EFFECT OF EDUCATIONAL GUIDELINE ON INTERN NURSES' DECISION-MAKING SKILLS DURING FIRST STAGE OF LABOR

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ABSTRACT

Design: Quasi- experimental study design was used. **Aim:** To evaluate effect of educational guideline on intern nurses' decision-making skills during labor. **Setting:** The labor unit in Obstetrical and gynecological department at Beni-Suef hospital. **Sampling:** A total number of (30) Intern nurses working in the labor unit. **Tools:** - 1. A Structured questionnaire sheet to assess socio demographic data for intern nurses and their knowledge regarding decision making. 2. Evaluation sheet to assess application of decision making steps. **Results:** The intern nurses were having high decision-making knowledge post intervention. The study revealed statistical significance difference between pre and post intervention in all items of decision making skills ($p<0.05$). **Conclusion:** Educational guideline affected positively on intern nurses, knowledge and skills regarding Decision making process. **Recommendation:** Develop training program regarding decision making process during care of other areas of obstetrics and gynecological nursing specialty.

Keywords: Educational Guideline, Decision Making, Intern nurses & Labor

INTRODUCTION

Labor is a critical stage in a women's life which needs suitable decision in the suitable time, if failed the women may be exposed to risk which may lead to morbidity and even death. Hence, suitable decision making during labor play an important role in women and fetal wellbeing. Furthermore, studies have been done to study the direct effect on maternal and neonatal morbidity and mortality rate. (World Health Organization, 2018; Say *et al.*, 2014). Decision making is the process of selecting the best alternative from the available set of alternatives and involves three activities which are Intelligence activity, Designing activity and Choice activity. Improving the health care outcomes in hospital settings must be done by promoting the effective information processing and decision-making process in environments where it is critical (Temmerman *et al.*, 2015).

The importance of decision making in nursing is a vital step in the process of converting knowledge into action. Hence using the complex knowledge and skills have been gained through education and experience which support nurses to make the most appropriate decisions in their practice. Identify the decision makers; the first step in addressing any problem is to answer the question, "Whose decision is it?" Assess the individual's ability to make a decision at times, by choosing acceptable alternatives among medically treatment and nursing intervention (Gregory *et al.*, 2017).

Medical staff in Obstetrics and Gynecological Department can enhance their decision-making process by considering when it would be useful to seek a formal or informal ethical consultation as well as which guidelines would be most helpful to them as they move from case to case and decision to decision to 'promote a staff member;' 'selection of an applicant,' etc. As well as an individual's capacity to make a decision depends on that individual's ability to understand information and appreciate the implications of that information when making a personal decision. (Macdonald & Worthington, 2012).

Nurses are increasingly regarded as key decision makers within the healthcare team by using the best available evidence in their judgments and decisions. Nurses make these decisions frequently each day while planning and delivering care by using the complex knowledge and skills they have gained through education and experience. So, it requires the understanding and application of specific knowledge and skills (Gaberson & Oermann, 2010).

The individual nurse and midwife have a responsibility to develop himself/herself as a professional. Health care organizations have a responsibility to assess the professional development needs of their staff and to provide appropriate support for staff to enable them to practice to high standards in the interests of quality patient/client care and it applies to both decisions and actions (Nageshwar *et al.*, 2015).

The internship allows students to develop personal contacts that may lead to job placement opportunities and build self-confidence, leadership and good communication skills while working with others. Practical experience helps students to understand better classroom theories, information and their application to real situations in the workplace. It is also a great way to prepare for the transition from the classroom to the workplace (Wrenn & Wrenn, 2009).

It is important for the Internship nurses to find or develop guidelines for decision making that can be applied consistently in facing health problem. The guiding principle for all decision-making in nursing is to achieve the best health outcomes for patients and clients. Guidelines consisting of several logical steps can aid the practitioner analyzing and resolving the health problem. The internship student has an obligation to assist the women's representatives in examining the issues and reaching a resolution (Garner, Hill & Schünemann, 2009).

Guidelines are essential to check how the nurses perform professionally and how they exercise the care, cure and coordination aspects of nursing. A guideline for nurses is to be accountable for their actions to their patients, and their peers (Padgett, 2013).

Critical thinking requires the use of scientifically based and practice-based criteria for making clinical decision. These criteria may be scientifically based on practice and standards developed by clinical experts

and quality improvement initiatives (Papathanasiou *et al.*, 2014).

