



A SURVEY ON AWARENESS OF MALOCCLUSION AMONG THE GENERAL POPULATION IN CHENNAI

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Abstract:

Background: Humans have attempted to straighten teeth for thousands of years before orthodontics became a dental speciality in the late 19th century. Proper alignment of teeth has long back recognized to be an essential factor for function, esthetics and overall preservation of dental health. Hence the objective of this study is to perceive the knowledge of youngsters and enlighten their perception on misaligned teeth. A cross sectional study was conducted among 500 adults between the age 20 to 45 years in Chennai, India. An online questionnaire consisting of 20 multiple choice questions was given to the participants to assess their awareness and attitude towards malocclusion and orthodontic treatment.

Keywords: alignment, esthetics, malocclusion, orthodontic treatment

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INTRODUCTION:

The term malocclusion was coined by Edward Angle⁽¹²⁾. It is defined as an appreciable deviation from ideal occlusion⁽¹³⁾. It is said to be ranked as World's third common oral pathology in the public health dental disease priorities next to periodontal disease and dental carries⁽¹⁾. Oral health is inseparable from general health, hence, it is important to maintain oral health of an

individual to prevent from affecting general health⁽¹⁾

The aetiology is multifactorial. It is influenced by both genetic and environmental factors. Therefore the causative factors can be skeletal factors, muscle factors and dental factors⁽¹⁰⁾. Habits like tongue thrusting, thumb sucking, early loss of teeth due to trauma or other dental disease, medical conditions like enlarged tonsils and

adenoids can lead to mouth breathing which causes malocclusion⁽²⁾

Malocclusion affects the function and aesthetics of the oral cavity, interferes with maintaining proper oral health by causing difficulty in brushing and flossing. Additionally it can affect the appearance, speech and mastication⁽⁶⁾

Malocclusion left untreated can lead to dental caries, periodontal diseases, TMJ dysfunction, head and neck pain etc⁽¹⁰⁾. The need and desire for the orthodontic treatment among individuals can be influenced through awareness and availability of proper orthodontic treatments⁽⁶⁾. Though individuals are concerned for orthodontic treatment, they tend to report at a later stage which causes the treatment to be prolonged and tedious⁽¹⁾. Hence, the purpose of the study is to create awareness and to promote early diagnosis and treatment.

Methodology:

An epidemiological survey was conducted in Chennai, Tamilnadu.

The patients personal details were collected after consent. The survey was conducted among 500 young adults of age 20- 45 years. Ethical clearance was obtained after approval from the Institutional Review Board of SRM Institute of Science and Technology. A pre-structured questionnaire consisting of 20 questions was given to random patients after obtaining their informed consent. The questions included in the survey

helped to assess the awareness of patients towards dentist and orthodontic treatment as a whole.

INCLUSION CRITERIA: 20 to 45 years of age

EXCLUSION CRITERIA: Those who had/were undergoing orthodontic treatment were not willing to participate.

STATISTICAL ANALYSIS:

The collected data is coded and entered into excel sheet. Data analysis is done using Simple descriptive statistics to describe the study variables.

Results:

The study population comprised of 500 young adults, with male and female participants. The questionnaire was divided into six categories focusing on the aetiology, Knowledge, Consequences of malocclusion and attitude toward orthodontic treatment.

Concern and interest on self image:

About 92.1% of the participants were confident about their smile (table 1). 90% of the participants feel happy to smile for photographs (table 2). The response of the participants about their arrangement of the teeth brings into view that 35 % of the total study population were unhappy (table 3). Similarly, it is evident that 83.35 % of the participants strongly believe that teeth should be properly aligned for a better facial appearance. 52.7% believe that smile plays a role in boosting their self – confidence (table 2).

