permissions were obtained from college management authorities.

Inclusion Criteria:

1. Students with age group of 18-25 years
2. No prior history of orthodontic treatment
3. Healthy adults

Exclusion Criteria:

1. Subjects who underwent orthodontic treatment
2. Subjects with cranio- facial anomalies like cleft lip and palate

Methodology

A pre-structured questionnaire consisting of 14 questions were given to the subjects. They were instructed to give the answers as YES/NO. Pilot study was done to validate the closed ended questionnaire. Based on the results of pilot study the sample size was decided to be 750. The total sample composed of 808 subjects, including 491 males and 317 females.

The following questionnaire was given:

1. Have you ever noticed people with irregular teeth?
a) Yes b) No
2. Have you seen people wearing braces? a) Yes b) No
3. Have you ever felt the need to wear braces? a) Yes b) No
4. Do you think crooked teeth could have ill effects if left untreated? a) Yes b) No
5. Could thumb sucking have any ill effect on front teeth alignment? a) Yes b) No
6. Do you believe teeth should be properly aligned for better facial appearance and chewing efficiency? a) Yes b) No

7. Has anyone advised you to get your teeth aligned?
a) Yes b) No
8. Have you ever visited a dentist before? a) Yes b) No
9. Do you know any specialized branch in dentistry?
a) Yes b) No
10. Did you ever hear of an Orthodontist? a) Yes b) No
11. Are you aware that Orthodontists can align your teeth? a) Yes b) No
12. Are you aware that sometimes, A few teeth may have to be removed for aligning irregular teeth? a) Yes b) No
13. Do you think the duration of Orthodontic treatment is longer than other dental procedures? a) Yes b) No
14. Do you think Orthodontic treatment is costly? a) Yes b) No

Data Analysis

Statistical analysis was done using SPSS software. The following analysis was done.

1. Chi-square test
 2. Unpaired t test
 3. One way ANOVA followed by posthoc procedures
- The results are tabulated and statistical figures were drawn.

Table 1: Comparison of male and females with opinion on Q. No. 1: Have you ever noticed people with irregular teeth

Gender	Yes	%	No	%	Total	%
Male	372	75.76	119	24.24	491	60.77
Female	248	78.23	69	21.77	317	39.23
Total	620	76.73	188	23.27	808	100.00
Chi-square= 0.6582 P = 0.4171						

Table 2: Comparison of male and females with opinion on Q. No. 2: Have you seen people wearing braces

Gender	Yes	%	No	%	Total	%
Male	398	81.06	93	18.94	491	60.77
Female	280	88.33	37	11.67	317	39.23
Total	678	83.91	130	16.09	808	100.00
Chi-square= 7.5392 P = 0.0061*						

*p<0.05

Table 3: Comparison of male and females with opinion on Q. No. 3: Have you ever felt the need to wear braces

Gender	Yes	%	No	%	Total	%
Male	132	26.88	359	73.12	491	60.77
Female	77	24.29	240	75.71	317	39.23
Total	209	25.87	599	74.13	808	100.00
Chi-square= 0.6764 P = 0.4113						

Table 4: Comparison of male and females with opinion on Q. No. 4: Do you think crooked teeth could have ill effects if left untreated

Gender	Yes	%	No	%	Total	%
Male	332	67.62	159	32.38	491	60.77
Female	218	68.77	99	31.23	317	39.23
Total	550	68.07	258	31.93	808	100.00
Chi-square= 0.1184 P = 0.7315						

Table 5: Comparison of male and females with opinion on Q. No. 5: Could thumb sucking have any ill effects on front teeth alignment

Gender	Yes	%	No	%	Total	%
Male	279	56.82	212	43.18	491	60.77
Female	155	48.90	162	51.10	317	39.23
Total	434	53.71	374	46.29	808	100.00
Chi-square= 4.8694 P = 0.0273*						

*p<0.05

Table 6: Comparison of male and females with opinion on Q. No. 6: Do you believe teeth should be properly aligned for better facial appearance and chewing efficiency

Gender	Yes	%	No	%	Total	%
Male	427	86.97	64	13.03	491	60.77
Female	278	87.70	39	12.30	317	39.23
Total	705	87.25	103	12.75	808	100.00
Chi-square= 0.0935 P = 0.7614						

Table 7: Comparison of male and females with opinion on Q. No. 7: Has anyone advised you to get your teeth aligned

