

## INTISARI

**Latar Belakang :** *Bruxism* merupakan aktivitas parafungsional otot mastikasi yang ditandai dengan kebiasaan mengatupkan atau mengasah gigi secara berulang, yang dapat menghasilkan gaya oklusal nonfungsional dalam jangka panjang. Salah satu dampak klinis dari kondisi ini adalah atrisi gigi, yang berhubungan dengan besarnya kekuatan gigit pada gigi. **Tujuan:** Penelitian ini bertujuan untuk menganalisis hubungan antara kekuatan gigit dan derajat atrisi gigi pada anak *bruxism* usia 10–12 tahun. **Metode:** Penelitian observasional analitik dengan desain *cross-sectional* dilakukan pada 20 anak *bruxism* usia 10–12 tahun di beberapa sekolah dasar Kecamatan Depok, Sleman, Yogyakarta. Kekuatan gigit gigi kaninus pada sisi kanan dan kiri diukur menggunakan sensor FlexiForce, sedangkan derajat atrisi gigi kaninus dinilai menggunakan indeks atrisi gigi. Untuk membedakan kekuatan gigit gigi kaninus kanan dan kiri dilakukan uji *independent t* dengan *confidence intervals* 95%, sedangkan untuk membedakan derajat atrisi gigi dilakukan uji *Mann–Whitney*. Adapun untuk mengetahui hubungan antara kekuatan gigit dengan derajat atrisi gigi kaninus sisi kanan dan kiri dilakukan uji korelasi *Spearman*. **Hasil:** Hasil penelitian menunjukkan tidak terdapat perbedaan yang bermakna antara kekuatan gigit gigi kaninus kanan dan kiri ( $p = 0,368$ ), maupun derajat atrisi gigi kaninus kanan dan kiri ( $p = 0,600$ ). Terdapat hubungan positif yang kuat ( $r=0,69$ ) dan bermakna antara kekuatan gigit dan derajat atrisi gigi kaninus pada kedua sisi ( $p = 0,001$ ). **Kesimpulan:** Pada anak *bruxism* usia 10-12 tahun, semakin besar kekuatan gigit gigi kaninus kanan dan kiri, semakin besar derajat atrisi gigi kaninus kanan dan kiri.

**Kata kunci :** *Bruxism*, anak, kekuatan gigit, atrisi gigi

## ABSTRACT

**Background:** Bruxism is a parafunctional activity of the masticatory muscles characterized by repetitive clenching or grinding of the teeth, which may generate prolonged nonfunctional occlusal forces. One of the clinical consequences of this condition is dental attrition, which is closely associated with bite force magnitude acting on the teeth. **Objective:** This study aimed to analyze the relationship between bite force and the degree of dental attrition in children with bruxism aged 10–12 years. **Methods:** An analytical observational study with a cross-sectional design was conducted involving 20 children diagnosed with bruxism aged 10–12 years from several elementary schools in Depok District, Sleman, Yogyakarta. Canine bite force on the right and left sides was measured using a FlexiForce sensor, while the degree of canine tooth attrition was assessed using a dental attrition index. Differences in bite force between the right and left canines were analyzed using an independent t-test with a 95% confidence interval, whereas differences in attrition degree were evaluated using the Mann–Whitney test. The correlation between bite force and the degree of canine attrition on both sides was analyzed using Spearman’s correlation test. **Results:** The results demonstrated no statistically significant difference in bite force between the right and left canines ( $p = 0.368$ ), nor in the degree of canine attrition between both sides ( $p = 0.600$ ). A strong and statistically significant positive correlation was found between bite force and the degree of canine attrition on both sides ( $r = 0.69$ ;  $p = 0.001$ ). **Conclusion:** In children with bruxism aged 10–12 years, greater bite force in both right and left canines is associated with a higher degree of canine dental attrition.

**Keywords:** Bruxism, child, bite force, dental attrition