ABSTRAK

Latar Belakang : *Smartphone* memberikan keuntungan bagi tenaga kesehatan dalam komunikasi dan akses informasi, tetapi s*martphone* yang terkontaminasi kuman membahayakan pasien di rumah sakit. Perilaku pengguna *smartphone* merupakan salah satu faktor kontaminasi kuman pada *smartphone*.

Tujuan : Untuk mengetahui faktor perilaku yang mempengaruhi cemaran kuman pada *smartphone* tenaga kesehatan.

Metode : Penelitian analitik observasional dengan desain *cross sectional*. Penelitian dilakukan di RS PKU Muhammadiyah Gamping pada April-Juni 2018. Responden penelitian adalah 94 tenaga kesehatan yang memenuhi kriteria inklusi, yaitu tenaga kesehatan yang memiliki dan membawa *smartphone*. Setiap responden mengisi kuesioner. *Smartphone* tenaga kesehatan dilakukan *swab,* dikultur di media TSA, diinkubasi pada suhu 37^{o}C selama 24 jam, dan dilakukan pengecatan gram. Analisis data menggunakan uji *Mann-Whitney.*

Hasil : *Smartphone* tenaga kesehatan di RS PKU Muhammadiyah Gamping tercemar kuman batang gram negatif dan kokus gram positif dengan rata-rata angka kuman sebanyak 98,13±196,61 CFU (95% CI 57,86-138,40). Hasil analisis statistik menunjukkan terdapat pengaruh bermakna frekuensi penggunaan *smartphone* di rumah sakit (p=0,034), tidak terdapat pengaruh bermakna penggunaan *smartphone* ketika melakukan pemeriksaan atau tindakan perawatan (p=0,182), dan tidak terdapat pengaruh bermakna pembersihan *smartphone* setiap hari (p=0,344) terhadap cemaran kuman pada *smartphone* tenaga kesehatan di RS PKU Muhammadiyah Gamping.

Kesimpulan : Angka kuman yang diisolasi dari *smartphone* tenaga kesehatan di RS PKU Muhammadiyah Gamping adalah 98,13±196,61 CFU. Terdapat pengaruh frekuensi penggunaan *smartphone* terhadap cemaran kuman pada *smartphone* tenaga kesehatan di RS PKU Muhammadiyah Gamping. Tidak terdapat pengaruh penggunaan *smartphone* ketika melakukan pemeriksaan atau tindakan perawatan terhadap cemaran kuman pada *smartphone* tenaga kesehatan di RS PKU Muhammadiyah Gamping. Tidak terdapat pengaruh pembersihan *smartphone* setiap hari terhadap cemaran kuman pada *smartphone* tenaga kesehatan di RS PKU Muhammadiyah Gamping.

Kata Kunci : faktor, cemaran kuman, *smartphone*

ABSTRACT

Background *: Smartphone provides a number of benefits for healthcare professionals in terms of communication and access to information, however smartphones that are contaminated by bacteria carry significant risk for patients at hospital. The characteristics of the users in terms of using their smartphones is considered a risk factor for bacterial contamination on the smartphones.*

Objective *: To investigate behavioral factors affecting transmission of microorganisms on healthcare professionals' smartphones.*

Methods *: An observational analytic study was conducted using cross-sectional design. This study was conducted at PKU Muhammadiyah Gamping Hospital on April-June 2018. The study involved 94 healthcare professionals who met the inclusion criteria, namely those who had and always brought their smartphones to work. All participants were required to fill a questionnaire. A culture specimen was obtained from smartphone swab, cultured in the TSA medium, incubated at 37^{o}C for 24 hours followed by gram-staining. Data analysis was conducted using Mann-Whitney test.*

Results *: The smartphones that belong to the healthcare professionals at PKU Muhammadiyah Gamping Hospital were found to be contaminated by gram-negative bacilli and gram-positive coccus with the mean bacterial load of 98.13±196.61 CFU (95% CI 57.86-138.40). The results showed a significant influence of the frequency of smartphone use at the hospital (p=0.034), otherwise no significant influence was found for using smartphone while performing a clinical examination or medical intervention (p=0.182) as well as daily smartphone cleansing (p=0.344) on bacterial contamination over the healthcare professionals' smartphone at PKU Muhammadiyah Gamping Hospital.*

Conclusion *: The number of isolated bacteria from healthcare professionals' smartphones at PKU Muhammadiyah Gamping Hospital was 98.13±196.61 CFU. There was significant influence of frequent smartphone use at the hospital on bacterial transmission over the healthcare professionals' smartphone at PKU Muhammadiyah Gamping Hospital. There were no effects of smartphone use while performing a clinical examination or medical intervention on bacterial transmission over the healthcare professionals' smartphone at PKU Muhammadiyah Gamping Hospital. There were no effects of daily smartphone cleansing on bacterial transmission over the healthcare professionals' smartphone at PKU Muhammadiyah Gamping Hospital.*

Keyword *: factors, bacterial transmission, smartphone*