

Assessment of Public Awareness among Local population of Bhavnagar regarding Orthodontics and its treatment using a questionnaire web based survey.

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Abstract

Background: Awareness of malocclusion and the need to make corrections has increasingly become prevalent among our population. As the growing public interest in oral health increased, the demand for orthodontic treatment also became more noticeable in dental practices. Enhancing appearances and improving psychosocial statuses have been identified as important motivating factors behind the decision to initiate orthodontic treatment. This survey was formulated to investigate the awareness of local population towards Orthodontic treatment and to create awareness of orthodontic treatment among them.

Aims and Objectives: There is a paucity of data about the awareness of orthodontic treatment among the Local population of Bhavnagar, Gujarat. Therefore the rationale for this study was to assess the awareness of the local population towards orthodontic problems and its treatment of those who visited the college of Dental Science, Amargadh, Bhavnagar.

Materials and Methods: A questionnaire web based survey consisting of 15 questions on awareness regarding orthodontics and treatment was conducted and assessed using percentage among 555 participants.

Result: A total 23.8% people have not noticed other people having irregular teeth and 33% do not know that irregular teeth can be aligned. 39.1% of people do not know the ill effects of irregular teeth and 48.3% of people do not know the ill effects of oral habits on teeth; 30.8% people believe that aligned teeth does not contribute for better facial appearance; and 45% people were advised for aligning their teeth in the past. A total of 85% people have seen other people wearing braces; 61.3% of people know the duration for braces is longer; 45% of people have been advised to get their teeth aligned; 51.7% of people know that oral habits can be treated using braces; 65.9% of people know the cost for orthodontic treatment is high. 32.6% of people have taken orthodontic treatment and 60.7% people

noticed change in smile after orthodontic treatment.

Conclusion: People in our region comparatively lack awareness regarding advances and various techniques in orthodontic treatment. Although people are concerned regarding their facial look, lack of knowledge regarding orthodontics make them unapproachable to an orthodontist.

Key Words: Awareness, Local population, orthodontic treatment, Web based survey

Introduction

Oral health can affect the general health, well-being, and development of children. In many of the countries, large number of parents and children are unaware of the knowledge about the causes, occurrence and prevention of most of the common oral diseases. One of the most common dental problems in mankind along with dental caries, gingival disease, and dental fluorosis is malocclusion.¹ The specialty of orthodontics relates to facial and occlusal development and involves the supervision, interception, and correction of occlusal and dentofacial anomalies known as malocclusion.² Malocclusion can be defined as an occlusion in which there is mal-relationship between the arches in any of the planes or there are anomalies in tooth

and symptoms, but may complain about esthetics, difficulty with speech, and mastication. However, malocclusion is still not considered to be a dental problem because more priority is given to the treatment of dental caries and periodontal diseases due to pain experienced by them.⁴

The prevalence of malocclusion has been found to vary in different countries, ranging from 20 to 43% in India.^{5,6} from 20 to 35% in the United States.⁷ 62.4% in Saudi Arabia.⁸ and 88.1% in Colombia.⁹ In Nigeria, a prevalence of 87.7% was reported among children in the north.¹⁰ 76% in Ibadan¹¹ and 84.1% in Benin.¹² Maloccluded teeth can cause psychosocial problems related to impaired dentofacial esthetics.¹³

Malocclusion may also lead to problems of oral cavity (traumatic bite and cheek bite), and it may also be one of the factors for rejection during marriage proposals. The uptake of orthodontic treatment is influenced by the desire to look attractive, self esteem, and self perception of dental appearance.¹⁴The early management of malocclusion is important because of its impact on self-esteem and quality of life.¹⁵

