10.48047/jocaaa.2024.33.07.107

DOES GENDER AND MOLAR RELATION INFLUENCE THE ORTHODONTIC TREATMENT

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ABSTRACT

Introduction : Orthodontics is the area of dentistry that deals with the development of the teeth, occlusion, and facial growth as well as the prevention and treatment of occlusal anomalies. The primary goals of orthodontic therapy are to enhance oral health overall, aesthetics, and function.

AIM:The aim of the study is to examine whether gender and molar relation influence the orthodontic treatment.

MATERIALS AND METHODS: This study is a DIAS based study from Saveetha dental college by utilizing existing patient records. The list of 10 males and females who had undergone orthodontic treatment were taken for study and its molar relation has been noted in a tabular column using spss and represented in a bar graph.

RESULTS: 80 percent of the females showed class 1 type of molar relation while 10 percent showed class 2 division 1 and another 10 percent showed class 2 division 2. Similarly 80 percent of the males showed class 1 type of molar relation while 10 percent showed class 1 division 1 and

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another 10 percent showed class 3. 80% of the population has class1 type of molar relation irrespective of the gender to which they belong.

CONCLUSION: This study concludes that specific variations in craniofacial growth patterns. The timing of orthodontic treatment may be considered concerning gender-specific growth spurts. The type of malocclusion may influence the choice of orthodontic appliances, treatment duration, and the need for adjunctive procedures like orthognathic surgery. Gender and molar relation influence the orthodontic treatment.

INTRODUCTION:

Orthodontics is the area of dentistry that deals with the development of the teeth, occlusion, and facial growth as well as the prevention and treatment of occlusal anomalies. The primary goals of orthodontic therapy are to enhance oral health overall, aesthetics, and function(1).

Orthodontic treatment, the branch of dentistry concerned with the alignment and positioning of teeth and jaws, is a highly individualized field. A successful orthodontic treatment plan takes into account numerous factors, ranging from the structural characteristics of the patient's teeth and jaws to their overall oral health and specific treatment goals(2). Among the myriad factors that can influence orthodontic treatment, two of particular interest are gender and molar relation.

Gender plays a role in orthodontic treatment due to inherent anatomical and hormonal differences between males and females(3). These differences can affect the timing, progression, and complexity of treatment. Meanwhile, molar relation refers to the alignment and positioning of the upper and lower molars when the jaws are closed. Issues with molar relations, such as overbites, underbites, and crossbites, can significantly impact the orthodontic treatment plan(4).

This exploration delves into the ways in which gender and molar relation can influence orthodontic treatment. It is important to understand that while these factors are considered during treatment planning, they are not the sole determinants(5). The complexity of each patient's case requires a comprehensive evaluation that considers various variables, including age, oral health, and the specific nature of their malocclusion(6). Gender and molar relation, therefore, serve as valuable pieces in the larger puzzle of orthodontic care, each playing a unique role in shaping the treatment

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approach. This discussion will delve deeper into these roles, examining the significance and impact of gender and molar relation in orthodontic treatment(7).

MATERIALS AND METHODS:

This study is a DIAS based study from Saveetha dental college by utilizing existing patient records. More than 1500 people had undergone short term fixed appliances in Saveetha dental college. Patients between the age group of 20 to 40 were collected in which 10 females and 10 male were collected with different types of malocclusion. Patients provide informed consent for their involvement in the study. Utilization of orthodontic imaging, such as X-rays or 3D scans, to assess dental and facial structures were assessed for better results. The list of people who had undergone orthodontic treatment and its molar relation has been noted in a tabular column using spss. Bar graph 1 denotes the relation between gender and molar relation.

RESULTS:

The type of malocclusion can influence the treatment approach, including the use of various orthodontic appliances and the potential need for orthognathic surgery. 80 percent of the females showed class 1 type of molar relation while 10 percent showed class 2 division 1 and another 10 percent showed class 2 division 2. Similarly 80 percent of the males showed class 1 type of molar relation while 10 percent showed class 1 division 1 and another 10 percent showed class 3. 80% of the population has class1 type of molar relation irrespective of the gender to which they belong.