Gender	Yes	%	No	%	Total	%
Male	134	27.29	357	72.71	491	60.77
Female	71	22.40	246	77.60	317	39.23
Total	205	25.37	603	74.63	808	100.00
Chi-square= 2.4372 P = 0.1191						

Table 8: Comparison of male and females with opinion on Q. No. 8: Have you ever visited a dentist before

Gender	Yes	%	No	%	Total	%
Male	147	29.94	344	70.06	491	60.77
Female	96	30.28	221	69.72	317	39.23
Total	243	30.07	565	69.93	808	100.00
Chi-square= 0.0113 P = 0.9172						

Table 9: Comparison of male and females with opinion on Q. No. 9: Do you know any specialized branch in dentistry

Gender	Yes	%	No	%	Total	%
Male	168	34.22	323	65.78	491	60.77
Female	58	18.30	259	81.70	317	39.23
Total	226	27.97	582	72.03	808	100.00
Chi-square= 24.2316 P = 0.0001*						

*p<0.05

Table 10: Comparison of male and females with opinion on Q. No. 10: In your opinion did you hear about an Orthodontist

Gender	Yes	%	No	%	Total	%
Male	215	43.79	276	56.21	491	60.77
Female	154	48.58	163	51.42	317	39.23
Total	369	45.67	439	54.33	808	100.00
Chi-square= 1.7833 P = 0.1822						

Table 11: Comparison of male and females with opinion on Q. No. 11: Are you aware that orthodontist can align your teeth

Gender	Yes	%	No	%	Total	%
Male	276	56.21	215	43.79	491	60.77
Female	154	48.58	163	51.42	317	39.23
Total	430	53.22	378	46.78	808	100.00
Chi-square= 4.5068 P = 0.0347*						

*p<0.05

Table 12: Comparison of male and females with opinion on Q. No. 12: Are you aware that sometimes, a few teeth may sometimes have to be removed for aligning irregular teeth

Gender	Yes	%	No	%	Total	%
Male	312	59.32	214	40.68	526	65.10
Female	179	63.48	103	36.52	282	34.90
Total	491	60.77	317	39.23	808	100.00
Chi-square= 1.3322 P = 0.2481						

Table 13: Comparison of male and females with opinion on Q. No. 13: Do you think duration of orthodontic treatment is longer than other dental procedures

Gender	Yes	%	No	%	Total	%
Male	251	51.12	240	48.88	491	60.77
Female	163	51.42	154	48.58	317	39.23
Total	414	51.24	394	48.76	808	100.00
Chi-square= 0.0073 P = 0.9342						

Table 14: Comparison of male and females with opinion on Q. No. 13: Do you think orthodontic treatment is costly?

Gender	Yes	%	No	%	Total	%
Male	357	72.71	134	27.29	491	60.77
Female	236	74.45	81	25.55	317	39.23
Total	593	73.39	215	26.61	808	100.00
Chi-square= 0.2983 P = 0.5852						

Table 15: Male and females comparison in each question

Questions	Gender	Yes	%	No	%	Total	%
1. Have you ever noticed people with irregular teeth	Male	372	75.76	119	24.24	491	60.77
	Female	248	78.23	69	21.77	317	39.23
	Total	620	76.73	188	23.27	808	100.00
2. Have you seen people wearing braces	Male	398	81.06	93	18.94	491	60.77
	Female	280	88.33	37	11.67	317	39.23
	Total	678	83.91	130	16.09	808	100.00
3. Have you ever felt the need to wear braces	Male	132	26.88	359	73.12	491	60.77
	Female	77	24.29	240	75.71	317	39.23
	Total	209	25.87	599	74.13	808	100.00
4. Do you think crooked teeth could have ill effects if left untreated	Male	332	67.62	159	32.38	491	60.77
	Female	218	68.77	99	31.23	317	39.23
	Total	550	68.07	258	31.93	808	100.00
5. Could thumb sucking have any ill effects on front teeth alignment	Male	279	56.82	212	43.18	491	60.77
	Female	155	48.90	162	51.10	317	39.23
	Total	434	53.71	374	46.29	808	100.00
6. Do you believe teeth should be properly lined for better facial appearance and chewing efficiency	Male	427	86.97	64	13.03	491	60.77
	Female	278	87.70	39	12.30	317	39.23
	Total	705	87.25	103	12.75	808	100.00
7. Has anyone advised you to get your teeth aligned	Male	134	27.29	357	72.71	491	60.77
	Female	71	22.40	246	77.60	317	39.23
	Total	205	25.37	603	74.63	808	100.00
8. Have you ever visited a dentist before	Male	147	29.94	344	70.06	491	60.77
	Female	96	30.28	221	69.72	317	39.23
	Total	243	30.07	565	69.93	808	100.00
9. Do you know any specialized branch in dentistry	Male	168	34.22	323	65.78	491	60.77
	Female	58	18.30	259	81.70	317	39.23
	Total	226	27.97	582	72.03	808	100.00
10. In your opinion did you hear about an Orthodontist	Male	215	43.79	276	56.21	491	60.77
	Female	154	48.58	163	51.42	317	39.23
	Total	369	45.67	439	54.33	808	100.00
11. Are you aware that orthodontist can align your teeth	Male	276	56.21	215	43.79	491	60.77
	Female	154	48.58	163	51.42	317	39.23
	Total	430	53.22	378	46.78	808	100.00
12. Are you aware that sometimes, a few teeth may sometimes have to be removed for aligning irregular teeth	Male	312	59.32	214	40.68	526	65.10
	Female	179	63.48	103	36.52	282	34.90
	Total	491	60.77	317	39.23	808	100.00