Oral health is a comfortable and functional dentition that allows individuals to continue their social role.¹⁶ Oral health knowledge is considered to be an essential prerequisite for health-related behavior.¹⁷ Both perceived need and demand vary with social and cultural conditions, but the most important motivation for orthodontic treatment is usually an improvement in appearance.¹⁸ There is a paucity of data about the awareness of orthodontic treatment among local population. Thus, the study was conducted to find out the awareness toward orthodontic treatment among Local population through web based survey technique. Which is a recent innovation in survey technique (One of most widely utilized survey methods). Web based survey have become more prevalent in areas such as evaluation research than paper based survey. Web survey is collection of large amount of information through self-administered electronic set of questions on

the web without having to pay for interviewers, paper supplies or postage and doesn't require separate data entry for responses to be processed. The rise in web based survey is due to the increasingly widespread availability of computers , social networking sites and the aim of this study was to assess public awareness towards orthodontics and its treatment using web based survey technique.¹⁹

Materials and Methods

A web based survey was conducted through an online questionnaire (prepared in Google forms software) composing of 15 questions and was assessed using the percentage with an intention of evaluating orthodontic treatment awareness among the 555 participants who visited the college of Dental Sciences Amargadh, Bhavnagar (between 18-70 years of age for two week in August 2020), which was conducted using a social networking site. Questionnaire was prepared in English to facilitate completion and to get better understanding of the questions by the respondents. Online questionnaires were administered through laptop/ smart phones. All the respondents were informed about the aims and objective of the study. A web-based questionnaire helped in ease of data collection, recording, and maintenance of data for statistical analysis. The additional advantages were cost benefits and reduced time consumption.

The data obtained from an online form were available instantly and could be easily transferred into specialized statistical software or spread sheets for further analysis. Inclusion criteria were Persons aged between 18 to 70 years and Well educated subject (computer literate and had capability of understanding orthodontics and its treatment related questions). Exclusion criteria were Persons below 18 years and above 70 years and those who didn't have computer knowledge and capability of understanding the related questions. Distribution of responses was examined using frequencies and percentages. Descriptive statistics were presented for the scores of questionnaire.

QUESTIONNAIRE-

Q-1 Have you ever visited dental clinic before ?

- (a) Yes
- (b) No

Q-2 Have you noticed people having irregular teeth ?

- (a) Yes
- (b) No

Q-3 Have you faced any problem due to irregular teeth in day to day life ?

- (a) Yes

- (b) No

Q-4 Have you seen people wearing braces ?

- (a) Yes
- (b) No

Q-5 Do you know that irregular teeth can be aligned by orthodontic treatment ?

- (a) Yes
- (b) No

Q-6 Do you believe that teeth should be properly aligned for better facial appearance ?

- (a) Yes
- (b) No

Q-7 Have anyone advised you to get your teeth aligned ?

- (a) Yes
- (b) No

Q-8 Are you aware that sometimes few teeth may have to be removed for aligning irregular teeth ?

- (a) Yes
- (b) No

Q-9 Do you know that oral habits have ill effect on teeth ?

(a) Yes

(b) No

Q-10 Are you aware that oral habits can be treated using orthodontic treatment? (like thumb sucking , mouth breathing , sleep apnea, tongue thrusting, lip sucking, lip biting etc)

(a) Yes

(b) No

Q-11 Are you aware that orthodontic treatment is costly ?

(a) Yes

(b) No

Q-12 Are you aware that orthodontic treatment takes long time to get over?

(a) Yes

(b) No

Q-13 Have you taken orthodontic treatment ?

(a) Yes

(b) No

Q-14 After orthodontic Treatment did you notice any change in your personality ?

(a) Yes

(b) No

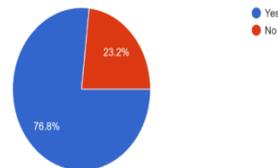
Q-15 Have you seen anyone's smile become very pleasant after orthodontic treatment ?

