

Dental Health and Rheumatic Fever



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Outline

- Hypothesis
- Research question
- What is “Poor Oral Health” and how do we quantify it?
- Caries
- Summary



Hypothesis

That an association exists between poor oral health and an increased risk of RF



Research Question

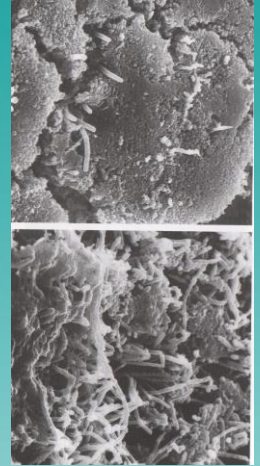
- Does the dental plaque biofilm act as a reservoir for GAS?
 - GAS have been isolated in dental plaque.
 - RF/RHD and poor oral health both more prevalent in deprived populations - common bacterial aetiology ?
 - BLIS producing probiotics: reduction indental plaque and reduced pharyngitis



What is “*Poor Oral Health*” ?

- Caries

- “A bacterial driven, chronic, site-specific, multifactorial, dynamic disease process that involves a shift of the balance between protective factors and destructive factors to favour demineralisation of the tooth structure over time”
- Caries process occurs in the biofilm at the tooth or cavity surface



- Periodontal diseases

Gingivitis
Periodontitis



Quantifying Oral Health

- **Decayed Missing Filled Teeth (or dmft) index**
 - the key cumulative measure of dental caries
 - quantifies dental caries
 - provides a “snapshot” of an individual’s caries history
 - obtained from most recent dental therapy/dentist visit

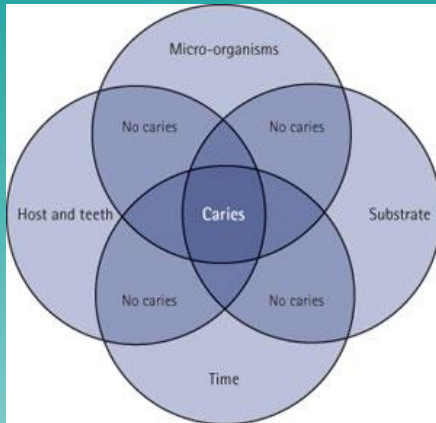


Study Questionnaire

- Questions 25 – 37, 58
- Dental history - fillings, extractions, GA
- Self-reported oral health (including gingivitis)
- Oral hygiene practices (including fluoride exposure)
- Dietary factors – sugar-sweetened juice

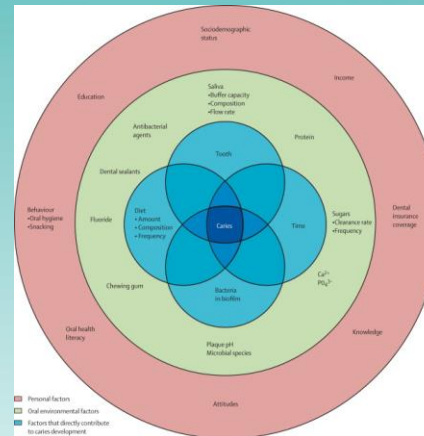


Dental Caries



- Sugar plays a pivotal role in the aetiology of dental caries
- Extensive scientific evidence that sugar is the primary necessary factor in the development of this common disease (Sheiham & James, 2015)

... however



Sheiham A, James WPT. Diet and Dental Caries The Pivotal Role of Free Sugars Reemphasized. J Dent Res. 2015;94(10):1341-1347.

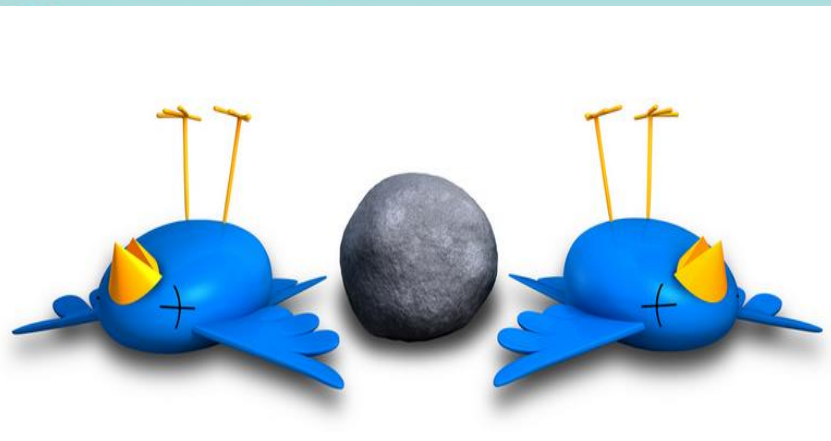


Summary

- DMFT/dmft data from DHBs and GDPs
- Oral health data from Study Questionnaire
- Descriptive statistics, univariate and bivariate analyses
- Comparison with National Oral Health data



- Is poor oral health linked to presence/absence of RF?
- If similar origins can be identified - targeting diseases separately is a waste of resources and effort (Sheiham and Watt, 2000)
- Integrated primary health intervention



Sheiham A, Watt RG (2000). The common risk factor approach: a rational basis for promoting oral health. *Community Dentistry and Oral Epidemiology* 28: 399-406.