

Comparison of Cognition between Obese and Lean Groups in Middle-Aged Adults; Results from Selected MOH Area, Colombo District, Sri Lanka

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Associations of generalized obesity and Cognitive Function (CF) are not still clear in the Sri Lankan context. Therefore, the objective of this study was to determine the association between the level of cognitive function and obesity among middle aged adults in the Homagama MOH area, Colombo district, Sri Lanka. This descriptive cross sectional study was conducted with 166 middle age adults of 50-60 yrs. The subjects were selected after screening their Body Mass Index (BMI) and they were grouped as obese (BMI - 27.5 Kg/m²) and lean (BMI - 18-23 Kg/m²) using simple random sampling. CF was assessed via Validated Mini Mental State Examination (MMSE). Data were analyzed using Independent sample t test, Pearson correlation coefficient and Chi-square in SPSS Version 23 and the significant level was taken as $p < 0.05$. The study sample consists of 83 obese and 83 lean subject categories while 50 % of the subjects were female. Mean age was 54.6 years and Mean BMI for lean and obese were 21.4[1.6] Kg/m² and 29.62.8] Kg/m² respectively. A significantly lower mean values in MMSE in obese category for both males and females were observed when compared to the lean category ($t [164] = 3.196, p < 0.05$). There was a significant association between BMI and MMSE categories ($\chi^2 = 5.537, df = 1, p < 0.05$). Moreover, there was a significant negative correlation between MMSE and BMI ($r = -0.250, p < 0.01$). The study concludes that the obese middle aged adults in the study sample had a poorer cognitive function compared to that of the lean subjects.

Keywords: BMI, MMSE, Obese, Lean, Cognition, Middle age