



Interaction between air pollution and total antioxidant capacity (DTAC) on the managers and teacher's anxiety and memory in two polluted and less polluted areas of Tehran province

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Abstract:

Background: industrialization has increased air pollution in large cities. Due to the association between air pollution and memory impairment, anxiety and the effectiveness of antioxidants in improving these, it was suggested that a high level of antioxidants may have adverse effects of air pollution on brain function, memory, and anxiety.

Objective: This study investigate the interaction between air pollution and total antioxidant capacity (DTAC) on the teacher's anxiety and memory in the two polluted and less polluted areas of Tehran.

Methods: In cross-sectional study. Air Quality Index (IQA) assessed in 200 teachers from two polluted and less polluted areas of Tehran. It include 6 air pollutants substances (CO, SO₂, NO₂, O₃, particulate matter (PM_{2.5}), particulate matter (PM₁₀)). the data from DTAC estimated by food frequency questionnaire (FFQ). Wechsler and Spielberger tests was used for memory and anxiety measurement, respectively.

Results: A mean of anxiety and memory in two areas did not show statistically significant differences. Relationship between dietary TAC and air pollution in determining memory benefit and anxiety levels was non significant.

Conclusions: there was no significant relationship between dietary TAC and air pollution in determining memory benefit and anxiety levels.

Keywords: "air pollution", "total antioxidant capacity", "DTAC", "brain function", "memory", "anxiety"