

Web-Based Nursing Information System for Credentialing and Training Needs Assessment

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ABSTRACT

The nursing management information system is a software package created to facilitate the nursing management process to improve performance and formulate strategic policies in efficiency (organization, management and human resources) as well as the ability to make decisions quickly and precisely in order to improve services to service users. This shows that an organization is innovative, effective, efficient and responsive to developments in science and information technology. The purpose of this literature review is to determine whether the application of a website-based nursing management information system can improve the nurse credentialing/re-credentialing process and improve the determination of nurse training needs. The method used is PRISMA. The results of the review of the three articles reviewed all said that a web-based management information system facilitates the credentialing process of an organization with all its weaknesses and advantages. The conclusion is that the implementation of a website-based management information system can improve the credentialing process and determine nurse training needs.

Keywords: nursing management information system, credentials, nurse training.

Background

In the era of globalization, hospitals are required to improve performance and be able to formulate strategic policies, including efficiency from within (organization, management and Human Resources) and must be able to quickly and accurately make decisions to improve services to the community so that they can become a reliable organization. responsive, innovative, effective, efficient, profitable and responsive to developments in science and technology including information technology(1).

The use of information technology in health organizations is an alternative to support performance effectiveness and efficiency. A nursing management information system is a software package created to facilitate the management process, information retrieval process and support the implementation of nursing care (2)

Nursing at Hospital nursing and organizing good clinical governance so that the quality of nursing services and midwifery services that are oriented towards patient safety in hospitals is more guaranteed and protected. To increase the professionalism of nursing staff in health services, a nursing management information system is needed so that it can support the activities of the nursing and HRD divisions in carrying out hospital regulations including; nurse recruitment, competency assessment, general and specific nurse orientation, performance evaluation, nurse placement and nurse training (3). The activities of the nursing committee according to its role and duties in improving the professionalism of nursing staff are divided into 3 sub-committees, namely the credentials sub-committee, the quality sub-committee and the ethics and professional discipline sub-committee (4).

Hospital Identification for planning nurse training programs held internally or externally

is still done manually based on meeting general training needs only, namely to fulfill 30 hours of training hours per year. Not yet based on competency according to career level. The Human Resources Division still has difficulty in determining what the appropriate training needs are for nurses based on the nurse's career level, moreover the administrative process for providing training is still not automated, making the data from the HRD Division and the Nursing Division not yet synchronized, this is the background to this research

Methods

The literature study method uses the PRISMA checklist to select scientific literature that has been found from a database in the form of secondary data from previous research, published journals so that it can be adjusted to the purpose of writing which discusses creating a web-based website. implementation of a nursing management information system to improve the credentialing process. -credentialing and determining nurse training needs. Next, a review was carried out by the author. The keywords used in the search were "Nursing management information system application", "Credentialing Process" and "Nurse Training Needs Analysis".

A systematic search was conducted from three English language databases to identify relevant articles published from 2020 to 2023. The following databases included 149 journals. In this research, we have searched several databases including Scopus, PubMed, and Google Scholar. Using MeSH terms and a combination of OR, AND operators to find more articles from the databases mentioned above. There were 3 articles obtained according to their objectives. Additional articles were searched from the bibliographies of articles that had been identified using relevant article inclusion criteria. Article search criteria were inclusion and exclusion. Inclusion criteria in this study include; article explaining the application of a nursing management information system, original research, research subject is nursing credentials with nursing training, the time requirement for the article to be published is from 2020 to 2023. Exceptions in this research are articles other than Indonesian and English, inappropriate research data

Results

After searching 68 existing articles, 8 articles were found, so that after the duplicates were published there were 60 articles. Then the remaining 60 articles were traced again and there were 5 articles including articles that did not meet the purpose of writing and were excluded from the analysis, leaving 55 articles. The next process is seen from the same intervention, in this case the creation of a nursing management information system application that meets the inclusion criteria of 3 articles worthy of being assessed in this literature review study.

