Assessment of Nurses' Knowledge Concerning Gestational Hypertension at Maternity and Pediatric Teaching Hospital in Al- Samawa City

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ABSTRACT

Background: The most frequent pregnancy complication, the most frequent cause of maternal death, and a factor in newborn morbidity and mortality is pregnancy-induced hypertension (PIH).

Objectives: To assess Nurses' Knowledge of Concerning Gestational Hypertension at Maternity and Pediatric Teaching Hospital in Al- Samawa City.

Methodology: A descriptive study about the nurses' knowledge about of concerning gestational hypertension. A purposive sampling (non-probability) consists of (100) nurses. Pilot research was carried out to assess the questionnaire's reliability, a questionnaire which is consisted of 20 questions, at Maternity and Pediatric Hospital in Al-Samawa City. This study started from 1 January 2023 to 10 June 2023. The study was carried out during the morning shift at the Maternity and Pediatric Hospital in Al-Samawa City, and self-report – structured questionnaire with nurse were performed in the wards (both public and private wards), includes emergency room, wards medical and preoperative room, (purposive and non-probability sample) were according to the study's findings, nurses' knowledge of concerning gestational hypertension.

Results: The findings indicate that this table indicates most age of the sample (80%) were 31-39 years old, the table also show that the majority of the study subjects (56%) are female where more than half of them was Single (56%). Most study sample graduated from college nursing about (52%), and the total years of services (50%) were (11-20). The result of assessment of nurse knowledge regarding concerning gestational hypertension was good level.

Conclusions: The study concluded that the knowledge of a good level of nurses about gestational hypertension is good in Al-Hussein Teaching Hospital.

Recommendations: standardized procedures for the management of pregnancy-induced hypertension and nursing care. A guidebook offering the essential details regarding PIH.

Key words: Nurses, Gestational, Hypertension

INTRODUCTION

Pregnancy-induced hypertension (PIH) is the most common pregnancy complication, and it is one of the main causes of maternal death as well as a contributor to neonatal morbidity and mortality. It affects approximately 10% of pregnant women globally[1].

Prenatal therapies have the potential to improve mother outcomes. This intervention includes primary prevention, improved risk detection, and early detection of PIH at any stage by providing effective prenatal care. Secondary progression prevention is accomplished through initial therapy or referral to specialist care. It is commonly known that scientifically informed care is the gold standard in healthcare[2].

Blood pressure more than 140/90 mmHg on two occasions during pregnancy is described as pregnancy-induced hypertension. After a period of rest or greater than 160/110 mmHg on one occasion in a woman who was previously normotensive[3].

Systolic blood pressure (SBP) greater than 140 mmHg and diastolic blood pressure (DBP) greater than 90 mmHg are considered high

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blood pressure. SBP >160 and DBP >110 mmHg are regarded serious, while SBP 140-149 and DBP 90-99 mmHg are mild, SBP 150-159 and DBP 100-109 mmHg are moderate, and SBP >160 and DBP >110 mmHg are severe[4]. This condition is linked to pre-eclampsia, eclampsia, superimposed pre-eclampsia, prenatal hypertension, and chronic hypertension. Chronic hypertension existed before conception or before the 20th week of pregnancy. Preeclampsia, a systemic illness involving hypertension and proteinuria, and eclampsia, a crippling condition, both develop after the 20th week of pregnancy[5-7].