Tabular column representing people who had undergone orthodontic treatment in Saveetha dental college and its molar relation

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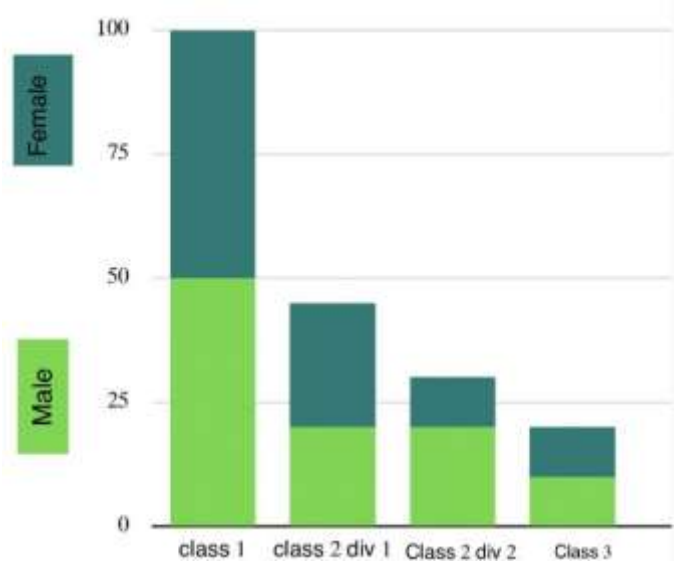
Name	Gender	Molar relation
Mahalakshmi	Female	Class 1
Soniya	Female	Class 1
Vishnavi	Female	Class 1
Kavyashree	Female	Class 1
Kamala	Female	Class 2 division 1
Deivani	Female	Class 1
Devi	Female	Class 1
Roshni	Female	Class 2 division 2
Ayisha	Female	Class 1
Vijayalakshmi	Female	Class 1
Gokul	Male	Class 1
Senthil	Male	Class 1
Arunagiri	Male	Class 1
Velu	Male	Class 1
Manivanan	Male	Class 2 division 2
Kishore kumar	Male	Class 1
Shakthivel	Male	Class 1
Subash	Male	Class 1
Dinesh kumar	Male	Class 3
Krishnamoorthi	Male	Class 1

Bar graph 1 denotes the relation between gender and molar relation.



DISCUSSION

Studies have investigated the impact of molar relation (Class I, Class II, Class III) on orthodontic treatment outcomes. The type of malocclusion may influence the choice of orthodontic appliances,

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treatment duration, and the need for adjunctive procedures like orthognathic surgery. Some research suggests that there may be gender-specific variations in craniofacial growth patterns. The timing of orthodontic treatment may be considered concerning gender-specific growth spurts(8). Depending on the molar relation and other factors, treatment duration may vary. For instance, severe malocclusions might require a more extended treatment period. The type of malocclusion may influence the choice of orthodontic appliances (e.g., braces, aligners). Some malocclusions may respond better to specific types of appliances(9).

Patients may have different aesthetic preferences, and gender might play a role in how individuals perceive treatment outcomes. Investigate the long-term stability of orthodontic outcomes based on gender and molar relation(10). Research suggests that there are gender-specific differences in craniofacial growth patterns. Males and females may exhibit variations in the development of the jaws and teeth during adolescence, influencing the orthodontic treatment approach. The molar relation is a critical component of facial harmony. Different molar relations can impact not only the alignment of teeth but also the overall aesthetics of the face. The choice of orthodontic appliances may be influenced by the patient's gender and molar relation.

Certain malocclusions may respond better to specific types of braces or aligners. Severe malocclusions, especially those involving significant discrepancies in molar relation, may require orthognathic surgery(11). The decision to recommend surgery may take into account gender-related anatomical considerations. Molar relation is not solely about aesthetics; it also has functional implications. Correcting malocclusions improves the bite, reduces the risk of temporomandibular joint issues, and enhances overall oral function(2,6). The psychosocial aspects of orthodontic treatment, including self-esteem and satisfaction, may be influenced by how individuals perceive the changes in their facial aesthetics and molar relation.Patients may have varying aesthetic preferences, and these preferences could be influenced by gender norms and expectations(6). Gender and molar relation influence orthodontic treatment is multifaceted, involving considerations of anatomy, growth patterns, treatment strategies, and patient perceptions.

CONCLUSION

Gender-specific variations in craniofacial growth patterns and molar relations, the impact on orthodontic treatment outcomes is nuanced. The timing of orthodontic treatment is a critical aspect influenced by gender, as growth spurts may occur at different stages for males and females. Understanding these growth patterns is crucial for optimizing the effectiveness of interventions. Functional considerations, beyond aesthetics, play a significant role in orthodontic treatment. Correcting malocclusions, including variations in molar relation, contributes to improved bite function and reduced risks of temporomandibular joint issues. Patient preferences and psychosocial factors also come into play, with individuals expressing varying aesthetic concerns influenced by societal norms. Recognizing and addressing these factors are essential for achieving

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patient satisfaction and compliance throughout the treatment process. This study concludes that gender and molar relation influence the orthodontic treatment.

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