

ABSTRACT

Background: Informal workers often experience occupational safety and health problems in their work, one of the areas of concern in agriculture. It is estimated that as many as 20,000 people die per year due to pesticide poisoning and $\pm$ 5000 - 10,000 people experience various health problems due to pesticide poisoning/buildup, 500 - 1000 of them experience harmful effects, including disability, infertility, cancer, liver damage, nerve damage and so on. Pesticide poisoning, it can be seen from the levels of the cholinesterase enzyme in the blood. This study aims to see the relationship between pesticide exposure factors and cholinesterase levels in local coconut farmers in Kuala Jambi District, East Tanjung Jabung in 2021.

Methods: This type of research is quantitative and analytical observational with a cross sectional design. The research was carried out from February - April 2021). The population is all local coconut farmers according to BPS 2019 in the research area (1,151 people). The sample was calculated using the binominal proportion formula, namely 64 local coconut farmers. The independent variables are age, working period, duration of spraying, pesticide dose, frequency of spraying, and use of PPE. While the dependent variable is cholinesterase levels.

Result: The results of the chi-square study using the Fisher's exact test formula for cholinesterase levels showed p-value of age = 0.079, p-value of working period = 0.079, p-value of spraying time = 0.013, p-value of pesticide dose = 1,000, p-value of frequency spraying = 0.555, and p-value of the use of PPE = 0.559.

Conclusion: The results showed that the duration of spraying was significantly related to the respondent's cholinesterase levels. Meanwhile, age, working period, pesticide dose, frequency of spraying, and use of PPE were not related to the respondents' cholinesterase levels in this study.

Keywords: Pesticides, Cholinesterase Levels, Local Coconut Farmer.

ABSTRAK

Latar Belakang: Pekerja informal banyak mengalami masalah keselamatan dan kesehatan kerja dalam pekerjaannya, salah satu bidang yang mengkhawatirkan adalah bidang pertanian. Diperkirakan sebanyak 20.000 orang meninggal pertahun akibat keracunan pestisida dan $\pm$ 5000 - 10.000 orang mengalami berbagai masalah kesehatan akibat keracunan/penumpukan pestisida, 500 - 1000 orang diantaranya mengalami dampak berbahaya, diantaranya cacat, kemandulan, kanker, kerusakan hati, kerusakan saraf dan lain sebagainya. Keracunan pestisida bisa dilihat dari kadar enzim cholinesterase dalam darah. Penelitian ini bertujuan untuk melihat hubungan faktor paparan pestisida dengan kadar cholinesterase pada petani kelapa lokal di Kecamatan Kuala Jambi, Tanjung Jabung Timur tahun 2021.

Metode Penelitian: Jenis penelitian ini kuantitatif dan bersifat observasional analitik dengan desain *cross sectional*. Penelitian dilaksanakan Februari - April 2021. Populasinya seluruh petani kelapa lokal menurut BPS 2019 di wilayah penelitian (1.151 orang). Sampel dihitung menggunakan rumus proporsi binomunal yaitu 64 orang petani kelapa lokal. Variabel bebasnya umur, masa kerja, lama penyemprotan, dosis pestisida, frekuensi penyemprotan, dan penggunaan APD. Sementara variabel terikatnya adalah kadar cholinesterase.

Hasil Penelitian: Hasil penelitian dengan *chi-square* dengan rumus *fisher's exact test* terhadap kadar cholinesterase menunjukkan *p-value* umur = 0,079, *p-value* masa kerja = 0,079, *p-value* lama penyemprotan = 0,013, *p-value* dosis pestisida = 1,000, *p-value* frekuensi penyemprotan = 0,555, dan *p-value* penggunaan APD = 0,559.

Kesimpulan: Hasil penelitian menunjukkan faktor lama penyemprotan berhubungan secara signifikan dengan kadar cholinesterase responden. Sedangkan faktor umur, masa kerja, dosis pestisida, frekuensi penyemprotan, dan penggunaan APD tidak berhubungan dengan kadar cholinesterase responden pada penelitian ini.

Kata Kunci: Pestisida, Kadar Cholinesterase, Petani Kelapa Lokal.