

Assessment of Nurses' Practical Skills Regarding Emergency Situations in The Delivery Unit

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ABSTRACT

AIM: Aim of the study was to assess nurses' practical skills regarding emergency situations in the delivery unit. **SETTING:** The study was conducted at labor unit of Benha University Hospital and Benha Teaching Hospital, Ministry of health. **DESIGN:** A descriptive study design was utilized. **SAMPLING:** A convenient sample included 60 nurses. **TOOLS:** Interviewing questionnaire schedule, likert scale and observational checklist. **RESULTS:** The present study revealed that more than half of the studied nurses had incorrect knowledge, nearly three quarters had incorrect practices and more than half of the studied nurses had negative attitude during emergency situations in the delivery unit also, there was highly statistical significant relation between total nurses' knowledge and their general characteristics ($P \leq 0.001$), while there was no statistical significant relation between nurses' practices and their level of education ($P \geq 0.001$). **CONCLUSION:** The present study showed that there was highly statistical significant relation between total practices score and general characteristics of the studied nurses also, there was a positive statistically significant correlation between total knowledge, total attitude and total practices scores additionally, there was highly statistical significant relation between total practices score, total attitude score and number of available nurses as one of the main barriers that affect on nurses' practices and attitude.

Key words: Obstetrical emergencies, Emergency Obstetrics Care.

INTRODUCTION

Obstetrical emergency was defined as a life threatening medical condition that occurs during pregnancy, labor, or the post partum period. The World Health Organization posits the following conditions as obstetrical emergencies, Ectopic or tubal pregnancy, placenta abruption, placenta previa, pre-eclampsia or pregnancy induced hypertension, eclampsia, premature rupture of membranes, amniotic fluid embolism, inversion or rupture of uterus, placenta accreta, prolapsed umbilical cord, shoulder

dystocia, postpartum hemorrhage and postpartum infection (Oiyemhonlan et al., 2013).

Obstetrical emergencies may be occurred at any time in the birthing process; therefore all health professionals involved in caring for women should be competent in both accurate diagnosing and appropriate and timely management of an obstetrical emergency. An obstetrical emergency therefore requires an immediate and appropriate response to prevent complications that may affect not only the childbearing woman, but also the life of the

newborn child (The Royal College of Midwives, 2011).

Additionally, the leading global causes of maternal deaths were hemorrhage, hypertension and infection. It had been estimated that approximately 15% of all pregnant women experience obstetrics complications. These complications occur regardless of socioeconomic status and level of health care provided and generally cannot be predicted or prevented (Holmer et al., 2015).

Also, obstetrics hemorrhage was the leading cause of maternal mortality across the world and directly accounts for an estimated 127,000 deaths each year. Severe bleeding in childbirth was estimated to occur once in every 200-250 births. Early recognition and treatment of major obstetrics hemorrhage was vital to ensure the best outcome for mother and fetus (Chaboyer et al., 2012).

In addition, ten percent of all pregnancies were complicated by hypertension. Worldwide eclampsia and preeclampsia account for about half of these cases and had been recognized and described for years despite the general lack of understanding of the disease (Ross, 2014).

In addition, the emergency obstetrics care was one of the strategies to reduce maternal and neonatal mortality by employing specific interventions during pregnancy, delivery and postnatal period. Emergency obstetrics care was necessary to save lives of pregnant women and neonates. It is divided into basic emergency obstetrics care and comprehensive emergency obstetrics care (Bhandari & Dangal, 2014)

So, nurses working in labor unit are in a unique position to screen, monitor and provide care to patients who are affected by complications during pregnancy. It is essential for nurses to be familiar with these

complications, as well as the maternal and fetal implications, medical treatment, and nursing care necessary to address these problems. They also play a special role in ensuring the safety of the mother and fetus during all phases of pregnancy and delivery (Derricott, 2014).

