Alat Kenyamanan Kerja Perawat Dengan Nano Wave Light Emitting Diode (Nano-Led) Dan Efektifitasnya Terhadap Kenyamanan Dan Efikasi Diri Perawat Di Ruang Perawatan Covid-19 = Nursing Work Comfort Device With Nano Wave Light Emitting Diode (Nano-Led) For Nurses Comfort And Self-Efficacy In The Covid-19 Ward

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Abstrak

Latar Belakang: Ketidaknyamanan kerja perawat semakin meningkat akibat stres, kelelahan serta kecemasan tertular Covid-19 yang mengakibatkan penurunan kinerja dan berdampak pada pelayanan yang tidak aman. Perawat manajer dapat memodifikasi lingkungan kerja menggunakan teknologi terapi sinar biru yang memiliki panjang gelombang nanometer untuk meningkatkan kenyamanan kerja perawat. Penelitian ini bertujuan untuk mengembangkan alat kenyamanan kerja menggunakan nano wave light emitting diode (Nano-LED) dan mengukur efektifitasnya terhadap kenyamanan dan efikasi diri perawat di ruang perawatan Covid-19. Metode: Penelitian ini menggunakan desain Research and Development dengan tiga tahap penelitian. Penelitian tahap 1 mengidentifikasi masalah dan kebutuhan peningkatan kenyamanan kerja menggunakan Nano-LED, tahap 2 mengembangkan alat Nano-LED, dan tahap 3 mengukur efektifitasnya terhadap kenyamanan kerja dan efikasi diri perawat. Penelitian dilakukan di dua rumah sakit rujukan Covid-19 di wilayah DKI Jakarta sebagai kelompok intervensi dan kelompok kontrol. Jumlah sampel sebanyak 187 perawat menggunakan total sampling. Analisis data menggunakan uji Wilcoxon, Mann Whitney dan regresi linear berganda. Hasil: Penelitian tahap 1 menemukan 5 tema. Partisipan perawat manajer dan perawat pelaksana melalui focus group discussion mengonfirmasi perlunya peningkatan kenyamanan kerja perawat menggunakan Nano-LED. Tahap 2 menghasilkan alat Nano-LED blue turquoise light SMD 2835 panjang gelombang 460—470 nm. Tahap 3 diperoleh hasil ada perbedaan signifikan peningkatan rerata kenyamanan kerja ($p < 0,001$) dan efikasi diri perawat ($p < 0,001$) sebelum dan setelah intervensi pada responden kelompok intervensi. Selanjutnya ditemukan ada perbedaan signifikan peningkatan rerata kenyamanan kerja perawat ($p = 0,002$) dan efikasi diri perawat ($p = 0,001$) antara kelompok intervensi dan kelompok kontrol setelah intervensi. Kesimpulan: Intervensi Nano-LED efektif meningkatkan kenyamanan kerja dan efikasi diri perawat. Hasil penelitian merekomendasikan agar Nano-LED dapat diaplikasikan di ruang rawat untuk meningkatkan kenyamanan kerja dan efikasi diri perawat.

.....Background: Nurses' work discomfort due to stress, fatigue and anxiety of contracting Covid-19 can have an impact on decreasing performance and unsafe services for patients. Nurse managers can modify the work environment using blue light therapy technology which has a nanometer wavelength to increase the comfort of nurses' work. The research aims to develop a work comfort tool using a nano wave light emitting diode (Nano-LED) and measure its effectiveness on the comfort and self-efficacy of nurses in the Covid-19 ward. Methods: The study used a Research and Development design with three phases of research. Phase 1 research identifies problems and needs for increasing work comfort using Nano-LED, phase 2 develops Nano-LED device, and phase 3 measures its effectiveness on work comfort and nurse self-efficacy. The study was conducted at two Covid-19 referral hospitals in the DKI Jakarta area as an intervention group and a control group. The number of samples was 187 nurses using total sampling. Data analysis used Wilcoxon

test, Mann Whitney and multiple linear regression. Result: Phase 1 study found 5 themes. Participant nurse managers and nurse staffs through focus group discussions confirmed the need to increase the comfort of nurses' work using Nano-LED. Phase 2 produces a Nano-LED blue turquoise light SMD 2835 with a wavelength of 460—470 nm. Phase 3 showed that there was a significant difference in the average increase in work comfort ($p < 0.001$) and nurses' self-efficacy ($p < 0.001$) before and after the intervention in the intervention group respondents. Furthermore, it was also found that there was a significant difference in the average increase in nurses' work comfort ($p = 0.002$) and nurses' self-efficacy ($p = 0.001$) between the intervention group and the control group after the intervention. Conclusion: The Nano-LED intervention is effective in increasing the work comfort and self-efficacy of nurses. The results of the study recommend that Nano-LED can be applied in the treatment room to increase work comfort and nurse self-efficacy.