

Oral Health and Occurrence of Salivary *S. mutans* in Small Children

Language: English

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Aim and Methods

- A clinical study was carried out on 155 children from Erfurt, Germany, aged in average 30 months (tab. 1) to analyse their oral health status (dmft, initial caries lesions, oral hygiene and periodontal status, dento-facial anomalies).
- Additionally salivary tests Dentocult® SM strip mutans were carried out.
- For statistical analyses the SAS package with a confidence interval of 95% was used.

Results

Sampling Frames and Response Rates

	30 months old children	Sampling frame	Subject	Response rate
Total	425	231	155	67.1%
Male	208	119	85	71.4%
Female	217	112	70	62.5%

- 85.3% of the subjects were caries free (dmft =0).
- The caries prevalence was recorded at a value of 0.58 dmft, without differences between the gender (fig. 1)
- In 29.9% of the subjects initial caries was recorded, mostly as brown discolorations on the anterior upper teeth (fig. 2).
- In more than one third of the children visible plaque and gingivitis were found, with a significantly higher frequency in boys than in girls (fig. 3, 4).
- The most frequent dento-facial anomaly was the open bite (42%) (fig. 5).
- Whereas in two third of the children no *S. mutans* were detected in saliva, 25% of children showed even high numbers (fig. 6).
- A correlation was found between the caries prevalence and the salivary counts of *S. mutans* (fig. 7, 8, 9).

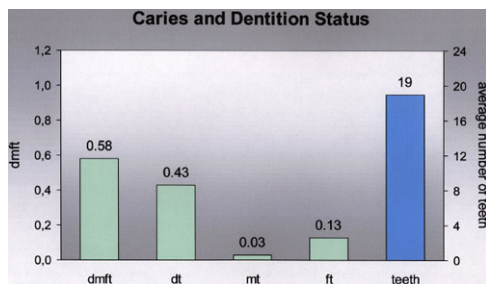


Fig. 1: Caries and Dentition Status

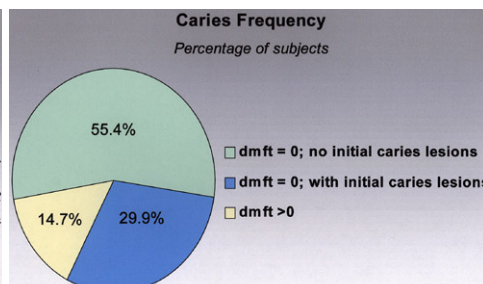


Fig. 2: Caries Frequency

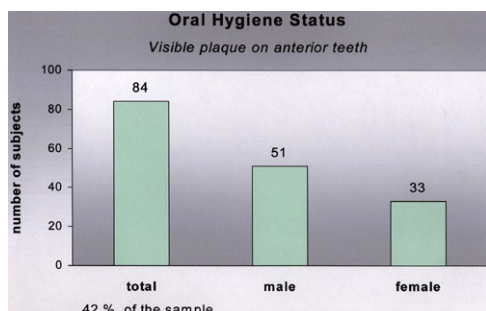


Fig. 3: Oral Hygiene Status

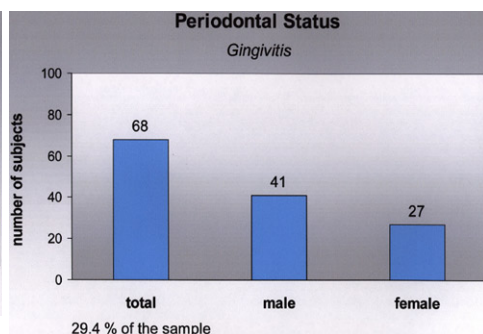


Fig. 4: Periodontal Status

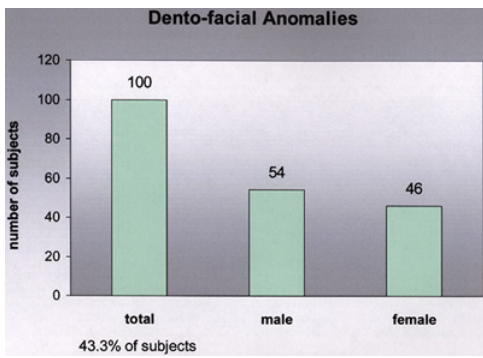


Fig. 5: Dentofacial Anomalies

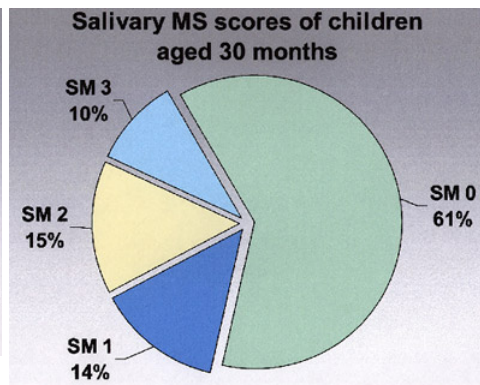


Fig. 6: Salivary MS scores of children

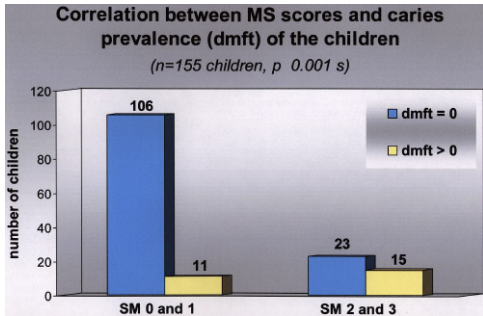


Fig. 7: Correlation between MS scores and caries prevalence (dmft) of the children

