

HUBUNGAN ANTARA PAJANAN RADIASI SINAR ULTRA VIOLET (UV) DENGAN KELUHAN FOTOKERATITIS PADA PEKERJA LAS DI KECAMATAN CIMANGGIS, DEPOK, JAWA BARAT TAHUN 2019

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Abstrak

Fotokeratitis merupakan peradangan pada kornea mata. Salah satu penyebab dari fotokeratitis adalah radiasi *reversible* akut (saling tarik menarik) sinar ultra violet (UV), sehingga jaringan epitel pada kornea mata mengalami cedera. *U.S Bureau of Labor Statistics* tahun 2008 menunjukkan kasus *eye injury* yang disebabkan oleh pajanan bunga api pengelasan terdapat 1.390 atau 5,1% kasus yang mengakibatkan fotokeratitis. Pekerja pengelasan sektor informal merupakan populasi rentan terpajan radiasi sinar UV, sehingga untuk mengonfirmasi besarnya efek pajanan radiasi sinar UV dengan keluhan fotokeratitis pada pekerja las di Kecamatan Cimanggis, Depok, Jawa Barat tahun 2019. **Metode:** Studi *cross sectional* dilakukan di Kecamatan Cimanggis, Depok, Jawa Barat dari bulan Mei-Juni 2019. Sampel penelitian ini sebanyak 100 orang dengan teknik *purposive sampling*. Variabel independen pada penelitian ini adalah radiasi sinar UV yang diukur dengan UV Meter dan variabel dependen yaitu keluhan fotokeratitis diukur dengan kuesioner. Variabel *confounding*/perancu yaitu usia pekerja, tingkat pendidikan, proteksi mata, pengetahuan K3, masa kerja, dan jarak las. Data dianalisis menggunakan uji regresi logistik. **Hasil:** Proporsi fotokeratitis sebanyak 84,0% dan proporsi radiasi sinar UV yang melebihi nilai ambang batas (NAB) berdasarkan Peraturan Menteri Ketenagakerjaan No. 5 Tahun 2019 sebanyak 76,0%. Uji regresi logistik didapatkan besarnya hubungan antara radiasi sinar UV setelah dikontrol oleh variabel perancu (tingkat pendidikan, proteksi mata, pengetahuan K3, dan jarak las) dengan *p-value* 0,006 (OR= 7,236; 95% CI 1,74-30,07). **Kesimpulan:** Penelitian ini menemukan adanya hubungan antara radiasi sinar UV setelah dikontrol oleh variabel perancu (tingkat pendidikan, proteksi mata, pengetahuan K3 dan jarak las) dengan keluhan fotokeratitis.

Kata Kunci: Fotokeratitis, Las, Pekerja, Radiasi, Ultra Violet

RELATIONSHIP BETWEEN ULTRA VIOLET RADIATION EXPOSURE (UV) WITH PHOTOKERATITIS COMPLAINT ON WELDING WORKER IN CIMANGGIS SUBDRICIT, DEPOK, WEST JAVA YEAR 2019

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Abstract

Photokeratitis was an inflammation of the cornea eye. One of the causes of photokeratitis was acute reversible radiation of Ultra Violet (UV) rays so that the epithelial tissue of the cornea eye was injured. The U. S Bureau of Labor Statistics in 2008 showed the case of eye injury caused by the welding rate 1,390 or 5.1% cases were resulting in photokeratitis. The informal sector welding worker was a population of susceptible to exposure to UV rays. **Objective:** to confirm the effect of UV radiation exposure with photokeratitis complaints welding workers in Cimanggis subdistrict, Depok, West Java in 2019. **Method:** Cross-sectional study conducted in Cimanggis Sub-district, Depok, West Java from May-June 2019. This research samples a total of 100 people with purposive sampling techniques. The independent variable in this study was UV radiation measured by UV Meter and the dependent variable was photokeratitis complaint measured by questionnaire. Confounding/scaffold variables were worker age, education level, eye protection, OHS knowledge, working period, and welding distances. Data were analyzed using a logistic regression test. **Results:** The proportion of photokeratitis 84.0% and the proportion of UV radiation that exceeds the threshold limit value (TLV) based on the Ministerial regulation No. 5 the year 2019 as much as 76.0%. Logistic regression test obtained the effect of UV radiation after controlled by scaffold variables (education level, eye protection, K3 knowledge, and welding distance) with P-value 0.006 (OR = 7.236; 95% CI 1.74-30,07). **Conclusion:** The study found a link between UV light radiation after being controlled by scaffolding variables (education level, eye protection, K3 knowledge, and welding distance) with photokeratitis complaints.

Keyword: Photokeratitis, Radiation, Ultraviolet, Welding, Worker