Significance of the study

Globally, 800 women die every day from causes related to pregnancy or childbirth. This is about one woman every two minutes, and for every woman who dies 20 or 30 encounters complications with serious or long-lasting consequences. In 2013, it was estimated that 289,000 women died of causes related to pregnancy or childbirth. The majority of deaths result from severe bleeding, sepsis, eclampsia, obstructed labor and the consequences of unsafe abortions. In Egypt the maternal mortality ratio was 20-99 deaths per 100,000 live births in 2013 (WHO et al., 2014).

AIM OF THE STUDY

To assess nurses' practical skills regarding emergency situations in the delivery unit.

The aim was achieved through:

- Assessment of nurses' knowledge regarding emergency situations in the delivery unit.
- Assessment of nurses' practices during emergency situations in the delivery unit.
- Assessment of nurses' attitude during emergency situations in the delivery unit.

Research Questions

- What was nurses' knowledge regarding emergency situations in the delivery unit?

- Were nurses correctly practiced during emergency situations?
- Were nurses respond positively during emergency situations?
- What are the barriers that prevent nurses to correctly practice emergency care in the delivery unit?

SUBJECTS AND METHODS

TECHNICAL DESIGN:

Study design:

A descriptive study design was utilized to achieve the aim of the study.

Study setting

The study was conducted at labor unit in both Benha University Hospital and Benha Teaching Hospital.

Sampling

***Type** Convenient sample was selected.

***Sample size** All nurses (60) who were working at labor unit of both Benha University Hospital (25) nurses and Benha Teaching Hospital (35) nurses.

Tools of Data Collection

Interviewing Questionnaire Schedule includes three parts.

Part A included nurses' general characteristics as (age, educational level, job, years of experience, and attendance of training programs related to emergency obstetrical care) (7 questions).

Part B included barriers that prevent nurses to correctly practiced emergency care in the delivery unit (9 questions).

Part C included questions to assess nurses' level of knowledge regarding emergency situations in the delivery unit (11 questions).

The questions were written in an Arabic language in the form of closed& open-ended questions.

Scoring System for nurses' Knowledge

The answers of the questions were classified into 2 categories as following: Correct answer was scored (2) and Incorrect answer was scored (1). The total score of knowledge was classified into two levels: Correct total knowledge ≥ 60 and Incorrect total knowledge < 60 %

Observational checklist

An observation checklist in English language was used to assess the nurses' practical level related to emergency situations in the delivery unit. It includes 16 procedures related to care of mothers with emergency conditions during labor.

Observational checklists' scoring system

The score of practice was classified as following: Correct practice was scored (2) and Incorrect practice was score (1). The total score of practice was classified into two levels: Correct total practice ≥ 60 % and Incorrect total practice < 60 %.

Likert scale

It was used to assess nurses' attitude regarding emergency situations in the delivery unit. The scale consisted of (18) statements, the responses were on three points of likert scale (agree, uncertain and disagree).

Content validity

Tools of data collection were reviewed by expertise (three specialized university

professors) and according to their comments the necessary modifications were considered.

Ethical considerations

- The aim of the study was explained before applying the tools to gain the nurses' confidence and trust to participate in the study.
- Oral consent was obtained from each nurse in order to participate in the study.
- No harm for participants.
- Freedom to withdraw from participation in the study at any time.
- Did not contradict nurses' culture, tradition, and religious.

OPERATIONAL DESIGN:

The study to be completed was passed through different phases as follows, Preparatory phase then the pilot study and the field work.

Preparatory phase

Assessment of the nurses' knowledge, attitude and practical skills were made. This assessment shed-light and gave more insight about the current nurses' knowledge level to help detecting knowledge, attitude and practices deficits, as it is based on the results obtained from the questionnaire, attitude scale and the observational checklist as well as, literature review.

Pilot study

A pilot study was carried out on 10% of the total sample (6 nurses). It was carried out to ascertain the clarity, estimated time needed to fill in the questionnaire, efficiency, applicability of the study tools and the necessary changes were undertaken. Nurses included in the pilot study were excluded from the sample.

Field work

The field work was carried out from the beginning of August 2014 to the end of January 2015. The labor unit was visited by the researcher three days/week from 9 A.M to 3 P.M, two nurses were interviewed, and the average time needed for completion of each nurse interview was 30 minute.

