

1. Introduction

Dental caries (tooth decay) is the single most common chronic disease of childhood¹ and is of particular concern in preschool children, for whom treatment of caries often requires general anaesthetic.

In the Republic of Ireland, there are no national data on caries levels in preschool children. However, we know that between 37% (F) and 55% (NF) of 5-year-olds have experienced dental caries.² There is a wide social divide in oral health status among young children: for example, in fluoridated areas, caries levels are 40% higher among disadvantaged 5-year-olds compared to those who are not disadvantaged.²



Dental caries is preventable and early intervention is the key to success.

Happy Teeth is a pilot project which aims to develop and pilot an intervention to prevent dental caries in preschool children in disadvantaged areas in Ireland. Developing a supervised toothbrushing programme for preschools is one arm of the project. One preschool in a government-designated disadvantaged (RAPID) area on the north side of Cork city was selected as the pilot site.

2. Aim

The aim of this arm of the Happy Teeth project was to

- Conduct a baseline dental survey
- Explore home toothbrushing behaviours

of preschool children in the pilot site prior to the introduction of a supervised toothbrushing programme.

3. Methods

Following ethics approval, consents and questionnaires were distributed to parents by the preschool.

Dental examinations were conducted in the preschool by a trained dental examiner using a DenLite illuminated mouth mirror (Milltex Inc). Caries was recorded at dentinal level in accordance with previous Irish dental surveys.² Standard infection control measures were observed.

Questionnaire responses were entered and analysed in Microsoft Excel.

4. Results

- Positive consent was returned for all children (n=34)
- 30/34 children were examined (mean age 3.9 years)
- 32 questionnaires were returned and analysed

Clinical results for the 2 age groups examined are presented in Table 1.

Table 1: Dental status of children examined

	N	No. children with caries	No. teeth with caries	Mean dmft	Mean dmft in children with caries
Toddlers (mean age 3.0)	10	2 (20%)	4	0.40	2
Preschoolers (mean age 4.3)	20	10 (50%)	30	1.5	3 (range 1-7)
Total	30	12 (40%)	34	1.1	2.8

Questionnaire data showed that:

- Only half of the children brushed their teeth every day
- One in 4 brushed their own teeth
- Over one third used more than a pea-size amount of toothpaste
- 2 out of 5 rinsed with a beaker of water after brushing
- Only 4/32 parents had ever received advice on caring for their child's teeth

5. Discussion

- The prevalence and severity of decay in this group of preschool children was high
- Toothbrushing behaviour was not in line with recommended practice
- This small survey clearly shows the need for raising awareness of the importance of oral health in preschool children and for early intervention to prevent dental caries

A supervised toothbrushing programme has commenced in the pilot preschool. Roll out of this programme to other preschools in the area will include a baseline survey which will provide a clearer picture of the dental health of preschool children in this fluoridated, disadvantaged area.

6. References

1. U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes for Health, 2000.
2. Whelton H, Crowley E, O' Mullane D, Harding M, Guiney H, Cronin M, et al. North South Survey of Children's Oral Health in Ireland 2002. Dublin: Department of Health and Children, 2006.[Available at: www.dohc.ie/publications/oral_health.html]

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