

THE ADVANTAGES OF CONCEPT MAPPING CARE PLAN IN CLINICAL PRACTICES

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ABSTRACT

Excellence in academic and practical skills is the main goal of most nursing educators. It is a tool to measure the level of success of the nurse educators. Concept mapping care plan is related to the expectation that today's nursing students must master a constantly expanding body of knowledge and apply complex skills in rapidly changing environment. Concept mapping care plan was developed by researcher and validated by ten expert panels using three rounds of Delphi technique. It was used to evaluate academic performance of nursing students at clinical practice. Concept mapping care plan is a good assessment tool to nursing educators to prepare nursing students for better critical thinking and expected to function effectively after graduation. The goal of concept mapping care plan as a teaching strategy during the clinical practices, help the students to integrate the knowledge from theory and implementing this knowledge in the clinical setting. Researcher believes that concept mapping care plan can be as a replacement of nursing process that have been practiced before in the clinical setting. In addition, through concept mapping care plan provides an opportunity for students to broaden their knowledge and become more creative.

Keywords: *Concept mapping care plan, Clinical practices, Nursing students*

INTRODUCTION

Excellence in academic and practical skills is the main goal of most nursing educators. It is a tool to measure the level of success of the nurse educators. Concept mapping care plan is related to the expectation that today's nursing students must master a constantly expanding body of knowledge and apply complex skills in rapidly changing environment. Concept mapping care plan was developed by researcher and validated by ten expert panels using three rounds of Delphi technique. It was used to evaluate academic performance of nursing students at clinical practiced. Concept mapping care plan is a good assessment tool to nursing educators to prepare nursing students for better critical thinking and is expected to function effectively after graduation. The goal of concept mapping care plan as a teaching strategy during the clinical practices is to help students integrate the knowledge from theory and implement this knowledge in the clinical setting. This process of learning will make the learning process becomes meaningful learning. Concept mapping care plan is

useful for students' preparation for clinical practices.

In nursing education, concept mapping has been used as a teaching strategy to provide students the opportunity to visualize and integrate theories with the nursing process. This concept mapping care plan allowed the students to determine the patient problems and interrelationships based on analysis of the patient data and plan comprehensive nursing care. Previous studies recommended that to replace traditional care plans or nursing care plans with concept mapping care plans to help students learn how patients' various problems are connected to one another (Chabeli, 2010; Kostovich *et al.*, 2007; Abel & Freeze, 2006). It can be seen that in oversee hospital the concept map care plans have been implemented. However, in Malaysia it is not implemented yet. Therefore, the concept mapping care plan can be a best method in replacing the current nursing care plans. This is a huge leap for nursing profession to change and perform this new approach in their daily practice.

LITERATURE REVIEW

The advantages of concept mapping care plan in clinical practices

i. Enhanced critical thinking

Concept mapping care plan enhanced critical thinking of the nursing students, which allows the students to analyze and make assessment and evaluate data that reflect with the patient care. Concept mapping care plan encouraged the nursing students to think more independently and gave them more confidence to practices in the clinical area, it is because all the respondents assign to find and give personnel nursing care to the patients. It will change the students from passive learners to active learners during clinical setting. It is supported by Wheeler and Collins (2003), who stated that concept mapping is one example of improvement of critical thinking, because during the construct of the maps, the students draw the map of content and this allow them to use their cognitive skills such as analysis, evaluation and reasoning.

ii. Students make self performance assessment

By applying the concept mapping care plan, nursing students have the opportunity to make an assessment of their performance in clinical practices. In due course this structure and each of its sub concepts have the rubric of its own in the form of a percentage. The students can determine their performance if it were adequate or inadequate knowledge in order to meet a desired goal. During student-made concept maps, the students have opportunity to self evaluate their own process and progress toward their learning, eg. what are the missing data or insufficient content.

Students can self-evaluate or peer-evaluate concept maps as a way of building the professional skills of self-assessment and peer evaluation (Billings & Halstead, 2005). Concept mapping is a student directed strategy that promotes the use of self monitoring, increases self-efficacy, leads to better achievement of the students (Chulart & DeBacker, 2004). Concept mapping must be built by a student who requires students to make links between concepts such as crosses links between concepts.

In the clinical area, concept maps can be evaluated by: comprehensiveness of data assessment, if data are linked to the correct diagnoses and problems, the suitability of nursing interventions and treatments are

specific and relevant, and if the relationships among the concepts are indicated and accurate (Oermann *et al.*, 2009). However, concept mapping care plan is more convenient, easy to understand and save time of the student.

iii. Promote meaningful learning at the clinical practices

Concept mapping care plan can promote meaningful learning at the clinical practices. The learners who are involved in meaningful learning process, will feel intellectual significance that comes with the understanding and gives confidence when the concept is comprehended (Novak & Gowin, 1984). In fact, using concept mapping care plan also make the students gain a holistic view of the client's health status by looking into the priorities of the complaints of the clients.