Significance

Egypt is considered a middle-income country, depend on Proper care during labor is important to maternal health, encouraged a substantial decrease of the Maternal Mortality Rate, accounting for 10%–30% of direct cause of maternal deaths in developed countries with a major component of severe maternal morbidity due to labor complication (World Health Organization, 2018).

The dynamic nature of health care environment requires nurses to be competent decision-makers in order to respond to clients' needs. Decisions are made and these decisions are implemented appropriately to solve their clients' problems in the context of a multidisciplinary team (Raine *et al.*, 2014). It was observed from the clinical setting at obstetrics department in Benha university hospital that decision making practice was neglected by most (89%) of intern nurses in labor unit. No previous study regarding decision making during labor applied in obstetrics department at Beni-Suef University hospital, so this study was conducted.

Aim of the study

To evaluate effect of educational guideline on intern nurses' decision-making skills during first stage of labor.

Research Hypotheses

Decision making educational guideline affect positively on intern nurses' knowledge and skills for care given during the first stage of normal labor in post than pre-intervention.

RESEARCH METHODOLOGY

Design: Quasi- experimental study design was used.

Setting: Faculty lab and labor unit in obstetrical and gynecological department at Beni-Suef University hospital.

Sample size: A total number of 30 intern nurses.

Sampling Technique: The sampling was done in University hospital for six months started from the beginning of March 2017 till the end of August 2017. They were divided into six groups each group involve 5

intern nurses. Each group must remain in training in labor unit for one month and then rotated.

Tools of data collection

Three tools were used for data collection

I -Structured interviewing schedule: It consists of two parts:

Part 1: To assess the personal characteristics, this includes age, other work (Privet hospital).

Part 2: knowledge assessment sheet which include:

a) Knowledge regarding decision making

The questionnaire contains 25 items divided into7 subscales namely care given during first stage of labor

1. Admission assessment, planning management
2. Maternal observation
3. Fetal well-being assessment
4. Maternal management (bladder; mobility; fluids, nutrition; comfort, emotional wellbeing; pain)
5. Assessment progress of labor
6. Reporting of abnormalities of labor
7. Documentation

Each statement response was one for wrong answer and two for right answer scoring system: The total Knowledge score was divided into three levels:

- Poor ($< 50\%$)	(< 25)
- Average $50 < 70\%$	($25 - < 35$)
- Good 70 - 100%	($35 - 50$)

11. Observation check list: To assess application of decision making steps, as well as decision making skills of intern nurses in clinical areas during care of the first stage of labor in real situation in the hospital. It consisted of 18 items divided under 6 subscales namely, Establishing a Positive Decision-Making Environment (4items), Generating Potential Solutions (3 items), Evaluating Alternatives (3 items), Deciding (3 items), Checking the Decision (2 items), and Communicating and Implementing(3items).Each statements response was measured on 3point.That ranged from : (1) incorrect, (2) incomplete correct, and (3) complete correct.

Total scoring system included 54 marks; it was divided into 2 levels:

Unsatisfactory	(< 32.5)
Satisfactory	($32.5 - 54$)

Supportive material (Educational guideline): It was developed by the researcher which includes: concept, types, steps, barriers etc. of decision making. Handouts in the form of problem solving (case study), exercises and scenarios with different obstetrical situation during care of the first stage of normal labor, to assess the intern nurse's student's application of decision-making steps, to encourage students to understand the content and develop solutions to a given scenario similar to clinical practice. To assess the intern nurses student's application of decision making steps to encourage students to understand the content and develop solutions to a given scenario similar to clinical practice . Each situation response was one for incorrect answer and two for correct answer.

Ethical and administrative design

The necessary official permissions for data collection and implementation of the study were obtained by submission of official letters containing the title and objectives of the study from Dean of the Faculty of Nursing & Director of Beni - Suef University Hospital. Consent was obtained from the participants. Each participant was informed about the purpose and benefits of the study and informed that their participation is voluntary. The intern nurses also informed that they have the right to withdraw from the study any time without giving any reason. Subjects were assured about complete confidentiality of the obtained data and that the study would not affect in any way of the work.

Content validity: Tools were submitted to a panel of five experts in the field of maternal and newborn health nursing furthermore nursing administration.

Pilot study: This carried out on 10% of the total subjects (3 intern nurse students) to test clarity, relevance and applicability of instruments. It also estimated the time needed for filling the tools. No modification was done. Those intern nurse students were included in the study.