Table 1 : About smile confidence

1.Are you confident about your smile?	Frequency(%)
Yes	90.5%
No	8%

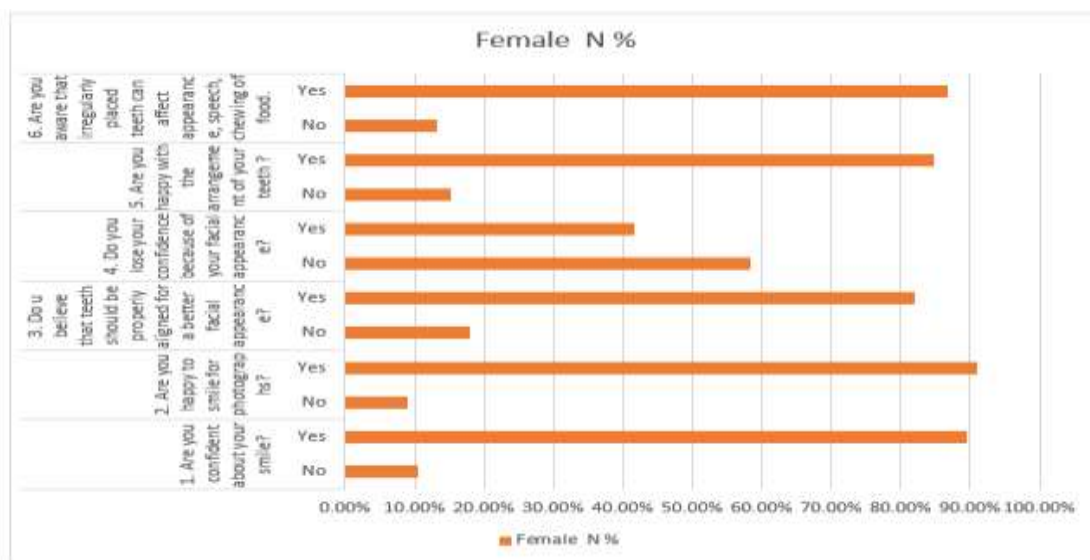
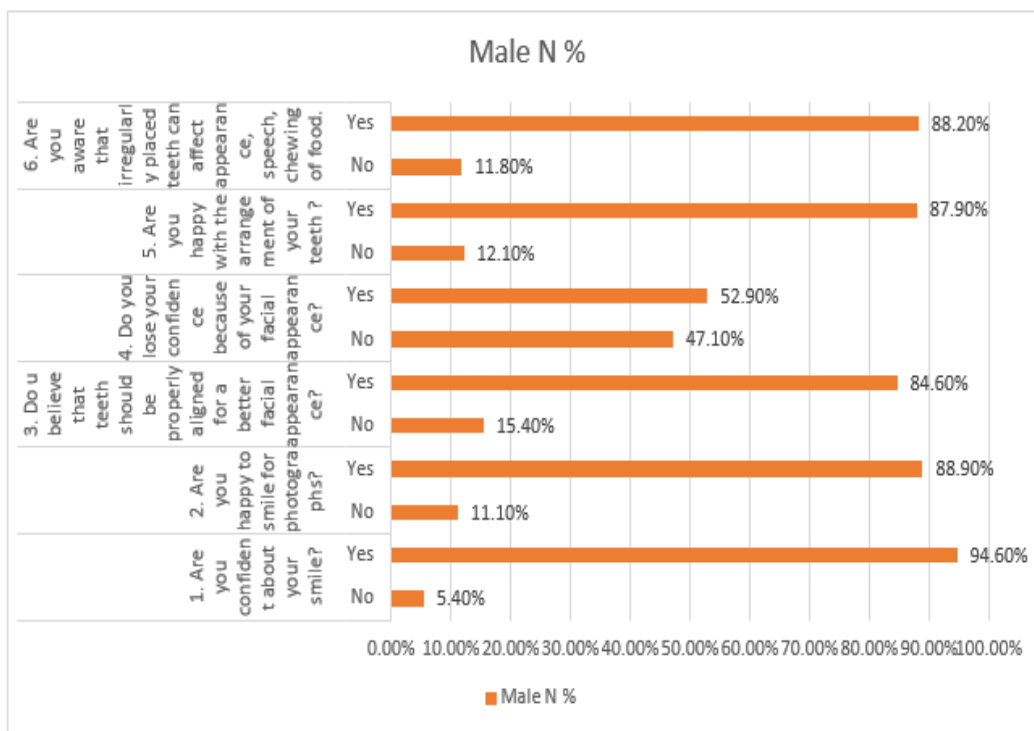
Table 2: Self confidence

