Clinical Nursing Worksheet Indonesian Nursing Diagnosis_GACETA

by Hernan Soria

Clinical Nursing Worksheet: Indonesian Nursing Diagnosis Standard-Based Assessment Form as an Online Learning Media of Nursing Clinical Practice

Hoja de trabajo de enfermería clínica: Formulario de evaluación basado en estándares de diagnóstico de enfermería de Indonesia como medio de aprendizaje en línea de la práctica clínica de enfermería

Trijati Puspita Lestari[1a*], Nurul Hikmatul Qowi[2a], Sylvi Harmiardillah[wdc3a]

SUMMARY

Introduction: *Online learning was implemented as an impact of the COVID-19 pandemic. Learning clinical nursing practice to improve students' skills is also implemented by online methods. This research aims to develop Clinical Nursing Worksheet learning media as an online learning tool for Indonesian Nursing Diagnosis Standard (SDKI)-based Nursing Clinical Practice during a pandemic.*

Method: *This study uses a Research and Development (R&D) design with two stages. The first research stage was through focus group discussion (FGD) with six lecturers, 86 students, 2 Information and Technology (IT) education experts, and two nursing documentation experts. The second study involved four structural officials and 116 students in the socialization of the Clinical Nursing Worksheet (CNW) application. The instrument of the feasibility test used an assessment instrument for learning media which consisted of media rules, management, Computer Assisted Interaction (CAI) media, the relevance of the syllabus, and the material. The data were analyzed by using descriptive analysis.*

Result: *The assessment of educational experts of informatics technicians showed the highest mean value on CNW's governance items at 3.80. Nursing documentation experts showed the highest mean value on CAI items at 3.20. And nursing student evaluations showed items of material relevance had the highest score (3.40). Therefore, the clinical Nursing Worksheet based on SDKI can be applied as learning media.*

Conclusion: *Clinical Nursing Worksheet can be applied to online-based nursing clinical practice courses. Improvements in features, navigation, and some buttons, and the addition of data in support of SDKI functions need to be implemented. CNW effectiveness tests also need to conduct the impact of CNW use in learning.*

Keywords: *E-learning, learning media, nursing studies.*

ORCID ID: 0000-0002-4448-3783[1]
ORCID ID: 0000-0001-5362-0180[2]
ORCID ID: 0000-0003-1191-3721[3]

[a]Universitas Muhammadiyah Lamongan, Indonesia

*Corresponding Author: Trijati Puspita Lestari
E-mail: trijati_puspita_lestari@umla.ac.id

RESUMEN

Introducción: *El aprendizaje en línea se implementó como un impacto de la pandemia de COVID-19. El aprendizaje de la práctica clínica de enfermería para*

mejorar las habilidades de los estudiantes también se implementa mediante métodos en línea. Esta investigación tiene como objetivo desarrollar medios de aprendizaje de hojas de trabajo de enfermería clínica como una herramienta de aprendizaje en línea para la práctica clínica de enfermería basada en el estándar de diagnóstico de enfermería de Indonesia (SDKI) durante una pandemia.

Método: *Este estudio utiliza un diseño de Investigación y Desarrollo (I+D) con dos etapas. La primera etapa de la investigación fue a través de discusiones de grupos focales (FGD) con seis profesores, 86 estudiantes, 2 expertos en educación de Información y Tecnología (TI) y dos expertos en documentación de enfermería. El segundo estudio involucró a cuatro funcionarios estructurales y 116 estudiantes en la socialización de la aplicación Hoja de Trabajo de Enfermería Clínica (CNW). El instrumento de la prueba de factibilidad utilizó un instrumento de evaluación para los medios de aprendizaje que consistió en las reglas de los medios, la gestión, los medios de Interacción Asistida por Computadora (CAI), la pertinencia del programa y el material. Los datos fueron analizados mediante el uso de análisis descriptivo.*

Resultado: *La evaluación de los expertos en educación de los técnicos en informática mostró el valor medio más alto en los elementos de gobernanza de CNW con 3,80. Los expertos en documentación de enfermería mostraron el valor medio más alto en los ítems CAI con 3,20. Y las evaluaciones de los estudiantes de enfermería mostraron que los ítems de relevancia material tenían la puntuación más alta (3,40). Por lo tanto, la Hoja de trabajo de enfermería clínica basada en SDKI se puede aplicar como medio de aprendizaje.*

