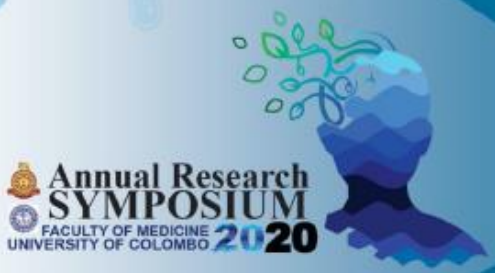
Annual Research SYMPOSIUM

UNIVERSITY OF COLOMBO
FACULTY OF MEDICINE
2020



PP 12 - Serum nitrate and nitrite levels among long term meditators: A pilot study

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Introduction: Mindfulness meditation has been suggested as a method of reducing oxidative stress. The objective of this study was to assess the serum nitrate and nitrite levels in experienced meditators and to compare them in an age, gender and education level matched non-meditating group.

Methods: The nitrate (NO_3^-) and nitrite (NO_2^-) levels of long-term, experienced meditators (n=10), recruited using a validated interview, and age, gender and educational level matched control subjects (n=10) who had never practiced meditation, were determined using the modified Griess assay. The standard curve was plotted using a serial dilution of $NaNO_2$. Nitrate and nitrite levels of the meditators and controls were compared using independent sample t-test and the correlation between nitrate and nitrite levels and socio-demographic factors was tested using Pearson correlation.

Results: The long-term mediator group (mean age ± SEM of 38.05±7.920) had lower total nitrate (5.07 ± 0.312, mean ± SEM) and nitrite levels (0.51 ± 0.046) compared to the non-meditator group who had total nitrate levels of 5.44±0.452 (p=0.041) and nitrite levels of 0.95±0.509 (p=0.049). The total nitrate levels or nitrite levels had no correlation with the socio-demographic factors such as age [$r_{(NO3-)}$=(-0.399), $r_{(NO2-)}$=(-0.042)], gender [$r_{(NO3-)}$=(-0.008), $r_{(NO2-)}$=(-0.145)], height [$r_{(NO3-)}$=(-0.044), $r_{(NO2-)}$=(0.266, weight [$r_{(NO3-)}$=(-0.116), $r_{(NO2-)}$=(-0.086)], marital status [$r_{(NO3-)}$=(-0.014), $r_{(NO2-)}$=(0.220)], educational level [$r_{(NO3-)}$=(-0.173), $r_{(NO2-)}$=(-0.588)], alcohol consumption [$r_{(NO3-)}$=(-0.053), $r_{(NO2-)}$=(-0.145)], number of sleeping hours per [$r_{(NO3-)}$=(-0.060), $r_{(NO2-)}$=(-0.125)], number of hours exercising per day [$r_{(NO3-)}$=(-0.167), $r_{(NO2-)}$=(-0.293)] and number of hours spent outdoors per day [$r_{(NO3-)}$=(0.139), $r_{(NO2)}$=(0.170)].

Conclusion: The findings of the study suggests a lower production of nitric oxide 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, nitrate, nitrite, $NaNO_2$

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