Journal identity	Method study	Research result
Author: Fania Sari Kinanti, Ariani Arista Putri Pertiwi Year of publication: 2021 Title: Evaluation of the use of the Nursing management information system at the Ghrasia	Quantitative Study uses a survey method with a cross sectional design	Factors that influence user acceptance of The nursing management information system namely result demonstrability (RD) of perceived usefulness (PU) and factors that influence perceived ease of use (PEU) include social influence (SI), screen design (SD) and terminology (TM). Meanwhile, job relevance (JR) and output quality (OQ) factors do not significantly influence perceived usefulness (PU), user training does

<p>Mental Hospital, Special Region of Jogjakarta. Journal of Information System for Public Health, Vol.5, No.3, December 2020</p>		<p>not influence perceived ease of use (PEU) and perceived ease of use (PEU) does not significantly influence perceived usefulness (PU) (2)</p>
<p>Author: Kincoko Setyono, Iin Inayah, Setiawati Year of publication: 2021 Title: The Influence of Web-Based Management Information System Design on Nurse Competency in the Nursing Credentialing Process JURNAL ILMIAH OBSGIN- VOL.13.</p>	<p>Mixed Method Approach: fenomenologi deskriptif, quasy experimental</p>	<p>The research results obtained four themes; 1) manual nursing credentialing process, 2) determining the use of web-based IT in the nursing credentialing process, 3) expectations for the use of web-based IT, 4) application of clinical authority not in accordance with SPKK and SKKK. For descriptive analysis, the average test scores before and after the cognitive domain (21.70; 25.70), affective domain (41.30; 53.30) and psychomotor domain (21.20; 12.80). From the dependent T test statistical test, the results show that there is an influence before and after using the information system with a p-value of 0.0001. (5)</p>
<p>Author: Muhammad Al Hafid, Pradita Maulidya Effendi Year of publication: 2023 Title: Application for Determining Competency Based Training Needs to Improve the Performance of Laboratory Analyst Staff Jurnal Tehnologi Informasi dan Komunikasi</p>	<p>The methodology in this research consists of 3 (three) stages, including data collection, gap analysis concept simulation, and application creation using the Waterfall SDLC model.</p>	<p>As a result, the application provides 4 important features that can support the training procurement process, namely the competency test assessment feature, competency test recapitulation, training needs analysis with gap analysis, and the training procurement plan submission feature which can also record the name of the trainer and the budget required so that the history Training procurement can be recorded automatically. All features in the application have been tested using the black box method with the result that all application functionalities run well (6)</p>

Discussion

External factors such as result demonstrability (RD) on perceived usefulness (PU) and factors that influence perceived ease of use (PEU), including social influence (SI), screen design (SD) and terminology (TM), are very important for supports the successful use of information systems and this needs to be considered by hospitals and policy makers in understanding the challenges of adoption as well as practical guidance for successful implementation of information systems (2). This will support the credentialing process of an organization, especially hospitals, where hospitals has human resources with heterogeneous professions. With this nursing management information system application, it will facilitate the process of archiving nurse data. This program is expected to help improve the performance of correspondence management in a training agency. Agencies can track the evolution of correspondence more easily and precisely with the help of the solution This web-based (7).

The Influence of Web-Based Management Information System Design on Nurse Competency in the Nursing Credentialing Process resulted in four themes; 1) manual nursing credentialing process, 2) determining the use of web-based IT in the nursing credentialing process, 3) expectations for the use of web-based IT, 4) application of clinical authority not in accordance with SPKK and SKKK. For descriptive analysis, the average test scores before and after the cognitive domain test were (21.70; 25.70), affective domain (41.30; 53.30) and psychomotor domain (21.20; 12.80). However, this web-based management information system is not as easy as imagined. considering the very heterogeneous educational background of nurses (5). Apart from that, age and length of work greatly influence the level of knowledge of nurses in using the SIMRS application (8).

Evaluation of the nurse credential system in determining clinical authority for the 3 hospitals studied is generally in accordance with PMK 40 of 2017 standards, however, there is a need for synergy from the nursing sector and the committee in carrying out regular observations of achievements during the SPKK period in effect to maximize the credential system as a tool. improving the quality of nursing (9). This will be easier if you use a Web-Based Management Information System system. This credentialing process is carried out for two main reasons. First reason, many factors influence competency after someone obtains a competency certificate from the collegium(10). The research results show that a web-based management information system makes it easier for the Human Resources Division to identify the training needs of each laboratory analyst between the competencies they have and the competencies required (7).

Conclusion and Recommendations

The conclusion in writing this Literature Review is that the Nursing Management Information System supports the credentialing process, making it easier to identify training needs for nurses. Suggestions for hospitals should continue to carry out research and development of Management Information Systems in order to improve the quality of service.

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