Conclusión: *la hoja de trabajo de enfermería clínica se puede aplicar a los cursos de práctica clínica de enfermería en línea. Es necesario implementar mejoras en las funciones, la navegación y algunos botones, la adición de datos en apoyo de las funciones SDKI. Las pruebas de eficacia de CNW también deben evaluar el impacto del uso de CNW en el aprendizaje.*

Palabras clave: *E-learning, medios de aprendizaje, estudios de enfermería.*

INTRODUCTION

The COVID-19 pandemic is happening all over the world, including in Indonesia. This situation led to changes in government policy in several sectors, including education. This policy change is intended to reduce the spread of COVID-19. As a policy stabilizer at the education level, the Director-general of higher education makes a regulation related to the policies of study and work from home (1). The circular also recommends that learning be done using an online system. Online learning is learning conducted through the internet (2-5). Nets education is an academic-professional education with a learning process that emphasizes the growth of students' ability to become academic and professional (6). At the end of the academic learning process, students are expected to meet the learning achievements of the Nets Education Curriculum for the special aspects of knowledge and skills (6-8). The specific skills to be achieved as a whole are students' ability to provide nursing care to patients from the assessment stage to evaluation. Nursing clinical practice is clinical learning that directly provides learning experiences related to nursing care to patients. Clinical learning through online methods is a demand and a challenge for educational institutions to be able to carry out the educational process during the COVID-19 pandemic. However, the learning media that can facilitate the practice of online nursing clinical has not been explained.

The preliminary study showed 86 students, 58 % of students stated that there is no form of nursing care preparation that can be used as a media of clinical nursing practice conducted online. In the implementation of online nursing clinical practice, the preparation of nursing diagnosis is a possible nursing process done online (30.2 %). Nursing studies are challenging to do using the online system (72 %), so describing the complicated cases in each case study is given to students. The assessment process is the initial stage of the implementation of nursing care. Inappropriate nursing assessment will have a negative impact on the next process. Proper and appropriate evaluation will affect the quality of nursing care provided to patients. The implementation of online nursing practice requires media to achieve learning objectives, such as when practicing in a hospital. Research conducted by previous research states that online assessment sheets are easier to use than paper-based assessment sheets (9). Neurological assessment through e-learning independently improves nurses' neurological assessment capabilities (10,11). Web-based learning can support the clinical learning process and virtual visual features. Virtual visuals can be provided in the form of videos. Video use in

nursing education and future research focuses on four key areas: effectiveness, efficiency (video production), video use, and video quality (12).

Based on the problems described above, researchers want to provide solutions in the clinical nursing worksheet as an online learning media of Indonesian Nursing Diagnosis Standard (SDKI)-based Nursing Clinical Practice. Clinical Nursing Worksheet (CNW) is an online-based application that presents nursing studies based on signs and symptoms in the SDKI. This application will make it easier for students to apply SDKI books according to the case approach. Thus, students will be accustomed to compiling assessments with focus data following online nursing diagnosis. Therefore, this study aimed to develop a clinical nursing worksheet as an online learning media in SDKI-based nursing clinical practice.

METHODS

Design

This method used for research and development (R&D) desing was used to produce online assessment learning media based on SDKI consists of 2 stages of research.

Participants

The first research phase was through Focus Group Discussion (FGD) with six nursing lecturers, 86 students, two educational experts of informatics technicians, and two nursing documentation experts. The second research phase was conducted with four structural officials and the socialization of learning media to 116 students.

Research Procedures

In the first stage of research, includes evaluation of nursing clinical practice learning, FGD 1st stage, designing Clinical Nursing Worksheet learning media, and conducting feasibility tests and expert discussions with educational Information and Technology (IT) experts and nursing documentation experts. Nursing clinical practice learning was evaluated

on 86 students; 58 % of students stated that no form of nursing care preparation could be used as a media of clinical nursing practice conducted online. However, in the implementation of online nursing clinical practice, the preparation of nursing diagnosis is a nursing process that can be carried out online (30.2 %).

Focus Group Discussion (FGD) 1st stage aims to examine the problems during the study of online nursing practice. Researchers invited nursing lecturers and discussed the implementation of online nursing clinical practices, obstacles in conducting guidance, students' ability to document nursing, determine nursing diagnosis, and conformity between nursing diagnosis, patient data, and solutions. Focus Group Discussion (FGD) phase 1 shows that the learning difficulty of online nursing clinical practice is the lack of an online assessment form that facilitates students filling and determining the nursing diagnosis. In addition, students' ability to assess nursing diagnosis following SDKI is still insufficient category, incompatible assessment data with data analysis in the determination of nursing diagnosis. The design of clinical nursing worksheet learning media based on SDKI was carried out by compiling an assessment form consisting of pattern assessment and B1-B6 assessment based on SDKI. Students can access the form through a shared link.