Given the high prevalence of GHS, its scope and impact on perinatal outcomes, and the present care strategy for high-risk pregnant women, it is critical to establish the necessity for specific care measures for pregnant women via specialized and high-quality prenatal care[8]. Gestational hypertension syndrome (GHS) is thought to affect 5% to 8% of pregnant women worldwide. GHS is the leading cause of maternal death in Brazil, as well as the primary cause of the dramatic increase in perinatal fatalities and babies with negative outcomes[9,10]. The primary causes of maternal and fetal death during pregnancy are pre-eclampsia and eclampsia, and hypertension affects 10% of all pregnancies globally[11]. Some expecting mothers "lack" comprehension of hypertension syndromes, necessitating greater professional engagement in terms of prevention and health promotion, with a focus on prospective concerns and appropriate treatment[12]. Given the high prevalence of GHS, its extent and influence on perinatal outcomes, as well as the current care strategy for high-risk pregnant women, it is critical to demonstrate the need for specific care measures for pregnant women through specialized and high-quality prenatal care[13]. To account for them, the biological backdrop of the disease, as well as the singularities and particularities, must be extrapolated. Nursing care must notice the indicators of GHS problems as soon as possible and implement systematic care measures based on tools that lead important actions while preserving the individuality of each pregnant lady[14]. Hypertension concerns include chronic hypertension, prenatal hypertension, preeclampsia, superimposed preeclampsia, and eclampsia. Prior to conception or during the 20th week of pregnancy, women can be evaluated for chronic hypertension. Preeclampsia, which manifests as hypertension and protein in the urine after 20 weeks of pregnancy, differs from eclampsia in that severe hypertension is defined as greater than 160/110 mm Hg. Preeclampsia, also known as Eclampsia, is an illness in which organ damage occurs as a result of high blood pressure after the 20th week of pregnancy and is accompanied by proteinuria. Preeclampsia in women with chronic renal failure or hypertension[15]. Every year, it responds to 500,000 neonatal fatalities and 76,000 maternal deaths[16]. Women who do not receive prenatal care are seven times more likely than those who do to die of preeclampsia. Preeclampsia cannot always be prevented, despite the fact that many of the deaths it causes are preventable. Every pregnant woman should receive complete prenatal care to decrease preeclampsia-related death[17]. Pregnant women are vulnerable to the hypertensive illnesses gestational hypertension (GH) and preeclampsia (PE); preexisting hypertension may present or develop during pregnancy[18]. Pregnancy hypertension is one of the most prevalent prenatal medical conditions, affecting 5% to 10% of all pregnancies. The prevalence varies depending on the hospital, area, and nation. Hypertensive disorders are a major cause of maternal and newborn morbidity and mortality worldwide[19].

Gestational hypertension (eclampsia gestational HT with protein urea gestational HT without protein urea undefined) in 2022, accounted for 8% of the direct causes of maternal death, according to the Ministry of Health Annual Statistical Report[20].

SUBJECTS AND METHODS

To meet the study's objectives, a descriptive analysis was performed on the nurses' knowledge of gestational hypertension at the Maternity and Pediatric Teaching Hospital in Al- Samawa City. A descriptive examination of the nurses' knowledge about gestational hypertension. Purposive (non-probability) sampling consists of (100) nurses. A pilot research was conducted at Maternity and Pediatric Hospital in Al-Samawa City to examine the reliability of the questionnaire, which comprised of 20 questions. This study ran from January 1, 2023 through June 10, 2023. The study was conducted during the morning shift at the Maternity and Pediatric Hospital in Al-Samawa City, and a self-report - structured questionnaire with a nurse was administered in the wards (both public and private wards, including the emergency room, wards medical and preoperative room), (purposive and non-probability sample) were administered. According to the outcomes of the study, nurses' knowledge concerning gestational hypertension.

By reviewing the literature, past studies, and prior information, a questionnaire structure was established and designed for the current study's objective study. To analyze the instrument's dependability, the internal consistency approach and the Alpha Cronbach's test (Alpha Correlation Coefficient) were applied. The Alpha Correlation Coefficient was calculated Version 24.0 of IBM SPSS, Statistical Package for Social Science[21].

