

Evaluation of Adult Level of Knowledge, Awareness of Malocclusion and Barriers to Uptake Orthodontic Care Among Patients

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Abstract

Background: Malocclusion is the most common dental health problem encountered worldwide. It is defined as discrepancy in position of maxillary and mandibular arches with characterized anomaly in position of tooth, form and number. The present study was conducted to assess adult level of knowledge and awareness of malocclusion and barriers to uptake orthodontic care among patients.

Materials & Methods: The present study comprised of 470 subjects of both genders in Indore, Madhya Pradesh. A questionnaire was prepared which comprised of question pertaining to oral, dental habits, parafunctional habits etc. was recorded.

Results: Out of 470 subjects, males were 240 and females were 230. 65% replied that gingivitis (Gum problems) may result from malocclusion, 20% not and 15% replied don't know. 75% thought that it is difficult to brush teeth with malocclusion, 15% replied no and 10% replied don't know. Barriers of orthodontic care were cost in 54%, repeated dental visits in 20%, long term treatment in 10%, requirement of good oral hygiene maintenance in 6% of cases, accessibility in 7% and post operative pain in 5%.

Conclusion: Authors found that subjects had knowledge and awareness regarding orthodontic care. Major barriers to orthodontic treatment found to be cost, repeated dental visits, long term treatment, requirement of good oral hygiene maintenance, accessibility and post operative pain.

Keywords: Awareness, Knowledge, orthodontic treatment

I. Introduction

As there is increase in number of malocclusion among children and young adults, the awareness among patients is also on rise.¹ Patient now show increase concern about their esthetics. Malocclusion is the most common dental health problem encountered worldwide. It is defined as discrepancy in position of maxillary and mandibular

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arches with characterized anomaly in position of tooth, form and number.²There is no single cause of malocclusion. Numerous studies have revealed various reasons for malocclusion. The occurrence of thumb sucking habit in early childhood may lead to forwardly placed maxillary central incisors resulting in increase overjet and overbite.³This leads to open bite and unaesthetic appearance. Early loss of milk teeth and heredity play an important role causing malocclusion. Tongue thrusting and mouth breathing are other parafunctional habits related to malocclusion.⁴

Malocclusion is third most common dental problem after dental caries and periodontitis. Patient may experience difficulty in speech, swallowing and mastication. Research has demonstrated its negative impact on patients' psychological aspect.⁵Malocclusion can also result in chronic cheek bite and traumatic bite and it may also be one of the factors for rejection during marriage proposals. It has been observed that children and young adults with malocclusion have less confidence as compared to those with normal occlusion.⁶ It has great impact on quality of life too. Malocclusion has great impact on physical, esthetics, psychological and social life. It is essential to go for orthodontic treatment if there is any dental or skeletal discrepancy. Awareness is the state or ability to perceive, to feel or to be conscious. Patient's knowledge and awareness towards oral and dental health is of paramount importance.⁷The present study was conducted to assess adult level of knowledge and awareness of malocclusion and barriers to uptake orthodontic care among patients.

II. Materials & Methods

The present study comprised of 470 subjects of both genders in Indore, Madhya Pradesh. All were informed regarding the study and written consent was obtained. Ethical clearance was taken from institutional ethical committee.

General information such as name, age, gender etc. was recorded. The selection of subject was simple random technique. A questionnaire was prepared which comprised of question pertaining to oral, dental habits, parafunctional habits, importance of occlusion, habits of thumb and digit sucking, premature exfoliation of deciduous teeth, need for orthodontic care. Information such as previous experience, knowledge about braces, wires etc. was recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

III. Results

Table I Distribution of subjects

Total- 470		
Gender	Males	Females
Number	240	230

Table I shows that out of 470 subjects, males were 240 and females were 230.

