A clinical trial showed the antibacterial efficacy of tulsi in reducing salivary Streptococcus mutans counts among 14-15-year-old school children in Davangere city.

**TULSI (OSCIMUM SANCTUM)**
- Is a holy herb easily available in courtyard
- Possesses antibacterial, antioxidant, and anti-inflammatory properties

Thorough literature search revealed, no studies assessing the antibacterial efficacy of Tulsi dentifrice against salivary Streptococcus mutans.

**RESULTS**
- Tulsi dentifrice had a significant inhibitory effect against salivary streptococcus mutans as compared to placebo dentifrice.
- The clinical effect size (r) was calculated for the Tulsi dentifrice and showed a moderate effect of 0.34 for antimicrobial action.

**METHODOLOGY**

**Baseline Score analysis**

Baseline

Tulsi (TD) 37.95
Placebo (PD) 38.66
Fluoridated (FD) 36.57

Chi square value = 2.102, p value = 0.350

**Post hoc analysis**

Tulsi (TD) 25.27
Placebo (PD) 32.91
Fluoridated (FD) 29.64

Post hoc analysis TD&FD (p=0.040*), r = 0.31

**INTRODUCTION**

Streptococcus mutans – one of the main culprits

Thorough literature search revealed, no studies assessing the antibacterial efficacy of Tulsi dentifrice against salivary Streptococcus mutans.

**METHODOLOGY**

**Baseline assessment**

Group 1 (4% Tulsi extract dentifrice) n=28
Group 2 (Fluoridated dentifrice) n=28
Group 3 (Placebo dentifrice) n=28

Sample size was calculated scientifically using GPower with α = 0.05 & β = 0.20, and 20% drop out was anticipated.

**RESULTS**

- The trial was registered with the clinical trial registry in India; trial no CTRI/2017/12/010749.
- The study was designed, analysed, and interpreted according to the CONSORT extension for herbal intervention.
- Sample size was calculated scientifically using GPower with n = 0.05 & B = 0.2, and 20% drop out was anticipated.
- Children with at least one cavitated active caries lesion (clinical selection criteria) and a salivary streptococcus mutans count equal to or more than $10^5$ colony-forming units (CFU)/ml of saliva (microbiological criteria – pre test) were included in the study.
- Subjects with a history of hypersensitivity to any products used in the study, suffering from any systemic disease that may affect the salivary flow rate, having a history of antibiotic-therapy in the month preceding the start of the study, and subjects undergoing orthodontic treatments were excluded.

**ACKNOWLEDGEMENT**

We duly acknowledge Bapuji Pharmacy College for the preparation of Tulsi extract dentifrice, placebo dentifrice, and the principals, teachers, parents and students of the three schools for their cooperation. I extend my gratitude to Dr. Mahesh (Public Health Dentist) for statistical assistance, Dr. Chandrabhaga (postgraduate – Public Health Dentistry) for concealed randomisation and Dr. Mukund (postgraduate – Oral Pathology and Microbiology) for microbiological assistance.

**REFERENCES**