Firstly, the researcher introduced herself and explained the purpose of the study to the nurses, then the researcher interviewed the nurses according to the sequences of names in hospital records; the aim of the study was explained to each nurse to gain their confidence and trust. Verbal agreement was obtained to participate in the study then each nurse was assessed by an interviewing questionnaire schedule to evaluate their level of knowledge related to emergency situations in the delivery unit.

Secondly, each nurse was assessed by likert scale to assess their attitude regarding emergency situations in the delivery unit.

Thirdly, observational check list was utilized to assess their practices during providing care to mothers with emergency conditions. The researcher clarified any question to the study sample if needed. This was repeated until the sample size was completed.

Limitations of the study

The emergency situations in the delivery unit sometimes lead to postponing the time of interviewing nurses because they were too busy to fill the questionnaire.

Results

Table (1) Frequency distribution of the studied nurses according to their general characteristics (n=54).

General characteristics	n=54	
	Frequency	%
Age (years)		
20 < 30	21	38.9
30 < 40	26	48.1
≥ 40	7	13.0
Mean ±SD	31.69 ± 7.06	
Educational qualification		
Diploma	40	74.0
Technical	9	16.7
Bachelor	5	9.3
Current job		
Nursing specialist	4	7.4
Nurse	47	87.0
Supervisor	3	5.6
Experience (years)		
<5	10	18.5
5-10	13	24.1
>10	31	57.4
Mean ± SD	12.07 ± 7.39	
Training program attended		
Yes	8	14.8
No	46	85.2
Time of training program (n=8)		
< year	3	37.5
≥ year	5	62.5
Mean ± SD	3.85 ± 3.09	

Table (1) shows the socio-demographic data of the studied nurses. Nearly half (48.1%) of nurses were in the age group of 30 < 40 .The mean age of them was 31.69 ± 7.06 years. Nearly three quarter (74.0%) of the studied nurses were diploma nurse and more than half (57.4%) of them had >10 years of experience with mean experience year about 12.07 year. The majority of the studied nurses (85.2%) did not receive any training program regarding emergency situations in the delivery unit.

Table (2) Frequencydistribution of the studied nurses regarding knowledge about emergency situations in the delivery unit (n=54).

Knowledge items	Correct answer		Incorrect answer	
	No	%	No	%
Definition of emergency during labor	8	14.8	46	85.2
Types of emergencies during labor	11	20.4	43	79.6
Priorities of nursing care for obstetrical emergencies	6	11.1	48	88.9
Preparations needed for emergency obstetrics care	7	13.0	47	87.0
Types of bleeding during labor	12	22.2	42	77.8
Priorities of nursing care for bleeding during labor	10	18.5	44	81.5
Causes of infection during labor	15	27.8	39	72.2
Signs and symptoms of infection during labor	16	29.6	38	70.4
Priorities of nursing care for infection during labor	13	24.1	41	75.9
Priorities of nursing care for eclampsia during labor	17	31.5	37	68.5

This table shows that the majority (88.9%) of the studied nurses had incorrect knowledge regarding priorities of nursing care for obstetrics emergencies and more than two third (68.5%) of them had incorrect knowledge regarding priorities of nursing care for eclampsia during labor, while small percent (13.0%) of the studied nurses had correct knowledge regarding Preparations needed for emergency obstetrics care.