Graph I: Distribution of subjects

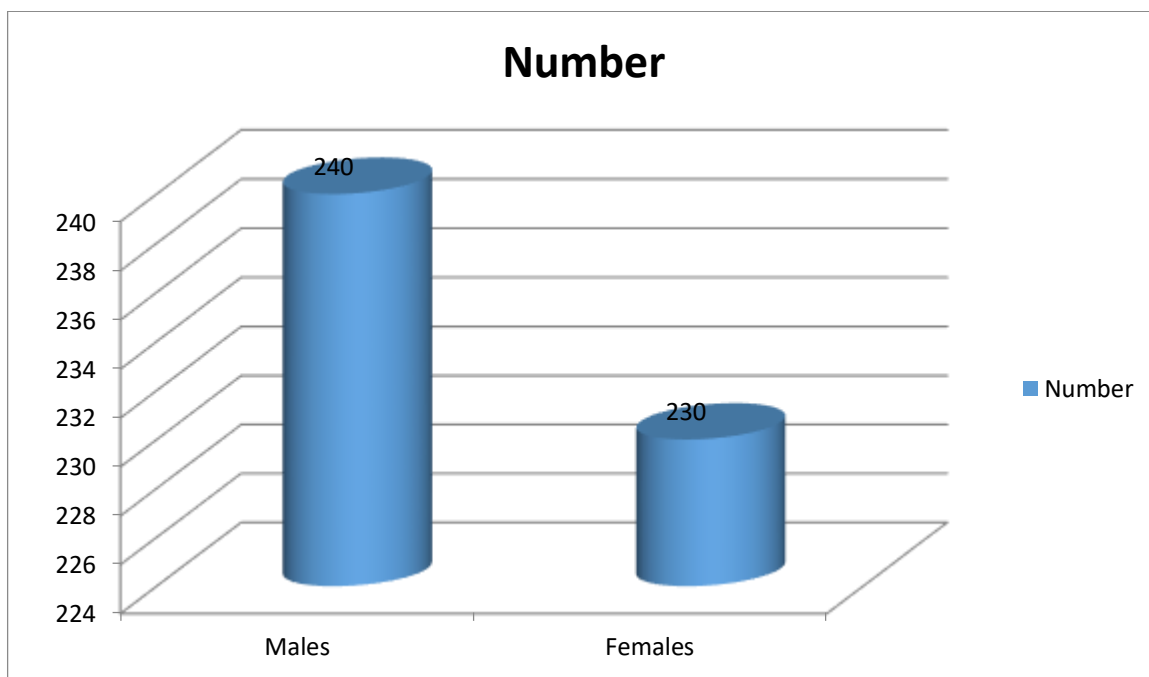


Table II Questionnaire used in the study

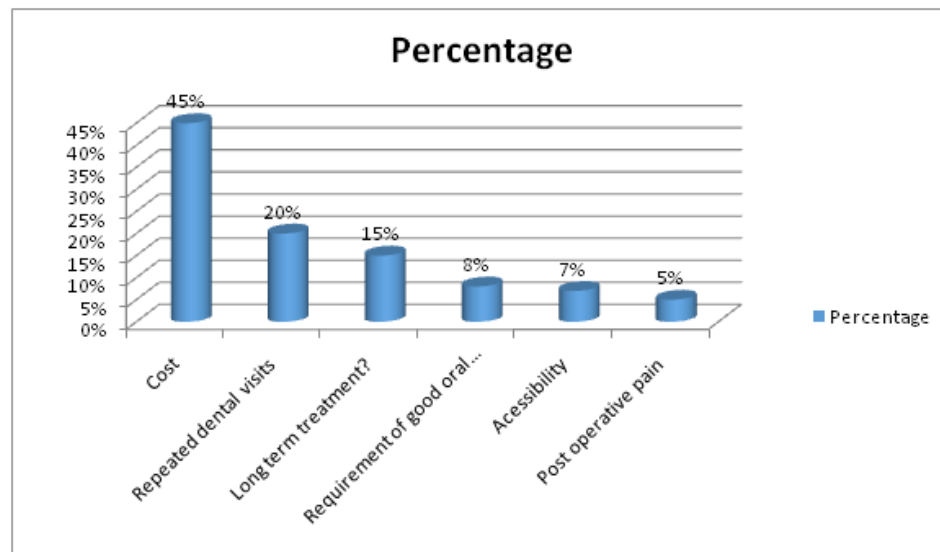
Questionnaire	Percentage	P value
1. Do you think dental caries/ tooth decay may result from malocclusion?		
a. Yes	72%	0.02
b. No	18%	
c. don't know	10%	
2. Gingivitis (Gum problems) may result from malocclusion?		
a. Yes	65%	0.01
b. No	20%	
c. Don't know	15%	
3. Do you think it is difficult to brush teeth with malocclusion?		
a. Yes	75%	0.02
b. No	15%	
c. Don't know	10%	

4. Do you think teeth should be in occlusion?		
a. Yes	78%	0.01
b. No	5%	
c. Don't know	17%	
5. Are you aware of alignment of teeth?		
a. Yes	80%	0.03
b. No	12%	
c. Don't know	8%	
6. Do you need orthodontic treatment?		
a. Yes	20%	0.05
b. No	70%	
c. Don't know	10%	
7. Have you ever visited orthodontist?		
a. Yes	83%	0.01
b. No	17%	
8. What do you think reason of malocclusion?		
a. Thumb sucking	68%	0.04
b. Mouth breathing	30%	
c. Genetic	2%	

