RESEARCH ARTICLE

Assessment of Nurses' Knowledge about Management of Pregnancy with Danger Signs

Asala Riyadhd Mohammed [1], Hawraa Hussein Ghafel [2] *

1. *Assist Lecturer, Nursing Department, Hilla University College, Iraq.*
2. *Assist. Prof. Doctor, Maternal and Neonate Nursing Department, College of Nursing, University of Baghdad, Iraq.*

Corresponding author: Hawraa Hussein Ghafel
Email: hawraah@conursing.uobaghdad.edu.iq

ORCID 0000-0002-9783-2078

ABSTRACT

Background: A well-equipped obstetrics unit, proper knowledge of danger signs, and the ability to take immediate action can help prevent maternal mortality. As the nurses being the primary health care providers, their preparedness for obstetrics emergencies attains paramount importance.

Objective: the study aimed to assess nurses' knowledge about management of pregnancy with danger signs and to find out relationship between these nurses' knowledge and their specific demographic characteristics

Methodology: A descriptive study design was carried to assess nurses' knowledge. A non-probability (purposive sample) of (50) nurses working in the emergency room, labour room, and maternity care. The questionnaire is divided into two sections: demographic characteristics of the nurses and knowledge on how to manage danger signs in pregnant women.

Results: The current study shows that nurses age mean (27.62±4) years in which the highest with age group 26-30 years, most of nurses was live in urban as seen with 92% of them.most of the study sample has a nursing schools education and have 1-5 year of experience

Conclusions: nurses' knowledge about management of pregnancy with danger signs was fair level of knowledge and there is no statistically significant association with demographic characteristics.

Keywords: Nurses' Knowledge , Management, Pregnancy, Danger Signs

INTRODUCTION

Pregnant women should be on the lookout for any warning signs or symptoms that could jeopardize her pregnancy. The following are some obstetric danger symptoms (ODS): loss of consciousness, nausea and vomiting, severe chronic stomach pain, vaginal bleeding, puffiness of the face, fingers, and toes, blurred vision, menstrual problems, and severe recurrent frontal headaches (Agrawal, 2015). There is a risk of unanticipated, uncontrollable complications that could result in death or injury to the mother and/or child, all of which are linked to ODS and cannot be predicted. As a mother, you have a unique opportunity to establish positive habits and parenting skills in your child during pregnancy. As a result of this breakdown in continuity of care, both mothers and their newborns are affected. Premature membrane rupture, growth restriction in the fetus, oligohydramnios, and preterm labor are all possible outcomes of ODS, as are greater rates of cesarean delivery and higher rates of preterm labor (Terefe et al., 2020).

More than 70% of all maternal deaths are due to complications such as hemorrhage, infection, improper abortion, eclampsia, and obstructed labor, among other things. In addition to these major causes of maternal death, inadequate, inaccessible, expensive, or of poor quality care are other factors in maternal mortality (El-Nagar et al 2017).

Because difficulties can emerge at any time throughout pregnancy, every woman should be aware of the warning signals. Vaginal bleeding, severe headaches, visual issues, high temperature, swollen hands/face, and diminished fetal activity are all warning symptoms. It is common for these symptoms to signify an obstetric complication that could arise during or after childbirth. This information can help determine the best decisions and get the necessary medical attention. Maternal mortality and morbidity are reduced as a result of timely and adequate healthcare seeking activities. When pregnant women attend an ANC center, they should receive health education on pregnancy outcomes, warning signs and symptoms throughout pregnancy, nutrition, and family planning, among other services (Kearns et al., 2014).

METHOD

A descriptive study design was carried to assess nurses' knowledge about danger signs during pregnancy. A non-probability (purposive sample) of (50) of nurse who emergency words, labor room and maternal words.

A questionnaire was developed by researchers through review of related literature. The questionnaire consists of two parts for data collection includes the following:

Part I: consists of the nurses' demographic variables (Age, Residence, education, and experience)

Part II: concerning nurses' knowledge about managing danger signs in pregnant women (vaginal bleeding and its types, high blood pressure, severe headaches and blurred vision, severe abdominal pain, rapid or difficult breathing, urgency, pain or a burning feeling when urinating, and 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 (Bolarinwa, 2015).