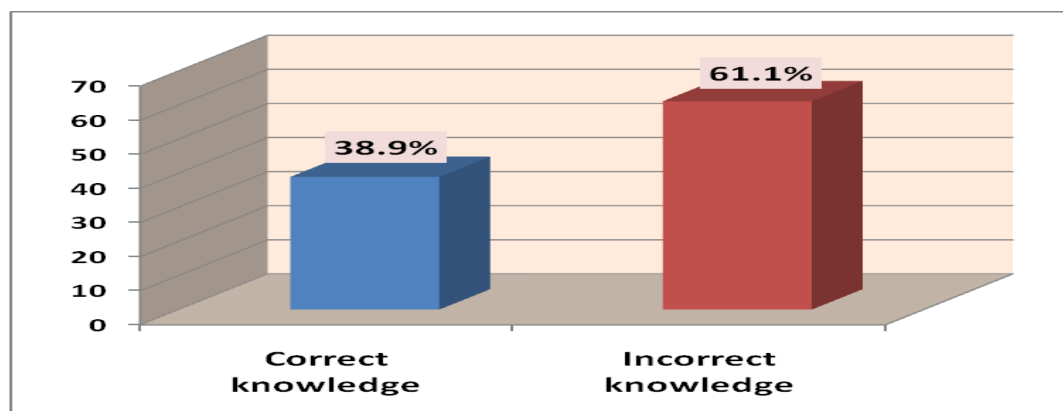


Figure (1) percentage distribution of studied nurses' total knowledge score regarding emergency situations in the delivery unit (n = 54).

Table (3) Frequencydistribution of the studied nurses regarding total score of their Practices during different emergency situations in the delivery unit (n=54).

Procedures	Correct practice		In correct practice	
	No	%	No	%
Performance of care regarding emergency situation in the delivery unit.	10	18.5	44	81.5
Management of bleeding.	15	27.8	39	72.2
Management of preeclampsia and eclampsia.	12	22.2	42	77.8
Oxygen administration	16	29.6	38	70.4
Back care	0	00.0	54	100.0
Breathing exercise	7	13.0	47	87.0
Leg exercise	0	00.0	54	100.0

This table shows that (100.0%) of the studied nurses had incorrect practice regarding back care and leg exercise, while small percent of them (13.0%) had correct practice regarding Breathing exercise. Moreover, less than three quarter (72.2%) of the studied nurses had incorrect practice regarding management of bleeding and more than three quarter (77.8%) of them had incorrect practice regarding management of preeclampsia and eclampsia.

Table (4) Frequencydistribution of the studied nurses regarding total score of their Practices about infection control in the delivery unit (n=54).

Procedures	Correct practice		In correct practice	
	No	%	No	%
Personal protective equipment:				
*Hand washing	14	25.9	40	74.1
*Gloving	11	20.4	43	79.6
*Gowning	17	31.5	37	68.5
*Masking	16	29.6	38	70.4
Vein(IV) puncture	8	14.8	46	85.2
Perineal care	5	9.3	49	90.7
Catheter care	9	16.7	45	83.3
Mouth care	0	00.0	54	100.0
Partial bath	5	9.3	49	90.7

This table shows that (100.0%) of the studied nurses had incorrect practice regarding mouth care and the majority (90.7%) of them had incorrect practice regarding perineal care and partial bath. In addition, nearly three quarter of the studied nurses (74.1%) had incorrect practice regarding hand washing while the minority (14.8%) of them had correct practice regarding vein (IV) puncture.

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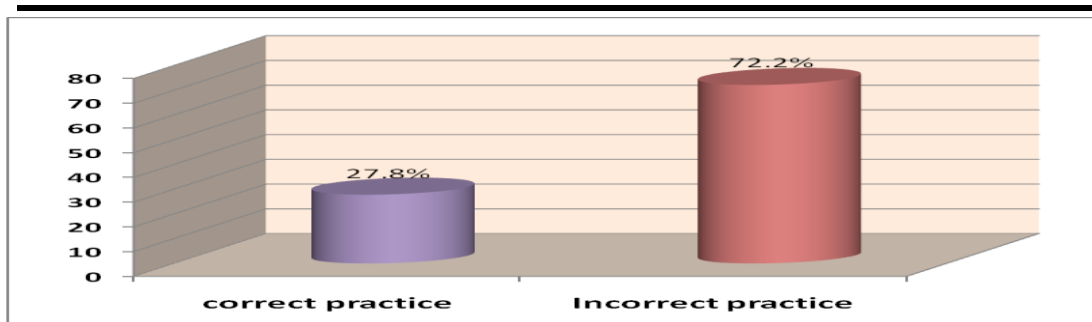


Figure (2) percentage distribution of studied nurses' total practices score regarding emergency situations in the delivery unit (n = 54).