Table II shows that in response to question, do you think dental caries/ tooth decay may result from malocclusion, 72% replies yes, 18% replied no and 10% replied don't know. 65% replied that gingivitis (Gum problems) may result from malocclusion, 20% not and 15% replied don't know. 75% thought that it is difficult to brush teeth with malocclusion, 15% replied no and 10% replied don't know. 78% replied that teeth should be in occlusion, 5% no and 17% replied don't know. 80% were aware of alignment of teeth, 12% no and 8% replied don't know. 20% replied that they need orthodontic treatment, 70% replied no and 10% replied do not. On response to question have you

ever visited orthodontist, 83% replied yes, 17% no. 68% considered thumb sucking to be the reason of malocclusion, 30% replied mouth breathing and 2% replied genetics. The difference was significant ($P < 0.05$).

Graph II Barriers of orthodontic care



Graph II shows that barriers of orthodontic care were cost in 54%, repeated dental visits in 20%, long term treatment in 10%, requirement of good oral hygiene maintenance in 6% of cases, accessibility in 7% and post operative pain in 5%. The difference was significant ($P < 0.05$).

IV. Discussion

Unaesthetic appearance is matter of concern. With the advancement in orthodontic treatment and management of complex cases, there has been increase in number of patients seeking orthodontic care. As now the number of population has already crossed over 130 crores.⁸

Normal dental occlusion is when mesio- buccal cusp of maxillary first molar occludes with mesio- buccal groove of mandibular first molar. If the disto- buccal cusp lie in buccal groove of mandibular first molar, then it is class II div I malocclusion and when mesio- buccal cusp lie in interdental area between mandibular first and second molar, then it is class III malocclusion. Skeletal malocclusion occurs when there is discrepancy in size of maxilla or mandible.⁹

Simultaneously with the rise in population, the number of malocclusion cases has increased significantly. The awareness and knowledge of malocclusion is helpful in deciding whether to go for treatment or not. It has been observed that high education, affordability, proper guidance, previous dental experience including orthodontist visit, socio economic status and accessibility are major factors which decides whether a person can adopt orthodontic treatment or not.¹⁰ The present study was conducted to assess adult level of knowledge and awareness of malocclusion and barriers to uptake orthodontic care among patients.

In our study, we recruited 470 subjects of both genders. Out of 470 subjects, males were 240 and females were 230. We found that 72% thought dental caries/ tooth decay may result from malocclusion, 18% replied no and 10% replied don't know. We found that 65% replied that gingivitis (Gum problems) may result from malocclusion, 20% not and 15% replied don't know. 75% thought that it is difficult to brush teeth with malocclusion, 15% replied no and 10%

replied don't know. Ashkyet al¹¹ included 554 subjects. The mean age was of 26.40 years and 55.2% were females. Over 60% of the participants reported high oral health knowledge with respect to the alignment of teeth and neglected malocclusion had consequences, eg, caries. 80% replied that thumb sucking is the cause of malocclusion. 52% replied that early extraction of primary teeth is the main cause and 40% thought it is because of genetics. Females were statistically significantly more likely to report barriers for orthodontic care. It was found that subjects had sufficient knowledge and awareness about malocclusion.

We observed that 78% replied that teeth should be in occlusion, 5% no and 17% replied don't know. 80% were aware of alignment of teeth, 12% no and 8% replied don't know. 20% replied that they need orthodontic treatment, 70% replied no and 10% replied do not. On response to question have you ever visited orthodontist, 83% replied yes, 17% no. 68% considered thumb sucking to be the reason of malocclusion, 30% replied mouth breathing and 2% replied genetics.

Zakirullaetal¹² conducted a study to assess knowledge and awareness among general population regarding orthodontic care. There were 292 (65%) of males and 285 (74%) of females. It was seen that 234 (52%) of males said that orthodontist would align their teeth. 203 (45%) and 250 (65%) of males and females respectively are aware that few teeth needed to be removed for aligning irregular teeth. Majority of the children are aware of taking braces treatment at an earlier age would improve facial appearance. 320 (83%) and 227 (59%) of female children aware of that irregular teeth can affect chewing ability and speech respectively. 261 (58%) of males knew that orthodontic treatment is longer than other dental procedures.

The limitation of the study is small sample size. Moreover the age criteria were not included. The present study included subjects of particular geographical area.

V. Conclusion

Authors found that subjects had knowledge and awareness regarding orthodontic care. Major barriers to orthodontic treatment found to be cost, repeated dental visits, long term treatment, requirement of good oral hygiene maintenance, accessibility and post-operative pain.

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