

AWARENESS AND KNOWLEDGE REGARDING MALOCCLUSION AMONG YOUNG ADULTS- A QUESTIONNAIRE SURVEY

Running title:Malocclusion among young adults

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Abstract

Introduction: Malocclusion is commonly seen dental anomaly. Awareness regarding malocclusion among youth forms basis for oral health status planning.

Objectives:*To assess awareness and knowledge regarding malocclusion among young adults.*

Materials & Methods:*The present study was conducted among 580 subjects age ranged 17-22 years of both genders. All subjects were thoroughly examined by a single orthodontic surgeon. Subjects were instructed to respond to the questionnaire which was given in their language.*

Results:*Out of 580 subjects, males comprised of 310 (53.4%) and females 270 (46.6%). 408 (70.3%) knew that beautiful smile adds to personality, 152 (26.3%) had no idea and 20 (3.4%) replied no. 435 (75%) were confident about their smile, 23 (3.9%) were not and 122 (21.2%) do not know. 255 (43.9%) were confident about their teeth, 300 (51.7%) were not and 25 (4.3%) do not know. 150 (25.8%) thought that crowded teeth can affect speech, 256 (44.1%) replied chewing and 174 (30%) replied esthetics. 290 (50%) replied that crowded teeth can cause gum problems, 180 (31%) replied cavity and 110 (18.9%) replied pain. There was lack of knowledge regarding braces and most of them never visited dentist.*

Conclusion:*Authors found that there was lack of awareness among adults regarding orthodontic need. There was lack of satisfaction level regarding the appearance of teeth.*

Key words:*Awareness, Malocclusion, Knowledge*

Introduction

Malocclusion is commonly seen dental anomaly among large number of population. ¹It is considered third most frequently occurring oral pathology next to dental caries and periodontal diseases. There are several reasons for malocclusion. ²These are incorrect oral habits such as mouth breathing, tongue thrusting, lip biting, anomalies in shape, number and developmental position of teeth, TMJ abnormalities, etc. Premature loss of deciduous teeth is also considered one of the cause of malocclusion. ³

Malocclusion is malalignment of teeth between two arches when they come in contact to each other. Angle's class I molar relation is ideal and it is occlusion of mesio- buccal cusp of maxillary first molar with mesio- buccal groove of mandibular first molar. ⁴ Crowding, rotation, transposition, spacing, proclination, retroclination, deep bite, open bite, cross bite etc. are components of malocclusion. The effect of malocclusion can be seen on chewing capacity, speaking etc. ⁵

In today's modern life, everybody wants to look beautiful. Hence in the last couple of years, there has been more concern about esthetic regarding appearance of teeth especially in young adults. ⁶ Therefore the number of subjects seeking orthodontic treatment has risen significantly. Various treatment modalities are available to treat malocclusion depending upon the type. Malocclusion strongly affects the oral health related quality of life. ⁷

Awareness regarding malocclusion among youth is the matter of discussion. It forms basis of planning for oral health status. Though there is increase in awareness towards esthetic especially among young adults, they do report in later stages leading to delay and prolonged treatment. ⁸ Considering this, the present study assessed awareness regarding malocclusion among young adults.

Materials & Methods

The present study was conducted among 580 subjects age ranged 17-22 years of both genders in the department of Orthodontics, Al Ameen Dental College, Vijayapura, India. Inclusion criteria were subject's age ranged 17-22 years. Exclusion criteria were subjects below 17 years and above 22 years and those not giving consent. The study approval was obtained from

institutional ethics committee. All subjects were informed regarding the study and their written consent was obtained in vernacular language.

Subject's information such as name, age, gender etc. was recorded in case history Performa. Considering, (p)= 500 as the minimum subjects with 9% margin of error, formula used

was, $n = \frac{Z_{\alpha/2}^2 pq}{d^2}$, where p is number of subjects, q = 1 – p, d is the margin of error, $Z_{\alpha/2}$ is the

ordinate of standard normal distribution at $\alpha\%$ level of significance. Thus 580 subjects were selected.

This questionnaire survey was done from period April 2019 to September 2019. The study was done by trained investigator. A questionnaire was prepared and distributed among subjects who comprised of smile, personality, self-confidence etc. Subjects were instructed to respond to the questionnaire which was given in their language. Response was recorded. Results were expressed as frequency, mean and percentage. SPSS version 19.0 was used for the study. Significance level was set at 0.05.

Results

Table 1 shows that out of 580 subjects, males comprised of 310 (53.4%) and females 270 (46.6%). Table 2 shows that 408 (70.3%) knew that beautiful smile adds to personality, 152 (26.3%) had no idea and 20 (3.4%) replied no. 435 (75%) were positive about their smile, 23 (3.9%) were not and 122 (21.2%) do not know. 255 (43.9%) were happy about their teeth, 300 (51.7%) were not and 25 (4.3%) do not know. 150 (25.8%) thought that irregular teeth can influence speech, 256 (44.1%) replied chewing and 174 (30%) replied esthetics. 290 (50%) replied that crowded teeth can cause gum problems, 180 (31%) replied cavity and 110

(18.9%) replied pain. 410 (70.8%) were aware of mouth breathing, tongue thrusting, lip biting, thumb sucking, 15 (2.5%) replied no and 155 (26.7%) replied do not know. 180 (31.1%) replied that all these parafunctional habits affect occlusion, 130 (22.4%) replied no and 270 (46.5%) do not know. 270 (46.6%) replied that correction of malocclusion requires lots of money and time, 45 (7.8%) replied no and 265 (45.6%) replied do not know. 260 (44.8%) had visited a dentist in the last 1 year while 320 (55.15%) no. 370 (63.7%) had no idea about invisible braces. The difference was significant ($P < 0.05$).

