

ABSTRACT

Background: Caries is caused by the interaction of plaque, bacteria, diet and teeth. Plaque is soft deposit on teeth surface which consists of growing microorganism. Plaque removed mechanically by brushing using toothpaste. miswak and xylitol have antibacterial substances to prevent plaque formation.

Research objective: The aim of this study was to determine differences reduction of plaque scores between brushing with miswak extract toothpaste and xylitol toothpaste on 10-12 years old children.

Research Design: This research was a quasi experimental study using pre and post-test design. This research involved 35 subjects from SDN Tlogo which age ranged from 10-12 years old. The subjects were given two different treatments that were brushing the teeth using miswak extract toothpaste and xylitol toothpaste. The data was analyzed by using independent sample t-test.

Research result: The research result showed that there was a difference plaque score from both treatments seen from the plaque average gap which significance was 0.000 ($p < 0.05$).

Conclusion: There was a differences reduction of plaque scores between brushing with miswak extract toothpaste and xylitol toothpaste on 10-12 years old children. miswak extract toothpaste (*Salvadora persica*) was stronger to reduce plaque score compared to xylitol toothpaste.

Keywords: Miswak extract toothpaste (*Salvadora persica*), Xylitol toothpaste, Plaque, 10-12 years old children