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Evaluation of nurses' practices about management of main danger signs during pregnancy

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***Abstract*---**Background: Globally, an estimated 10.7 million mothers died from 1990 to 2015 due to obstetric complications and maternal mortality remains high in developing countries. Objective: the study aimed to evaluate nurses' practice regarding the management of pregnancy with danger signs and to find out the relationship between these nurses' practice and their demographic characteristics. Methodology: A descriptive study design was carried to evaluate nurses' practice. A non-probability (purposive sample) of (50) of nurse who work in emergency words, labor room and maternal words. The questionnaire consists of two main parts (the first one is about nurses' demographic characteristics and the second is nurses' practice about managing danger signs in pregnant women).Results: The overall assessment of nurses' practices about management of pregnancy with danger signs; the findings reveal that nurses are showing fair level of practices (78.14±5.047) among (96%) Conclusions**:** nurses' practice about management of pregnancy with danger signs was fair level of practice.

***Keywords*---**nurses' practice, management, pregnancy, danger signs.

Introduction

Resource-poor countries have a high maternal death rate because of a lack of timely access to care, as well as a lack of competent treatment. The most common reason for the initial delay is because women and the community aren't aware of the risk indicators of pregnancy and are therefore hesitant to seek medical attention. Not the actual obstetric difficulties itself, but symptoms that the mother

and non-clinical staff may readily identify, these risk indications constitute a warning sign (1). Maternal mortality has serious effects for raising a family, particularly for neglected children, and the chance of death increases by up to 50% for children under the age of five. They died during their working years, and their deaths had an influence on society and the economy in general (2).

The high maternal mortality and morbidity rates around the world are due in part to a lack of awareness and practice of danger indications. On the basis of this notion, birth readiness is a strategy to encourage the timely use of skilled maternal care, particularly during labor, in order to minimize delays in accessing this care. In low-resource contexts, the proportion of women preparing for and dealing with the problems of childbirth is low (3). A major contributor to maternal and neonatal mortality is the poor quality of treatment given to mothers and newborns, which is likely due to a lack of health care workers' competence in obstetric crises, particularly in the United States (4). Obstetrical emergencies are situations in which a pregnant woman's life and the life of her unborn child are at danger. Pregnancy, childbirth, and the postpartum period are all times when obstetrical emergencies might arise, and they are all times when ethical difficulties arise due to the fact that two lives are at stake (5).

During pregnancy, obstetrical emergencies are health problems that occurred at different times during pregnancy and affected women's health, fetuses, or both. The most common causes of maternal mortality during pregnancy are maternal hemorrhage, severe preeclampsia, eclampsia, and premature rupture of membranes (PROM) (6). In general, complications during pregnancy and the possibility of risk during childbirth can be detected early through an assessment of risk factors or danger signals. That is, if the mother understands the danger signs during her pregnancy period, then deterioration can be avoided. But unfortunately, there are still many mothers who are less aware of the danger signs of pregnancy. Negligence was the main reason for not having a good awareness of the danger signs of pregnancy. More than half of the antenatal women were lacking in knowledge of pregnancy danger signs (7).

It is estimated that preeclampsia and eclampsia are the second and third greatest causes of maternal fatalities, respectively. Preeclampsia affects 10 million women a year throughout the world. A staggering 76,000 women lose their lives each year as a result of preeclampsia and other hypertension problems that often accompany it. Approximately 500,000 newborns die each year as a result of these conditions. Preeclampsia is seven times as common in impoverished countries than in developed countries (8). In underdeveloped nations, where literacy, poverty, lack of antenatal care, poor transportation, and inadequate equipment all contribute to the problem, obstetrical emergencies are the major cause of maternal mortality. There are also other probable contributing variables, such as a lack of obstetrical emergency skills and training as well as a lack of collaboration and inefficient communication among the health care team's members (9).

Many efforts have been made in various nations to lower maternal mortality rates, but the maternal mortality rate remains a global issue. Although there was a drop in the number of deaths, improvement was too slow to fulfill the SDG's 2030

deadline. Every day, around 810 women die from pregnancy and childbirth-related causes that may have been avoided. The majority of these maternal mortality events occur in low-income countries, and they are mostly caused by a lack of access to basic health treatments (10).

Globally, the maternal death rate was 216 per 100,000 live births, while in the South East Asia Region it was 164 per 100,000 live births; this difference was statistically significant. There were an estimated 126.0 maternal fatalities in Indonesia in the Southeast Asia Region, which ranks it fourth in the list of ASEAN countries, behind Lao PDR (Malaysia), Myanmar (Myanmar), and Cambodia. The closest neighbouring countries such as Malaysia and Singapore have much lower maternal mortality rates, which are 23.8 and 7.1 (11).

