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INTRODUCTION

Yemen is a country on the Arabian Peninsula in Southwest Asia and is part of the Middle East. However, no available data on the prevalence, distribution and severity of malocclusion or the orthodontic treatment need of the population representative of the whole of Yemen is available. The lack of data on the distribution, prevalence and severity of malocclusion in Yemen likely affects the effective planning for the orthodontic services, which is needed to address the ever-increasing demand for orthodontic treatment. Therefore, the aim of this study was to evaluate the prevalence and severity of selected malocclusion traits incorporated in the DAI index and orthodontic treatment need in a representative sample of 12-year-old Yemeni schoolchildren using the Dental Aesthetic Index (DAI).



RESULTS

Figure 1. Distribution of the DAI scores in the study sample

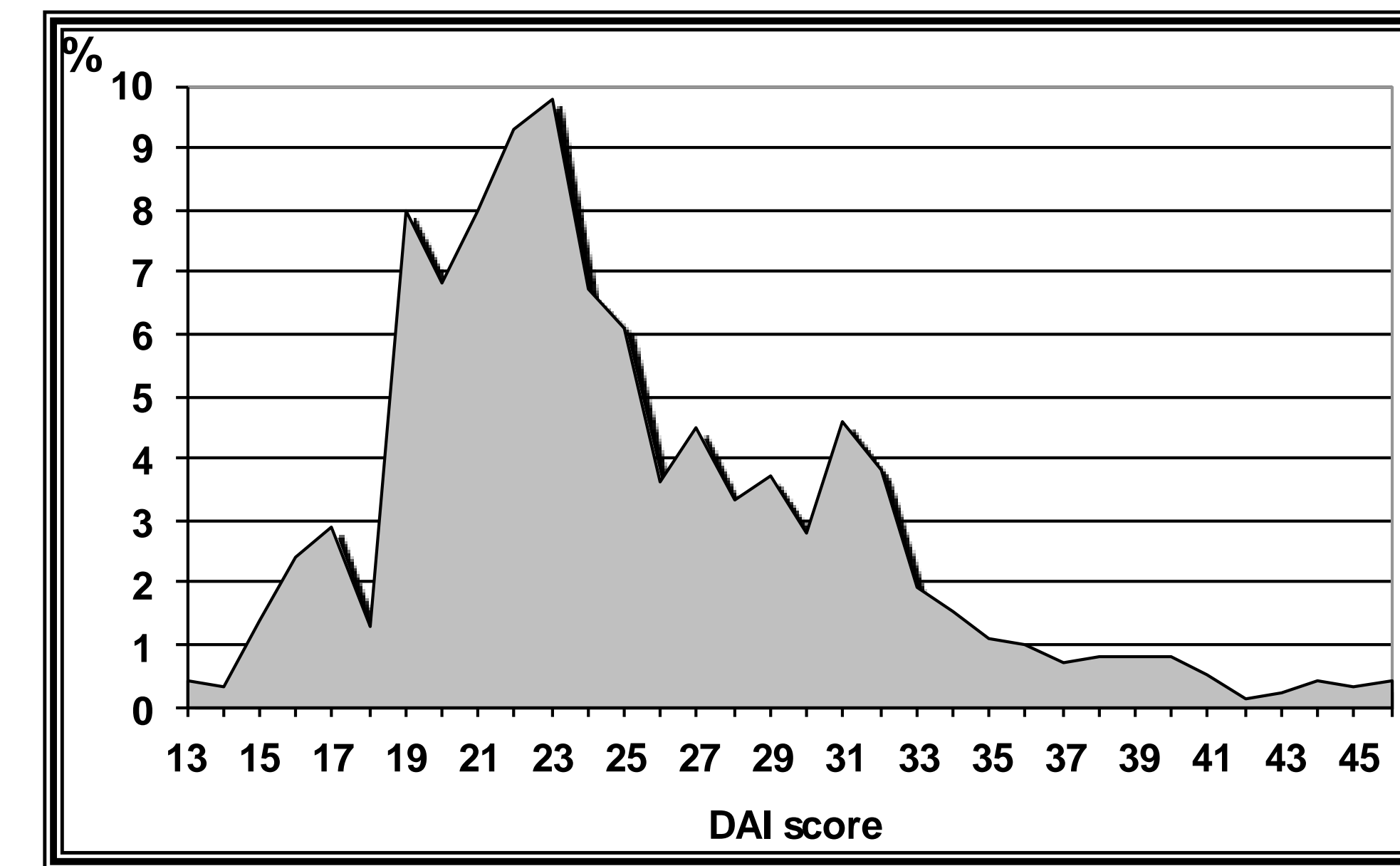
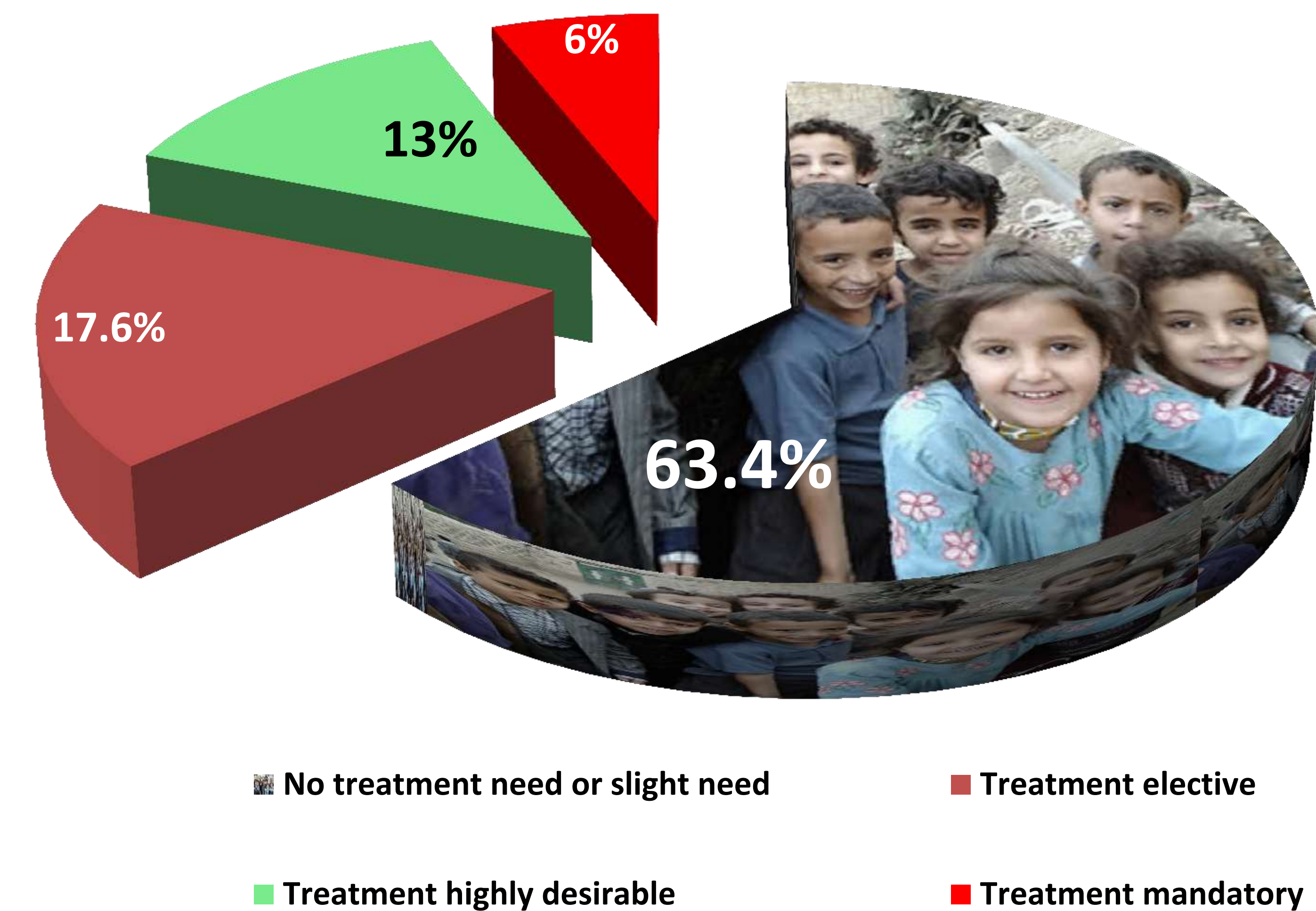


