

**PENGARUH *PREMATURE LOSS* GIGI MOLAR DESIDUI RAHANG BAWAH TERHADAP DAYA KUNYAH DAN FUNGSI KOGNITIF ANAK LAKI-LAKI DAN PEREMPUAN USIA 8-9 TAHUN DALAM BERBAGAI TINGKAT KEKERASAN MAKANAN**

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**INTISARI**

Kehilangan gigi desidui sebelum erupsi gigi permanen dapat mengganggu proses pengunyahan. Pengunyahan berperan sebagai salah satu stimulus psikomotorik dan dapat mempengaruhi fungsi otak anak. Salah satu pemicu pengunyahan dapat berasal dari tingkat kekerasan makanan. Penelitian ini bertujuan mengetahui pengaruh *premature loss* gigi molar desidui rahang bawah terhadap daya kunyah dan fungsi kognitif anak laki-laki dan perempuan usia 8-9 tahun dalam berbagai tingkat kekerasan makanan.

Jenis penelitian adalah penelitian observasional analitik dengan pendekatan *Cross-Sectional*. Sampel penelitian berjumlah 60 sampel berjenis kelamin laki-laki dan perempuan usia 8-9 tahun yang terbagi menjadi tiga kelompok: *premature loss* 2 gigi molar desidui rahang bawah, *premature loss* 4 gigi molar desidui rahang bawah dan tidak *premature loss*. Masing-masing anak dilakukan uji daya kunyah pada tiga jenis kekerasan makanan serta pengukuran fungsi kognitif menggunakan *Modified Mini Mental State Examination for Children* (MMMSEC). Data dianalisis menggunakan Analisis Variansi.

Hasil penelitian menunjukkan terdapat perbedaan signifikan daya kunyah dan fungsi kognitif pada kelompok *premature loss* 2 gigi molar desidui rahang bawah, *premature loss* 4 gigi molar desidui rahang bawah dan tidak *premature loss*, berdasarkan jenis kelamin dengan tiga jenis kekerasan makanan ( $p < 0,05$ ). Kesimpulan penelitian terdapat pengaruh *premature loss* gigi molar desidui rahang bawah dan tidak *premature loss* berdasarkan perbedaan jenis kelamin dan tingkat kekerasan makanan terhadap daya kunyah dan fungsi kognitif. Daya kunyah dan fungsi kognitif lebih besar pada kelompok tidak *premature loss*, jenis kelamin laki-laki dan tingkat kekerasan makanan keras.

Kata kunci: *premature loss*, gigi molar desidui, daya kunyah, fungsi kognitif, kekerasan makanan

**THE EFFECT OF PREMATURE LOSS OF LOWER PRIMARY MOLARS  
ON MASTICATORY EFFICIENCY AND COGNITIVE FUNCTION  
AMONG 8-9 YEARS OLD BOYS AND GIRLS WITH VARIOUS LEVELS  
OF FOOD HARDNESS**

(A Study among Javanese Children in Public Elementary Schools of  
Seloharjo Pundong)

**ABSTRACT**

The premature loss of primary teeth may interfere the mastication process. Mastication is one of the psychomotor stimuli and can affect children's brain function. The variety of food hardness contributes to child masticatory efficiency. This study aims to determine the effect of premature loss of the lower primary teeth and food hardness of masticatory efficiency and cognitive function in boys and girls aged 8-9.

This was an observational analytical research with cross sectional approach. The total samples in this study were 60 of boys and girls aged 8-9 was divided into three groups, which were the two premature loss of lower primary molars, the four premature loss of lower primary molars and no premature loss. Every child had a masticatory efficiency test with three of various levels of food hardness and the cognitive function was tested with Modified Mini Mental State Examination for Children (MMMSEC). The data were analyzed with Analysis of Variance.

The results showed a significant result ( $p < 0.05$ ) on masticatory efficiency and cognitive function with the two premature loss of lower primary molars, the four premature loss of lower primary molars and no premature loss based on sex and the various levels of food hardness effect. It can be concluded that the premature loss of lower primary molars and no premature loss, sex and food hardness has an effect on child masticatory efficiency and cognitive function. Masticatory efficiency and cognitive function are greater in group with no premature loss, boys and hardness level of hard food.

**Keywords:** premature loss, lower primary molars, masticatory efficiency, cognitive function, food hardness