

Introduction

Oral hygiene is essential for maintaining both oral and systemic health, especially among school-aged children who are particularly vulnerable to dental caries and periodontal diseases due to dietary habits and poor hygiene practices^{2,3,4}. This pilot study aims to assess the oral hygiene status of children aged 6–12 years in underprivileged schools of Islamabad and determine the impact of short-term oral health education and intervention. The focus is to evaluate plaque scores within a one-month follow-up period to assess immediate behavioral change.

Objectives

- 1.To assess the feasibility of implementing a school-based oral health intervention among schooled-aged children.
- 2.To evaluate its short-term impact on:
 - oral health knowledge and awareness
 - oral hygiene practices
 - oral hygiene status (measured by plaque scores)

Methodology

A pilot longitudinal observational study was conducted at Islamia Public School, Islamabad with 41 children (6–12 years) selected by convenient sampling. WHO Oral Health Survey (5th Edition)¹ guidelines were used for data collection. Plaque scores were assessed using the Simplified Oral

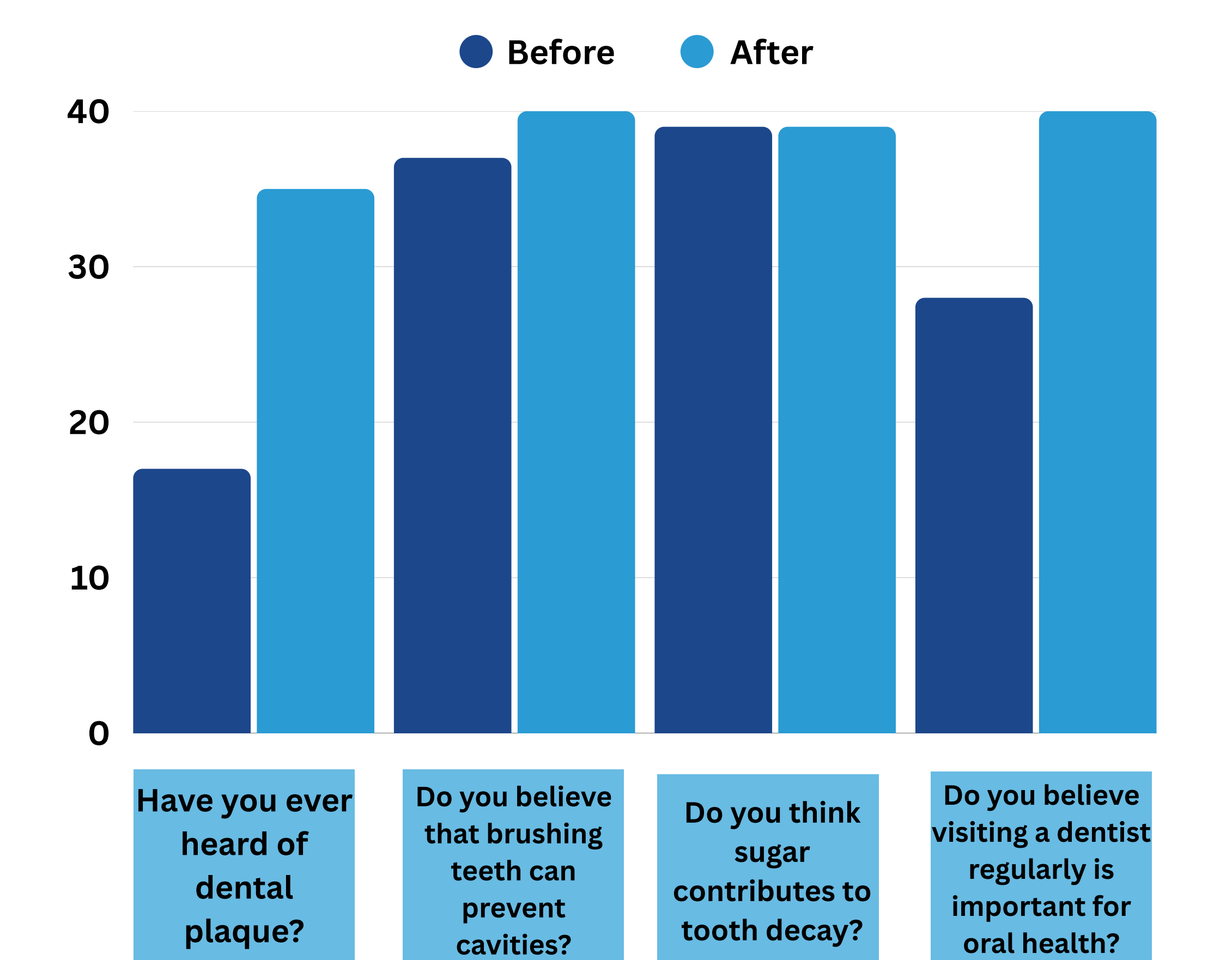
Hygiene Index (OHI-S)¹. Students received a brushing demonstration and oral health education. Plaque scores were reassessed after one month. Prior to data collection, a calibration session was conducted. Intra- and inter-examiner