Table 2: Malocclusion traits evaluated using the DAI

DAI Component	n	%
Missing teeth	>1	238 7.9
Crowding (incisal segments)	0	2060 68.6
	1	616 20.5
	2	327 10.9
Maxillary overjet (mm)	0	345 11.5
	1-3	1652 55.0
	>3	1006 33.5
Mandibular overjet (mm)	>0	321 10.7
Open bite (mm)	>0	249 8.3
Molar relationship	normal	2084 69.4
	one half cusp	595 19.8
	one full cusp	324 10.8

Figure 2. Orthodontic treatment need



SUBJECTS and METHODS

Sample size: 3003 (1501 Female, 1502 Male)

Sample age: 12 years old

Intraoral examination for occlusal status using the DAI was performed.

Scores for each component were multiplied by a previously reported weight and a constant was added to obtain a final DAI score for each child

Table 1: DAI components

DAI Component	Rounded weight
Number of missing visible teeth	6
Crowding in incisal segment	1
Spacing in incisal segment	1
Midline diastema	3
Largest anterior maxillary irregularity	1
Largest anterior mandibular irregularity	1
Anterior maxillary overjet	2
Anterior mandibular overjet	4
Vertical anterior openbite	4
Anteroposterior molar relationship	3
Constant	13



CONCLUSIONS

Malocclusion as assessed by DAI was characterized by a relatively high frequency of missing teeth, dental crowding, as well as a relatively high frequency of anterior mandibular overjet (Class III malocclusions).

According to the findings of this study:

➤ Almost one in five of the evaluated Yemeni school children had a DAI score above or equal to 31 points, suggesting highly desirable or mandatory orthodontic treatment need.

REFERENCES

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