INTISARI

Latar belakang: Susu mengandung mineral kalsium dan fosfat yang berperan dalam remineralisasi gigi, namun konsumsi susu juga berpotensi menurunkan pH saliva sehingga dapat memicu demineralisasi email. Struktur enamel gigi desidui lebih tipis dan lebih rentan terhadap kerusakan meningkatkan risiko terjadinya karies pada anak.

Tujuan: Mengetahui hubungan konsumsi susu dengan tingkat keparahan karies, kebersihan mulut, serta biomarker saliva yang meliputi derajat keasaman saliva, kapasitas buffer saliva, dan kadar kalsium anak usia 5 tahun di Kecamatan Jogorogo, Kabupaten Ngawi.

Metode: penelitian ini menggunakan desain observasional analitik dengan rancangan *cross-sectional* yang melibatkan 88 subjek anak sehat berusia lima tahun serta memiliki gigi desidui lengkap di Kecamatan Jogorogo, Kabupaten Ngawi. Data konsumsi susu diperoleh melalui kuesioner yang diisi oleh orang tua subjek, pemeriksaan dilakukan pada pukul 9-11 pagi untuk mengukur keparahan karies yang dinilai menggunakan *Caries Severity Index* (CSI), kebersihan mulut menggunakan modifikasi *Personal Hygiene Performance* (PHP-M), serta saliva tidak terstimulasi dikumpulkan untuk pemeriksaan derajat keasaman dan kapasitas buffer dan kadar kalsium saliva.

Hasil dan pembahasan: Analisis korelasi *Spearman* menunjukkan adanya hubungan positif yang signifikan antara frekuensi konsumsi susu dengan tingkat keparahan karies ($r = 0{,}255$; $p = 0{,}017$), kebersihan gigi ($r = 0{,}211$; $p = 0{,}049$) dan hubungan negatif yang signifikan antara frekuensi konsumsi susu dengan derajat keasaman saliva ($r = -0{,}261$; $p = 0{,}014$). Penelitian ini tidak menemukan hubungan yang signifikan antara frekuensi konsumsi susu dengan kapasitas buffer dan kadar kalsium saliva.

Kesimpulan: Frekuensi konsumsi susu berhubungan dengan keparahan karies, kebersihan gigi dan derajat keasaman saliva, tetapi tidak berhubungan dengan kapasitas buffer, dan kadar kalsium saliva pada anak usia 5 tahun di Kecamatan Jogorogo Kabupaten Ngawi.

Kata kunci: konsumsi susu; anak usia 5 tahun; karies gigi; saliva; kalsium

ABSTRACT

Background: Milk contains calcium and phosphate, which play a role in tooth remineralization; however, milk consumption may also lower saliva pH, potentially leading to enamel demineralization. The enamel of primary teeth is thinner and more susceptible to damage, increasing the risk of dental caries in children.
Objective: To determine the relationship between milk consumption and the severity of caries, oral hygiene, and salivary biomarkers—including salivary pH, salivary buffer capacity, and calcium levels—in 5-year-old children in Jogorogo Subdistrict, Ngawi Regency.
Methods: This study employed an analytical observational design with a cross-sectional approach, involving 88 healthy 5-year-old children with a full set of deciduous teeth in Jogorogo Subdistrict, Ngawi Regency. Milk consumption data were obtained via a questionnaire completed by the subjects' parents; examinations were conducted between 9 and 11 a.m. to measure caries severity using the Caries Severity Index (CSI), oral hygiene using the modified Personal Hygiene Performance (PHP-M) scale, and unstimulated saliva was collected for analysis of pH, buffer capacity, and calcium levels.
Results and discussion: Spearman's correlation analysis revealed a significant positive association between milk consumption frequency and caries severity ($r = 0.255$; $p = 0.017$), oral hygiene ($r = 0.211$; $p = 0.049$), and a significant negative correlation between milk consumption frequency and saliva pH ($r = -0.261$; $p = 0.014$). This study did not find a significant association between the frequency of milk consumption and buffering capacity or salivary calcium levels.
Conclusion: The frequency of milk consumption is associated with the severity of dental caries, oral hygiene, and salivary pH, but is not associated with buffering capacity or salivary calcium levels in 5-year-old children in Jogorogo Subdistrict, Ngawi Regency.

Keywords: milk consumption; preschool children; dental caries; saliva; calcium