2.Are you happy to smile for Photographs	Yes	90%
3. Do you believe that teeth should be properly aligned for a better facial appearance?	No	10%
	Yes	83.35%
4.Do you lose your confidence because of your facial appearance	No	16.65%
	Yes	47.3%
	No	52.7%

Table 3: Arrangement of the teeth

5.Are you happy with the arrangement of the teeth	Yes	86.3%
	No	13.7%

QUESTIONS ABOUT SMILE, CONFIDENCE AND ARRANGEMENT OF TEETH



Knowledge about the etiology and effects of malocclusion :

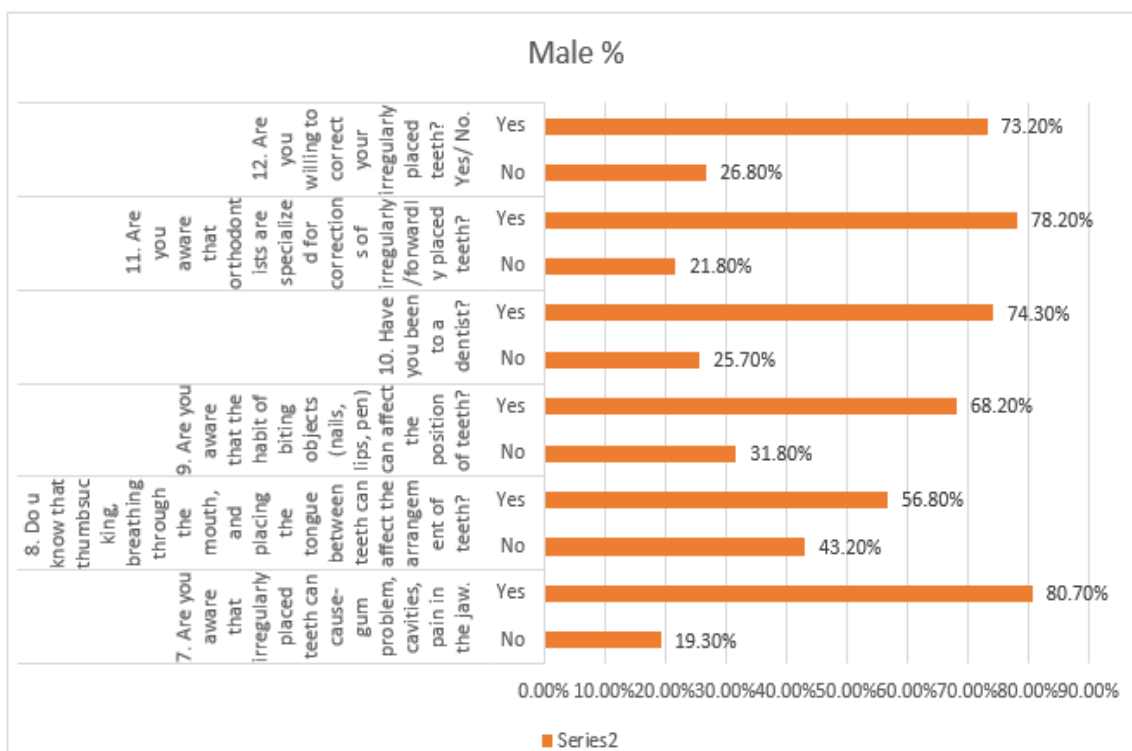
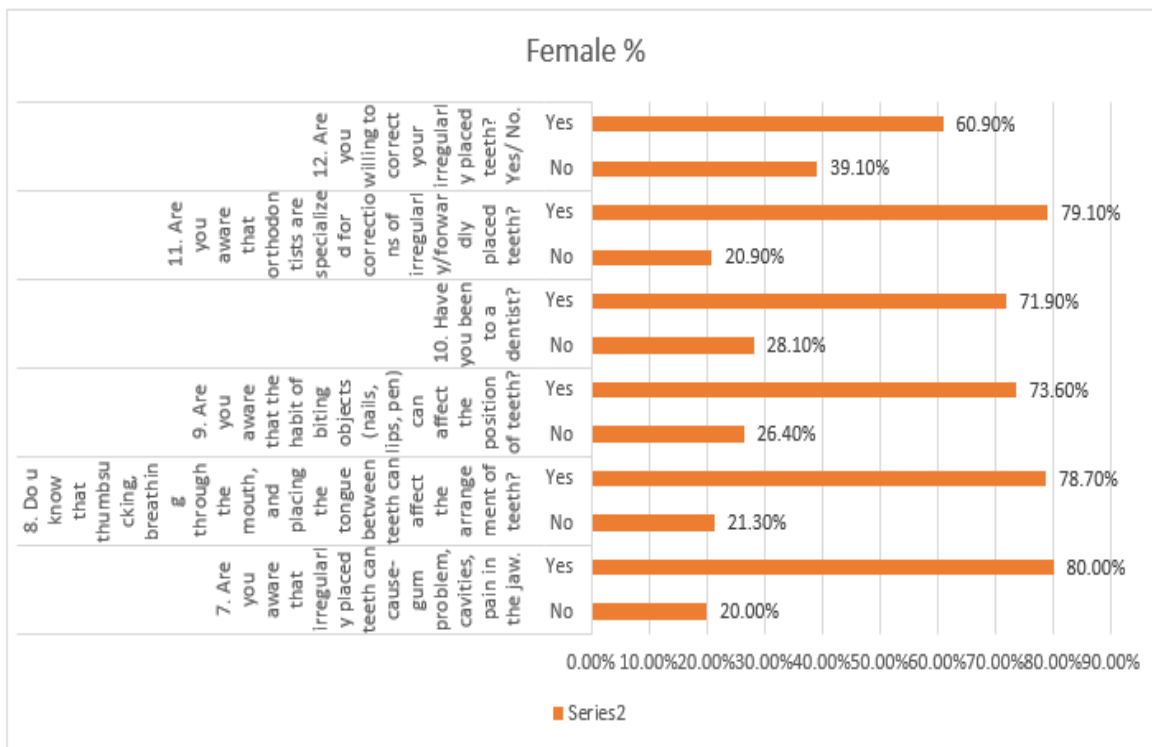
Among the study population, most participants were aware that irregularly placed teeth can affect the appearance and can cause gum problems, cavities, pain in the jaw. However, the participants