Field work (Procedure)

The study was conducted three days / week &four

hours/day a period of two months. The researchers obtain consent from the head nurse supervisor (matron) who responsible of intern nurses to attend the faculty and conduct the study four hours daily each week a period of two months until the study completed according to their roster time (schedule of shift). All intern nurses are divided into two groups- group1 (G1), group 2 (G2). Each group is supervised by researchers daily, G1 conducted the study during the first three days of the week and G2 conducted the study during the next three days of the same week. Each group worked separately with the researcher as follow:

1ˢᵗ week:

1ˢᵗ day: Introduction & Pretest of the theoretical part was done in the faculty class by applying the tool (1) for assessing the student's knowledge regarding decision making (concept, steps, etc.) and distribution and explanation of handout was conducted among the intern nurses for 4 hours.

2ⁿᵈ day: Explanation of the theoretical part, pretest which includes answer to scenarios, for application of decision making steps was done in the obstetrical lab of the faculty (tool 2).

The researchers assessed the intern nurses' students reported practices regarding application of decision making steps by applying situation in the form of case study exercises as scenario with different obstetrical situation during care of the first stage of normal labor in the form of problem solving based on the critical thinking.

3ʳᵈ day: The pretest of the clinical performance was done in labor unit by applying the tools for assessing the students' skills regarding application of decision making steps in real situation during care of the first stage of normal labor. The average time needed to complete each tool ranged between 20-25 minutes.

2ⁿᵈ week: The educational guideline was developed by the researchers according to the needs of the intern nurse students regarding decision making skills during care of the first stage of normal labor.

The educational guideline was applied and distributed to all intern nurses. The students attended two sessions for teaching the theoretical part of decision making process regarding care given during first stage of normal labor, which was discussed and explained by

the researchers in the faculty class. Each session takes two hours.

3ʳᵈ and 4ᵗʰ week: The intern nurse students were taught and trained t in the clinical area regarding real situation in the hospital along with the application of decision making steps during care of the first stage of labor (Evaluating effect of the decision making guideline on intern nurses' knowledge and skills).

Post-test was done to evaluate both the theoretical and clinical parts regarding decision making skills during care of first stage of labor. The theoretical part was evaluated during the first day of the 4th week and the clinical part was evaluated during the other two days. Three intern nurse students were evaluated by one researcher each day. Each intern nurse was evaluated on three situations as well as three time and the researcher calculate the average score.

RESULTS

The intern nurses were having high decision-making knowledge post intervention. Statistical significance differentiates between pre and post intervention in all items of decision making skills ($p < 0.05$).

Table 1: Personal characteristics of studied internship nurses (no=30)

Items	No	%
Age		
20 -< 22	20	56.7
22 -24	10	33.3
Mean ± SD	22.23 ±0.626	
Working in private hospital		
No	19	63.3
Yes	11	36.7
Studied decision making		
Yes	25	83.3
No	5	16.7

Table 1 clearly shows that, more than half of Nurse Internship Students (56.7%) were in the age group from 20 to less than 22, with mean age 22.23±0.626. Majorities of studied Nurse Internship Students (63.3%)

do not work in hospital. Most (83.3%) of studied intern Nurses were Studied decision making.

Table 2: Knowledge of nurse internship students regarding decision making through Study phases (no=30)

Decision Making Knowledge	Max score	Pre-training (no=30)	Post training (no=30)	Paired t test	P value
		Mean ± SD	Mean ± SD		
concept of decision making	6	4.1±0.5	5.6±0.4	10.7	0.001
types of decision making	2	1.0±0.8	1.7±0.8	2.5	0.05
steps of decision making	6	3.9±0.5	5.9±0.4	14.3	0.001
barriers of decision making	4	3.1±0.5	3.8±0.5	5.0	0.05
styles of decision making	3	1.2±0.8	1.9±0.8	3.5	0.05
Total of knowledge	21	13.3 ± 0.6	18.9 ± 0.4	28.0	0.001

Table 2 presents the nurse internship students mean score of decision making knowledge through study phases. The result reveals that there was statistical significance difference between pre and post training in all items and total of knowledge. The studied nurse internship students have high decision-making knowledge as shown in post training.