Methodology

A descriptive study design was carried to evaluate nurses' practice about danger signs during pregnancy. A non-probability (purposive sample) of (50) of nurse who working in emergency words, labor room and maternal words.A questionnaire was developed by researcher thorough review of related literature. The questionnaire consists of two main parts includes the following: Part I: consists of the nurses' demographic characteristics (Age, Residence, educational level for nurse, and years of experience) Part II: Including the checklist concerning nurses' practices about managing danger signs in pregnant women (vaginal bleeding and its types high blood pressure, severe headaches and blurred vision, severe abdominal pain, difficult breathing, Nurses' practice of urgency, pain or a burning feeling when urinating, unusual or more than usual vaginal secretions). Reliability is refers to an extent to which a questionnaire reports the same results on repeated time measure. Briefly it refers to consistent scores over times or raters (12). The data was collected after getting the official approval from hospital, the researcher collects the information from statistic units at targeted about all nurse are working in emergency words, labor room and maternal words. After collecting the information, the researcher selects the participants that meet inclusion criteria. The data were collected after getting permission from the participants. Through the period from 1st august 2021 to January 4th 2022.

The three Likert scale was used for the purpose of items' rating for the three domains follows: (1) for never, (2) for sometimes, and (3) for always. SPSS (Statistical Package for Social Sciences) version 20.0 and excel is used to examine the data. it include: data of this study analyzed descriptive by identifying the change and the percentage, frequency, standard deviation and mean of score. Also means determining the outcome. And Inferential Statistical Tests (Pearson Correlation Coefficient and Repeated Measure ANOVA)

Results

Table (1): Distribution of Nurses Demographic Characteristics

List	Characteristics		f	%
1	Age (M±SD=27.62±4)	20 – 25 year	18	36
		26 – 30 year	19	38

		31 – 35 year	11	22
		36 – 40	2	4
		Total	*50*	*100*
2	Residency	Rural	4	8
		Urban	46	92
		Total	*50*	*100*
3	Nursing qualification	Secondary school	20	40
		Midwifery secondary	9	18
		Institute \ midwifery	3	6
		Technical medical institute	10	20
		College +	8	16
		Total	*50*	*100*
4	Years of experience (M±SD=6.58±4.257)	1 – 5 years	23	46
		6 – 10 years	17	34
		11 – 15 year	9	18
		16 ≤ year	1	2
		Total	*50*	*100*

f: Frequency, %: Percentage, M: Mean, SD: Standard deviation

This table shows that that nurses are young adult with age 27.62±4 years in which the highest percentage associated with age group 26-30 year (38%) followed by age group 20 – 25 year (36). Regarding residency variable, most of nurses show they are resident in urban as seen with 92% of them. The nursing qualification indicates that the highest percentages refer to "nursing secondary school" as seen among 40% and "technical medical institute" as seen among 20%. Related to years of experience, the average refers to 6.58±4.257 year in which 46% of nurses reporting they have 1-5 year of experience. Regarding participation in training courses about management of pregnancy with danger signs, more than half of them are not participated and only 38% are engaged in training courses.

Table (2): Overall Assessment of Nurses' Practices about Management of Pregnancy with Danger Signs

Level of Practices	Pre-test				Post-test 1				Post-test 2			
	f	%	M.S	SD	f	%	M.S	SD	f	%	M.S	SD
Poor	2	4	78.14	5.047	0	0	104.86	10.791	0	0	104.10	10.873
Fair	48	96			11	22			12	24		
Good	0	0			39	78			38	76		
Total	*50*	*100*			*50*	*100*			*50*	*100*		

f: Frequency, %: Percentage, M: Mean for total score, SD: Standard deviation for total score
Poor= 42 – 70, Fair=71 – 98, Good=99 – 126

This table exhibits the overall assessment of nurses' practices about management of pregnancy with danger signs; the findings reveal that nurses are showing fair level of practices during the pre-test time (78.14±5.047) among 96%, and they show improvement in their practices' level as show good during the post-test 1 (78%) and post-test 2 (76%) evidenced by mean scores and standard deviation (post 1= 104.86± 10.791, post 2= 104.10 ± 10.873)