mostly are not aware that the habit of biting objects can affect the position of the teeth and only 67.75% are aware that thumb sucking, breathing through the mouth and placing the tongue between teeth can affect the arrangement of teeth. (table - 4).

6.Are you aware that irregularly placed teeth can affect appearance, speech, chewing of food?	Yes	87.5%
	No	12.5%
7. Are you aware that irregularly Placed teeth can cause gum Problem ,cavities, pain in the Jaw?	Yes	80.35%
	No	19.65%
8.Do you know that thumb sucking, breathing through the mouth and placing the tongue between teeth can affect the arrangement of teeth?	Yes	67.75%
	No	32.5%

9. Are you aware that the habit of biting objects (nails, lips, pen) can affect the position of teeth?	Yes	29.1%
	No	70.9%

QUESTIONS ON AWARENESS ABOUT THE EFFECTS OF MALOCCLUSION



Concern on dental health:

A note worthy observation was that 73.1% of the population have visited a dentist which reveals

that people understand the importance of their oral health. (table5)

10. Have you been to a dentist ?	Yes	73.1%
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	No 26.9%
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Knowledge about orthodontist, willingness for treatment:

About 21.35% of the participants were unaware that orthodontists are specialized for corrections of irregular/forwardly placed teeth. Almost 67.05% of the people are willing to correct their

irregularly placed teeth, where as 32.95% are not willing for orthodontic correction. Among 32.95%, 16.1% of them consider it as expensive and 13.25% are concerned about the time duration (table 6)

Table 6(a):Knowledge about orthodontist		
11.Are you aware that orthodontists are specialized for correction of irregular / forwardly placed teeth?	Yes	78.65%
	No	21.35%

Table 6(b):Willingness to correct irregularly placed teeth		
12. Are you willing to correct your irregularly placed teeth?	Yes	67.05
	No	32.95

Table 6(c):Reasons for not willing to correct irregularly placed teeth		
13. Reasons for not willing to correct irregularly placed teeth?	Not Necessary	70.65
	Time duration	13.25
	Expensive	16.1

Knowledge and attitude towards orthodontic treatment:

