Original Research

Assessment of different type of malocclusion among males and females of a known population

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ABSTRACT:
Background: The present study was conducted to assess the prevalence of different type of malocclusion among males and females of a known population. **Materials & Methods:** 230 children age ranged 15-24 years of both genders were examined by an orthodontist. Angles malocclusion was classified as class I malocclusion, class II div I and class II div II and class III malocclusion. **Results:** Type of occlusion was normal in 15 males and 25 females, class I malocclusion in 45 males and 40 females, class II div I in 20 males and 30 females, class II div II in 18 males and 15 females and class III maloccusion in 12 males and 10 females. The difference was non- significant (P> 0.05). **Conclusion:** Authors found that most commonly seen was class I followed by class II div I.
Key words: Malocclusion, Males, Orthodontic

INTRODUCTION

Increased concern for dental appearance during childhood and adolescents to early adulthood has been observed.[1] The social interactions that have a negative effect on self-concept, career advancement and peer group acceptance have been associated with unacceptable dental appearance. In general, societal forces define the norms for acceptable, normal and attractive physical appearance.[2]
Malocclusions feature the third highest prevalence among oral pathologies, second only to tooth decay and periodontal disease. While there are evidence that certain features such as stress, traumatic deep overbite, unprotected incisors and impacted teeth may adversely affect the longevity of the dentition.[3]

The social interactions that have a negative effect on self-concept, career advancement and peer group acceptance have been associated with unacceptable dental appearance.[4] In general, societal forces define the norms for acceptable, normal and attractive physical appearance.[2] Although dental malocclusion not a life threatening condition, the psychosocial distress, impaired mastication and poor periodontal conditions associated with it, need to explore the prevalence of malocclusion in different ethnic groups.[5] In addition, the prevalence of malocclusion or an accurate measurement of occlusal variation in different population group is important. With increasing interest in the early detection and treatment of malocclusion and a corresponding emphasis on preventive procedures, it

would be beneficial to collect more information on patients at younger age levels.[6] The present study was conducted to assess the prevalence of different type of malocclusion among males and females of a known population.

MATERIALS & METHODS
This study was conducted among 230 children age ranged 15-24 years of both genders. All patients were informed regarding the study and written consent was obtained. Ethical clearance was taken prior to the study. General information such as name, age, gender etc was recorded. All patients were examined by an orthodontist. Angles malocclusion was classified as class I malocclusion, class II div I and class II div II and class III malocclusion. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS
Table I Distribution of patients

| Age group (Years)	Males	Females	P value
15-17	30	35	0.15
18-20	55	60	0.12
21-24	25	25	1
Total	110	120	

Table I, graph I shows that age group 15-17 years had 30 males and 35 females. Age group 18-20 years had 55 males and 60 females. Age group 21-24 years had 25 males and 25 females. The difference was non-significant (P> 0.05).

**Table II Different type of malocclusion among males and females**

Malocclusion	Males	Females	P value
Normal	15	25	0.05
Class I	45	40	0.91
Class II div I	20	30	0.04
Class II div II	18	15	0.91
Class III	12	10	0.04
Total	110	120	

Table II, graph II shows that type of occlusion was normal in 15 males and 25 females, class I malocclusion in 45 males and 40 females, class II div I in 20 males and 30 females, class II div II in 18 males and 15 females and class III maloccusion in 12 males and 10 females. The difference was non- significant (P> 0.05).

