THE RELATIONSHIP BETWEEN AIR PHYSICAL QUALITY AND AIR GERM COUNTS IN THE WAITING ROOM AT RSUD D. SOETOMO SURABAYA

Alfa Nuraini Rahmawati[1], Iva Rustanti[2], Darjati[3], Suprijandani[4], Fitri Rokhmalia[5]

Ministry of Health RI

Health Polytechnic of the Ministry of Health Surabaya Environmental Sanitation Study Program Applied Undergraduate Program

Department of Environmental Health

Email: alfanuraini19@gmail.com

ABSTRACT

According to Minister of Health of the Republic of Indonesia's Decree Number 1204/MENKES/SK/X/2004, the waiting area is in a moderate risk zone, thus air quality must be measured to avoid nosocomial infections. This research was conducted to investigate the relationship between air physical quality and air germ count in the waiting room of the RSUD Dr. Soetomo.

This is analytic study that takes a cross-sectional methodology. This research independent variables include humidity, temperature, and waiting room illumination in the hospital. This study's dependent variable is the air germ count. The population of this study is the whole waiting room of Dr. Soetomo Hospital in Surabaya. Purposive sampling was used to pick the sample, resulting in two rooms: the BPJS administration waiting room and the cardiac poly waiting room in the IRJ (Outpatient Installation) building. The sample points for illumination measurement were 13, whereas the sample points for air germ count measurement comprised 10. The research lasted two days. The data analysis method employs both descriptive and statistical techniques, including Pearson correlation.

Based on the measurement results, the average temperature was 30.6 0C (p=0.038), the average humidity was 65.25% (p=0.990), the average lighting was 93.37 lux (p=0.450), and the average air germ count was 240.5 CFU/m^3.

The investigation found that the temperature, humidity, lighting, and air germ count in the waiting area of the IRJ Building of Dr. Soetomo Hospital Surabaya did not match the standards. After study, it was discovered that there was no link between humidity or illumination and air germ count, but there was a relationship between temperature and air germ count in the waiting area of the IRJ Building of RSUD Dr.Soetomo Surabaya.

Keywords: Air physical quality, Air germ count, Hospital waiting room

HUBUNGAN KUALITAS FISIK UDARA DENGAN ANGKA KUMAN UDARA PADA RUANG TUNGGU DI RSUD DR. SOETOMO SURABAYA

Alfa Nuraini Rahmawati[1], Iva Rustanti[2], Darjati[3], Suprijandani[4]
Kementerian Kesehatan RI
Politeknik Kesehatan Kemenkes Surabaya
Program Studi Sanitasi Lingkungan Program Sarjana Terapan
Jurusan Kesehatan Lingkungan
Email: alfanur aini19@gmail.com

ABSTRAK

Menurut Keputusan Menteri Kesehatan Republik Indonesia Nomor 1204/MENKES/SK/X/2004, ruang tunggu berada di zona risiko menengah. Akibatnya, untuk mencegah infeksi nosokomial, kualitas udara harus diukur. Tujuan dari studi ini adalah untuk mengetahui apakah ada hubungan antara kualitas fisik udara dan jumlah bakteri di ruang tunggu RSUD Dr. Soetomo.

Penelitian analitik yang menggunakan pendekatan cross-sectional termasuk dalam kategori ini. Variabel terikat penelitian adalah jumlah kuman udara, sedangkan variabel bebasnya adalah suhu, kelembaban, dan pencahayaan di ruang tunggu rumah sakit. Ruang tunggu administrasi BPJS dan ruang tunggu poli jantung di Gedung IRJ (Instalasi Rawat Jalan) adalah tempat penelitian dilakukan. Untuk mengukur angka kuman udara, ada tiga belas titik sampel, dan sepuluh titik sampel untuk mengukur pencahayaan. Proses penelitian dilakukan selama dua hari. Data diteliti secara deskriptif dan statistik menggunakan korelasi pearson.

Berdasarkan hasil pengukuran, didapatkan rata-rata suhu adalah 30,6 ^{0}C (p=0,038), rata-rata kelembaban 65,25% (p=0,990), rata-rata pencahayaan 93,37 lux (p=0,450) dengan rerata angka kuman udara sebesar 240,5 CFU/m^{3}.

Hasil penelitian menunjukkan bahwa suhu, kelembaban, pencahayaan, dan tingkat kuman udara pada ruang tunggu Gedung IRJ RSUD Dr. Soetomo Surabaya tidak memenuhi syarat. Namun, analisis menunjukkan bahwa ada hubungan antara suhu dan tingkat kuman udara. Namun, tidak ada hubungan antara jumlah kuman udara dan kelembaban atau pencahayaan.

Kata Kunci: Kualitas fisik udara, Angka kuman udara, Ruang tunggu di Rumah Sakit