Concept mapping of patient problems allowed student and instructor to see interrelationships in patient data, analyze the patient data and plan comprehensive nursing care. By using concept mapping care plan the students also finds it easy to identify the problem of the patient, because it can present visual representation of patients and can make plan of care more systematic and effective.

Concept mapping care plan requires nursing students to collect pertinent data and prioritize information for good nursing intervention and make best solution for clinical decisions. It is because the students have a view of patient care, where the important concepts such as patient medical illness was already listed along with data subjective, data objective, investigation and result, nursing diagnosis. Ultimately, the students have ability to identify patient problems and perform better nursing intervention based on the prioritization of problems.

This will stimulate the cognitive structure to think about the further steps or management of care of the patients. The students can determine the priorities of the patient care needed before nursing interventions. For example, from data subjective or interview of the patient, will provide the patient information such as complains of shortness of breath (SOB), then the nursing students can take action put the patient in the fowler's position expand the airways and make breathing easy for the patient. Another study was done by Ahlberg and Vuokko (2004) on the effect of concept

mapping on teachers and students of grades 4-6. This study included two experimental treatments of three years each. The finding reported that concept mapping was very helpful in teaching and assessment. The researchers concluded that concept mapping is an effective and reliable tool for meaningful learning for long term both for male and female students.

iv. Stimulate the students' cognitive thinking

Concept mapping care plan enhanced nursing students understanding and confident in clinical setting. This may lead to prepare nursing students to think critically in clinical settings. The development of concept mapping care plan can stimulate the student's cognitive aspect and help to connect the new knowledge and prior knowledge that they have already gained. These require the students to have a mental grasp of the situation.

Apart from that it also stimulates the student to find relevant information, and identify what is missing so as to give priority care to the clients. For instance in the case of clients complains of short of breath, the first nursing intervention is to lay the patient in a fowlers position to expand the airways and to give oxygen saturation to help breathing before other nursing interventions. It is supported by Hsui (2004) who reported that the using concept mapping makes the students to understand more the relationships between patient data and disease process and provide students a "big picture" to give care to the patients.

The approach in concept mapping is unique because it is based on a nursing model of health and illness and places the client requirement for nursing care at the center of the map (Taylor & Wros, 2007). Concept mapping stimulates the students' cognitive thinking because it enhances the understanding about needs of the clients and relates that with the care of the clients. Concept mapping provide idea to the students to develop a plan for nursing care when all the nursing assessment data such as data subjective and objective are available based on complain of client and vital sign observation that encouraged the students to think reflectively toward it. It is supported by Chabeli (2010) that stated that concept mapping is an integral teaching method to facilitate metacognitive thinking and encourage a deep approach towards learning.

v. Increased responsibilities in the nursing care

Nurses are responsible for the care they provide to their patients. The nurses must take the responsibility

for the nursing care towards patients and are individually accountable for their own practice. Responsibility for nursing judgment and action refer to the specific accountability or liability associated with performance of duties of a particular role. (Code of Ethics, p.16). Responsibility embraces the ability to make moral or rational decisions on one's own and therefore be answerable for one's own behavior. The nurses must also accountable for the quality of practice and for conformity with standards of care. The use of concept mapping care plan will increase the responsibilities of the students toward patient care. Concept mapping structure has sub concept structure that needed by the students to find and fulfill the requirements of the patient care. It will avoid the gap in the nursing care steps during implementation of nursing care.

Concept mapping care plan is a method to improve delivery of health care. It includes all the assessment that is needed by the nurses for appropriate patient care. For example based on medical diagnosis, the nurses learn about nursing diagnosis from data objectify and subjective data patient. After they refer to the nursing diagnosis, the nurses can identify a goal for nursing diagnosis and then implement nursing intervention. Then, nursing evaluation will be done to evaluate if the nursing intervention is effective or not. Concept mapping care plan helps the nurses to provide high-quality care to their patients based on the assessment (MacNeil, 2007).

vi. Good in decision making

Concept mapping care plan also increases the efficiency of nurses. Making decisions based on the assessment makes it easier for a nurse to choose the appropriate care to provide to their patient as opposed to trying something that may or may not be beneficial to their patient. This saves nurses time, which she can devote to patients who need more intensive care from her compared to the traditional nursing care plan (nursing process). It is because the nurses regularly make decisions on what care to provide for their patients. These decisions can impact the patients' health negatively or positively. Therefore, it is important to help nurses in practice at present and protect nurses in the future.

vii. Improve patient care and health outcomes

Using concept mapping care plan to provide care to

patients increases the nurse's confidence. This is because they know that all their decisions regarding patient care are based on assessment of the patient in detail. Research indicates that there is a significant association between positive patient outcomes and nurses who use critical thinking in nursing practice (Forneris & Peden - McAlphine, 2007). In their study also, they conclude that without the development of critical thinking skills, nursing care may be suboptimal at best and this affect patient outcomes. Concept mapping is an effective learning strategy to help students apply new knowledge and skills to client with complex health care needs (Hicks-Moore & Pastirik, 2006).

