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Occupational stress index and lipid profile among professional drivers in Ismailia city

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Background: Driving is a stressful job. Professional drivers are the high-risk group for occupational stress. Occupational stress has been associated with abnormal levels of lipids, however many studies could not find any association.

Aim: The study aims at contributing to improving the professional drivers' health by assessing occupational stress, lipid profile and their association.

Subjects and Methods: It is a cross-sectional study conducted at Suez Canal Authority in Ismailia City including 131 professional drivers. A structured interview questionnaire included occupational stress index (OSI) was conducted. Lipid profile in form of cholesterol, triglyceride, low-density lipoprotein cholesterol (LDL-C) and high-density lipoprotein cholesterol (HDL-C) were assessed.

Results: The total OSI score was 79.98 ± 6.14 . The prevalence of dyslipidemia was 79.4%, of hypercholesterolemia was 51.9%, of hypertriglyceridemia was 37.4%, of high LDL-C was 50.4% and of low HDL-C was 45%. The total OSI score and OSI aspects do not have the statistically significant relationship with dyslipidemia. The high demand aspect score has the statistically significant relations with cholesterolewia. The noxious exposure and conflict aspects of OSI have weak positive significant correlations with cholesterol level (r=0.163, 0.162 respectively). Also, noxious exposure and conflict aspects of OSI have weak positive significant correlations with LDL-C level (r=0.234, 0.149 respectively). While high demand aspect of OSI has the weak negative significant correlation with triglyceride level (r=-0.148).

Conclusion: Total OSI score doesn't have the statistically significant relationship with any lipid profile. However, some OSI aspects have the relationship with abnormal lipid profile.

Introduction: Despite the fact that occupational stress is not a new phenomenon, it becomes progressively globalized and has effects on workers, families and the overall society. It is in constant growth and presents a growing medical and economic problem. Occupational stress can be defined as a "variance between workload and capability." It is the ongoing stress occurred due to factors in the workplace. This stress may occur due to the responsibilities related to the work itself, or the conditions that are based on the personality conflicts or corporate culture. It can affect individuals' wellbeing if not managed appropriately. Driving is a stressful job which needs high levels of attention and caution to cope appropriately with job demands. Drivers stress can also occur due to timetables and working hours, traffic and weather conditions, passengers and goods safety, and the responsibility if an error and/or an accident occur. The risk of cardiovascular events has already been well documented among professional drivers. Professional drivers are exposed to several occupational risk factors as long working hours, shift work, noise, carbon monoxide, and chemical materials. These factors increase the probability of emerging CVD. Moreover, these drivers are more prone to develop obesity as they burn fewer calories due to the nature of the work activities, eating poorly, and irregular diet and driving in a sitting position for long duration every day. Occupation is a major socioeconomic factor that together with a prolonged exposure to stress at the workplace may have a direct effect on the autonomic nervous system and neuroendocrine activity, which may lead to increased incidence of diabetes mellitus, development of hypertension, and lipid disorders. However, although cross-sectional studies have linked occupational stress with lipid disorders, this association is still not consistent.

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