Table 3: Knowledge of nurse internship students regarding labor management through Study phases (no=30)

Knowledge relating Labor management	Max score	Pre-training (no=30)	Post training no=30)	T-test	P value
		Mean ±SD	Mean ±SD		
1.admission assessment, Planning management	6	2.7±0.9	5.6±0.5	14.5	0.001
2. Maternal observation	4	2.1±0.8	3.8±0.4	8.5	0.05
3. Fetal well-being assessment	3	0.6±0.9	2.7±0.4	10.5	0.001
4. Maternal management) bladder; mobility;fluids,nutrition;comfort,emotional wellbeing; pain)	6	2.3±0.9	5.4±0.5	15.5	0.001
5. Assessment progress of labor	4	1.3±0.9	3.7±0.4	12.0	0.001
6. Reporting of abnormalities of labour	1	0.2±0.9	0.9±0.3	5.0	0.05
1. Documentation	1	0.3±0.9	1.0±0.0	3.5	0.05
Total of knowledge	25	9.5±0.9	23.1±0.4	68.0	0.001

Table 3 illustrates knowledge of nurse internship students regarding labor management through Study phases, the result shows that there was statistical significance difference between pre and post training in all items and total of knowledge. most intern nurses had incorrect knowledge relating labor management in pre-training with total mean 9.5±0.9 while there was marked improvement on their knowledge post-training with total mean 23.1±0.4.

DISCUSSION

The requirement to facilitate learning and improvement of decision-making skills in nursing education is to understand how nurses make decisions. The nurse must be knowledgeable in critical thinking, problem solving, and discovering the best solution for patient's needs to assist them in maintaining their wellbeing. Intra-partum care is similar to other high-risk field which is a forbidden practice carried out by trained personnel with progressed specialized process preparing them for decision-making obligations. Subsequently, maintaining the patient/client interest is the best quality health service. A successful intra-partum care technique is needed to diminish maternal mortality and making decisions on suitable first line care (Stubbings Chaboyer & McMurray, 2012).

The main purpose of a nursing internship should be to expose a student nurse to a practical viewpoint of human resource management. Interaction with the administration side of the process will assist the student to customize his or her learning to best meet profession objectives (Nageshwar *et al.*, 2015). Clinical decision-making is the basic component of professional nursing care and ability of nurse to make efficient clinical decisions is the most significant aspect affecting the quality of care. Nurses have probably always known that their decisions have important implications for patient outcomes. Kluttz & Salvetti, (2004) argues that 'Concerning the knowledge of internship about decision making and labour management (table 2 & 3). The present study revealed that most nurses had incorrect knowledge relating to both decisions making and labour management in pre-intervention. This is possibly because they didn't receive enough knowledge or training related to this topic during their academics at undergraduate level.

This finding was explained by Botti & Reeve, (2003) reported that it is fundamental for each nurse and maternity specialist to engage in proceeding professional improvement to acquire the new information and competence which can empower her to practice successfully in an ever-changing healthcare environment. Meanwhile there were statistically significant improvements represented by the majority of intern nurses regarding both decisions making in post intervention. Regarding labor management the rate of correct knowledge was represented by most of intern nurses in post intervention as compared to half in pre. This finding was congruent with (Sana & Mahmoud, 2017) study on title in setting, found that the rate of improvement in post represented by 88 % of nurses as compared to 56% in pre-intervention. This finding was in line with Donohoe, 2015 whose study on title in setting, found that the rate of improvement in post intervention represented 78% of nurses regarding decision making. According to Nursing and Midwifery Board of Australia, (2013) this improvement was represented by 91% of nurses regarding labor management. Also, these results were supported by Simpson-Cosimano, (2010) who mentioned that qualified management introduces a decision-making framework to help maternity nurses in making decisions regarding the scope of maternity care. Also these results were supported by Simpson-Cosimano et al., (2010) who mentioned that qualified management introduces a decision-making framework to help maternity nurses in making decisions regarding the scope of maternity care. Also the rates of improvement related labor management were slightly lower in relation to the steps and barriers of decision making.

This may be due to the topics of decision making are more complex and need more discussion, more explanation and student's attention. Also, this finding attributed to the duration of labor management study was longer (one year) mean while the duration of decision making was shorter (one lecture) in which these topics were during their academic under graduate level. These findings were supported by LaMartina & Ward-Smith, (2014) who mentioned that the nurse/midwife is responsible for the practice. This means that she is responsible for decisions which make in formative scope of practice. This includes decisions to develop or not to develop her performance. As regard to application of decision making steps in different labor case studies

(situations) the present study summarized that there was statistical significant difference between pre and post intervention. In which most of them had the higher rate of improvement in post intervention as compared to one third in pre-intervention.