Table (5) Frequency distribution of the studied nurses regarding their attitudes during emergency situations in the delivery unit (n=54)

Items	Agree		Uncertain		Disagree	
	No	%	No	%	No	%
Feeling confident that professional skills help to deal with emergencies.	7	13.0	24	44.4	23	42.6
Reassuring mother during emergency.	9	16.7	24	44.4	21	38.9
Feeling guilt and anxiety during emergency.	10	18.5	30	55.6	14	25.9
Collaboration with health team members	10	18.6	22	40.7	22	40.7
Importance of increasing the number of nurses.	13	24.1	21	38.9	20	37.0
Role of providing care during pregnancy	13	24.1	25	46.3	16	29.6
Feeling comfortable and safe in the unit.	14	25.9	21	38.9	19	35.2
Feeling satisfied with the work in the unit.	5	9.3	23	42.6	26	48.1
Importance of monthly meeting.	14	25.9	30	55.6	10	18.5
Training courses about emergency was needed.	4	7.4	23	42.6	27	50.0
Following the ethics and basic needs of patients	9	16.7	28	51.8	17	31.5
Importance of posters, and guidelines about IC.	11	20.4	29	53.7	14	25.9
Sepsis as the leading cause of infection after childbirth or puerperal fever.	11	20.4	21	38.9	22	40.7
Massaging uterus to control bleeding	15	27.8	18	33.3	21	38.9
Importance of immediate breastfeeding in preventing bleeding.	8	14.8	23	42.6	23	42.6
Role of transferring mother with heavy bleeding to the operating room.	6	11.1	23	42.6	25	46.3
Importance of protocol for eclamptic cases.	15	27.8	26	48.1	13	24.1

This table illustrates that small percent (7.4%) of the studied nurses agreed on increasing the number of training courses about emergency obstetric care. In addition less than fifth (18.5%) of them disagreed on importance of monthly meeting. Moreover less than half (48.1%) of the studied nurses were not satisfied with work in the labor unit.

Table (6):- Relation between total practices score and barriers that prevent nurses to correctly practice emergency care in the delivery unit (n=54)

Item	Correct n= 15		In correct n=39		X ²	P – value
	No	%	No	%		
Number of available nurses for receiving emergency cases in labor unit.						
Yes	8	53.3	1	2.6	20.105	.000**
No	7	46.7	38	97.4		
Effective communication between staff in labor unit						
Yes	4	26.7	7	17.9	.508	.476
No	11	73.3	32	82.1		
Availability of nursing specialists in emergency obstetric care.						
Yes	5	33.3	2	5.1	7.639	.006**
No	10	66.7	37	94.9		
Routine evaluation of nursing practice in labor unit.						
Yes	8	53.3	7	17.9	6.761	.009**
No	7	46.7	32	82.1		
Availability of beds in labor unit						
Yes	3	20.0	5	12.8	.442	.506
No	12	80.0	34	87.2		
Availability of equipments in labor unit						
Yes	4	26.7	8	20.5	.237	.626
No	11	73.3	31	79.5		
Periodic repair of equipment						
Yes	6	40.0	7	17.9	2.882	.090
No	9	60.0	32	82.1		
Available records for evaluating emergency cases.						
Yes	3	20.0	13	33.3	.924	.337
No	12	80.0	26	66.7		
Availability of protocol related to emergency obstetrics care						
Yes	6	40.0	4	10.3	6.352	.012*
No	9	60.0	35	89.7		

(*) statistical significant difference ($p \leq 0.05$) (**) A highly statistical significant difference ($P \leq 0.001$)

This table shows that there was highly statistical significant relation between total practices score and number of available

nurses for receiving emergency cases and routine evaluation of nursing practice in labor unit. While revealed that there was

insignificant relation between total practices score and availability of equipments in labor unit.

DISCUSSION

The present study was aimed to assess nurses' practical skills regarding emergency situations in the delivery unit. The aim was significantly answered through the present study research question. The first research question was what was nurses' knowledge regarding emergency situations in the delivery unit? This question was answered through the present study findings

Results of the present study revealed that more than half of the nurses included in the study had incorrect knowledge regarding obstetrical emergencies that negatively reflected upon the nursing care offered for the admitted cases with obstetrical emergencies.