Students who meet the inclusion criteria, namely, have practiced online nursing, have active college status, and are willing to participate in this research program. As many as 116 students filled out a questionnaire for the feasibility test. Students who are not present during the activity and on college leave are excluded. Media feasibility tests are assessed using learning media assessment instruments.

The feasibility test was conducted with one expert informatics technician computer science graduate with a concentration in education and an expert in online learning media. One expert informatics technician graduated in computer science with a concentration in the database, and two experts in nursing documentation are still actively teaching. First, expert feasibility test activities are conducted with the exposure of learning media Clinical Nursing Worksheet based SDKI then continued with discussions.
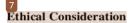
Second stage Research

The 2nd stage of research consists of socialization and testing the application of clinical Nursing Worksheet learning media, FGD phase two, and recommendations. A total of 116 students and four nursing lecturers participated in the socialization and trial activities. Students and lecturers were explained how to use the Clinical Nursing Worksheet and guidelines for using learning media in the form of modules. Furthermore, students and lecturers tried learning media both through computers and smartphones. After socialization, students can access learning media well. The second FGD and recommendations for the continuation of the application were carried out with four people consisting of the Head of the Nursing Study Program, the Secretary of the Nursing Study Program, the Dean of the Faculty of Health, and the Deputy Dean 1 of the Faculty of Health Sciences. Data collection was carried out in March-May 2021.

Instruments

The instrument used the assessment of learning media (13). The instrument of the feasibility test uses an assessment instrument for learning media which consists of the rules of media, management, Computer Assisted Interaction (CAI) media, the relevance of the syllabus, and the material. The scores used in this instrument are strongly agreed with the value of four, agree with the value of three, disagree with the value of two, and disagree with the value. Ordinal data scale with three codes, namely good (1), sufficient (2), and less (3).

Data Analysis

Data analysis using descriptive analysis, standard deviation, and mean.

Ethical Consideration

Ethical approval was obtained from the Health Research Ethics Committee, No 110 / EC / KEPK – S2 / 03 / 2021. All participants had signed the informed consent before the data were collected.

RESULTS

Table 1 describes the assessment of the Clinical Nursing Worksheet in several subcategories, containing the learning media rules, governance, Computer Assisted Interaction (CAI), and the relevance of materials and syllabus. Assessments are conducted from several points of view, containing media experts, nursing documentation experts, and students. The assessment of educational experts of informatics technicians assesses the learning media rule, governance, and media Computer-Assisted Interaction (CAI). Based on the table, the highest mean is found in the governance subcategory, which is 3.80, while the lowest mean in the Computer-Assisted Interaction (CAI) subcategory is 3.70. They also give a good assessment of all subcategories, containing learning media rules, governance, and CAI in the subcategory. Expert assessment of nursing documentation includes the learning media rules, Computer Assisted Interaction (CAI), and the relevance of materials and syllabus.

The highest mean is located in the CAI media subcategory of 3.20. As many as 50 % of nursing documentation experts rated the three subcategories, and the rest gave sufficient assessments on all three subcategories. Students gave CNW media assessment with the highest mean in the relevance subcategory between syllabus and material, which is 3.40. A total of 62.9 % of students gave good assessments on subcategories of learning rules, while in the CAI media subcategory, as many as 53.4 % of students gave good assessments. Almost all students assessed the subcategory of material and syllabus relevance which is 93.1 %.

Clinical Nursing Worksheet deserves to be a supporting media in online learning of clinical nursing practice, but some improvements are still needed. Clinical Nursing Worksheet can provide a clear picture in documenting the patient's condition. Furthermore, the clinical Nursing Worksheet can follow the development of technology where clinical nursing practice during the pandemic cannot be implemented by offline methods and can be implemented online methods. Based on some expert advice, researchers made improvements to the learning media of the Clinical Nursing Worksheet before socializing

