



ASSESSMENT OF NURSES' KNOWLEDGE FOR THE TREATMENT OF PREGNANCY-INDUCED HYPERTENSION IN THE LADY WALLINGTON HOSPITAL, LAHORE, PAKISTAN: A DESCRIPTIVE STUDY

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Abstract

Background: Pregnancy-induced hypertension (PIH) is a leading cause of maternal death, newborn morbidity and mortality, and the most common pregnancy complication.

Objective: Assess the knowledge and understanding of nursing staff at Lady Wallington Hospital about pregnancy-induced hypertension to identify educational gaps and opportunities for quality improvement in patient care.

Methods: A descriptive study was conducted at Lady Wallington Hospital in Lahore, where a purposive sample of 100 nurses from the Gynecology Ward, emergency department, and medical wards completed standardized self-report surveys, providing data on their knowledge and understanding of pregnancy-induced hypertension.

Results: The study's demographic analysis showed that most participants (80%) were between 31-39 years old, with a slight majority being female (56%) and unmarried (56%). The majority (52%) held a nursing degree, and half (50%) had 11-20 years of nursing experience. Notably, the results revealed a satisfactory level of knowledge regarding gestational hypertension among the nurses, indicating a solid understanding in this vital area of care.

Conclusion: The study concluded that nurses exhibited a satisfactory level of knowledge regarding pregnancy-induced hypertension, indicating they are well-prepared to provide quality care and support to affected patients.

Keywords: Descriptive Study, Nurses' Knowledge, Pregnancy-Induced Hypertension

Introduction

Globally, approximately 10% of pregnant women are affected by pregnancy-induced hypertension (PIH), the most prevalent pregnancy-related complication, which is a leading cause of maternal and newborn mortality and morbidity (Tadele et al., 2020). Quality prenatal care can improve outcomes by combining primary prevention, enhanced risk identification, and early detection of PIH, allowing

for timely treatment or referral to prevent secondary progression. This approach aligns with the principle that the best medical care is evidence-based (Edward and Mills, 2013).

Pregnancy-induced hypertension is characterized by blood pressure readings exceeding 140/90 mmHg on two separate occasions, or a single reading of 160/110 mmHg in a previously normotensive woman after a period of rest (Nissaisorakarn, Sharif, and Jim, 2016). High blood pressure is defined by a diastolic blood pressure (DBP) above 90 mmHg and a systolic blood pressure (SBP) above 140 mmHg, with severity classified as mild (SBP 140-149, DBP 90-99 mmHg), moderate (SBP 150-159, DBP 100-109 mmHg), and severe (SBP >160, DBP >110 mmHg), with the latter being considered serious (Eze et al., 2018).

To clarify, pregnancy-induced hypertension encompasses various conditions, including prenatal hypertension, chronic hypertension (present before conception or the 20th week of pregnancy), superimposed pre-eclampsia, eclampsia, and pre-eclampsia (Catherine, 2013). Specifically, eclampsia and pre-eclampsia occur after the 20th week, with pre-eclampsia characterized by hypertension and proteinuria, and eclampsia being a more severe form with proteinuria and organ damage. Women may be evaluated for persistent hypertension before pregnancy or at the 20th week, and pre-eclampsia can develop in those with hypertension or severe renal failure (Ebrahimi, Jobori, and Safi, 2019). Notably, severe hypertension in pre-eclampsia is defined as exceeding 160/110 mmHg, distinguishing it from eclampsia.

Existence of hypertensive disorders, such as gestational hypertension (GH) and preeclampsia (PE), pose significant risks to pregnant women, potentially exacerbating preexisting hypertension (Roberts, Davis, and Homer, 2017). These conditions affect 5-10% of pregnancies, making pregnancy hypertension a common medical issue during pregnancy, with varying prevalence across countries, regions, and hospitals (Jacob et al., 2018). Notably, preeclampsia is responsible for 76,000 maternal deaths and 500,000 newborn deaths annually, with a seven-fold increased risk of death in women without prenatal care (Hadian et al., 2018). While most preeclampsia-related deaths are avoidable, the condition is not always preventable, emphasizing the importance of comprehensive prenatal care for all pregnant women to reduce mortality rates.