This result was in the same line of a study conducted by **Bayley et al, (2013)** who studied Knowledge and perceptions of quality of obstetrics and newborn care of local health providers: a cross-sectional study in three districts in Malawi, Malawi. This study found serious deficiencies in providers' knowledge regarding monitoring during routine labor and management of emergency newborn care that may contributed to maternal and neonatal deaths in Malawi.

Also, this result agreed with **Chodzaza & Bultemeier, (2010)** who studied Service providers' perception of the quality of emergency obstetrics care provided and factors identified which affect the provision of quality care, Malawi. This study found that among the factors that contributed to poor quality of care was; the nurses' lack of awareness regarding signs of an obstetrics emergency.

On the other hand this result was in disagreement with **Kavitha et al., (2014)**

who studied To assess level of knowledge of staff nurses on emergency obstetrics management at orotta national referral maternity hospital, Asmara, Eritrea. This study found that the majority of nurses had adequate knowledge regarding emergency obstetrics management.

This result may be due to absence of educational program regarding emergency situations in the labor unit.

Also, this lack of knowledge may be related to the level of education and could be interpreted that nearly three quarter of the studied nurses were diploma nursing graduate that were graduated since long period of time that might led them to lose too much of their basic graduation knowledge and skills, as well as absence of refreshing programs related to obstetrical emergencies care.

This interpretation was in the same line with the finding of **Islam et al. (2006)** who studied The Implementation of Emergency Obstetrics Care Training in Bangladesh, Bangladesh. This study found that the majority of nurses included in the study were diploma nurse that were graduated since long period of time and did not attend any refreshing courses that affected negatively on the quality of obstetrics care.

Also this finding agreed with a study conducted by **Attia (2012)** who studied Assessment of Emergency Nursing Care offered at the labor ward of Ain Shams Maternity University Hospital, Egypt. This found that more than three quarter of the studied nurses were diploma nursing graduate that were graduated since long period of time and did not attend any refreshing courses.

Regarding nurses' knowledge about obstetrical emergencies during labor, results of the present study revealed that the majority

of the studied nurses had incorrect knowledge related to concept of emergency during labor. This finding was similar to that seen in other study in Nigeria that was conducted by **Ijadunola et al. (2010)** who studied New paradigm old thinking: The case for emergency obstetrics care in the prevention of maternal mortality in Nigeria. This study found that the nurses in the maternity unit had poor knowledge concerning the concept of EmOC. This may be due to that the nurses did not attend seminars, workshops and refreshing courses related to obstetrical emergencies during labor,

Concerning the nurses' knowledge regarding priorities of nursing care for obstetrical emergencies this study showed that the majority of nurses had incorrect knowledge regarding priorities of nursing care for obstetrical emergencies and this may be due to absence of training programs related to obstetrical emergencies as the majority of nurses reported that they did not attend any training programs related to obstetrical emergencies a condition that affect negatively on their knowledge and performance because continuous education and training are successful in improving knowledge and skills.

Moreover, it was obvious from the findings of this study that more than two third of the studied nurses had incorrect knowledge regarding priorities of nursing care for eclampsia during labor, this result is congruent with **El-Bahy et al., (2013)** who studied Effect of Educational Program for Nurses about Pregnancy Induced Hypertension on their Knowledge in Port Said, Hospitals, Faculty of Nursing, Cairo University, Egypt. This study found that the nurses had incorrect knowledge about nursing care for preeclampsia and eclampsia. This may be due to the fact that nurses did not receive adequate information or may need for refreshing in-services training regarding management of pre-eclampsia and eclampsia during labor, On the other hand

this was in contrast with findings of study conducted by **Kavitha et al., (2014)** who studied To assess level of knowledge of staff nurses on emergency obstetrics management at orotta national referral maternity hospital, Asmara, Eritrea. This study found that only small percent of nurses had inadequate knowledge regarding management of preeclampsia/eclampsia.

This could be explained by the lack of interest of the administrative disciplinary system about this type of training course regarding obstetrical emergency as their interest was directed to the general basic training as infection control programs.