Graph I Distribution of patients
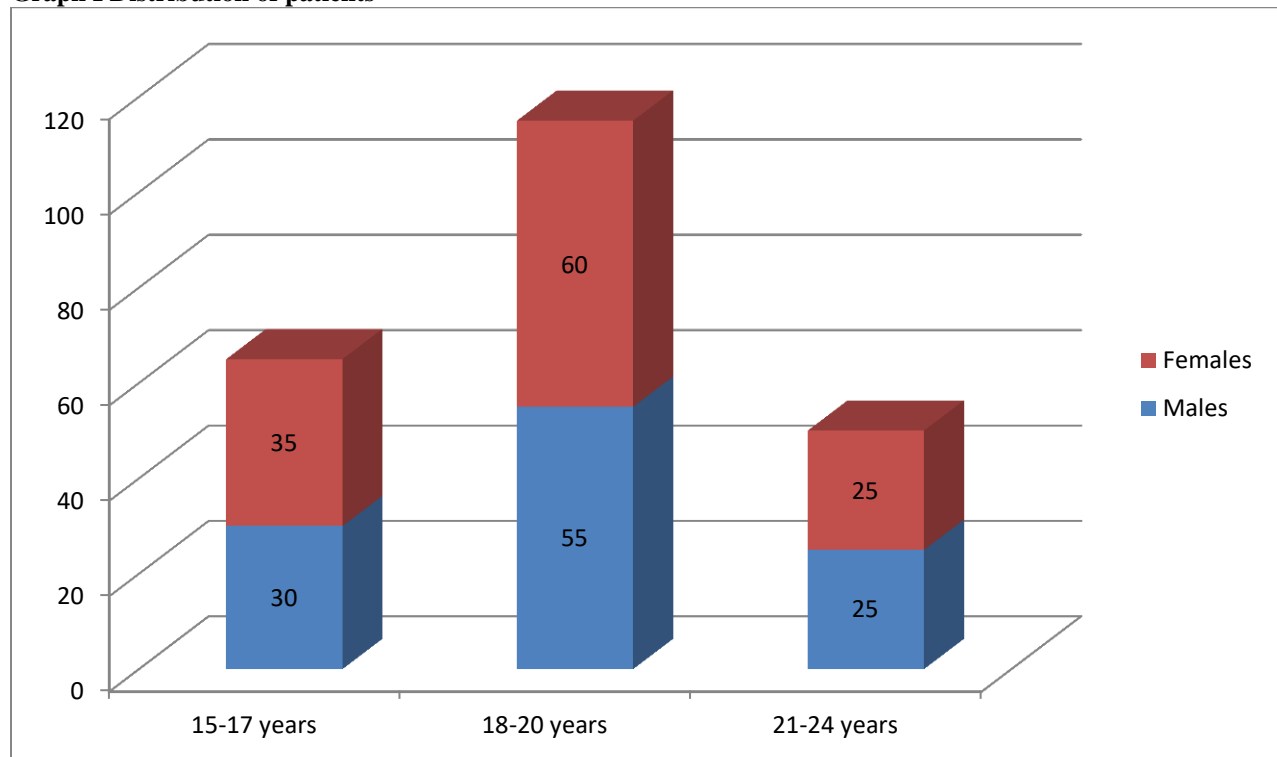
Graph II Different type of malocclusion among males and females
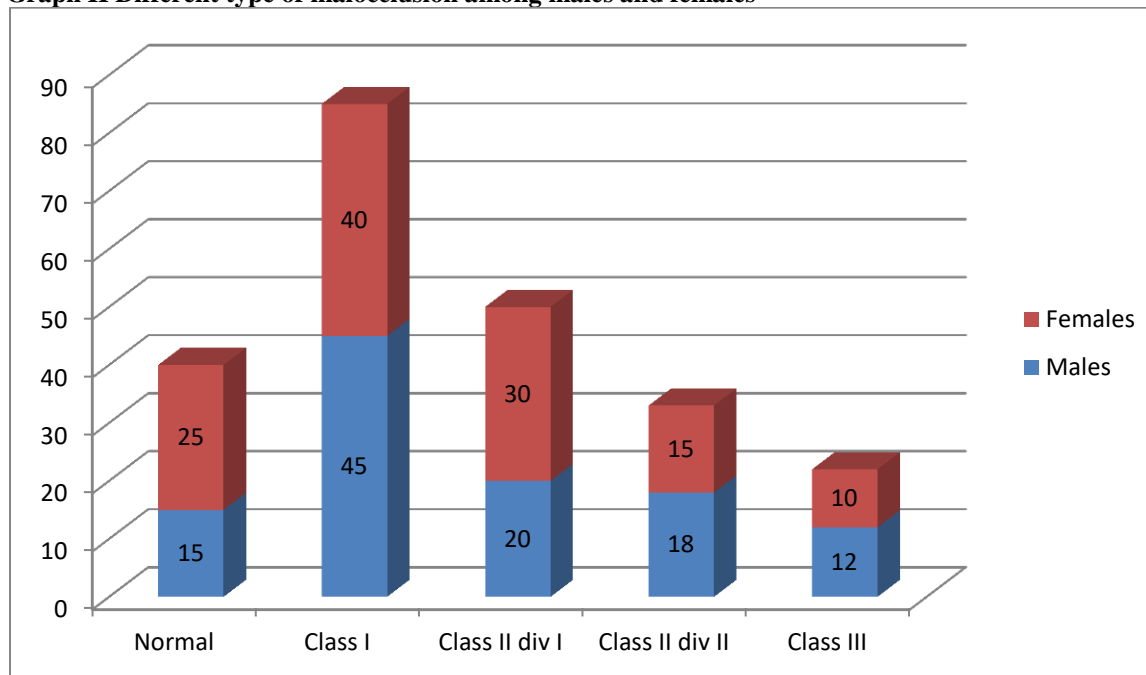
DISCUSSION

