

Effect of Nutrition Therapy Dates for Short Term Memory of Students at Elementary School 060 886 and 060 889

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Abstract--Improving the ability of short-term memory can be a variety of things one of them with nourishing food and drinks that contain enough sugar to the body. Sugar is safe for children and can be directly used for metabolism, namely in the form of a disaccharide sugar. Dates have a fairly high sugar content and are generally derived from the type of glucose and fructose. The research objective was to determine the effect of nutritional therapy palm against short-term memory fourth grade students in Elementary School No. 060 886 060 889 Elementary School and Medan. Quasy experimental research design using pre post design. There are two groups of respondents, intervention and control. Purposive sampling technique. In the intervention group were given nutritional therapy dates every day 100 g for 6 days. On the first day before the given therapy short-term memory measured using the test digit span forward and backward Wechsler Intelligence Scale for Children-Revised (WISC-R) after 15 seconds a child was told to repeat. On the day after consuming the nutrients dates -6 done the same test (post-test). In the control group was also done the same thing only difference was not given nutritional therapy dates. Analysis of the data used paired t test and independent t test. The results showed the average short-term memory after the students in the intervention group were given nutritional therapy dates = 25.33 seconds, SD = 20.61 seconds. The average short-term memory sisiwa posttest control group = 43.18 seconds, SD = 50.41 seconds. Mean difference = 17 850 seconds. Statistical test results obtained value of $p = 0.041$ (<0.05), it can be concluded that there are significant differences posttest score in the intervention group and the control (no treatment effect Nutri palm against short-term memory)

Keywords: nutrition therapy, dates, short-term memory.

I. INTRODUCTION

Improving the ability of short-term memory can be a variety of things one of them with nourishing food and drinks that contain enough sugar to the body. In the brain, sugar serves as a source of energy (glucose). Intellectual development is also known to be the result of each school providing food services for students in different ways. There are only providing canteen and there is also a catering facility for their students. Each of these methods in the school food service has its advantages and disadvantages, but the main thing to consider is the adequacy of nutrition and the amount of food available, so there should be provision of nutrition to increase children's learning concentration (Putranto, 2009).

Sugar is safe for children and can be directly used for metabolism, namely in the form of a disaccharide sugar. Blood

glucose is vital for the brain to function properly, among others expressed in the ability of memory. Glucose is mainly derived from the blood circulation of the brain due to glycogen as glucose reserves are very limited existence. Blood glucose is mainly derived from dietary intake of carbohydrate sources. Dates have a fairly high sugar content and are generally derived from the type of glucose and fructose, the sugar found in the type of dates are the result of the processing of natural and not harmful to health.

High sugar content makes palm is an instant source of energy to restore lost energy during fasting and normalize blood sugar levels. According conning (2008), a glass of water containing glucose, will be absorbed by the body within 20-30 minutes. But the sugars contained in dates exhausted absorbed within 40-45 minutes. This is due to the fibers contained therein. So that people who eat dates at the dawn of time will be fresh and lasting longer hungry. Dried dates in 100 g contains 255 kcal of energy, 66.78 g carbohydrates, 7.1 g fiber, sugars and protein 56.38gr 2.81 gr. Dates are easy to find and practical to be consumed without cooking, so very easy for children or parents to provide as breakfast or brought to school as a meal replacement.

II. RESEARCH DESIGN

This study used a quasi experimental research design using pre-post test design to identify the effect of nutritional therapy palm against short-term memory elementary school fourth grade 060 886 and 060 889 Medan. This study used two groups of subjects, the intervention and control group. The population in this study was the son of fourth grade students of Elementary School No. 060 886 Field which numbered 40 people and grade IV Elementary School No. 060 889, amounting to 40 people. The total sample of 80 people divided into intervention group and individual interventions - each 40 people. Purposive sampling technique. The inclusion criteria of this study are: Children are willing to become respondents, child Elementary School fourth grade students No.060886 Terrain physically healthy and not sick, students can speak Indonesian, following the pretest and posttest were conducted by researchers. Exclusion criteria: children do not like dates, children in unhealthy condition physically and mentally (having a disability and mental retardation).

