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## Effect of probiotic nutrition on episodic memory performance

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### Abstract

**Background:** Probiotic nutrition had an effect on episodic memory and those who consume probiotic products have better memory performance.

**Aims:** To examine the effects of consumption of probiotic products on episodic memory.

**Study Design:** Case-control study.

**Methods:** Two groups of participants who are either probiotic product consumers or non-probiotic product consumers participated to the study. In addition to this, participants have received a self-reported questionnaire for the measurement of their probiotic consumption behavior. Consumption frequency of each subtype of food is scored as 30 for every day. It is calculated by the sum of the points according to frequency. The experiment is conducted in a possibly isolated room from sound and bright light. Stimuli are presented from a 21" LCD monitor with a 1024X768 fixed resolution. All responses gathered by using left mouse button on a computerized experimental design which is coded with C# software. Gathered data is analyzed with SPSS v18.

**Results:** A significant difference for dairy product consumption  $t(28) = 8,44, p=0.000$ ; fruit and vegetable product consumption  $t(28) = 5,73, p=0.000$ , fat and desert consumption  $t(28) = 2,98, p<0.01$ , and fast-food consumption  $t(28) = -2,9, p=0.000$  is found between two groups. Especially dairy product consumption is considered in accordance with the purpose of this study, and probiotic product consumers ( $M = 112,53$ ) found to have a higher score for their dairy probiotic consumption than non-probiotic product consumers ( $M = 57,73$ ). Probiotic product consumers were found to have significantly more correct answers ( $M = 26,33$ ) than non-probiotic product consumers ( $M = 21,47$ ),  $t(28) = 4,93, p=0.000$ . On the other hand, they were found to have significantly less incorrect answers ( $M = 13,67$ ) than non-probiotic product consumers ( $M = 18,53$ ),  $t(28) = -4,93, p=0.000$ .

**Conclusion:** Results showed better memory performance for participants who consume probiotic products.

### Biography

Dr. Muge Arslan is working as Assistant Professor at Bahcesehir University, Bursa, Turkey. She completed her Ph.d at Okan University. She is a experienced Dietitian with a demonstrated history of working in the health wellness and fitness industry. Skilled in Nutrition Education, Coaching, Wellness Coaching, Fitness Training, and Functional Training. Strong healthcare services professional with a Graduate focused in Public Health from Marmara University.

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