Table 1

Assessment Result of Clinical Nursing Worksheet Learning Media Based on SDKI

Experts	Items	Mean	SD	Rating items			Total
				Good	Moderate	Poor	
Educational expert of informatics technicians	Learning media rules	3.79	±0.296	2 (100 %)	0 (0.0 %)	0 (0.0 %)	2 (100 %)
	Governance	3.80	±0.282	2 (100 %)	0 (0.0 %)	0 (0.0 %)	2 (100 %)
	Computer Assisted Interaction (CAI)	3.70	±0.424	2 (100 %)	0 (0.0 %)	0 (0.0 %)	2 (100 %)
Nursing documentation experts	Learning media rules	3.08	±0.473	1 (50 %)	1 (50 %)	0 (0.0 %)	2 (100 %)
	Computer Assisted Interaction (CAI)	3.20	±0.282	1 (50 %)	1 (50 %)	0 (0.0 %)	2 (100 %)
	Relevance of materials and syllabus	2.75	±0.353	1 (50 %)	1 (50 %)	0 (0.0 %)	2 (100 %)
Nursing student	Learning media rules	3.35	±0.453	73 (62.9 %)	42 (36.2 %)	1 (0.9 %)	116 (100 %)
	Computer Assisted Interaction (CAI)	3.38	±0.523	62 (53.4 %)	52 (44.8 %)	2 (1.7 %)	116 (100 %)
	Relevance of materials and syllabus	3.40	±0.577	108 (93.1 %)	8 (6.9 %)	0 (0.0 %)	116 (100 %)

with students and lecturers. As for suggestions from experts that cannot be improved, namely the use of applications that immediately show the correct answers, the initial goal of making CNW can be carried out according to plan.

DISCUSSION

Based on the assessment result in Table 1, experts who have expertise in the material, and users, can be known that most assessed CNW applications show well in all categories are media of learning, governance, media Computer-Assisted Interaction (CAI), and re-levance between the syllabus and the material. This indicates that CNW is very applicative as a learning media for online nursing clinical practice during the pandemic. The COVID-19 pandemic raises challenges in the learning process, especially in clinical nursing practices using online-based methods such as simulation methods, telehealth, virtual reality, and blended learning (14-16). Web-based learning teaching is an online learning media widely used to support practical learning in nursing students (9,17). In addition, media practices in web-based nursing process teaching can help students develop care planning skills (18-20). Therefore, the development of this learning media and maintaining the continuity of nursing practices implemented by online methods is also expected to improve the ease of students in learning nursing care.

The results of the media expert assessment showed that the mean assessment of the CAI category obtained the lowest results. This application is considered necessary to improve features, navigation, and some buttons to make it easier to use. Web-based tools or worksheets enable structured, clear, and more objective content creation in a sometimes obscure, inconsistent, and subjective scope (21). Worksheets that have clarity, detail, and no double perception in the application will greatly help students in the accuracy of diagnosis preparation. The theory of constructivism strongly supports this learning. Learning is formed from students' understanding after gaining experience (22,23). Students who increasingly try to fill out the assessment form will increase their understanding of students in putting together the correct assessment.

The results of the identification of expert assessment of documentation obtained the lowest mean value in the category of the relevance of the material and syllabus. The completeness of the assessment format and presentation of inspection data, both normal and abnormal, need to be improved. Web-based online learning can improve students' ability to determine actual diagnoses, health promotion diagnoses, and risk diagnoses better. Students can use web-based exercises anytime, anywhere, and use virtual cases as much as possible (18,24). Completeness of data presentation displayed on the assessment form/ worksheet is critical to support students' accuracy in preparing a nursing diagnosis.

Users (students) mostly give good judgment in the CNW category as media defense, CAI media, and relevance of materials and syllabus. Students stated that this CNW application is easy and practical to arrange nursing care. This is supported by research that states that online-based assessment tools are much easier to apply (9). Electronic-based nursing documentation is also better than paper-based processes and structures (25). Other research through integration learning of diagnosis and formative assessment-based with web learning methods and forms of checklist physical assessment skills also considered more practical and efficient and able to improve the acceptance of benefits, learning assistance, and student satisfaction (24,26). Online media as a learning tool is expected to ease the learning process and ease knowledge transfer.

Obstacles experienced by students related to learning media rules such as applications that do not support IOS, obstacles in storing form results, loss of assessment results when accidentally pressing the back button, and others.

CONCLUSION

Clinical Nursing Worksheet-based SDKI deserves to be used as a learning tool. The assessment of media experts shows that CNW is good at the governance of the use of learning media. At the same time, the documentation experts show CNW in the media Computer-Assisted Interaction (CAI). Improvements in features, navigation, and some buttons, and the addition of data in support of SDKI functions need to be implemented. CNW effectiveness tests also need to be conducted to determine the impact of CNW use on learning.

ACKNOWLEDGEMENT

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