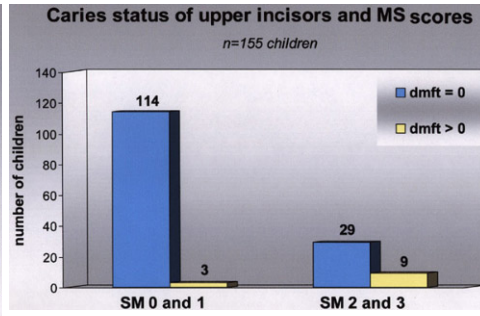


Fig. 8: Figure 8: Caries Status of upper incisors and MS scores

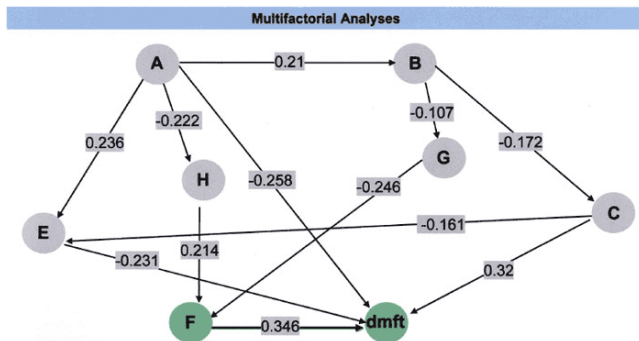


Fig. 9: Multifactorial Analyses

Variables

- A: Education of the mothers (1 = at least class 10; 0 = lower education)
- B: Occupation of the mothers (1 = working; 0 = no working)
- C: The child has the bottle at night (1 = yes; 0 = no)
- dmft: Caries index of deciduous teeth (0 = healthy; 1 = carious, to summarize d-,m-, and f-components)
- E: Visible plaque at anterior teeth (1 = yes; 2 = no)
- F: Scores of mutans streptococci (1 = high; 0 = low)
- G: Regular supervised of toothbrushing by the mothers of the children and additional toothbrushing (1 = yes; 0 = no)
- H: Cariogenicity of meals (1 = cariogenic; 0 = no cariogenic)



Fig. 10 and 11: Early Childhood Caries



Fig. 12

Conclusion

It could be concluded that oral health showed still deficits, expressed by early development of dentinal caries and a relatively high frequency of initial caries lesions, which were combined with high numbers of *S. mutans* in saliva.

This poster was submitted by Prof. Dr. Annerose Borutta.

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FP 13-9 Oral health and occurrence of salivary *S. mutans* in small children



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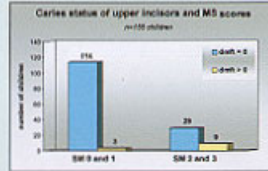
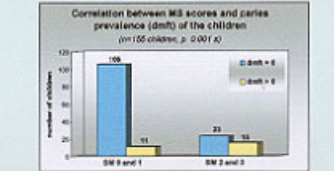
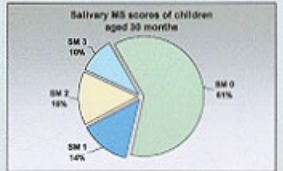
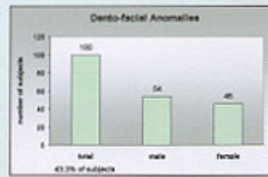
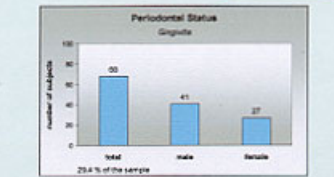
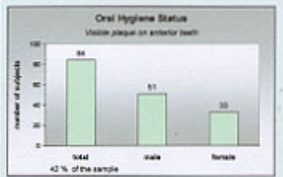
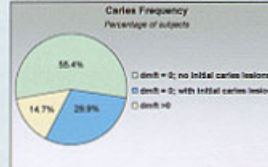
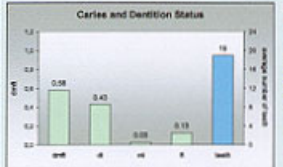
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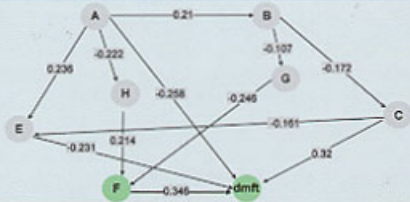
RESULTS

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