reproducibility were assessed, with repeated examinations and independent assessments, respectively. A Cohen's Kappa value above 0.80 indicated high examiner agreement. Informed consent was taken before collecting data. Data analysis was done using SPSS 20. Frequencies, percentages, and means were calculated for descriptive statistics. Paired t-tests were performed to evaluate statistical significance. IRB approval was obtained from Shifa College of Dentistry.



Results and Analysis

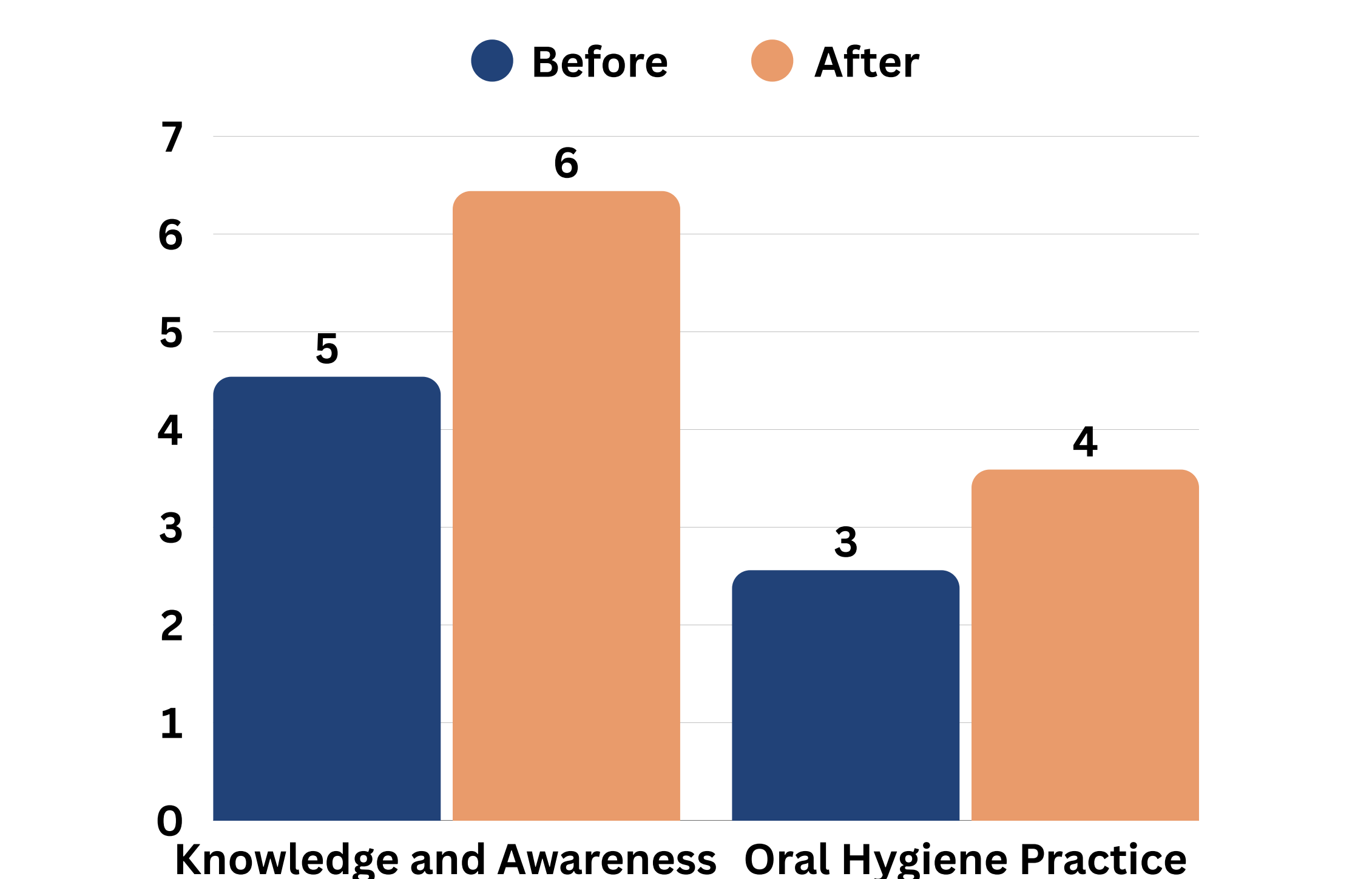
The study demonstrated a significant short-term improvement in oral health knowledge, awareness, and hygiene practices among school children after a simple educational intervention.