This is in the same line with the study done by Papathanasiou, Tsaras & Sarafis, (2014) who mentioned that decision-making instrument based on the cognitive continuum theory was utilized to investigate how nurses sees their practice when meeting an elective patient for the primary time. Also Chan, (2013) said that Critical thinking and case studies are described as teaching method to help and encourage active learning, assist in clinical problem solving. Using case studies in nursing education will assist the nurse to promote active learning; moreover it will help in growing critical thinking skills, which are very important for nursing profession.

Moreover Stubbings, Chaboyer & McMurray, (2012) mentioned that Nurse or a midwife must be appointed to build the method of reasoning for decisions they make and to legitimize such decisions in guidelines, evidence-based practice, professional and ethical conduct. Furthermore, implementing appropriate activity for a case will serve the leading interface of the patient/client by suitable nursing or midwifery care in crisis situation. Proceeding of proficient improvement is required to preserve the most elevated quality of wellbeing care; it should also contribute to the nurse's and midwives' improvement. An individual's ability to form a decision depends on nurse's capacity to get the data and appreciate the suggestions of that data when making an individual decision.

In relation to total knowledge level of nurse internship students regarding application of decision making steps in different situation relating labor management. The present study revealed that there was a highly statistical significance difference between pre and post intervention. Significant improvements have been noticed post intervention than pre-intervention. This finding is supported by Bakr et al., 2013 who reported that utilization of an instructional guideline increase the awareness of nurses and helps to motivate them.

Regarding application of decision making steps in real situation the current study demonstrated that there

was statistically significant difference between pre and post training. This finding reflecting the improving of intern nurses' decision-making skills was attributed to the positive effect of instructional guideline. The current results were emphasized by Perinatal Services BC, (2011), stated that practical experience helps students better understand classroom, theories, information and their application to real situations in the workplace.

This result was supported by Guo, (2008) who clarified that there is a 6-step decision-making model for determining the nursing scope of practice which helps nurses in making good professional decision. Concerning the first step of decision making the present study revealed that the ordinary process for solving a problem will initially involve defining the problem that nurse want to solve and need to decide what she want to achieve and write it down . The initial part of the process not only involves writing down the problem to solve, but also checking whether the nurses are replying the right problem. It is a check-step to make sure that nurses do not answer a side subject or only solve the part of the problem that is most easy to solve. Using the most immediate solution to the first problem description that they discover without spending time checking the problem is the accurate one to answer.

A marked improvement in application of decision making in different labor situation in faculty lab was observed, as regard to level of nurse internship students' decision making skill and improvement in decision making skills in real situation. All the nurses get enough education and arrange practice sections and competency skill check-off before they implement. The nurse must take lead in the development of any new roles or procedures". Bakr *et al.*, (2013) added that the knowledge influenced on skills and value of those participating in the care of patients and the nurses, cognitive ability to decide on a plan of actions that depends upon other factors as their education, experience and training in caring for those patients. It was also added that the nursing action begins with nurses, knowledge, philosophy and skill affecting on the quality of care given and patient outcome.

Our mission is to be the key provider of data and sharer of information in arrange to help with strategic planning and decision making. This mission is based on the belief that approved data and knowledge are key components in a successful decision-making process.

The previous study finding also, supported by Damghani, Taghavifard & Moghaddam, (2009), who mentioned that in decision making with complete uncertainty, the decision maker has no knowledge, not even about the likelihood of occurrence for any state of nature. In such situations, the decision maker's behavior is based on his/her attitude toward the unknown.

Acebedo-Urdiales, Medina-Noya & Ferré-Grau, (2014) found that Nurses' knowledge regarding spur of the moment decisions were influenced by the years of experience. Those nurses who had worked at the clinic had the possibility of taking after patient progress, observing symptoms and changes in the patient conditions over time. The decisions nurses make whereas performing nursing care will impact their adequacy in clinical practice and make an effect on patients' lives and encounters with wellbeing care notwithstanding of which setting or nation the nurse is practicing in skills.

CONCLUSION

Educational guideline affected positively on intern nurses, knowledge and skills regarding decision making process.

There was statistical significance difference between pre and post training in all items and total of knowledge. The studied nurse internship students have high decision-making knowledge as shown in post training.

RECOMMENDATION

Develop training program regarding decision making process during care of other areas of obstetrics and gynecological nursing specialty.

Further study on large number of intern nurse in special obstetrics situation management and decision-making skills has potential benefit to nurses in terms of effective decision making, maternal and neonatal management.

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