"PERBEDAAN VARIASI JARAK PENYINARAN ULTRAVIOLET INTENSITAS 11,03 LUX TERHADAP ANGKA KUMAN UDARA DI LABORATORIUM JURUSAN ANALIS KESEHATAN POLTEKKES KEMENKES YOGYAKARTA"

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ABSTRAK

Latar Belakang: Laboratorium merupakan ruangan dengan tingkat kontaminasi kuman udara tertinggi karena banyak aktivitas melibatkan sampel dan media yang mengandung bakteri. Radiasi sinar ultraviolet efektif untuk mensterilkan udara karena menggunakan gelombang cahaya sehingga tidak meninggalkan residu. Jarak penyinaran menunjukkan seberapa jauh suatu benda terpapar sinar ultraviolet bergantung intensitas cahaya dan lama waktu penyinaran.
Tujuan Penelitian: mengetahui perbedaan jumlah angka kuman udara sebelum dan setelah penyinaran ultraviolet jarak 2 meter dan 2,5 meter di Laboratorium Jurusan Analis Kesehatan Poltekkes Kemenkes Yogyakarta.
Metode Penelitian: *quasy experimental* dengan *nonequivalent control group*. Sampel terdiri 40 sampel.
Hasil Penelitian: menunjukkan jumlah kuman udara sebelum disinari jarak 2 meter sebanyak 174 CFU/m^3 dan setelah disinari ultraviolet sebanyak 50 CFU/m^3. Presentase penurunan angka kuman jarak 2 meter sebesar 71,26%. Sedangkan jumlah kuman udara sebelum disinari jarak 2,5 meter sebanyak 254 CFU/m^3 dan setelah disinari ultraviolet sebanyak 98 CFU/m^3. Presentase penurunan angka kuman jarak 2,5 meter sebesar 61,42%. Uji *Mann Whitney* menunjukkan Sig 0,023 untuk angka kuman sebelum penyinaran dan Sig 0,008 setelah penyinaran. Uji Korelasi angka kuman udara sebelum penyinaran dengan jarak nilai Asymp. Sig 0,018. Korelasi angka kuman udara setelah penyinaran dengan jarak nilai Asymp. Sig 0,004. Korelasi angka kuman udara setelah penyinaran dengan jarak Asymp. Sig sebesar 0,000. Uji Regresi menunjukkan probabilitas jarak penyinaran terhadap penurunan angka kuman udara 60,3% dan 39,7 % faktor lain.
Kesimpulan: Ada perbedaan jumlah angka kuman udara sebelum dan setelah ultraviolet jarak 2 meter dan 2,5 meter di Laboratorium Jurusan Analis Kesehatan Poltekkes Kemenkes Yogyakarta.
Kata Kunci : *Angka Kuman Udara, Ultraviolet, Jarak Penyinaran*

"THE DIFFERENCES DISTANCE OF ULTRAVIOLET LAMP 11.03 LUX TO THE NUMBER OF AIR GERMS IN THE LABORATORY OF HEALTH ANALYSTS DEPARTMENT OF POLTEKKES KEMENKES YOGYAKARTA"

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ABSTRACT

Background: The laboratory is the highest level of air germ contamination. Ultraviolet radiation is effective for sterilizing air because it uses light waves and doesn't leave a residue. The distance of illumination indicates how far an object is exposed to ultraviolet light depends on the intensity of light and time.
Research aim : tell the difference number of air germs before and after ultraviolet exposure Intensity 11.03 Lux at 2 meters and 2.5 meters in the Laboratory of the Department of Health Analysts Poltekkes Kemenkes Yogyakarta.
Research design : quasi-experimental with a nonequivalent control group. The sample consisted of 40 samples.
Results : number of airborne germs at 2 meters before being irradiated was 174 CFU/m3, after being irradiated with an ultraviolet lamp 50 CFU/m3 and the percentage decrease is 71.26%. Meanwhile, the number of airborne germs at 2.5 meters before being irradiated was 254 CFU/m3, after being irradiated with an ultraviolet lamp was 98 CFU/m3 and the percentage decrease is 61.42%. Mann Whitney test showed Sig 0.023 for the number of germs before irradiation and Sig 0.008 after irradiation. Correlation test germ numbers before irradiation with the distance was Sig 0.018. Germ numbers after irradiation with the distance was Sig 0.004. Germ numbers after irradiation with distance. Sig of 0.000. Regression test shows the probability of exposure distance to decrease the number of airborne germs is 60.3% and 39.7% is caused by other factors.
Conclusion: There is a difference in the number of air germs before and after ultraviolet at 2 meters and 2.5 meters in the Laboratory of the Department of Health Analysts Poltekkes Kemenkes Yogyakarta.
Keywords: *Air Germ Numbers, Ultraviolet, Illumination Distance*