(a) Yes

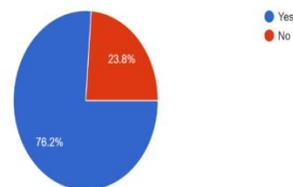
(b) No

RESULTS

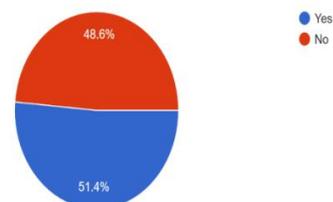
Have you ever visited dental clinic before ?
555 responses



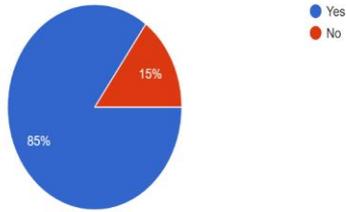
Have you noticed people having irregular teeth ?
555 responses



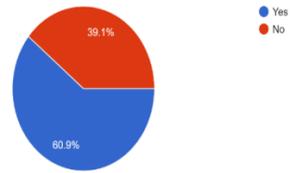
Have you faced any problem due to irregular teeth in day to day life ?
555 responses



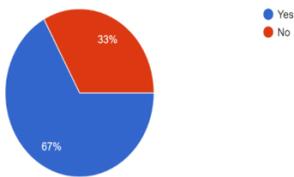
Have you seen people wearing braces ?
553 responses



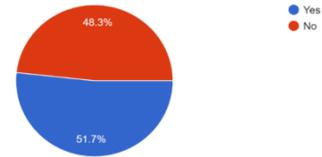
Do you know that oral habits have ill effect on teeth ?
555 responses



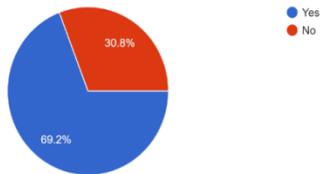
Do you know that irregular teeth can be aligned by orthodontic treatment ?
555 responses



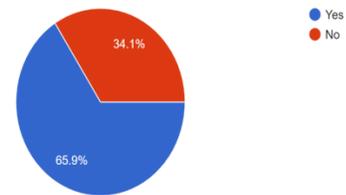
Are you aware that oral habits can be treated using orthodontic treatment ?(like thumb sucking , mouth breathing , sleep apnea, tongue thrusting , lip sucking , lip biting etc)
555 responses



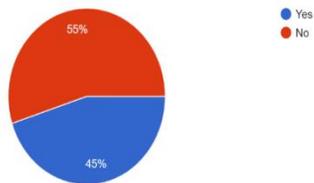
Do you believe that teeth should be properly aligned for better facial appearance ?
555 responses



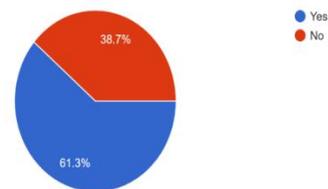
Are you aware that orthodontic treatment is costly ?
555 responses



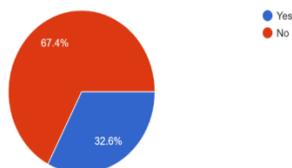
Have anyone advised you to get your teeth aligned ?
555 responses



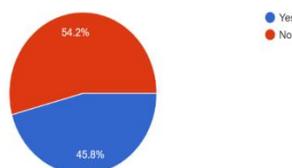
Are you aware that orthodontic treatment takes long time to get over?
555 responses



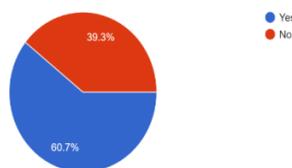
Have you taken orthodontic treatment ?
555 responses



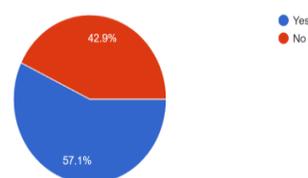
After orthodontic Treatment did you notice any change in your personality ?
555 responses



Have you seen anyone's smile become very pleasant after orthodontic treatment ?
555 responses



Are you aware that sometimes few teeth may have to be removed for aligning irregular teeth ?
555 responses



