

A Comparative Study of the Effect of Stress on the Cognitive Parameters in Women with Increased Body Mass Index before and after Menopause

Authors : Ramesh Bhat, Ammu Somanath, A. K. Nayanatara

Abstract : Background: The increasing prevalence of overweight and obesity is a critical public health problem for women. The negative effect of stress on memory and cognitive functions has been widely explored for decades in numerous research projects using a wide range of methodology. Deterioration of memory and other brain functions are hallmarks of Alzheimer's disease. Estrogen fluctuations and withdrawal have myriad direct effects on the central nervous system that have the potential to influence cognitive functions. Aim: The present study aims to compare the effect of stress on the cognitive functions in overweight/obese women before and after menopause. Material and Methods: A total of 142 female subjects constituting women before menopause between the age group of 18-44 years and women after menopause between the age group of 45-60 years were included in the sample. Participants were categorized into overweight/obese groups based on the body mass index. The Perceived Stress Scale (PSS) the major tool was used for measuring the perception of stress. Based on the stress scale measurement each group was classified into with stress and without stress. Addenbrooke's cognitive Examination-III was used for measuring the cognitive functions. Results: Premenopausal women with stress showed a significant ($P < 0.05$) decrease in the cognitive parameters such as attention and orientation Fluency, language and visuospatial ability. Memory did not show any significant change in this group. Whereas, in the postmenopausal stressed women all the cognitive functions except fluency showed a significant ($P < 0.05$) decrease after menopause stressed group. Conclusion: Stress is a significant factor on the cognitive functions of obese and overweight women before and after menopause. Practice of Yoga, Encouragement in activities like gardening, embroidery, games and relaxation techniques should be recommended to prevent stress. Insights into the neurobiology before and after menopause can be gained from future studies examining the effect on the HPA axis in relation to cognition and stress.

Keywords : cognition, stress, premenopausal, body mass index

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020