

Comparison between indices of exposure risk to Nitrogen dioxide and their impact on health of people in Southwest of Iran

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Abstract

Background and Aims: Air pollution is very important because every human being inhales an average of 10 m³ air. Also air pollution has adverse impacts on human health. The objective of this study is to compare of relative risk and attributable proportion exposure to Nitrogen dioxide in the southwest of Iran.

Methods: This descriptive study was conducted in Ahwaz, Kermanshah and Bushehr cities during 2012. In this study, Data were collected from Department of Environment (DOE) and analyzed to determine the relative risk (RR) and attributable proportion (AP) of NO₂ in three mentioned cities.

Results: Based on the results, the total accumulative number of cardiovascular death attributed to exposure with NO₂ in Ahwaz, Kermanshah and Bushehr were 43, 48 and 4 cases, respectively. The relative risk of NO₂ attributed to cardiovascular death was in a moderate level (1.002). The maximum and minimum number of obstructive pulmonary disease attributed to NO₂ was observed in Kermanshah and Bushehr with 21 and 3 cases, respectively.

Conclusion: According to this study increasing the NO₂ concentration has a direct and significant effect on death rates of cardiovascular and obstructive pulmonary diseases.

Keywords: NO₂, Cardiovascular disease, Relative risk, attributable proportion.