



Keywords: Oral health; Dentition; Oral diseases; Dental crowding; Children; Oral hygiene; Deciduous dentition; Dental occlusion; Dental caries

Introduction

A literature review reported that, besides its aesthetic and psychological function, deciduous dentition plays a significant role in development of speech, jaws growth's stimulation and maintenance of space for permanent dentition [1]. However, it is exposed to a rich and varied pathology like tooth decay, trauma and anomalies of number,

approval and the authorizations by the educational and the health authorities; the parents were well informed, and had given their written agreement. During the survey, children with oral diseases were referred to our paediatric dentistry department for free management according to the directives of the Tunisian National Program of Oral Health.

Sampling

A bi-stage clustered sampling technique was used. In the first stage, of 42 kindergarten stratified by district, 11 were randomly selected. Secondly, 36 children were selected in each institution. The sample was chosen in respect of the following inclusion criteria:

- No dental anomalies of number (agenesis or supernumerary teeth)
- No malocclusion (teeth version) because of premature loss of deciduous teeth.

Methods

A session for oral hygiene education was performed in a first contact with children. During the next meeting, a clinical examination was carried out, according to the World Health Organization (WHO) criteria [11], to detect oral alterations. Children were examined in a classroom, under daylight, with the usual dental examining instruments (dental mirror, explorer and tongue depressor); no radiographs were taken. The same investigator performed all examinations in order to avoid "inter-examiner reliability" bias. Data were recorded in a modified WHO oral health assessment form [11].

The family income was assessed from the profession of the parents.

		Bad oral hygiene (%)	Dental caries (%)	Mean d (SD)	Mean m (SD)	Mean f (SD)	Mean dmft (SD)	Mean SiC (SD)
Gender	Boys	15.4	34.4	1.13(1.04)	0.01 (0.01)	0.01 (0.04)	1.15 (0.57)	5.86 (4.2)
	Girls	14.2	37	1.07 (0.9)	0.01 (0.03)	0.01 (0.02)	1.09 (1.02)	5.46 (4.1)
Age (Y)	3	14.3	28.6	0.75 (0.06)	0	0	0.75 (0.23)	4.6 (5.1)
	4	14.1	33.3	1.08 (0.87)	0.01 (0.03)	0	1.09 (1.0)	5.75 (4.5)
	5	15.4	37.8	1.18 -0.2	0.01 (0.02)	0.05 (0.02)	1.24 (0.26)	5.65 (3.2)
Total		14.8	35.7	1.10 (1.0)	0.01 (0.8)	0.01 (0.05)	1.12 (0.02)	5.57 -2.26

Table 2: Oral hygiene and caries experience.

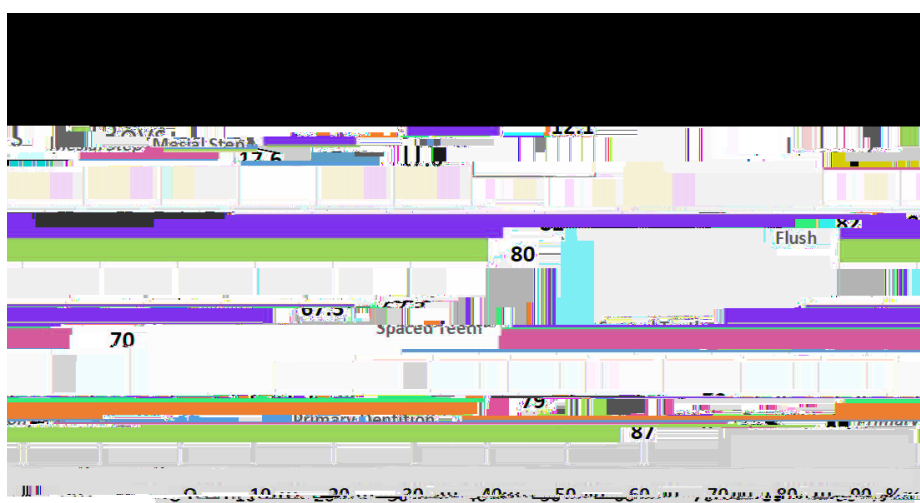


Figure 1: Occlusal patterns by gender in primary dentition.

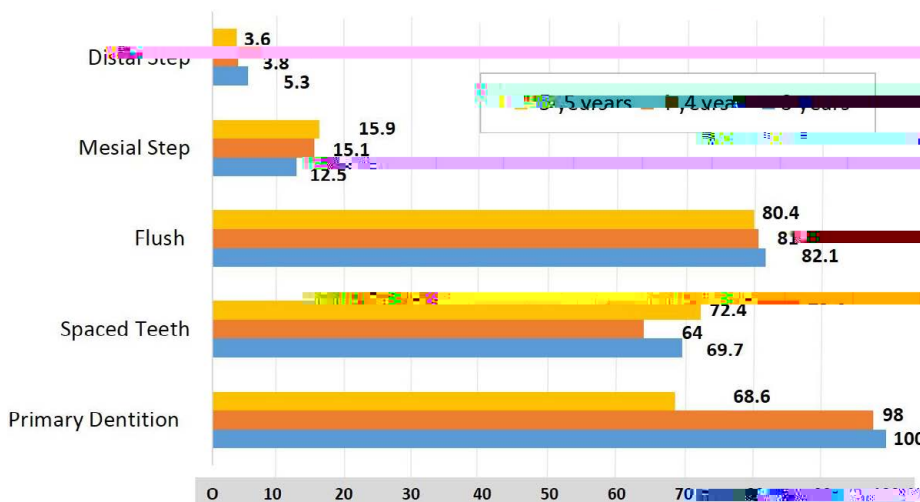


Figure 2: Occlusal patterns by age.

had distal step (Figure 2). Asymmetrical (right/left) molar relationship was noted in 12% of cases. No significant difference was noted in these occlusal patterns by age and gender.

The prevalence of malocclusion was about 24.7%, with only 13.3% children presenting moderate to severe malocclusion and needing orthodontic follow up. The analysis revealed that malocclusion was less frequent in children with spaced teeth ($\chi^2=39.04$, $p<0.000$) and

in children presenting flush molar relationship ($\chi^2=21.6$, $p<0.001$) but malocclusion was more frequent in children with dental caries ($\chi^2=13.16$, $p<0.01$).

Discussion

Several limitations of this study must be taken into consideration; the major one was the subjectivity of some information given by

