

# THE EFFECT OF NUTRITIONAL EDUCATION THROUGH SINGING AND CARD GAME TECHNIQUE ON FRUIT AND VEGETABLE INTAKE IN CHILDREN

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## ABSTRACT

**Background:** Getting used to consume fruit and vegetable is very important since childhood to adulthood. A lack of fruit and vegetable consumption leads to poor health and an increased risk of non-communicable diseases. The percentage of fruit and vegetable consumption deficiency in Indonesian population  $\geq 60$  years in 2016 was 28.9%, 35-59 years was 26.1%, and  $< 15$  years was 25.8%. This study aimed to examine the effect of nutritional education through singing and card game technique on fruits and vegetables intake in kindergarten school children.

**Subjects and Method:** This was a quasi experimental study with control design. This study was conducted in four kindergarten schools in West Bangka from January to February 2018. A sample of 68 children, aged 5-6 years, both male and female was selected for this study by purposive random sampling. The sample was divided into 4 groups: (1) Singing technique; (2) Picture card game; (3) Combination of singing and card game; (4) Nutrition education using power point (control group). Each group performed 30-50 minute nutrition education using power point every week for 4 weeks. Fruit and vegetable intake was measured by 24-hour recall form 2 days without succession. The data were analyzed by one-way ANOVA test.

**Results:** After intervention, the fruit intake in group (1) Singing technique (Mean= 1.71 d, SD= 0.85); (2) Card game (Mean= 1.76, SD= 0.56); (3) Combination of singing and card game (Mean= 1.82; SD= 0.53); (4) Control (Mean= 2.88, SD= 1.58) with  $p= 0.002$ . After intervention, the vegetable intake in group (1) Singing technique (Mean= 2.00, SD= 1.17); (2) Card game (Mean= 2.88; SD= 1.58); (3) Combination (Mean= 2.94, SD= 1.35); (4) Control (Mean = 4.35, SD= 1.37) with  $p= 0.001$ .

**Conclusion:** Singing technique and card game is effective in increasing fruit and vegetable intake among kindergarten school children.

**Keywords:** singing, card game, fruit intake, vegetable intake, kindergarten, school children

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