FINDINGS FROM THE STUDY

Table 1: Socio-Demographic Characteristics Statistics (N=100)

Socio-demographic characteristics		Frequency	Percentage	Mean	St. deviation
Age	22-30	2	2	28.46	6.834
	31-39	80	80		
	40-48	8	8		
	49-50	10	10		
Gender	Male	44	44	1.56	0.501
	Female	56	56		
Educational level	Secondary	16	16	2.36	0.749
	Institute	32	32		
	College	52	52		
Marital status	Single	42	42	1.46	0.542
	Married	56	56		
	Divorced	2	2		
Total years of service	1-10	34	34	6.54	7.399
	11-20	50	50		
	21-30	16	16		

DISCUSSION

The current analysis discovered that the current sample's age range (31 to 39) years old confirms that the majority of nurses in the study groups were less than 30 years old (80%). The study disagree with this result of a Jaddoua et al., (2013) who reported that the study group's biggest number (19%) were (28-32) years old (Table 1). This was explained by the nurses' involvement in research, which made them more engaged, motivated, and active in these areas[22].

Gender: According to the present poll, the majority of nurses (56%), are females. This study agrees with Gesmundo's (2016) study, which said that the bulk of the participants (92% in his study) were females,

Table 2: Shows nurses' general knowledge of pregnancy-induced hypertension (n = 100)

NO.	Questions	Response				Means	Assessment
		True		false			
		F	%	F	%		
1.	When does pregnancy-related high blood pressure happen?	34	34	66	66	1.66	Good
2.	The best posture for a pregnant lady to take her blood pressure is on her left side.	8	8	92	92	1.92	Good
3.	Chronic hypertension mean	50	50	50	50	1.50	Good
4.	The following factors raise the chance of getting preeclampsia:	32	32	68	68	1.68	Good
5.	What causes preeclampsia?	18	18	82	82	1.82	Good
6.	What exactly is edema?	32	32	68	68	1.68	Good
7.	What are the contributing reasons to elevated blood pressure?	76	76	24	24	1.24	Poor
8.	What are some of the preeclampsia risk factors?	52	52	48	48	1.48	Poor
9.	What is the effect of preclampsia on fetal outcome?	58	58	42	42	1.42	Poor
10.	What is the outcome for the fetus when preclampsia occurs?	40	40	60	60	1.60	Good

F: Frequency, %: Percentage

Table 3: Nurses' Knowledge of Pregnancy-Induced Hypertension Treatment and Prevention (n = 100)

NO.	Questions	Response				Means	Assessment
		True		false			
		F	%	F	%		
1.	What is recommended as a general non-pharmacological course of treatment for pregnant women who have mild to moderate high blood pressure?	38	76	12	24	1.24	Poor
2.	Why is bed rest recommended for expecting mothers who have preeclampsia?	28	56	22	44	1.44	Poor
3.	What actions should the nurse take before giving (MgSo4)?	28	56	22	44	1.44	Poor
4.	How should pregnant women take magnesium sulfate MgSo4?	16	32	34	68	1.68	Good
5.	For severe pre-eclampsia, how is nursing care administered?	13	26	37	74	1.74	Good
6.	What steps may be taken to avoid gestational hypertension?	31	62	19	38	1.38	Poor
7.	What measures are possible to prevent gestational hypertension?	17	34	33	66	1.66	Good
8.	What kind of medical care would you recommend for pre-eclampsia?	26	52	24	48	1.48	Poor
9.	Severe pre-eclampsia nursing care includes:	20	40	30	60	1.60	Good
10.	The aim of antihypertensive treatment is to	28	56	22	44	1.44	Poor

Table 4: Knowledge of the Study Sample

Variables	Classification	F	%
Total Nurses' Knowledge of Concerning Gestational Hypertension	Good	64	64
	Poor	36	36
	Total	100	100

F: Frequency, %: Percentage

which validates the current study[23]. The study also aligned with the findings of Teshager et al., (2022), who found that the majority of participants (68.6%) were females[24] (Table 2-4).

Educational Level: According to the current study, the majority of nurses (52%) in the study groups were nursing college graduates. This is consistent with the findings of Mong et al., (2022), who discovered that the majority of nurses were nursing college graduates [25]. According to the experts, this is most likely owing to the enormous number of governmental and private nursing institutions that have opened in recent years, as well as the large number of nurses who have graduated from these colleges.