This finding was consistent with **Islam et al. (2006)** who studied The Implementation of Emergency Obstetrics Care Training in Bangladesh. This study found that the majority of nurses under study didn't receive training and refreshing courses in obstetrics care in general and emergency management in particular.

Moreover, this finding was in agreement with **Ameh&Broek,(2015)**who studied Making It Happen: Training health-care providers in emergency obstetrics and newborn care, Liverpool, UK. This study stressed the need to build the capacity of health-care providers to recognize and manage complications during pregnancy, childbirth and the post-partum period through providing training in skilled birth attendance, emergency obstetrics care and early newborn care (EmONC) which considered an approach that was successful in improving knowledge and skills and improved availability and quality of care.

On the other hand this result was contradicted with **Bayley et al, (2013)**who studied Knowledge and perceptions of quality of obstetrics and newborn care of local health providers: a cross-sectional study in three districts in Malawi. This study reported that training had little impact on levels of knowledge and the knowledge gap

couldn't be overcome by simply providing more training, so staff in general reported perception of poor quality of care.

Regarding the total nurses' practices toward emergency obstetrical cases, results of the present study revealed that nearly three quarters of the studied nurses had incorrect practice regarding management of obstetrical emergencies in the delivery unit. This could be explained by their lack of knowledge regarding management of obstetrical emergencies, absence of protocol related to emergency obstetrical care and lack of training programs.

Supporting this interpretation **Traoré et al., (2014)** who studied Obstetrics competence among primary healthcare workers in Mali, found that there was a relation between the availability of guidelines for the management of obstetrical emergencies and the higher competency of physicians, health technicians, and obstetrics nurses ($P < 0.001$).

Also, this result was on the same line with a study conducted by **D'Ambruoso et al., (2009)** who studied Assessing quality of care provided by Indonesian village midwives with a confidential enquiry, Indonesia found that although the nurses' emergency diagnostic skills were accurate but they were less capable in the management of complications that occurred during labor. Also, **Ueno et al., (2015)** who studied Skilled birth attendants in Tanzania: a descriptive study of cadres and emergency obstetrics care signal functions performed, found that lack of nurses' knowledge and skills in performing EmOC were among the main challenges that affect on the quality of care.

In addition, the present study findings revealed that less than three quarter of the studied nurses had incorrect practice regarding management of bleeding and more than three quarter of had incorrect practice

regarding management of preeclampsia and eclampsia, this result is in the same line with **Brenner et al., (2015)** who studied 'The quality of clinical maternal and neonatal healthcare - a strategy for identifying routine care signal functions'. This study found that there were major gaps in the nurses' performance of routine care processes regarding bleeding and pre-eclampsia risks.

This lack may be due to lack of knowledge which reflect on their obstetrical skills in the management of such cases, supporting this interpretation **Ziraba et al., (2009)** who studied The state of emergency obstetrics care services in Nairobi informal settlements and environs: results from a maternity health facility survey, Nairobi found that the nurses failed to provide lifesaving emergency obstetrics procedures and quality of emergency obstetrics care due to Lack of the obstetrical skills.

Furthermore, **Bradley et al., (2015)** who studied Too few staff, too many patients: a qualitative study of the impact on obstetrics care providers and on quality of care in Malawi. This study found that inadequate obstetrics skills and undermining performance and professionalism were main factors that affect on the quality of care.

Also, the foregoing results showed that nearly three quarter of the studied nurses had incorrect practice regarding hand washing; this result is in the same line with a study conducted by **Mohammed, (2010)** who studied Assessment of nurse's knowledge and practices toward infection control strategy in obstetrics and gynecologic operating rooms in Baghdad city hospitals, Baghdad. This study found that nurses have inadequate practices regarding the standard precaution during wearing operation clothing, patient's preparation, and wash hands practices.

On the other hand this result was contradicted with **Abd El Fattah et al., (2012)** who studied Assessment of Quality of

Nursing Care Provided Immediately after Birth at University Hospital, Egypt. This study found that more than half of nurses have a good knowledge and practice for hand washing.