Pre and Post Analysis of Oral Health Knowledge and Awareness

Fig .01

An average increase of 1.902 in knowledge score and 1.024 in practice scores was observed within one month.



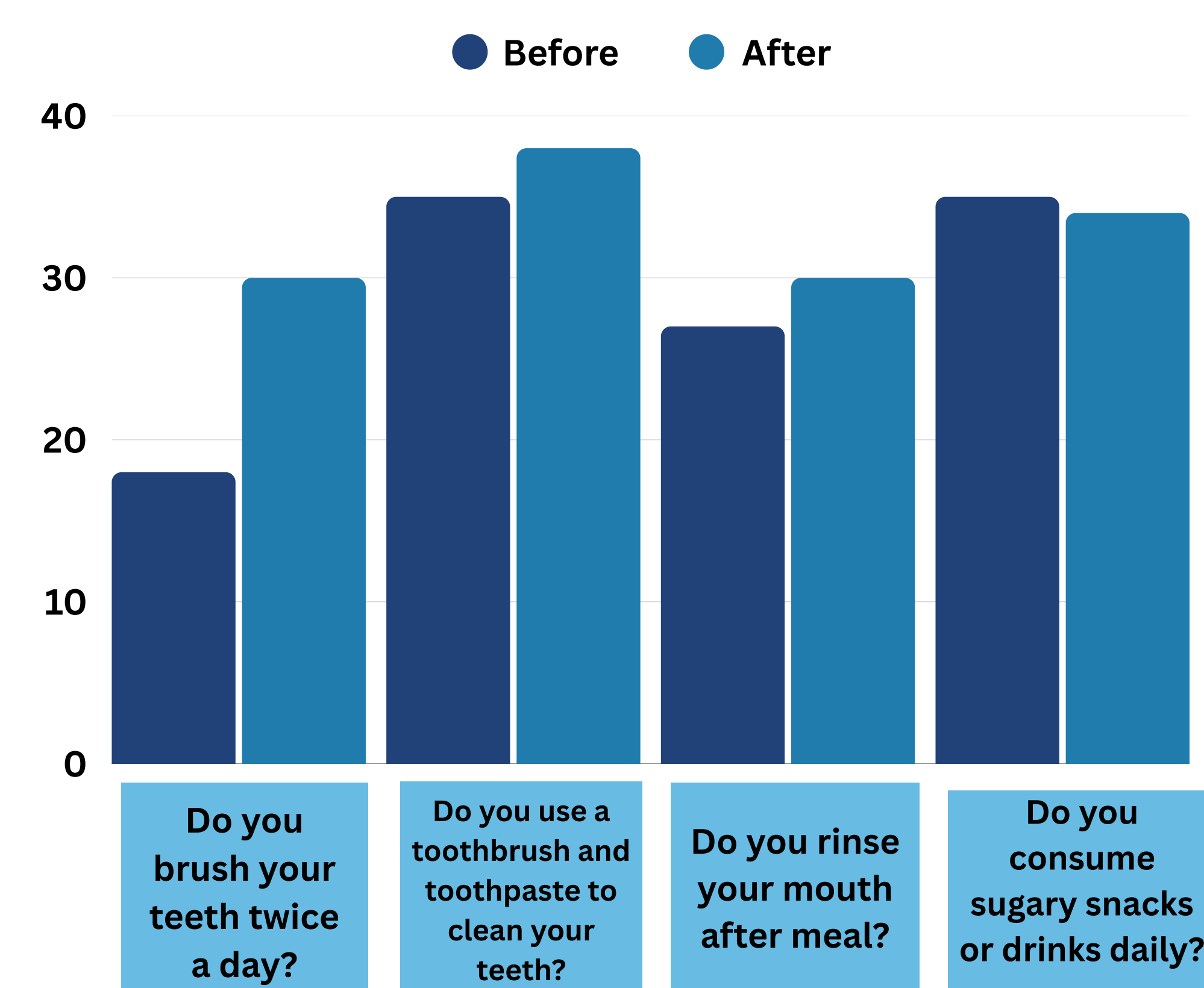
Pre and Post Mean Scores of Oral Health Awareness and Daily Practice

