

THE EFFECT OF CARBOXYHEMOGLOBIN ON SUBJECTIVE COMPLAINTS OF FISH SMOKING WORKERS IN PENATARSEWU VILLAGE, SIDOARJO

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ABSTRACT

Excessive exposure to fish smoking smoke can increase the risk of workers experiencing subjective complaints. Based on a preliminary survey, 7 out of 10 fish smoking workers had complaints such as cough, runny nose, nausea, and dizziness. Previous research showed that 59.5% of these workers experienced abnormal carbon monoxide exposure. The purpose of this study was to analyze the effect of carboxyhemoglobin on subjective complaints of fish smoking workers in Penatarsewu Village, Sidoarjo.

This research method was observational with cross-sectional design. The independent variable was carboxyhemoglobin, while workers' subjective complaints were the dependent variable. In addition, the variables of length of exposure, tenure, and age were confounding variables. The study was conducted from January to June 2024 with a focus on fish smoking workers in Penatarsewu Village Sidoarjo who are female and do not smoke, with a population of 57 people and a sample of 25 people. Data analysis using simple linear regression statistical tests.

The results showed that all respondents' carboxyhemoglobin levels were within normal limits. Of the 25 respondents, 23 of them experienced subjective complaints. Statistical analysis showed that age ($p=0.00$) and length of exposure ($p=0.0003$) had a significant influence on subjective complaints, while carboxyhemoglobin ($p=0.372$) and tenure ($p=0.705$) had no significant effect.

The conclusion of this study was that the factors that affect subjective respiratory complaints of fish smoking workers in Penatarsewu Sidoarjo Village were age and length of exposure, while COHb and tenure did not have a significant effect. Fish smoking business owners are advised to choose workers who are still in productive age and provide work shifts to limit the length of exposure. For fish smoking workers, it is recommended to use personal protective equipment in the form of half face respirator gas mask when working.

Keywords : Carboxyhemoglobin, Subjective Complaints , Fish smokers.

PENGARUH KARBOKSIHEMOGLOBIN TERHADAP KELUHAN SUBJEKTIF PEKERJA PENGASAPAN IKAN DI DESA PENATARSEWU SIDOARJO

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ABSTRAK

Paparan asap pengasapan ikan yang berlebihan dapat meningkatkan risiko pekerja mengalami keluhan subjektif. Berdasarkan survei pendahuluan, 7 dari 10 pekerja pengasapan ikan memiliki keluhan seperti batuk, pilek, mual, dan pusing. Penelitian sebelumnya menunjukkan bahwa 59,5% dari pekerja tersebut mengalami paparan karbon monoksida yang tidak normal. Tujuan penelitian ini adalah menganalisis pengaruh karboksihemoglobin terhadap keluhan subjektif pekerja pengasapan ikan di Desa Penatarsewu Sidoarjo.

Metode penelitian ini adalah observasional dengan desain *cross-sectional*. Variabel bebas adalah karboksihemoglobin, sedangkan keluhan subjektif pekerja menjadi variabel terikat. Selain itu, variabel lama paparan, masa kerja, dan usia merupakan variabel pengganggu. Penelitian dilakukan dari Januari hingga Juni 2024 dengan fokus pada pekerja pengasapan ikan di Desa Penatarsewu Sidoarjo yang berjenis kelamin Perempuan dan tidak merokok, dengan populasi berjumlah 57 orang dan sampel sebanyak 25 orang. Analisis data menggunakan uji statistik regresi linier sederhana.

Hasil penelitian menunjukkan bahwa kadar karboksihemoglobin seluruh responden berada dalam batas normal. Dari 25 responden, 23 diantaranya mengalami keluhan subjektif. Analisis statistik menunjukkan bahwa usia ($p=0,00$) dan lama paparan ($p=0,0003$) memiliki pengaruh signifikan terhadap keluhan subjektif, sementara karboksihemoglobin ($p=0,372$) dan masa kerja ($p=0,705$) tidak berpengaruh signifikan.

Kesimpulan dari penelitian ini adalah faktor yang mempengaruhi keluhan subjektif pernafasan pekerja pengasapan ikan di Desa Penatarsewu Sidoarjo yakni usia dan lama paparan, Sedangkan COHb dan masa kerja tidak berpengaruh secara signifikan. Pemilik usaha pengasapan ikan disarankan memilih pekerja yang masih dalam usia produktif dan memberikan shift kerja untuk membatasi lama paparan. Bagi pekerja pengasapan ikan disarankan menggunakan alat pelindung diri berupa *half face respirator gas mask* saat bekerja.

Kata kunci : Karboksihemoglobin, Keluhan Subjektif , Pengasapan Ikan