Discussion

Malocclusion can be seen during a routine dental checkup. The treatment of malocclusion is done by an orthodontist who is a specialist in correcting such problems.⁹ Braces are the most commonly used treatment option for malocclusions.¹⁰ There are different types of malocclusion, the most common one is Angle's class II division I in which there is increased overjet and overbite due to proclined maxillary anterior teeth.¹¹ Spacing, rotation, and crowding are among commonly encountered anomalies.¹² The present study assessed awareness regarding malocclusion among young adults.

Faizee et al. conducted a cross-sectional study among 1000 young adults aged 18-22 years and found that > 70% of the subjects had concern and interest in self-image. It was found that 39.9% of subjects were unhappy with the arrangement of their teeth. There was a general deficiency of knowledge about the etiology and malocclusion effect among the subjects. Most of the participants in the past 3 years, have not visited a dentist. Most of them had a false opinion for orthodontic treatment.¹³

We found that 408 knew that beautiful smile adds to personality, 152 had no idea and 20 replied no. Reddy et al in their study, a total of 75 people responded. The responded were adolescents in the age range of 11–18 years.⁹ Adolescents presented mostly with malocclusion, crowding and spaces in between the teeth.

Harish et al found out most of the subjects had never visited a dentist before neither the orthodontist & area of specialization. They were made aware about their malalignment of teeth by other people of the society & were not yet aware of the functioning of the orthodontist. They never know about the side effects of improperly positioned teeth. Subjects showed awareness that such treatment could take more than 2 years.¹⁴

Feldens et al included 704 adolescents aged 12- 13 years and assessed orthodontic need using the Dental Aesthetic Index (DAI). Authors found that the prevalence of the desire for orthodontic treatment was 69.6%. There was higher outcome more prevalent among girls, and there was significantly higher among those who had difficult chewing, those dissatisfied with their dental appearance and those with greater malocclusion severity.¹⁵

Assessment of knowledge and awareness about orthodontic need in adults may be useful in deciding the better management.

The restraint of the study was smaller sample range. Further long term study is required on larger sample to evaluate the knowledge attitude of adolescent towards orthodontic dental treatment.

Conclusion

Authors found that there was lack of awareness among adults regarding orthodontic need. There was lack of satisfaction level regarding the appearance of teeth.

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Legends for illustrations

Tables

Table1: Distribution of subjects

| Total- 580 | | |
|-------------------|--------------|----------------|
| Gender | Males | Females |
| Number | 310 (53.4%) | 270 (46.6%) |

Table 2: Questionnaire used in the study

| Questionnaire | Number | Percentage | P value |
|-----------------------------------------------------|---------------|-------------------|----------------|
| 1. Beautiful smile adds to your personality? | | | |
| a. Yes | 408 | 70.3 | 0.01 |
| b. No | 20 | 3.4 | |
| c. Do not know | 152 | 26.3 | |
| 2. Are you positive about your smile? | | | |
| a. Yes | 435 | 75 | 0.02 |
| b. No | 23 | 3.9 | |
| c. Do not know | 122 | 21.2 | |
| 3. Are you happy about your teeth? | | | |
| a. Yes | 255 | 43.9 | 0.91 |
| b. No | 300 | 51.7 | |
| c. Do not know | 25 | 4.3 | |
| 4. What do you think irregular teeth can influence? | | | |
| a. Speech | 150 | 25.8 | 0.01 |
| b. Esthetics | 174 | 30 | |
| c. Chewing | 256 | 44.1 | |

| | | | |
|-----------------------------------------------------------------------------------|-----|------|------|
| 5. What do you think crowded teeth can result? | | | |
| a. Pain | 110 | 18.9 | 0.05 |
| b. Cavity | 180 | 31 | |
| c. Gum problems | 290 | 50 | |
| 6. Are you aware of mouth breathing, tongue thrusting, lip biting, thumb sucking? | | | |
| a. Yes | 410 | 70.8 | 0.01 |
| b. No | 15 | 2.5 | |
| c. Do not know | 155 | 26.7 | |
| 7. Do you think all these parafunctional habits affect occlusion? | | | |
| a. Yes | 180 | 31.1 | 0.02 |
| b. No | 130 | 22.4 | |
| c. Do not know | 270 | 46.5 | |
| 8. Do you think correction of malocclusion require lots of money and time? | | | |
| a. Yes | 270 | 46.6 | 0.05 |
| b. No | 45 | 7.8 | |
| c. Do not know | 265 | 45.6 | |
| 9. Have you visited your dentist in last 1 year? | | | |
| a. Yes | 260 | 44.8 | 0.81 |
| b. No | 320 | 55.1 | |
| 10. Do you know about invisible braces? | | | |
| a. Yes | 210 | 36.3 | 0.01 |
| b. No | 370 | 63.7 | |