Fig.02

	Mean	N	Std. Deviation	P-Value* Paired t-test
Pre-analysis of oral health knowledge & awareness	4.54	41	1.227	.000
Post-analysis of oral health knowledge & awareness	6.44	41	1.097	
Pre-analysis of oral hygiene practice	2.56	41	1.285	.000
Post-analysis of oral hygiene practice	3.59	41	1.224	

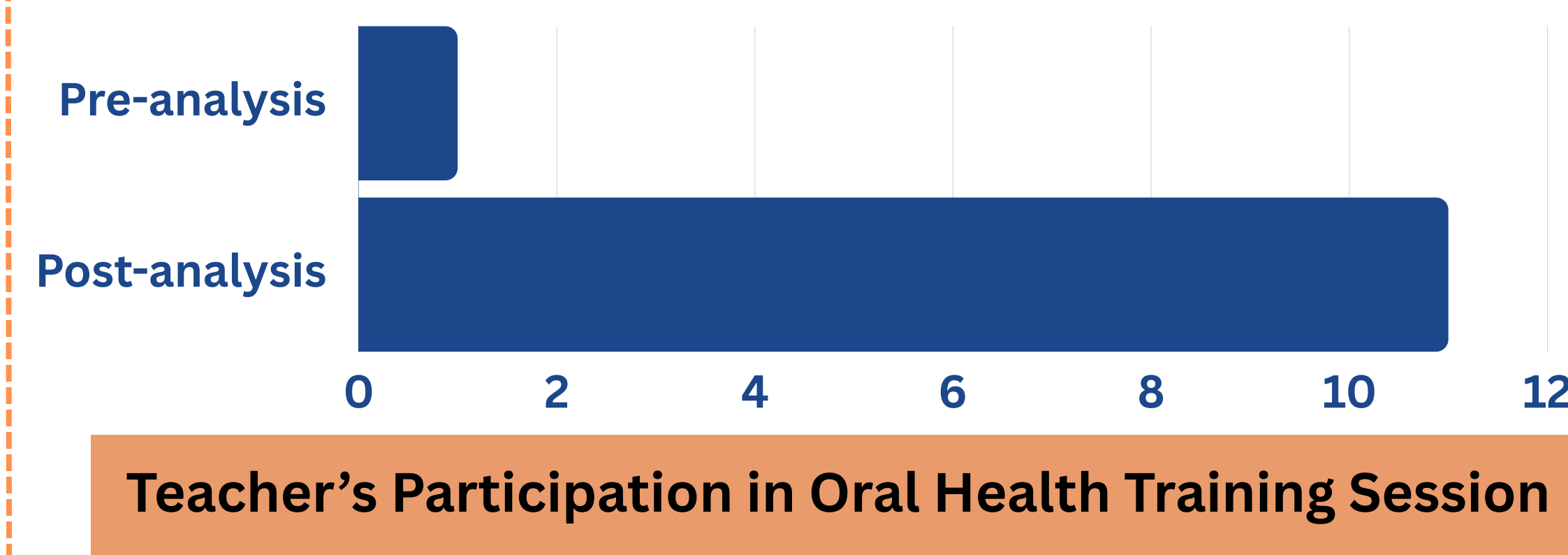
Paired T-test Indicating Statistical Significance Between Pre and Post Oral Health Awareness and Practices