The data was collected after getting the official approval from hospital, the researchers 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 researchers selects the subjects that meet inclusion criteria. The data were collected after getting permission from the subjects. 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 version 26.0 is used to examine the data.and excel 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

The current study's findings were analysed using statistical methods, and the data were organised and interpreted. These findings are based on the replies of a sample of participants to a questionnaire.

Table (1): Demographic Characteristics Nurses

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

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): Management of Danger Signs in Pregnancy Nurses Knowledge

List	Nurses' Knowledge	Pre-test			Post-test 1			Post-test 2		
I	Knowledge of nurses about managing danger signs in pregnant women / choose the correct answer	M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
1	Vaginal bleeding, severe headaches	1.26	63	Poor	1.68	Good	84	1.82	91	Good

		M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
	with blurred vision, and severe abdominal pain are a danger signs of pregnancy.									
II	Nurses' knowledge about vaginal bleeding and its types	M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
2	Implantation bleeding is a types of vaginal bleeding	1.16	58	Poor	1.60	Good	80	1.60	80	Good
3	Early bleeding may include: an ectopic pregnancy (ectopic pregnancy)	1.20	60	Poor	1.82	Good	91	1.76	88	Good
4	First trimester miscarriage occurs when an unborn child is born without a mother.	1.80	90	Fair	1.94	Good	97	1.86	93	Good
5	A abortion symptom is vaginal bleeding.	1.10	55	Poor	1.90	Good	95	1.86	93	Good
6	An ectopic pregnancy occurs when the fertilized egg does not implant in the uterus, but it implants somewhere else	1.82	91	Good	1.88	Good	94	1.82	91	Good
7	A molar pregnancy occurs when placental tissue grows abnormally during fertilization	1.24	62	Poor	1.88	Good	94	1.86	93	Good
8	Delayed bleeding may include placental abruption, advanced placenta, premature birth	1.26	63	Poor	1.70	Good	85	1.70	85	Good
9	Bleeding occurs without pain in the case of placenta previa	1.44	72	Fair	1.84	Good	92	1.82	91	Good
10	Immediate medical care is obtained if there are any symptoms of severe bleeding, severe pain	1.74	87	Good	1.92	Good	96	1.88	94	Good
11	The important instructions for women at home to reduce bleeding complications is "Abstaining from marital relations until the bleeding stops"	1.76	88	Good	1.96	Good	98	1.94	97	Good

	Nurses' knowledge of high blood pressure	M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
III	Nurses' knowledge of high blood pressure	M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
12	Spasms are increased electrical activity in the brain	1.44	72	Fair	1.78	89	Good	1.74	87	Good
13	One of the causes of preeclampsia of pregnancy or eclampsia is "Vascular problems and genetic factors"	1.36	68	Fair	1.88	94	Good	1.84	92	Good
14	One of the risk factors that can increase the chances of developing eclampsia To be over 35 years old	1.42	71	Fair	1.72	86	Good	1.72	86	Good
15	A common symptom of preeclampsia is high blood pressure	1.30	65	Poor	1.88	94	Good	1.84	92	Good
16	Preeclampsia is diagnosed by blood and urine tests	1.42	71	Fair	1.74	87	Good	1.72	86	Good
17	Complication of preeclampsia is kidney failure	1.50	75	Fair	1.88	94	Good	1.86	93	Good
IV	Nurses' knowledge of severe headaches and blurred vision	M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
18	When Headache accompanied by dizziness or blurred vision are occur, calling the obstetrician or health care provider	1.64	82	Fair	1.84	92	Good	1.82	91	Good
19	One of the causes of vision problems or flashing lights in the eye is high blood pressure caused by pregnancy	1.30	65	Poor	1.88	94	Good	1.80	90	Good
V	Nurses' knowledge of severe abdominal pain	M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
20	One of the causes of abdominal pain is ectopic pregnancy	1.44	72	Fair	1.68	84	Good	1.68	84	Good
21	You should contact your doctor if the pain is accompanied by vaginal bleeding or spotting	1.54	76	Fair	1.94	97	Good	1.88	94	Good
VI	Nurses' knowledge of rapid or	M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.

