Sleep apnoea: prevalence of risk factors and symptoms of daytime sleepiness in bus company employees

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ABSTRACT

Obstructive sleep apnoea and resulting excessive daytime sleepiness are conditions which affect a significant percentage of adults of working age and can be associated with an increased rate of accidents, particularly motor vehicle accidents. Accidents involving professional drivers have a higher mortality rate and financial cost. This study measures the prevalence of physical characteristics associated with obstructive sleep apnoea and quantifies excessive daytime sleepiness as measured by the Epworth Sleepiness scale (ESS) in a population of professional bus drivers based in Leeds, England.

The results show a level of excessive daytime sleepiness as measured by the ESS of 13.4% which is consistent with other published results. The mean body mass index (BMI) in the study population is 28.419 kg/m² as compared with a mean body mass index of 27.3 kg/m² in the general local population. Over 31% of PCV licence holders have a BMI greater than 30 kg/m². The observed neck circumference/collar size in the study population is 41.572 cm with 30% having a neck circumference greater than 43 cm. This compares with an average neck circumference for adult males of 39.87 cm. Positive correlations between age and ESS, BMI and ESS were observed in the study analysis but were not statistically significant.

The results show that in general bus drivers are more obese and have larger necks than the general population, with more than 30% of drivers in a high risk group for increased accident rates due to undiagnosed obstructive sleep apnoea and resulting daytime sleepiness. The fact that these risk factors are modifiable suggests efforts to improve the physical health and education of employees should be a much higher priority than at present.