Table (3): Evaluation of Nurses' Practices about Management of Vaginal Bleeding

List	*Nurses' practice regarding the management of vaginal bleeding*	Pre-test			Post-test 1			Post-test 2		
		M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
1	Monitor and record the fetal heartbeat, notice bradycardia or tachycardia	1.90	63.33	Fair	2.60	86.66	Good	2.56	84.33	Good
2	Notice the change in fetal inactivity or hyperactivity.	1.54	51.33	Poor	2.46	82	Good	2.44	81.33	Good
3	Note the expected date of birth	1.56	52	Poor	2.52	84	Good	2.48	82.66	Good
4	Measuring uterine height	2.08	69.33	Fair	2.54	84.66	Good	2.54	84.66	Good
5	Monitoring and recording of blood loss	1.72	57.33	Fair	2.44	81.33	Good	2.40	80	Good
6	Monitor uterine contractions.	2.04	68	Fair	2.50	83.33	Good	2.46	82	Good
7	Provide bed rest in the lateral position.	1.52	50.66	Poor	2.48	82.66	Good	2.44	81.33	Good
8	Ultrasound assistance	1.96	65.33	Fair	2.56	85.33	Good	2.50	83.33	Good
9	Replacement of fluids and lost blood for the mother	1.82	60.66	Fair	2.62	87.33	Good	2.60	86.66	Good
10	Giving the patient supplemental oxygen.	1.84	61.33	Fair	2.54	84.66	Good	2.52	84	Good
11	Prepare the patient for the appropriate surgical intervention as specified.	2.06	68.66	Fair	2.64	88	Good	2.60	86.66	Good
12	Giving the sedatives prescribed by the doctor.	2.26	75.33	Fair	2.64	88	Good	2.60	86.66	Good
13	Instructing the patient in relaxation techniques such as meditation, guided imagery, and deep breathing	1.50	50	Poor	2.42	80.66	Good	2.40	80	Good
14	Raising awareness of the patient about the condition and treatment	1.56	52	Poor	2.34	78	Good	2.34	78	Good
15	Encourage the expression of concerns	1.44	48	Poor	2.34	78	Good	2.34	78	Good
16	Monitoring the nature, intensity, location and duration of the pain	2.22	74	Fair	2.60	86.66	Good	2.58	86	Good

M.S: Mean of score, R.S: Relative sufficiency, Ass: Assessment
M.S: Poor= 1 – 1.66, Fair=1.67 – 2.33, Good=2.34 – 3

This table presents the mean scores for assessing the items related to nurses' practices about management of vaginal bleeding; the analysis of findings during the pre-test show that nurses showing poor to fair level of practices as indicated by mean scores that show fair level among all items except items 2, 3, 7, 13, 14, and 15 was poor. When it comes to managing vaginal bleeding during post-tests 1

and 2, the nurses are displaying a high level of practice as evidenced by the high mean scores on all items.

Table (4): Evaluation of the Nurses' Practices about Management of Hypertension

List	*Nurses' practice regarding management of hypertension*	Pre-test			Post-test 1			Post-test 2		
		M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
1	Mother delivery If the woman is at 37 weeks or later, the doctor may induce labor. At this stage, the baby has grown sufficiently and is not considered premature	2.20	73.33	Fair	2.62	87.33	Good	2.60	86.66	Good
2	Bed rest	2.02	67.33	Fair	2.46	82	Good	2.42	80.66	Good
3	Staying in hospital	1.84	61.33	Fair	2.58	86	Good	2.58	86	Good
4	Giving medicines to lower blood pressure (antihypertensive)	2.52	84	Good	2.74	91.33	Good	2.74	91.33	Good
5	Corticosteroid	2.56	85.33	Good	2.72	90.66	Good	2.66	88.66	Good
6	Giving anticonvulsant medication	2.74	91.33	Good	2.84	94.66	Good	2.82	93.33	Good
7	Paying attention to the timely use of the drug without interruption, explaining everything related to the treatment and its symptoms, and informing her of referring to her treating physician	1.98	63.33	Fair	2.54	84.66	Good	2.54	84.66	Good
8	Providing medical advice, such as: sleeping on the floor or on a low bed of the type that has side protection to protect it from falling and not sleeping in a room alone.	1.66	55.33	Poor	2.52	84	Good	2.50	83.33	Good
9	Providing comprehensive nursing care in case she is in a coma with wounds, fractures, or any other complications, whether during or after the seizure, and providing the necessary medical equipment to aid her.	1.78	59.33	Fair	2.42	80.66	Good	2.42	80.66	Good

10	Regularly measuring the patient's weight and asking the patient to record her weight at home between visits	1.52	50.66	Poor	2.52	84	Good	2.48	82.66	Good
11	noticing signs of increased or excessive edema	1.70	56.66	Fair	2.42	80.66	Good	2.42	80.66	Good
12	Carry out all the necessary tests and write accurate notes and give an accurate description of how the epileptic seizure occurred when it occurred, its duration, the type of vibrations, the symptoms that resulted, such as: biting the tongue - wounds - involuntary urination and the place in which it occurred	1.64	54.66	Poor	2.38	79.33	Good	2.38	79.33	Good

M.S: Mean of score, R.S: Relative sufficiency, Ass: Assessment
M.S: Poor= 1 – 1.66, Fair=1.67 – 2.33, Good=2.34 – 3

This table presents the mean scores for assessing the items related to nurses' practices about management of hypertension; the analysis of findings during the pre-test show that nurses showing fair level of practices as indicated by mean scores; the fair level is seen among items 1, 2, 3, 7, 9, and 11. In post-tests 1 and 2, the nurses demonstrate high levels of practice in the care of hypertension, as evidenced by high mean scores across all items.

