

ABSTRAK

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Program Studi : Kedokteran Gigi
Judul : Efektivitas Penggunaan Probiotik Terhadap Jumlah Bakteri
Streptococcus mutans di dalam Saliva pada Anak Sekolah Dasar di Klinik Yarsi

Latar Belakang: Karies gigi merupakan masalah kesehatan yang sering terjadi pada anak usia sekolah, dengan *Streptococcus mutans* sebagai salah satu bakteri penyebabnya. Probiotik berpotensi menekan pertumbuhan *S. mutans* melalui pengaturan mikrobiota rongga mulut, namun hasil penelitian pada anak masih beragam sehingga perlu diteliti lebih lanjut. **Tujuan:** Mengetahui efektivitas probiotik terhadap jumlah *Streptococcus mutans* dalam saliva serta pandangan Islam mengenai penggunaannya. **Metode:** Penelitian eksperimental dengan pendekatan *pre-test* dan *post-test* dilaksanakan di Klinik YARSI pada Februari-Maret 2026. Subjek penelitian sebanyak 10 anak sekolah dasar dengan karies gigi. Jumlah *Streptococcus mutans* diperiksa menggunakan *Quantitative Polymerase Chain Reaction* (qPCR) sebelum dan sesudah pemberian probiotik. Data dianalisis menggunakan *Paired Sample t-test*. **Hasil:** Rata-rata jumlah bakteri *Streptococcus mutans* sebelum pemberian probiotik sebesar $4,663 \pm 0,320$ log CFU/ml, sedangkan setelah pemberian probiotik sebesar $4,463 \pm 0,291$ log CFU/ml, dengan penurunan rata-rata sebesar 0,20 log CFU/ml. Hasil uji *Paired Sample t-test* menunjukkan nilai t sebesar 1,369 dengan nilai $p = 0,204$ ($p > 0,05$), sehingga tidak terdapat perbedaan yang bermakna secara statistik antara jumlah bakteri sebelum dan sesudah pemberian probiotik. **Kesimpulan:** Probiotik menunjukkan penurunan rata-rata jumlah *Streptococcus mutans*, tetapi tidak bermakna secara statistik. Penggunaannya sejalan dengan ajaran Islam selama memenuhi prinsip halal, aman, dan tidak menimbulkan kemudharatan.

Kata kunci: Probiotik, *Streptococcus mutans*, saliva anak sekolah dasar, Klinik YARSI.

ABSTRACT

Name : Debby Priscilla Rajak
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Title : *The Effectiveness of Probiotics on the Number of Streptococcus mutans Bacteria in the Saliva of Elementary School Children at the Yarsi Clinic*

Background: Dental caries is a common oral health problem among school-aged children, with *Streptococcus mutans* being one of the bacteria associated with its development. Probiotics have the potential to suppress the growth of *S. mutans* by modulating the oral microbiota; however, findings from studies involving children remain inconsistent, highlighting the need for further investigation.

Objective: To determine the effectiveness of probiotics in reducing the number of *Streptococcus mutans* in saliva and to examine their use from an Islamic perspective. **Methods:** This experimental study employed a pre-test and post-test design and was conducted at YARSI Clinic from February to March 2026. The study included 10 elementary school children with dental caries. The number of *Streptococcus mutans* was examined using quantitative polymerase chain reaction (qPCR) before and after probiotic administration. Data were analyzed using a paired-samples t-test. **Results:** The mean number of *Streptococcus mutans* before probiotic administration was 4.663 ± 0.320 log CFU/mL, compared with 4.463 ± 0.291 log CFU/mL after administration, representing a mean reduction of 0.20 log CFU/mL. The paired-samples t-test showed a t-value of 1.369 and a p-value of 0.204 ($p > 0.05$), indicating no statistically significant difference in the number of *Streptococcus mutans* before and after probiotic administration. **Conclusion:** Probiotic administration resulted in a decrease in the mean number of *Streptococcus mutans*, although the reduction was not statistically significant. Its use is consistent with Islamic teachings as long as it meets the principles of being halal, safe, and free from harm.

Keywords: Probiotics, *Streptococcus mutans*, saliva of elementary school children, YARSI Clinic.