	difficult breathing									
22	Asthma causes of rapid or difficult breathing	1.78	89	Good	1.92	96	Good	1.92	96	Good
VII	Nurses' knowledge of urgency, pain or a burning feeling when urinating	M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
23	Cause of Urinary Tract Infection is sexually transmitted diseases	1.62	81	Fair	1.90	95	Good	1.90	95	Good
24	Symptoms of urinary tract infection is frequent need to urinate and a painful burning sensation when urinating	1.66	83	Fair	1.90	95	Good	1.88	94	Good
VIII	Nurses' knowledge of unusual or more than usual vaginal secretions	M.S	R.S	Ass.	M.S	R.S	Ass.	M.S	R.S	Ass.
25	One of the signs of abnormal vaginal secretions is yellow, green or gray secretions	1.36	68	Fair	1.76	88	Good	1.74	87	Good

M.S: Mean of score, R.S: Relative sufficiency, Ass: Assessment.

Nurses' knowledge of managing pregnancies with danger signs was assessed using items in this table, and the results suggest that the mean scores indicate that nurses had a poor to fair level of Knowledge; fair level is seen among items 4, 9, 12, 13, 14, 16, 17, 18, 20, 21, 23, 24, and 25, poor level is seen among items 1, 2, 3, 5, 7, 8, 15, and 19. During post-test 1 and 2, the nurses demonstrate a high level of knowledge, as seen by high mean scores across the board.

Table (3): Nurses' Knowledge about Danger Signs Management during Pregnancy: An Overall Assessment

Level of Knowledge	Pre-test				Post-test 1				Post-test 2			
	f	%	M.S	SD	f	%	M.S	SD	f	%	M.S	SD
Poor	8	16			0	0			0	0		
Fair	42	84	36.56	2.771	5	10	45.98	2.470	9	18	45.20	3.188
Good	0	0			45	90			41	82		
Total	50	100			50	100			50	100		

As can be seen from the data in this table, nurses were found to have a fair level of knowledge (36.56±2.771) prior to the test, but their knowledge improved to a good level in post-tests 1 and 2 (90 percent and 82%, respectively), as can be seen from the mean scores and standard deviations (post 1= 45.98±2.470, post 2= 45.20±3.188).

Table 1 shows the results of a demographic study on nurses. The biggest percentage of nurses

DISCUSSION

(MSD=27.624) are between the ages of 26 and 30. According to Beydag (2011), the bulk of the nurse midwives in his study (60.4 percent) were between the ages of 20 and 30 years old, which is in line with this conclusion. Nursing midwives are reported to have an average age of between (25-29) years, while the World Health Organization stated that the average age of nurses' midwives is between (25-29) years in places where competent care is given by the WHO. Nurse work on wards is less stressful than employment in emergency rooms for a variety of reasons, including the fact that there are more nurses in wards than emergency rooms at the majority of critical care hospitals, there are also more nurses in wards (WHO, 2006).

Abdalmajed (2018) study stated: 35.7% had a diploma (64.3%), and nearly half (47.6%) of participants had less than ten years of experience in their age range (20-30 years.

A fair degree of knowledge (36.562.771) was demonstrated by nurses in 84 percent of instances, as shown in Table (3), in regards to managing pregnancies with danger signs.

Pre-test results showed that nurse-midwives had a low to fair grasp of danger signs, whereas post-test results showed that they had a fair to good comprehension (Kadhim & Ali, 2020). The general level of nurses' understanding of danger signs was found to be adequate by (Abdalmajed, 2018).

Before the intervention, the nurses, according to El Sharkawy et al., (2020) had a reasonable understanding of the nature of an obstetrical emergency, which was corroborated by the current study's findings.

Researchers believe that a decline in the number of nurses who are knowledgeable about danger signs can be attributed to several factors, including a lack of participation in research-related training programs by most of the nurses studied and a secondary nursing education for the majority of those nurses.

Table (2) shows the mean scores for items assessing nurses' knowledge of treating pregnancy with danger symptoms; the results suggest that nurses have a low level of knowledge on several items (Nurses' knowledge of vaginal bleeding and its types). These findings back with Emam and Saber (2018) claim that maternity nurses' overall understanding of vaginal bleeding was lacking before the educational intervention was implemented.

