

Analisis Faktor Risiko Kontaminasi Mikrobiologi Pada Air Minum Rumah Tangga Terhadap Kejadian Diare di Kota Depok: Berdasarkan Data SKAMRT Tahun 2025

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Abstrak

Diare masih menjadi salah satu masalah kesehatan berbasis lingkungan yang berkaitan dengan kualitas air minum dan sanitasi rumah tangga. Kontaminasi mikrobiologi pada air minum, terutama akibat pencemaran fekal, dapat meningkatkan risiko terjadinya diare. Penelitian ini bertujuan menganalisis hubungan kualitas mikrobiologi air minum rumah tangga dengan kejadian diare di Kota Depok, dengan menggunakan pendekatan teori triad epidemiologi yang menekankan interaksi antara agent, host, dan environment dalam proses terjadinya penyakit. Penelitian ini menggunakan desain case-control dengan memanfaatkan data sekunder SKAMRT Kota Depok tahun 2025. Variabel independen yang dianalisis yaitu kontaminasi mikrobiologi air minum, dan variabel confounding meliputi, sumber air minum, jarak sumur dengan septic tank, pengolahan air minum, dan perilaku pembersihan wadah air minum. Analisis dilakukan secara univariat, bivariat menggunakan uji chi-square, dan multivariat menggunakan regresi logistik. Hasil penelitian menunjukkan bahwa hanya variabel jarak sumur dengan septic tank yang memiliki hubungan signifikan dengan kejadian diare ($p = 0,03$; OR = 2,41; 95% CI: 1,14–5,1). Analisis multivariat menunjukkan bahwa jarak sumur dengan septic tank merupakan faktor dominan terhadap kejadian diare ($p = 0,022$; OR = 0,415; 95% CI: 0,196–0,878). Penelitian ini menunjukkan bahwa faktor sanitasi lingkungan, khususnya jarak sumber air dengan septic tank, masih menjadi faktor penting dalam pencegahan diare di Kota Depok.

Diarrhea remains one of the major environmental health problems associated with drinking water quality and household sanitation. Microbiological contamination in drinking water, particularly due to fecal pollution, may increase the risk of diarrheal disease. This study aimed to analyze the relationship between the microbiological quality of household drinking water and the incidence of diarrhea in Depok City using the epidemiological triad theory approach, which emphasizes the interaction between agent, host, and environment in the occurrence of disease. This study employed a case-control design utilizing secondary data obtained from the Household Drinking Water Quality Surveillance (SKAMRT) of Depok City in 2025. The independent variable analyzed was microbiological contamination of drinking water, while the confounding variables included drinking water source, distance between wells and septic tanks, drinking water treatment practices, and cleaning behavior of household water storage containers. Data analysis was conducted using univariate analysis, bivariate analysis with the chi-square test, and multivariate analysis using logistic regression. The results showed that only the distance between wells and septic tanks had a significant association with diarrheal incidence ($p = 0.03$; OR = 2.41; 95% CI: 1.14–5.1). Multivariate analysis further indicated that the distance between wells and septic tanks was the dominant factor associated with diarrhea incidence ($p = 0,022$; OR = 0,415; 95% CI: 0,196–0,878). This study demonstrates that environmental sanitation factors, particularly the proximity of water sources to septic tanks, remain important determinants in diarrhea prevention efforts in Depok City.