Sigma's VIRTUAL 31st International Nursing Research Congress (Wednesday, 22 July - Friday, 24 July)

Acceptance and Usability of a Web-Based Medication Management System Among Nurses in a Telehealth Hospital

Hanna Monigue Arindugue Floresca, PhD, MAN, RN¹

Michael Joseph Diño, PhD, MAN, RN, LPT²

Christian Jay S. Orte, PhD, MAN, RN, RM³

Michael Ignacio Aggari, PhD, MSN, RN¹

(1)School of Nursing, Our Lady of Fatima University, Quezon City, Philippines (2) Research Development and Innovation Center, Our Lady of Fatima University, Valenzuela City, Philippines

(3)Graduate School, Our Lady of Fatima University, Pampanga, Philippines Purpose:

This study aims to determine the Acceptance and Usability of a web-based medication management system among nurses working in a Pilot Telehealth Hospital in Bulacan, Philippines.

Methods:

The study had utilized three (3) designs (mixed-method – convergent-parallel) to analyze the data; these are: a) descriptive-evaluative, and b) descriptive-comparative study, and c) case study approach. The data was gathered through the use of a post study usability questionnaire (PSSUQ) and a questionnaire adapted from the Unified Theory of Acceptance and Use of Technology (UTAUT) model. Questionnaire about the acceptance of web based medication management was also made and utilize through interview to further expand the results of the study. Furthermore, the study also utilized a partial least square modelling to generate a reliable and valid result so as to compensate for the total number of populations of the study. The study also used partial least square modelling to further enhance the study. In this study, there were 26 respondents from a selected tele-health hospital. The study applied purpose census sampling and purpose sampling and includes Nurses in the E.R. OPD, general nursing unit and ICU.

Results:

The findings of the study revealed that the usability and acceptance of web-based medication management system has no significant difference in terms of gender, age, and years of practice. However, it was found out that there is a significant difference that lies in the area of practice. The data gathered from the qualitative part of the study was analyzed and came up with three themes: Engaging, Enabling and Exciting. Whereas the model that has emerged from the study showed that at some range of age, the PUse levels tend to get higher as age increases. At some other range of age, the PUse tends to get lower as age increases. Furthermore, it also showed that at some range of LoP, the PUse levels tend to get higher as LoP increases; then, at some other range of LoP, the PUse tends to get lower as LoP increases.

Conclusion:

The web based medication management system appeals to nurses regardless of gender, age, and years of practice. However in the area of practice, it is found out that the web based medication management system is not that much of appealing specifically in terms of performance and effort expectancy, facilitating conditions and usability. Based from the model that was emerged from the study, It states that at some range of age, perceived usability of the technology tends to get higher as age increases. Furthermore, it also showed that at some range of length of practice, the higher the length of practice is the lower the perceived usability of the technology may become. Themes such as engaging, enabling and exciting were drawn from the study to describe the acceptance of technology among the nurses. Furthermore, to implement the Web based medication management system, additional modules or interface must be implemented to be able to deliver safe medication administration to the patients.

Title:

Acceptance and Usability of a Web-Based Medication Management System Among Nurses in a Telehealth Hospital

Keywords:

Acceptance, Web based medication management system and usability

Abstract Summary:

This study aims to determine the Acceptance and Usability of a web-based medication management system among nurses working in a Pilot Telehealth Hospital in Bulacan.

References:

- Aldosari, B., Al-Mansour, S., Aldosari, H., & Alanazi, A. (2017). Assessment of factors influencing nurses acceptance of electronic medical record in a Saudi Arabia hospital. Elsevier. https://doi.org/doi.org/10.1016/j.imu.2017.12.007
- Atmowardoyo, H. (2018). Research Methods in TEFL Studies: Descriptive Research, Case Study, Error Analysis, and R & D. Journal of Language Teaching and Research, 9, 197–204. https://doi.org/10.17507/jltr.0901.25
- Balestra, M. (2017). Electronic Health Records: Patient Care an Ethical and Legal Implications for Nurse Practitioners. Elsevier, 13(2). https://doi.org/10.1016/j.nurpra.2016.09.010
- Binaymin, S., Smith, S., & Rutter, M. J. (2016). The utilization of system usability scale in learning management systems: a case study of jeddah communitycollege. https://doi.org/10.21125/iceri.2016.2290
- Boonen, M., Vosman, F., & Niemeijer, A. (2015). Is Technology The Best Medicine? Three practice Theoretical perspectives on Medication Administration Technologies in Nursing. John Wiley and Sons Ltd. DOI:10.1111/nin.12119
- Boyd Rabkin, A., & Weberg, D. (2015, June 5). Nursing 2.0: Improving Care Through Technology. California Health Care Foundation. Retrieved from www.chcf.org
- Groube, J. (2017). Postgraduate Study: The Journey for Registered Nurses. Retrieved from https://ir.canterbury.ac.nz
- Guetterman, t., fetters, m., & creswell, j. (2015). Integrating quantitative and qualitative results in health science mixed methods research through joint displays. Annals of Family Medicine, 13. https://doi.org/0.1370/afm.1865.

First Primary Presenting Author

Primary Presenting Author

Hanna Monique Arinduque Floresca, PhD, MAN, RN Our Lady of Fatima University School of Nursing Associate Professor 1 Quezon City Philippines

Author Summary: The researcher is a graduate of BS Nursing at our Lady of Fatima University and a graduate of Masters of Arts in Nursing major in Nursing Administration and Doctor of Philosophy in Nursing Administration in the same University. She is a college Lecturer and teaches professional nursing subjects and clinical instructor and at the same time a graduate school lecturer in the Philippines.

Second Author Michael Joseph Diño, PhD, MAN, RN, LPT Our Lady of Fatima University Research Development and Innovation Center Director Valenzuela City Philippines

Author Summary: Prof. Dr. Michael Joseph Diño, Vice President and Program Chair of the Phi Gamma Chapter, is the Director for Research Development and Innovation Center of the Our Lady of Fatima University, Philippines. He is an Apple Distinguished Educator (ADE), an ENFLA scholar of Sigma for Cohort III 2018-2019, and the first Asian recipient of the Nurse in the Limelight Award conferred by the Connecting Nurses Program in partnership with the International Council of Nurses.

<u>Third Author</u> Christian Jay S. Orte, PhD, MAN, RN, RM Our Lady of Fatima University Graduate School Professor Pampanga Philippines

Author Summary: He is a graduate of Bachelor of Science in Nursing, Master of Arts in Nursing and Doctor of Philosophy in Nursing. He is also a Speaker in Different schools and hospitals in the Philippines

<u>Fourth Author</u> Michael Ignacio Aggari, PhD, MSN, RN Our Lady of Fatima University School of Nursing Associate Professor 1 Quezon City Philippines

Author Summary: The researcher is a graduate of the following: Associate Health Science Education Bachelor of Science in Nursing Master of Science in Nursing Doctor of Philosophy in Nursing He is currently employed as Nursing Director, Graduate School Coordinator and a Clinical instructor in the Philippines. He engaged also in the Department of Health, Philippines as HIV Counselor. He also invited as a resource Speaker of Infection prevention and Control Program.