13. Do you think duration of orthodontic treatment is longer than other dental procedures	Male	251	51.12	240	48.88	491	60.77
	Female	163	51.42	154	48.58	317	39.23
	Total	414	51.24	394	48.76	808	100.00
14. Do you think orthodontic treatment is costly?	Male	357	72.71	134	27.29	491	60.77
	Female	236	74.45	81	25.55	317	39.23
	Total	593	73.39	215	26.61	808	100.00

Discussion

The study was designed to determine awareness of orthodontic treatment need among young adults. A questionnaire was given to 808 in different educational institutions. Most of the students participated in the survey responded that they noticed people with crooked teeth and had seen people wearing braces (76.73% and 83.91% respectively). However, when asked the need for wearing braces, most of them responded as not required (74.13%). Majority of the students responded on a positive note when questioned about functional ill effects with malocclusion showing that awareness among young adults is good about oral health. On the contrast when questioned about visiting a dentist majority of them have not visited a dentist and had no knowledge about specializations in dentistry (69.93% and 72.03%). Through the survey it is inferred that 54% of students were unaware of orthodontist and 46% claim to know who an Orthodontist is. Majority responded that in few cases teeth will have to be removed for aligning the irregular teeth. (60.77%). Around 52% felt that the orthodontic treatment is longer. 73.39% felt that the treatment is costly.

Earlier studies were done by Roopa Siddegowda and MS Rani^{2,4,5} among school children based on origin and different socio-economic backgrounds and concluded that the awareness among school children was average and there was a need to educate children on oral health and malocclusion related problems. The present study is unique in its kind as the subjects taken are young adults who are supposed to be potential orthodontic patients.

Conclusion

The study's main purpose was to know the levels of awareness of orthodontic treatment need among young adults, there by educating them by posing these questions as this age group is considered to be potential orthodontic patients. The survey will be useful to the community, dental professionals to provide the students with awareness programs and treatment possibilities.

References

1. Mahajan BK. Social Environment. Text book of Preventive and Social Medicine. 1st Ed. New Delhi, Jaypee Brothers Medical Publishers (P) Ltd;29-35.
2. Siddegowda R. Evaluating the awareness of Orthodontic treatment among school children of different Socio-economic grounds. *International Journal of Scientific Research*. 2013;2(7):370-371.
3. Muqtadir Quadri SM, Thilagarani PR et al. Awareness towards orthodontic treatment in central Indian school children. *Sch. J. Dent. Sci.*,2015;2(1):45-48.
4. Siddegowda R, Rani MS. An epidemiological survey on awareness towards Orthodontic treatment in South Indian school children. *Open Journal of Dentistry and Oral medicine*. 2013;1(1):5-8.
5. Siddegowda R, Rani MS. Awareness of Orthodontic Treatment in school children of Karnataka state- A survey. *Journal of Applied Physics*.2013;4(2):1-5.
6. Rafighi A, Moghaddam SF. Awareness of Orthodontic treatments among school teachers of two cities of Iran. *J Dent Res Clin Dent Prospect* 2012;6(1):25-28.