The prevalence of malocclusion in India varies from 20 to 43%. Malocclusion can be defined as appreciable deviation from normal or ideal occlusion.[7] Malocclusions are classified into two major groups: dental and skeletal malocclusions, depending on skeletal relationships. Severe malocclusions are frequently skeletal and often referred to as 'dentofacial deformities'. Dentofacial deformities have been described as deviations from normal facial proportions and dental relationships severe enough to be handicapping.[8] Some malocclusions are more prone than others to persist during the development of the occlusion, and it is claimed that a full Class II malocclusion in the primary dentition is never self-correcting in growing children. Moreover, maxillary protrusion is established early in the primary dentition and remains unmodified in the transition to the mixed dentition. Other conditions undergo spontaneous correction: the prevalence of anterior open bite decreases from 51 per cent in the primary dentition to 4 per cent in the mixed and early permanent dentitions.[9] The present study was conducted to assess the prevalence of different type of malocclusion among males and females of a known population.

In this study, age group 15-17 years had 30 males and 35 females. Age group 18-20 years had 55 males and 60 females. Age group 21-24 years had 25 males and 25 females. Das et al[10] determined the prevalence of malocclusion among school children. The sample consisted of 745 children (388 males and 357 females) in the age group of 8-12 years. The results showed that about 71% of the subjects had malocclusion. Class I malocclusion constituted the major proportion of malocclusion which was found in 62% of the studied population. No significant difference was found between boys and girls neither in the overall prevalence of malocclusion nor in various forms of malocclusion. Crowded incisors was found to be most common finding in subjects with class I malocclusion. A number of studies have been conducted to determine the prevalence of malocclusion among Indian children and it has been reported that the results range from a value as low as 19.6%.

We found that type of occlusion was normal in 15 males and 25 females, class I malocclusion in 45 males and 40 females, class II div I in 20 males and 30 females, class II div II in 18 males and 15 females and class III malocclusion in 12 males and 10 females. There are many other more common causes for open bites (such as tongue thrusting and thumb sucking), and likewise for deep bites. Upper or lower jaw can be overgrown or undergrown, leading to Class II or Class III malocclusions that may need corrective jaw surgery or orthognathic surgery as a part of overall treatment, which can be seen in about 5% of the general population.[11]

Dimberg et al[12] in their study comprised 386 children (199 girls and 187 boys), aged 3 years. The overall prevalence of malocclusion decreased significantly, from 70 to 58%: predominantly anterior open bite, excessive overjet, and Class III malocclusion. Although high rates of spontaneous correction were also noted for deep bite, Class II malocclusion and posterior and

anterior crossbites, new cases developed at almost the same rate; thus, the prevalence was unchanged at the end of the observation period. Anterior open bite and posterior crossbite were the only conditions showing significant associations with sucking habits. The results confirm the hypothesis of higher prevalence of malocclusion at 3 years of age.

CONCLUSION
Authors found that most commonly seen was class I followed by class II div I.

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