

**Ministry of Higher Education
& Scientific Research
Baghdad University
College of Dentistry**



**Occlusal Features, Perception of Occlusion and
Orthodontic Treatment Need and Demand among
13 Years aged Baghdadi Students
(A Comparative Cross Sectional Epidemiological Study)**

A thesis

**Submitted To the College Of Dentistry Baghdad University In
Fulfillment Of Requirement for the Degree of Master of
Science in Orthodontics**

Submitted by

Zaynab Mohamed Ridha Al-Chalabi

B.D.S

Supervisor by

Prof. Dr. Fakhri Abid Ali Al-Fatlawi

B.D.S., M.Sc. (Orthodontics)

IRAQ – BAGHDAD

2014 A.D.

1436 A.H.

ABSTRACT

The study was conducted to assess the distribution, prevalence, severity of malocclusion and orthodontic treatment need in Baghdad governorate in relation to gender and residency, and whether it has increased or not over 12 years by comparison with previous survey in Baghdad.

A multi-stage stratified sampling technique was used in this investigation to make the sample a representative of target population. The sample consisted of 2700 (1349 males and 1351 females) intermediate school students aged 13 years representing 3% of the total target population.

A questionnaire was used to determine the perception of occlusion and orthodontic treatment demand of the students and the assessment procedures for occlusal features by direct intraoral measurement using vernier and an instrument to measure the rotated and displaced teeth. In summary the following results were obtained:

- 1- 7.7% of the sample had some type of orthodontic treatment or consultation.
- 2- 39.1% of the students answered that they have malaligned teeth, being significantly more in female than males.
- 3- Of the students who stated that they have malaligned teeth, 26% reported that they had crowded teeth, 26.6% had spaced teeth, 22.4% had protruded teeth and 25.7% had rotated and displaced teeth.
- 4- Regarding the answers of the effect of mal-aligned teeth, 70.3% answered that it affects their appearance, 17.7% chewing, and 7.7% speech while 4.1% answered that mal-aligned teeth did not affect appearance, chewing or speech.
- 5- the most common reasons for not seeking orthodontic treatment that the student thought that treatment is fear of pain (48.8%) and not important or not possible (25.8%).
- 6- One or more missing teeth due to extraction or trauma were found in 4.9% of the sample, and the most common extracted teeth were the first molars (1.6%

mandibular and 0.9% maxillary). One or more rotated teeth were found in 38.3% of the sample; one or more displacement teeth were found in 19.6% of the sample.

7- The maxillary anterior region showed the highest prevalence of 2mm or more spacing (15.2%) and the mandibular anterior region showed the highest prevalence of 2mm or more crowding (12.6%); a maxillary central diastema of 1mm or more was found in 18.1% of the sample with a mean of 0.306 ± 0.015 mm.

8- Angle's class I occlusion was found in 78.29% of the sample, class II in 19.5% (17.2% division 1 and 2.3% division 2) and 2.3% had class III malocclusion (1.6% postural and 0.7% true). The mean overjet of the sample was 3.31 ± 0.04 mm. The mean overbite was 2.99 ± 0.03 mm,

9- Midline shift (≥ 1 mm) was found in 54.3% of the sample (28% to the right and 26.3% to the left side). Soft tissue impingement was found in 3.3% (3% palatally and 0.3% labially). Normal lip form was found in 86.6%, contracting lip form in 10.1% and lip trap in 3.3% of the sample.

10- The DAI scores registered in this study ranged between 13 and 65 with a mean of 23.234 ± 0.12 . 7.3% with treatment highly desirable, and 4.5% with treatment mandatory.

Significant changes in the proportions of malocclusions as a whole in school children were found over the last decade; also increase the need for orthodontic treatment among adolescents in the Baghdad commune and low perception level of the Baghdadi children to their own occlusion and the demand on treatment was remarkably low. This data will be useful for public oral health service and emphasize the need for orthodontic treatment among adolescents in Baghdad and stressing on the role of oral health education to encourage the children to undergo orthodontic treatment.