Table (5): Evaluation of Nurses' Practices about Management of Severe Abdominal Pain

List	*Nurses' practice regarding management of severe abdominal pain*	Pre-test			Post-test 1			Post-test 2		
		M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
1	Encouraging eating small, frequent meals	1.78	59.33	Fair	2.50	83.33	Good	2.50	83.33	Good
2	Encouraging regular exercise	1.42	47.33	Poor	2.34	78	Good	2.34	78	Good
3	Encouraging healthy food choices	1.42	47.33	Poor	2.44	81.33	Good	2.44	81.33	Good
4	Provide comfort as much as possible	1.80	60	Fair	2.44	81.33	Good	2.44	81.33	Good
5	a comprehensive assessment of pain: location, characteristics, onset,	2.08	69.33	Fair	2.44	81.33	Good	2.42	81.33	Good

	duration, frequency and severity of the pain									
6	Determine the factors that relieve pain	1.98	66	Fair	2.52	84	Good	2.52	84	Good
7	Provide measures to relieve pain before it becomes severe	2.34	78	Good	2.64	88	Good	2.64	88	Good
8	Pain control with medication	2.36	78.66	Good	2.66	88.66	Good	2.66	88.66	Good

M.S: Mean of score, R.S: Relative sufficiency, Ass: Assessment
M.S: Poor= 1 – 1.66, Fair=1.67 – 2.33, Good=2.34 – 3

This table presents the mean scores for assessing the items related to nurses' practices about management of abdominal pain; the analysis of findings during the pre-test show that nurses showing fair level of practices as indicated by mean scores; the fair level is seen among items 1, 4, 5, and 6. In post-tests 1 and 2, the nurses demonstrate high levels of practice in the care of abdominal pain, as evidenced by high mean scores across all items.

Discussion of the Results

Nurses' practice about management of pregnancy with danger signs was fair level of practice, these findings agree with El Sharkawy et al., (13) that concluded: when assessing nurses' practice, regarding dangers signs was found insufficient. Table (1) shows the results of an analysis of nurse demographic factors. The largest percentage (38 %) of nurses' age is in the (26-30) years old age group, with (M±SD=27.624). This discovery is in line with Beydag's research findings, who found that the majority of nursing midwives who participated in his research were between the ages of 20 and 30 years old (60.4 %), according to his findings (14). Collins et al. (15) found that the average age of nurses' midwives was between (25-29) years, and the World Health Organization indicated that the average age of nurses' midwives is between (25-29) years in regions where skilled care is provided. Nurses on wards are less stressful than nurses in emergency departments, and the majority of critical care hospitals have more nurses in wards than in emergency departments, for a variety of reasons (16).

Additionally, this study's findings were in line with those of a previous one by Abdalmajed, who discovered that participants in their age range (20-30 years) (35.7 %) had a diploma (64.3 %) and that nearly half (47.6 %) had less than ten years of experience (17). Table (4-4) shows that the nurses demonstrate a fair level of practices (78.14±5.047) among 96 percent of the sample. This finding contrasts with that of Hailu and Berhe, who discovered that the vast majority of those who participated in the research had poor practice when it came to recognizing and responding to danger signs and symptoms during pregnancy (18).

Table (3) show the mean scores for assessing the items related to nurses' practices about management of hypertension; the analysis of findings show that nurses fair level of practices. These findings are consistent with the findings of Said et al, who determined that employing simulation learning for the

management of hypertension was a fair level of nurses practice regarding high blood pressure during pregnancy and successful to provided nurses with appropriate experience. Furthermore, a highly statistically significant positive association between practices was detected during the period following the intervention and during the subsequent follow-up (19).

Conclusion

Nurses' practice in managing pregnancies with danger signs was at a fair level.

Recommendations

1. Development of an educational program, including periodical workshops regarding the management of danger signs during pregnancy for maternity nurses.
2. Applying periodic training courses for nurses to enhance their practical skills regarding danger signs during pregnancy.
3. Prepare a brochure, courses, or any other type of mass media program to help nurses enhance and promote their understanding of danger indicators and their practice of them.

Ethical considerations

The College of Nursing / University of Baghdad's research ethics committee gave its approval for this study to proceed. The hospital's management gave written approval for the procedure. In addition, all participants supplied written informed consent that was signed by them.

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