Moreover, the present study showed that all nurse did not perform the specific procedures of daily hygiene of mothers (mouth care, back care) and the majority of them had incorrect practice regarding perineal care and partial bath, this result agrees with **El-Bahy et al., (2013)** who studied Effect of Educational Program for Nurses about Pregnancy Induced Hypertension on their Knowledge in Port Said Hospitals, Faculty of Nursing, Cairo University, Egypt. This study found that, the majority of nurses before the training program had incorrect practice regarding daily hygienic care for women and stated that dental hygiene and care, breast care, and perineal care are also important components of health care for women during pregnancy and should not be neglected. This may be due to absence of in-service training programs and refreshing courses.

This unsatisfactory level of practices showed the importance of continuous education and regular updating clinical courses for nurses to promote knowledge and practice. Therefore, it is important and essential that nurses are well trained and educated on obstetrical emergencies especially in the emergency department as they have the vital role to play to inform the doctor and begin the initial assessment and management of such cases.

Regarding nurses' attitudes during emergency situations in the delivery unit, results of the present study revealed that small percent of the studied nurses agreed that increasing the number of training courses about emergency obstetrics care leads to improve nursing care, this result is contradicted with **Islam et al., (2015)** who studied Perceptions of health care providers and patients on quality of care in maternal

and neonatal health in fourteen Bangladesh government healthcare facilities: a mixed-method study, Bangladesh. This study found that the majority of nursing personnel mentioned that training could be a good initiative for an improved quality of care and indicated that in-service training needs to be organized regularly to enhance the quality of healthcare.

The foregoing findings could explain the fact that the majority of nurses in the present study did not receive any training program regarding emergency situations in the delivery unit that reflect on their knowledge, practice and finally their attitude.

Additionally, results of the present study showed that less than half of the studied nurses were not satisfied with work in the labor unit that reflect on their performance. This finding may be due to absence of patient appreciation of nurses, cooperation among staff, as well as absence of physicians' respect towards nurses and the decisions they make. The finding was similar to a study done by **Maroof, (2012)** found that there was statistically significance relation between unsatisfactory nurses' performance (knowledge & practice) and nurses related factors including nurses dissatisfaction with work, frequent nurses absenteeism, communication with patients, supervisors and colleagues.

In addition, results of the present study showed that there was highly statistical significant relation between nurses' total practices score and number of available nurses for receiving emergency cases ($P \leq 0.001$) this result agreed with **Essendi et al., (2011)** who studied Barriers to Formal Emergency Obstetric Care Services' Utilization. This study found that there was highly statistically significant relation between lack of human resources and nurses' practices which considered one of the main obstacles of accessing emergency obstetrical care services.

Also, results of the present study showed that there was highly statistical significant relation between nurses' total practices score and routine evaluation of nursing practice in labor unit ($P \leq 0.001$). This result was in the same line with **Austin et al., (2015)** who studied Barriers to providing quality emergency obstetric care in Addis Ababa, Ethiopia: Healthcare providers' perspectives on training, referrals and supervision, a mixed methods study. This study found that there was highly statistical significant relation between the absence of supportive supervision and nurse's provision of quality emergency obstetric care.

CONCLUSION

Results of the present study concluded that; more than half of the studied nurses had incorrect knowledge regarding emergency situations in the delivery unit, nearly three quarters had incorrect practice while more than half of the studied nurses had negative attitude during emergency situations in the delivery unit. Also, the present study showed that there was highly statistical significant relation between total knowledge score and general characteristics of the studied nurses. Moreover the present study showed that there was highly statistical significant relation between total practices score and number of available nurses for receiving emergency cases ($P \leq 0.001$). The above-mentioned findings have mainly answered the study questions.

Recommendations

- Designing pre-service and in-service training programs regarding obstetrical emergencies during labor by Faculty of nursing, department of maternal and neonatal health nursing are recommended for the nurses working at the delivery unit to improve their knowledge, practices and attitude.

- Dissemination of the present study findings to all obstetrics departments of the ministry of health and university hospitals at Benha city.

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