

ABSTRACT

One of the jobs that are at risk of carbon monoxide (CO) gas exposure is workshop mechanic because this work is directly related to exhaust gas of vehicles. Therefore the aim of this study was to analyze the differences between COHb levels, SaO₂, and subjective health complaints of workshop mechanic at Automotive Department compared with administration staff of PPPPTK / VEDC Malang.

The study was conducted by using the observational design with a cross sectional approach. The total sample was 18, 9 study samples (workshop mechanic of Automotive Department) and 9 comparison samples (administrative staff). Interviews and laboratory test were used to measure the independent variables and the dependent variables.

The result of statistical test showed that COHb levels was 12.87% for workshop mechanic and 10.28% for administrative staff. This statistical test was using independent t-test with p value = 0,014, means that the COHb levels of workshop mechanic was significantly higher than the COHb levels of administrative staff. The result of statistical test shows that SaO₂ levels was 85% for workshop mechanic and 88% for administrative staff. This statistical test was using independent t-test with p value = 0,441, means that the SaO₂ levels of workshop mechanic was significantly lower than the SaO₂ levels of administrative staff. Meanwhile, there was no relationship between subjective health complaints and ambient air CO levels. The most widely perceived were dizziness and coughing.

It is concluded that the COHb levels of workshop mechanic exceed normal values and the SaO₂ levels below the normal value, whereas subjective health complaints often felt were dizziness and coughing. Workshop mechanic advised to wear a mask when working and stop smoking. If there are some health problems, workshop mechanic is suggested to go to area that are spared from CO pollution and checked himself in the nearest health care.

Key words: COHb level, SaO₂ level, subjective health complaints, and workshop mechanic