Table.01



Participant's Response to Oral Hygiene Practices

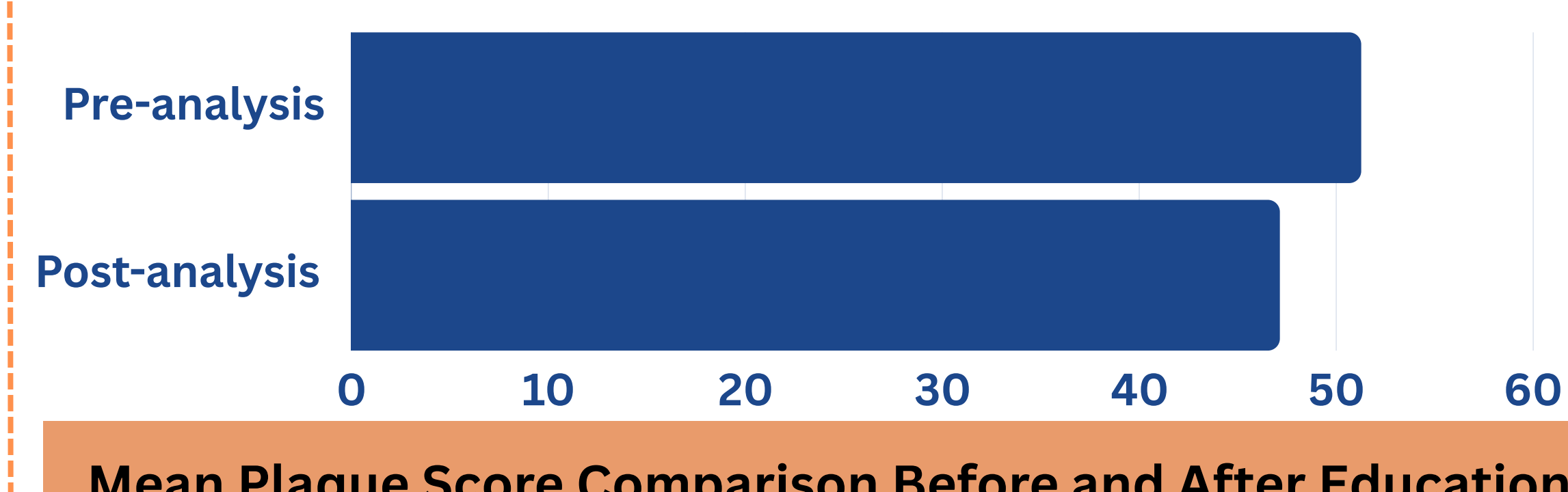
Fig.03



Teacher's Participation in Oral Health Training Session

Fig.04

Mean DMFT score was 1.83 which remained unchanged. The mean decrease in plaque score was 4.124.



Mean Plaque Score Comparison Before and After Education

Fig.05

Conclusion

The study demonstrated a significant short-term improvement in oral health knowledge, awareness, and hygiene practices among schoolchildren after a simple educational intervention. A noticeable reduction in plaque scores and an increase in both knowledge (1.902) and practice scores (1.024) were observed within one month. Teachers feedback also reflected improved oral health awareness and student engagement following the program. Collectively this pilot study indicated the feasibility and short term impact of a school-based oral health intervention, providing valuable insights and laying a foundation for scaling up to larger, long-term community-based programs.

Reference