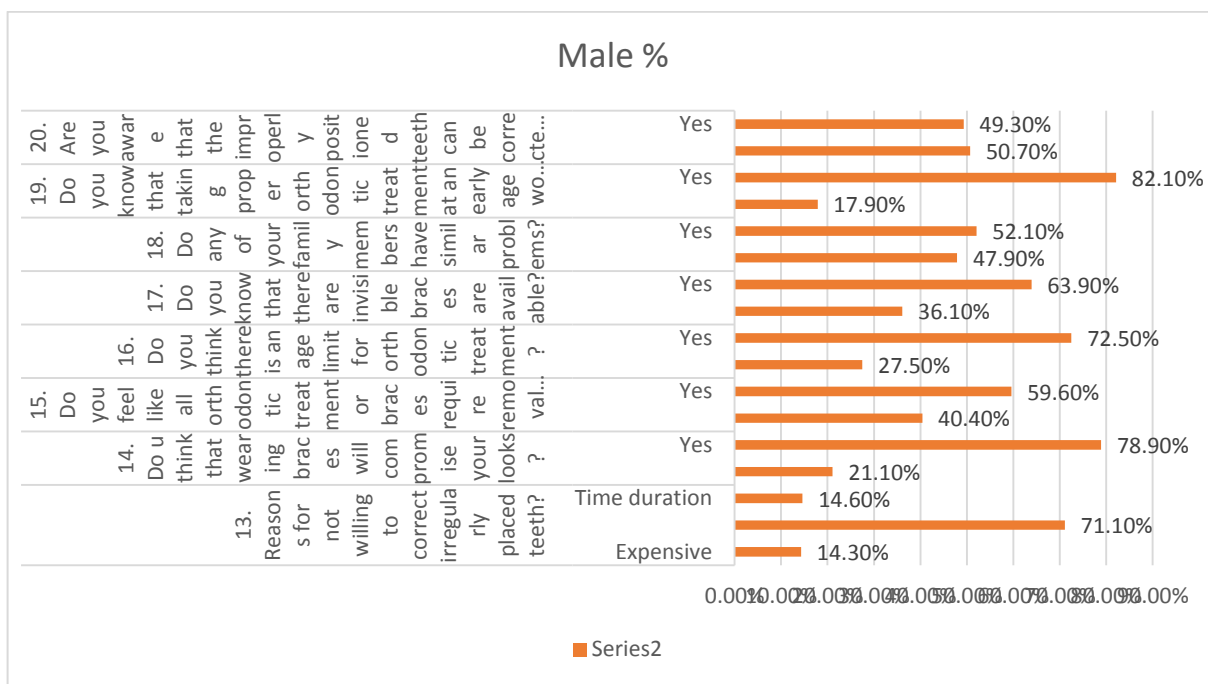
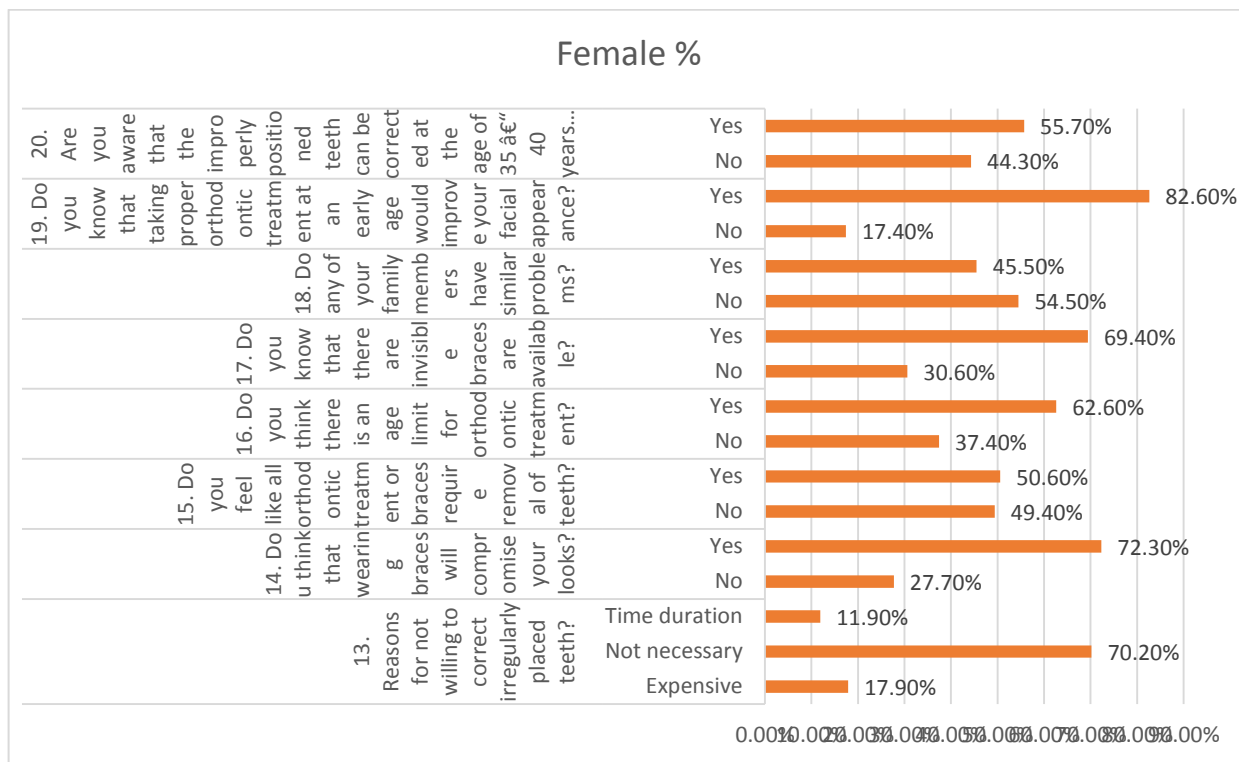
About 75.6% of the participants are thinking that wearing braces will compromise their looks. Almost 54.85% of them feel that any orthodontic treatment would require removal of teeth. 67.55% of them have false opinion that there is an age limit for orthodontic treatment, whereas only

66.65% of them are aware about invisible braces. About 82.35% of them are aware that taking proper orthodontic treatment at an early age would improve their facial appearance. Approximately 52.5% are aware that improperly positioned teeth can be corrected at the age of 35-40 years also. (table7)

Table(7):Knowledge and attitude towards orthodontic treatment

14.Do you think that wearing braces will compromise your looks?	Yes	75.6
	No	24.4
15. Do you feel any orthodontic treatment or braces require removal of teeth?	Yes	54.85
	No	45.15
16. Do you think there is an age limit for orthodontic treatment?	Yes	67.55
	No	32.45
17. Do you know that there are invisible braces available?	Yes	66.65
	No	33.35
18. Do any of your family members have similar problems?	Yes	48.8
	No	33.35
19. Do you know that taking proper orthodontic treatment at an early age would improve your facial appearance?	Yes	82.35
	No	17.65
20.Are you aware that the improperly positioned teeth can be corrected at age of 35 to 40 years also?	Yes	52.5
	No	47.5