Marital Status: The current study found that (56%) of the sample was married. This is congruent with the study Algarni et al., (2019), which indicated that the majority of the study's participating nurses (59.2%) were married[26]. This study also agreed with Mukakamanzi (2017), who found that the majority of participants (51.6%) were married[27]. Because the majority of nurses marry shortly after graduation, as well as the fact that the ages taken from the sample were in the middle ages, and this age is likely to be a married person.

Total Years of Services: According to the report, the majority of nurses (50%) had (11-20) years of experience. The study contradicts the findings of Jaddoua et al. (2013), who found that (6-10) years of service forming (22%) The current investigation found that the age group of the current sample ranged from 31 to 39 years old [22].

The result of assessment of nurse knowledge: The level of gestational hypertension was satisfactory. This results is consistent with the findings of a study conducted in Kerbala by Radi, (2022), who stated that nurses had a high degree of knowledge concerning gestational hypertension[28]. This conclusion contradicts the findings of a study conducted in Al-Nasiriya by Kadhim and Khairi, (2020), who stated that in the pretest, the nurse's awareness of gestational hypertension was poor to fair[29].

CONCLUSIONS

The majority of the subjects were (31 to 39) years old (80%), and the majority of the study subjects (56%) are females. Less than half of them were married (42%) and less than half of them were single. The assessment of nurse knowledge regarding gestational hypertension knowledge yielded a good level of understanding.

RECOMMENDATIONS

A training and education program for nurses to improve their understanding of pregnancy-induced hypertension is frequently provided. Encourage nurses to attend continuing education workshops, conferences, and training sessions, as well as to review and refresh their knowledge of nursing care for pregnant women with hypertension illnesses. Educational lectures for nurses in hospitals and primary health care facilities should be held on a regular and updated basis to assist nurses in spreading health awareness with the goal of sustaining pregnancy and fetal health.