Incorporating concept mapping care plan into the nursing care may help the hospital achieve Magnet status. The Magnet Recognition Program is a program operated by the American Nurses Credentialing Center that allows nurses to recognize nursing excellence in other nurses. It is considered the highest recognition for nursing excellence (Broom *et al.*, 2007). The Magnet Recognition Program recognizes quality patient care, nursing excellence and innovations in nursing practice. Being a magnet facility, assures patients that they are getting excellent nursing service.

To achieve this nurse must educate the client by educating them. Client education is the process of influencing patient behavior, producing changes in knowledge, attitudes and skills required to maintain and improve health. Therefore concept mapping care plan has always had the potential to dramatically improve patient care and health outcomes.

viii. Give benefit to both nursing educators and students

Concept mapping care plan give benefit to both nursing educators and students, because it encourages student to learn how to solve the problem and it also enhances the critical thinking. Most important thing it helps nursing student to function well as a nurse during clinical practice particularly in their professional field. Therefore concept mapping encouraged them to think more independently and gave them more confidence in implementing their knowledge in the clinical area.

Concept mapping care plan could be beneficial to both nursing educators and students in promoting meaningful learning at clinical setting. Besides that, nurse educators or clinical nurse instructor can evaluate

the weakness and performance of nursing students based on concept mapping care plan grading score, which were divided based on mild, moderate and high achievements. This criterion for grading is evaluated based on nine components namely: (1) Clinical manifestation (5%), (2) Risk factors and etiologies (5%), (3) Investigation and result (5%), (4) Medical treatment (5%), (5) Nursing diagnosis (subjective data and objective data) (10%), (6) List of Nursing diagnosis (5%), (7) Nursing intervention (included medication) (40%), (8) Nursing evaluation (5%) and (9) Health education (20%)

This is valuable in determining the effectiveness of these using teaching methods, beside pointing out the weakness of the students in order to makes the nursing students more knowledgeable, skillful and successful nurses when they graduate. The students can acquire new information into cognitive structure and links with their prior knowledge that they have retained. This will contribute to meaningful learning and students would be confident to functions as a nurse in the clinical setting. Learning occurs when meaningful material enters in the cognitive structure and interacts with and is embeded under a relevant and more inclusive conceptual system (Ausubel & Robinson, 1969).

DISCUSSION

The researchers from this study believed that the development of concept mapping care plan must be used in the clinical practices to give benefit to the nursing student because it just needed the nursing students to fill the columns that had already been structured likes the nursing process format. To overcome the problems and difficulties to evaluate the concept mapping, the researcher used the rubric score based on the percentages adapted from Gabriel & Ainsley (2011). The scores were divided into three categories: Low (<33.3%), Moderate (>33.3-66.6%) and High (>66.6%).

According to Oermann *et al.*, (2009) the clinical area, concept maps can be evaluated by: comprehensiveness data assessment, if data are linked to the correct diagnoses and problems, if nursing interventions and treatments are specific and relevant, and if the relationships among the concepts are indicated and accurate. The skills of using concept mapping care plan can be improved better if concept mapping care plan is continually practiced and

reinforced in the clinical area. It requires the effective integration of theory to clinical practices.

Ultimately, this can help foster critical thinking skills among nursing students, with the structure of concepts that is available and show the connections between each concepts, in order word, the concept mapping structure can be used as diagram to portray the relationships between nursing diagnosis and patient needs. The students have visualized connection between what they learn in didactive theory and information in clinical setting, because the concept mapping structure enable them to continue to incorporate the knowledge. This representation allows the students to see a patient's problem and visually connect with nursing interventions (Adema - Hannes & Parzen, 2005). It is supported by King & Shell (2002) who stated that the students using concept map, after groping and categorizing, have a holistic aspect of clinical decisions when the data are added together making the links and the relationships evident, which they can change according to the requirements.

CONCLUSION

Researchers believe that concept mapping care plan can be used as a replacement of nursing process that have been practiced before in the clinical setting. In addition, concept mapping care plan can provide an opportunity for students to broaden their knowledge and become more creative. By using concept mapping care plan the nursing students will analyze every problem of the patient first and try to solve the problem by using appropriate decision making. This will develop the critical thinking, "think out of the box". Concept mapping care plan has the potential to improve problem solving skills among students if a particular situation is complicated. If a student has interpersonal and intrapersonal skills along with positive and stable emotions, then this will create a group of professional energy source for the country. This is in line with the vision and mission Institusi Latihan Kementerian Kesihatan Malaysia (ILKKM) under Ministry of Health to produce nurses who are competent and knowledgeable.

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