III. RESULTS AND DISCUSSION

Based on the results obtained from the data in the intervention group, the majority of female sex. The results showed the average short-term memory after the students were given nutritional therapy dates = 25.33, SD = 20:06 seconds. A minimum of 10 seconds and a maximum of 90 seconds. 95% CI obtained a minimum of 18.91 seconds and a maximum of 31.74 seconds. 80% of the Javanese. In the control group, the majority of women 52.5%, 47.5% second, brother number two and three respectively 50%, employment and self-employed parents driver respectively 42.5%, 67.5% Javanese.

Based on the results of the study showed the average short-term memory of the student prior to the dates given nutritional therapy seconds = 37.9, SD = 70 seconds. Value of at least 3 seconds and a maximum of 430 seconds. 95% CI obtained a minimum of 15:51 seconds and a maximum of 60.29 seconds.

The results showed the average short-term memory of students on the pretest = 242.05 seconds, SD = 49.86 seconds. A minimum of 4 seconds and a maximum of 180 seconds. 95% CI obtained a minimum of 26.10 seconds and a maximum of 58 seconds.

Table 1 Effect of nutritional therapy dates in the intervention group at elementary school 060 886 Medan

Variable	Mean	standard deviation	Mean difference	95% Confidence Interval Min-Maks	P value
Pretest	46	69.93	20.675	2.22-39.12	0.029
Posttest	25.33	20.06			

The results showed the average short-term memory before the students were given nutritional therapy dates = 46 seconds, SD = 69.93 seconds. The average short-term memory after the students were given nutritional therapy dates = 25.33 seconds, SD = 20:06 seconds. 95% CI obtained a minimum of 2:22 seconds and a maximum of 39.12 seconds. Mean difference = 12:58 seconds. Statistical test results obtained value of P = 0.029 (<0.05), it can be concluded that there are significant differences in the pretest and posttest after being given nutritional therapy dates.

Table 2 Effect of nutritional therapy dates in the control group at elementary school 060 889 Medan

Variabel	Mean	SD	Mean difference	95% Confidence Interval Min-Maks	P value
Pretest	42.05	49.86	1.125	2.44-4.60	0.265
Posttest	43.18	48.16			

The results showed the average short-term memory after the students in the intervention group were given nutritional therapy dates = 25.33 seconds, SD = 20.61 seconds. The average short-term memory sisiwa posttest control group =

43.18 seconds, SD = 50.41 seconds. Mean difference = 17 850 seconds. Statistical test results obtained value of P = 0.041 (<0.05), it can be concluded that there are significant differences in the value posttest intervention and control groups.

Table 3 Comparison of the effects of nutrition therapy dates in the intervention group at elementary school 060 886 and 060 889 Medan

Variable	Mean	SD	Mean difference	P value
Post test	25.33	20.61	17.850	0.041
Post test	43.18	50.41		

The results showed the average short-term memory after the students in the intervention group were given nutritional therapy dates = 25.33 seconds, SD = 20.61 seconds. The average short-term memory sisiwa posttest control group = 43.18 seconds, SD = 50.41 seconds. Mean difference = 17 850 seconds. Statistical test results obtained value of P = 0.041 (<0.05), it can be concluded that there are significant differences in the value posttest intervention and control groups.

IV. DISCUSSION

According Artkinson et al (2000) one of the factors that affect memory, namely: nutrition. Adequacy of nutrients in children is a very important prerequisite in child development including brain development. Nutrients needed for brain development not only macro-nutrients but also micronutrients. Children who experience less nutrients, especially during the critical period of brain growth will have a lower value on tests of vocabulary, reading comprehension, arithmetic and general knowledge as well as impaired motor development. Improving the ability of short-term memory can be a variety of things one of them with nourishing food and drinks that contain enough sugar to the body. In the brain, sugar serves as a source of energy (glucose). Sugar is safe for children and can be directly used for metabolism, namely in the form of a disaccharide sugar. Blood glucose is vital for the brain to function properly, among others expressed in the ability of memory. Glucose is mainly derived from the blood circulation of the brain due to glycogen as glucose reserves are very limited existence. Blood glucose is mainly derived from dietary intake of carbohydrate sources. Dates have a fairly high sugar content and are generally derived from the type of glucose and fructose, the sugar found in the type of dates are the result of the processing of natural and not harmful to health.

V. CONCLUSION

There are significant differences in the pretest and posttest after kurma. Sedangkan given nutritional therapy in the control group there was no significant difference in the pretest and posttest. So it can be concluded that there is

influence of nutritional therapy palm against short-term memory of students.

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