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REFERENCES

1. Tadele W, Debebe F, Tadele A, et al. Assessment of knowledge and practice of nurses working in gynecology emergency room towards pregnancy induced hypertension in selected government public hospitals found in Addis Ababa, Ethiopia.(2020).
2. Edward KL, Mills C. A hospital nursing research enhancement model. J Contin Educ Nurs 2013;44(10):447-54.
3. Nissaisorakarn P, Sharif S, Jim B. Hypertension in pregnancy: defining blood pressure goals and the value of biomarkers for pre-eclampsia. Curr Cardiol Rep 2016;18(12):131.
4. Eze E, Barasa A, Adams MD, et al. Determination, knowledge and prevalence of pregnancy-induced hypertension/eclampsia among women of childbearing age at Same District Hospital in Tanzania. Int J Med Med Sci 2018;10(2):19-26.
5. Cathrine M.Norman (R. 118433). An investigation into pregnancy induced hypertension: a case study for unpublished. Nyadire Methodist Hospital.May,2013.
6. Moodley J. Maternal deaths due to hypertensive disorders in pregnancy. Best Pract Res Clin Obstet Gynaecol 2008; 22(3):559-67.
7. Magee LA, Abalos E, von Dadelszen P, et al. Control of hypertension in pregnancy. Curr Hypertens Rep 2009;1(6):429.
8. Jacob LM, Mafetoni RR, Lopes MH, et al. Knowledge, attitude and practice about hypertensive gestational syndrome among pregnant women: a randomized clinical trial. Texto & Contexto-Enfermagem 2022;9:31.
9. Muti M, Tshimanga, M, Notion GT, et al. Prevalence of pregnancy induced hypertension and pregnancy outcomes among women seeking maternity services in Harare, Zimbabwe. BMC Cardiovasc Disord 2015;15:111.
10. Ministério da Saúde (BR). Protocolos da Atenção Básica: Saúde das Mulheres. Brasília, DF(BR): Ministério da Saúde [Internet]. 2016 [cited 2019 May 09].
11. Mol B, Roberts C, Thangaratinam, S. Pre-eclampsia. The Lancet 2016;387(10022):999-1011.
12. Jacob LMS, Mont'Alverne DGB, Figueira MCS, et al. Knowledge of pregnant women about Gestational Hypertension Syndrome. Rev Enf Atual 2018;86:1-8.
13. Antunes MB, Demitto MO, Gravena AAF, et al. Hypertensive Syndrome and perinatal outcames in high-risk pregnancies. Rev Min Enferm 2017;21:e1057.
14. Thuler ACMC, Wall ML, Benedet DCF, et al. Preventive measures of hypertensive syndromes of pregnancy in primary care. J Nurs 2018;12(4):1060-71.
15. Al Ebrahimy EA, Al Jobori SS, Al Safi W. Knowledge about pregnancy induced hypertension among pregnant women attending gynecology and obstetrics teaching hospital in Kerbala. Karbala J Med 2019;12(2).
16. Britt R. World Preeclampsia Day: Recognizing That Delivery Is aTreatment, Not a Cure Posted on May 22, 2018.
17. Hadian T, Mirghafourvand M, Mohammad-Alizadeh-Charandabi S, et al. The Effect of Prenatal Home Visiting for Adolescent Mothers on Maternal and Neonatal Outcomes: A Systematic Review and Meta-Analysis 2018.
18. Roberts LM, Davis GK, Homer CS. Pregnancy with gestational hypertension or pre-eclampsia: A qualitative exploration of women's experiences. Midwifery 2017;46:17-23.
19. Perry, Shannon E. Maternal child nursing care-E-Book, 2017. Elsevier Health Sciences.
20. The Ministry of Health, 2022. Annual Statistical Report.
21. Hassali MA, Harun SN, Abbas S, et al. Validation and clinical interpretation of the St George's respiratory questionnaire for COPD (SGRQ-C) after adaptation to Malaysian language and culture, in patients with COPD. Health Qual Life Outcomes 2020;18(1):1-2.
22. Jaddoua BA, Mohammed WK, Abbas AD. Assessment of nurse's knowledge concerning glasgow coma scale in neuro surgical wards. Kufa J Nurs Sci 2013;3(2).
23. Gesmundo M. Enhancing nurses' knowledge on catheter-associated urinary tract infection (CAUTI) prevention. Kai Tiaki Nurs Res 2016;7(1):32-40.
24. Teshager T, Hussien H, Kefyalew M, et al. Knowledge, practice and associated factors of nurses towards prevention of catheter-associated urinary tract infection in intensive care unit of public hospitals administered by Federal Government in Addis Ababa, Ethiopia: a cross-sectional institutional-based study. BMC Nurs 2022; 21(1):186.
25. Mong I, Ramoo V, Ponnampalavanar S, et al. Knowledge, attitude and practice in relation to catheter-associated urinary tract infection (CAUTI) prevention: A cross-sectional study. J Clin Nurs 2022;31(2):209-19.
26. Algarni SS, Sofar SS, Wazqar DY. Nurses' knowledge And Practices Toward Prevention Of Catheter-Associated Urinary Tract Infection At King Abdulaziz University Hospital. J Health Med Nurs 2019;4(1):50-73.
27. Mukakamanzi J. Knowledge, attitude and practices of nurses towards the prevention of catheter-associated urinary tract infection in selected Referral Hospitals in Rwanda (Doctoral dissertation, University of Rwanda) 2017.
28. Radi AF. Effectiveness of an Educational Program on Nurses' Knowledge and Attitudes Regarding Pregnancy Induced Hypertension at Primary Health Care Centers in Kerbala City (Doctoral dissertation, University of Kerbala) 2022.
29. Kadhim ST, Khairi SH. Effectiveness of Educational Program on Nurse-midwives' Knowledge about Pregnancy Induced Hypertension at Bint Al-Huda Hospital in Al-Nasiriya City. Indian J Forensic Med Toxicol 2020;14 (3):2714-9.