El-Refaaey et al. (2020) confirmed the findings by stating that in the pre-test, most staff nurses lacked acceptable knowledge and only one-third had moderate understanding regarding the causes and management of vaginal bleeding.

According to the mean scores in table 2, there was a decent degree of knowledge among items (Nurses' understanding of high blood pressure) as well. According to Emam and Saber (2018) findings, nurses' awareness of hypertension during pregnancy was incomplete.

CONCLUSIONS

The current study found that nurses had a decent degree of knowledge about managing pregnancy with danger signals, and that there was no statistically significant relationship between nurses' knowledge of danger signs and demographic variables.

ETHICAL CONSIDERATIONS COMPLIANCE WITH ETHICAL GUIDELINES

The research ethics committee of the Baghdad University's College of Nursing approved this study. Management of hospital granted written authorization. In addition, all participant provided signed informed consent.

AUTHOR'S CONTRIBUTIONS

Asala Riyadhd Mohammed: review and editing. Methodology ; writing – review and editing; writing – original draft; writing – review and editing.

Hawraa Hussein Ghafel: Conceptualization; formal analysis; Conceptualization; formal analysis.

DISCLOSURE STATEMENT:

No conflicts of interference are rest declared by the authors.

REFERENCES

Abdalmajed, S. A. S. (2018). Nurses' Knowledge regarding Nursing Care of Pregnancy Induced Hypertension at Kassala Saudi New Hospital, Kassala State, Sudan (2018) (Doctoral dissertation, University of Gezira).

Agrawal, P. (2015). Maternal mortality and morbidity in the United States of America. *Bulletin of the World Health Organization, 93,* 135-135.

Beydag, K. D. (2011). Knowledge and applications of the midwives and nurses at an

educational hospital on the early diagnosis of cervix cancer. *Asian Pacific Journal of Cancer Prevention*, *12*(2), 481-485.

Bolarinwa, O. A. (2015). Principles and methods of validity and reliability testing of questionnaires used in social and health science researches. *Nigerian Postgraduate Medical Journal*, *22*(4), 195.

El Sharkawy, A. T., Ali, F. K., & Araby, O. A. (2020). The Effect of Simulation-Based Educational Program on Maternity Nurses' Performance regarding Obstetrical Emergencies during Pregnancy. Evidence-Based Nursing Research, 2(4), 14-14.

El-Nagar, A. E., Ahmed, M. H., & Belal, G. A. E. S. (2017). Knowledge and practices of pregnant women regarding danger signs of obstetric complications. *IOSR Journal of Nursing and Health Science*, *6*, 30-41.

El-Refaey, S. R. I., Abd El-Hady, R. M., Elmasry, Y. M., Abd-Elmohdy, H., & Ali, H. H. (2020). The Effect of Tailored Psycho-Educational Program on Pregnant Women's Anxiety and Knowledge about Self-care Management Regarding Minor Discomforts. *Systematic Reviews in Pharmacy*, *11*(12), 2430-2436.

Emam, E. E. R., & Saber, N. M. (2018). Effect of nursing program on improving nurses' knowledge and skills regarding care of eclamptic women. American Journal of Nursing Research, 6(6), 430-436.

Kadhim, A. K., & Ali, R. M. (2020). Effectiveness Of Education Program In Knowledge For Nurse-Midwife Regarding Sexual Intercourse And Contraception, Danger Signs, And Complications Self-Care For Primipara Women With Cesarean Section At Maternity Hospital In Holy Karbala. *Turkish Journal of Physiotherapy and Rehabilitation*, *32*, 2.

Kearns, A., Hurst, T., Caglia, J., Langer, A., Kearns, A., Hurst, T., ... & Langer, A. (2014). Focused antenatal care in Tanzania: delivering individualised, targeted, high quality care. *Woman and health initiative: Maternal Health Task Force, 2014*.

Terefe, N., Nigussie, A., & Tadele, A. (2020). Prevalence of Obstetric Danger Signs during Pregnancy and Associated Factors among Mothers in Shashemene Rural District, South Ethiopia. *Journal of Pregnancy*, *2020*.

World Health Organization. (2006). integrated Manangement of pregnancy and childbirth pregnancy, childbirth, postpartum and newborn care :A Guide for essential practice, world health organization Geneva, retived 18/3/2011from http://www.who.int/