

## Abstract

**Introduction:** Malocclusion is one of the most important dental anomalies that can negatively affect appearance and function. IOTN (index of orthodontic treatment need) is one of the well-known orthodontic indices based on individual occlusal features that has classified malocclusions. The aim of this study was to evaluate the orthodontic treatment needs of male students aged 11-14 years between 2020- 2021 in Ardabil, Iran.

**Materials and methods:** In this cross-sectional descriptive study, 260 male students aged 11-14 years from 16 schools in two districts having inclusion criteria were studied. Cluster-random sampling was used to select schools. Tools used for examination Includes abslang and marker to determine the amount of overjet and overbite and ruler and single-use gloves. Information in checklist including demographic information and IOTN index were recorded. The IOTN index consists of two index components: DHC dental health and AC beauty index. The DHC index evaluates ten characteristics and it has 5 degrees. AC index contains 10 degrees, which is shown with 10 photos. Collected Data were investigated bay SPSS software version 22, Chi-square statistical tests and Spearman correlation tests.

**Results:** 141 (54.23%) students from public schools and 119 (45.77%) students from private schools were evaluated. Based on DHC index, 67.3% of students and based on AC beauty index, 93.5% of students did not have orthodontics treatment. There were no significant differences in terms of AC beauty index and DHC dental health index between public and private schools ( $P>0.05$ ). Beauty index AC and DHC dental health index didn't have significant differences based on age of students, their education and socio-economic status of their parents ( $P>0.05$ ).

**Conclusion:** According to beauty index AC and DHC, most of students didn't need orthodontics treatment, also there is no aignificant relationship between student's dental health DHC and age socio – economic and educational situation of their parents.

### Keywords:

DHC, AC IOTN index need for orthodontic treatment, malocclusion.