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OP 14 - High serum antioxidant capacity among long term meditators: A pilot study

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Introduction: Meditation is defined as a deliberate approach to achieve mindfulness by continuous practice. ABTS (2,2'-azino-bis (3-ethylbenzothiazoline-6-sulfonic acid)) assay measures the relative ability of antioxidant to scavenge the ABTS•+ generated in aqueous phase, as compared with a Trolox standard. The results are expressed as Trolox equivalent antioxidant capacity (TEAC). The objective of the study was to assess the serum antioxidant capacity in experienced meditators and to compare them in an age, gender and education level matched non-meditating group.

Methods: The TEAC of ten long-term, experienced meditators and ten age, gender and educational level matched control subjects who had never practiced any form of meditation, were determined using the ABTS assay. Trolox was used as standard. TEAC values of the meditators and controls were compared using independent sample t-test and the correlation between TEAC values and socio-demographic factors was tested using Pearson correlation.

Results: The non-meditating control group had mean ± SEM TEAC value of 366.29 ± 4.72 while the mediator group had significantly higher TEAC values of 406.85±8.42; (p=0.004). There was no significant correlation observed between TEAC and socio-demographics parameters including age (r = 0.014), gender (r = 0.272), height (r = -0.551), weight (r = 0.144), marital status (r = -0.165), educational level (r = 0.428), alcohol consumption (r = 0.063), the number of sleeping hours per day (r = 0.099), number of hours exercising per day (r = 0.260) and number of hours spent outdoors per day (r = -0.221).

Conclusion: The findings of the study suggests a higher serum antioxidant capacity in the long-term meditators with potential beneficial effects against oxidative stress. This emphasizes the need for further evaluation using a larger sample of long-term meditators and controls.

Keywords: Meditation, antioxidant capacity, ABTS, Trolox

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