

ABSTRAK

HUBUNGAN ANTARA HIGIENE SANITASI DENGAN KEBERADAAN BAKTERI *Escherichia coli* PADA AIR CUCIAN DI WARUNG SEPANJANG JALAN KEDUNG SROKO SURABAYA

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Latar Belakang: Makanan diperlukan oleh manusia sebagai kebutuhan dasar hidup dalam menjalankan aktivitasnya. Berdasarkan data dari CDC (2018), setiap tahun setidaknya ada 48 juta kasus keracunan makanan, dimana diantaranya 128 ribu jiwa dilarikan ke rumah sakit, dan tiga ribu jiwa meninggal. Oleh karena tingginya kasus keracunan makanan oleh bakteri *Escherichia coli*, perlu diadakan pengawasan terhadap sanitasi makanan dan minuman.

Tujuan: Menganalisis hubungan higiene sanitasi terhadap kontaminasi bakteri *Escherichia coli* pada air cucian di warung sepanjang Jalan Kedung Sroko Surabaya

Metode: Penelitian ini merupakan penelitian analitik observasional dengan rancangan studi *cross-sectional* menggunakan *total sampling* air cucian di warung sepanjang Jalan Kedung Sroko Surabaya yang memenuhi kriteria inklusi mulai Maret – Agustus 2020. Analisis data menggunakan pengujian *Most Probable Number (MPN) Escherichia coli* dan penghitungan *Total Plate Count (TPC)* dengan Metode Tuang (*Pour Plate Method*). Untuk pengolahan data menggunakan uji *chi-square* dari software aplikasi IBM *Statistic SPSS 25*.

Hasil: Dari hasil analisis data, terdapat hubungan signifikan ($p \text{ value} < 0,05$) antara *personal hygiene* dengan keberadaan bakteri ($p \text{ value} = 0,016$), frekuensi penggantian air cucian dengan keberadaan bakteri ($p \text{ value} = 0,015$), dan kondisi air sampel ketika diambil dengan jumlah total bakteri ($p \text{ value} = 0,027$). Sedangkan tidak ditemukan hubungan signifikan antara sumber air, jumlah bak pencucian dalam satu siklus, jumlah pelanggan dalam sehari, serta durasi jam buka warung dengan keberadaan dan jumlah total bakteri.

Kesimpulan: Terdapat hubungan signifikan antara *personal hygiene* dan frekuensi penggantian air cucian dengan keberadaan bakteri *Escherichia coli* serta kondisi air sampel ketika diambil dengan jumlah total bakteri.

Kata Kunci: bakteri *Escherichia coli*, higiene sanitasi, kontaminasi, air cucian, makanan

THE RELATIONSHIP BETWEEN HYGIENE SANITATION AND THE EXISTENCE OF Escherichia coli BACTERIA IN WASHING WATER IN WARUNG SEPANJANG JALAN KEDUNG SROKO SURABAYA

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Background: Food was needed by humans as a basic necessity of life in carrying out their activities. Based on data from the CDC (2018), every year there were at least 48 million cases of food poisoning, of which 128 thousand people were hospitalized, and three thousand die. Because of the high number of cases of food poisoning by Escherichia coli bacteria, it was necessary to carry out supervision of food and beverage sanitation.

Objective: To analyze the relationship between hygiene and sanitation against Escherichia coli contamination in washing water in stalls along Jalan Kedung Sroko, Surabaya.

Methods: This study was an observational analytic study with a cross-sectional study design using a total sampling of washing water in all shop along Jalan Kedung Sroko Surabaya which fulfills the inclusion criteria from March to May 2020. Data analysis using Most Probable Number (MPN) and Total Plate Count (TPC) test. For data processing, we used the chi-square test of the IBM Statistic SPSS 25 application software.

Results: From the results of data analysis, there was a significant relationship (p value $< 0,05$) between personal hygiene and the presence of bacteria (p value = 0.016), frequency of replacing washing water with the presence of bacteria (p value = 0.015), and the condition of the water sample when it was taken with the total number of bacteria (p value = 0.027). Meanwhile, there was no significant relationship between water sources, the number of washing tubs in one cycle, the number of customers in a day, and the duration of shop opening hours with the presence and total number of bacteria.

Conclusion: There was a significant relationship between personal hygiene and washing water replacement frequency with the presence of Escherichia coli bacteria and the condition of the water sample when it was taken with the total number of bacteria.

Keywords: Escherichia coli bacteria, hygiene sanitation, contamination, washing water, food