A total 23.8% people have not noticed other people having irregular teeth and 33% do not know that irregular teeth can be aligned. This suggests that there is general lack of awareness about orthodontics. A total of 39.1% of people do not know the ill effects of irregular teeth and 48.3% of people do not know the ill effects of oral habits on teeth;

30.8% people believe that aligned teeth does not contribute for better facial appearance; and 45% people were advised for aligning their teeth in the past. A total of 85% people have seen other people wearing braces; 61.3% of people know the duration for braces is longer than any other dental treatment; 45% of people have been advised to get their teeth aligned; 51.7% of people know that oral habits can be treated using braces; 65.9% of people know the cost for orthodontic treatment is high; and none of them knew various techniques for correction of malaligned teeth. Nearly 32.6% of people have taken orthodontic treatment and 60.7% people noticed change in smile and it became pleasant after orthodontic treatment.

Discussion

“Why people do not seek orthodontic treatment?” is questionable among all staring orthodontist & leading towards this study. The answer to this question may vary from, “Lack of knowledge and awareness, excessive Metal display, Costly treatment, longer Duration of treatment or Extraction of multiple teeth”. The exact satisfactory response to this question was evaluated through this study.

Globally, there has been an increase in the awareness of orthodontics as a dental specialty in children as well as adults.^{20,21} A similar trend has been reported in Nigeria

with an associated increase in orthodontic care.²² However, in a developing country like India, it was seen that the level of dental health knowledge, positive dental health attitude, and dental health behavior are interlinked and associated with the level of education and income as demonstrated by studies in the past.²³⁻²⁸ Thereby, attitudes and perceptions toward dental appearance differ among populations and individuals. A study stated that the orthodontic awareness level was unsatisfactory, and the correlation between the awareness level and malocclusion problems was poor.²⁹

In the present study, 555 participants who visited the college of Dental sciences - Amargadh, Bhavnagar were randomly selected via a web based survey technique. The study was regarding the awareness of orthodontic treatment on a questionnaire basis. The study was conducted to include a Local social background. The sample does not represent the whole Gujarat population but rather gives an overview of the potential orthodontic awareness among Local population. Data graphs were made for clear understanding of the awareness among the local population. Although the basic awareness regarding dentist is worth appreciable, it was seen that the local population had lack of awareness with respect to irregular teeth, its consequences,

and different treatment modalities for the correction of irregular teeth.

Therefore, a general increase in awareness regarding this field may be helpful to people. If they are aware of interceptive orthodontics, it may help to lower the financial burden of fixed therapy and also prevent the progress of malocclusion. A study conducted by Sheikh et al. among school children in Pune, Maharashtra, concluded that about 86% of school children considered well aligned teeth important for overall facial appearance. Therefore, intercepting malocclusion might have a positive impact on children's psychological development as well. Furthermore, placement of ceramic braces may help tackle stress related to their facial appearance which may be due to non-esthetic approach of conventional metal braces.

In a similar study by Siddegowda,³⁰ high school children showed a higher level of awareness about orthodontic treatment when compared to middle school children. Urban children had shown more positive attitude like visiting a dentist in a study done by Singh et al. in 2012.³¹ Considering the influence of age on awareness of orthodontics, it was found that it increased significantly. Similar findings were seen in a study conducted by Friedman et al., in 1976.³¹ The aim of orthodontic procedure is to improve dental occlusion, which results in

better smile and good functioning in harmony with the face. Overall, it has been seen as an increase in awareness of orthodontic treatments as a dental specialty among Local population.

Conclusion

There are many studies undertaken to know the awareness of students or teachers regarding orthodontic treatment throughout the world. However, in a developing country like India, awareness can be best known by assessing the knowledge of the local population. Therefore, the present study was undertaken by assessing awareness regarding orthodontics and its treatment using webbased survey technique in the local region. Within the limits of this study, it may be concluded that people in our region comparatively lack awareness regarding advances and various techniques in orthodontic treatment. Although people are concerned regarding their facial appearance, lack of awareness regarding this field makes them unapproachable to an orthodontist.

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Conflict of Interest: Nil

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