QUESTIONS ON KNOWLEDGE ABOUT ORTHODONTIC TREATMENT



Discussion:

Globally, the awareness about Orthodontics has been increasing among children and adults⁽²⁾. But in developing countries like India, malocclusion is still not considered as a major dental problem due to lack of awareness⁽³⁾. The attitude and perception towards malocclusion differs from person to person. It is linked to the factors like literacy rate, socio economic status and knowledge about dentistry⁽¹⁾.

nadu ,India to assess their knowledge about orthodontist and orthodontic treatment⁽²⁾. The sample size gives an overview about the awareness of individuals regarding Orthodontics. The first set of questions in this study is about their personal concern and interest on self image. It is fortunate to note that 83% of them believe that teeth should be properly aligned for better facial appearance and strongly believe that smile uplifts their confidence⁽¹⁾.

This is an online study, where 500 participants were selected randomly from Chennai, Tamil
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When it comes to the awareness of aetiology and effects of malocclusion, people believe in the concept that irregularly placed teeth and habits
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such as thumb sucking, mouth breathing, placing the tongue between the teeth can affect the appearance and can cause gum problems, cavities, pain in the jaw⁽¹⁴⁾. Nevertheless they don't realise that habit of biting objects can affect the position of the teeth⁽¹⁾

Another noteworthy observation is that, 73% of the population consider that oral health is as important as general health. But still they lack the desire to treat malocclusion as they consider that the treatment as expensive and time consuming. Furthermore, they are not aware that orthodontists are specialized for corrections of irregular and forwardly placed teeth⁽⁸⁾

Likewise, it is noted that 75.6% of the participants are aware that braces will enhance their looks. Besides they are under a misconception that orthodontic treatment requires removal of teeth and there is an age limit for the treatment. Most of them are not aware about invisible braces⁽¹⁾

On comparison among males and females, it is evident that males are more concerned about their smile and facial appearance. They tend to lose their confidence because of misaligned teeth and they are not aware about the effects of malocclusion⁽⁶⁾ whereas females are aware about the drawbacks of malocclusion ,but still not willing to take up orthodontic treatment as they consider it expensive. Males are more bothered about the time duration .As males socialize more, they are more concerned about their misaligned teeth. They feel that wearing braces will compromise their looks but at the same time they are worried about extractions⁽¹²⁾. Males believe that appearance enhances their confidence and promotes them socially, whereas females are more worried regarding the effects of malocclusion⁽¹⁶⁾

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Conflicts of interest:

There are no conflicts of interests

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It is evident from our study that there is diminutive awareness among the adults regarding the treatment procedure and availabilities of treatment options. Moreover, they are reluctant because of the lack of knowledge about the ill effects of malocclusion . So it is necessary to organise awareness camps with the support of health care educators and media, detailing the drawbacks of malocclusion and the necessities to treat malocclusion to satisfy the functional demands and esthetics⁽¹⁰⁾

Conclusion:

The following conclusions drawn from this survey are:

- Males are more concerned about malocclusion as it affects their day to day lifestyle, but they lack information on the various modalities of treating malocclusion which is why they do not come forward to get treated. Whereas females are not more precise about malocclusion. Despite the gender bias, it is important to inculcate knowledge about the dental skills, effects to remove fears among them and help them in promoting towards a healthy lifestyle.
 - Oral health education is the first step for creating awareness. Our people are not much aware about the consequences and ill effects of malocclusion, which is because of lack of adequate preventive health care programs.
 - Therefore, efforts should be made by conducting systematic health care programs in a large scale community.
 - Inculcating oral health care in school syllabus to educate children about the adverse effects of improper oral hygiene, treating malocclusions at the right age would help in creating awareness among the younger population.
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