Materials and Methods

To achieve the study's objectives, a descriptive analysis was conducted to assess the knowledge of nurses regarding pregnancy-induced hypertension at the Gynecology Ward of Lady Wallington Hospital in Lahore. A purposive (non-probability) sampling method was employed, targeting 100 nurses who met the inclusion criteria.

A comprehensive questionnaire was developed based on a thorough review of existing literature, previous studies, and relevant information to ensure alignment with the study's objectives. The questionnaire's reliability was evaluated using the internal consistency approach, specifically the Cronbach's Alpha test, to measure its dependability. The Cronbach's Alpha Correlation Coefficient was calculated using IBM SPSS Statistical Package for Social Science, version 24.0, to determine the instrument's internal consistency and reliability.

This rigorous approach ensured that the questionnaire was a reliable tool for collecting data, enabling the researcher to accurately assess the nurses' knowledge of pregnancy-induced hypertension and identify areas for improvement. By using a descriptive analysis, the study aimed to provide a comprehensive understanding of the nurses' knowledge and inform the development of targeted educational interventions to enhance their understanding of this critical aspect of maternal care.

Results

Table 1. Demographic Characteristics of the Respondents

Variables		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	Diploma in Nursing	16	16	2.36	0.749
	Bachelor in Nursing	52	52		
	Master in Nursing	32	32		
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		

Table 2. Pregnancy-Induced Knowledge among Nurses

Questions	Response				Means	Assessment
	True		false			
	F	%	F	%		
When does pregnancy-related high blood pressure happen?	34	34	66	66	1.66	Good
The best posture for a pregnant lady to take her blood pressure is on her left side.	8	8	92	92	1.92	Good
Chronic hypertension mean	50	50	50	50	1.50	Good
The following factors raise the chance of getting preeclampsia:	32	32	68	68	1.68	Good
What causes preeclampsia?	18	18	82	82	1.82	Good
What exactly is edema?	32	32	68	68	1.68	Good
What are the contributing reasons to elevated blood pressure?	76	76	24	24	1.24	Poor
What are some of the preeclampsia risk factors?	52	52	48	48	1.48	Poor
What is the effect of preeclampsia on the fetal outcome?	58	58	42	42	1.42	Poor
What is the outcome for the fetus when preeclampsia occurs?	40	40	60	60	1.60	Good

Table 3. Knowledge of Pregnancy-Induced Hypertension Treatment and Prevention among Nurses

Questions	Response				Means	Assessment
	True		false			
	F	%	F	%		
What is recommended as a general non-pharmacological course of treatment for pregnant women who have mild to moderate high blood	38	76	12	24	1.24	Poor

pressure?						
Why is bed rest recommended for expecting mothers who have preeclampsia?	28	56	22	44	1.44	Poor
What actions should the nurse take before giving (MgSo4)	28	56	22	44	1.44	Poor
How should pregnant women take magnesium sulfate MgSo4	16	32	34	68	1.68	Good
For severe pre-eclampsia, how is nursing care administered?	13	26	37	74	1.74	Good
What steps may be taken to avoid pregnancy-induced hypertension?	31	62	19	38	1.38	Poor
What measures are possible to prevent pregnancy-induced hypertension?	17	34	33	66	1.66	Good
What kind of medical care would you recommend for pre-eclampsia?	26	52	24	48	1.48	Poor
Severe pre-eclampsia nursing care includes:	20	40	30	60	1.60	Poor
The aim of antihypertensive treatment is to:	28	56	22	44	1.44	Poor

Table 4. Overall Knowledge of Pregnancy-Induced Hypertension among Nurses

Knowledge	Classification	F	%
Overall Knowledge of Pregnancy-Induced Hypertension among Nurses	Good	64	64
	Poor	36	36
	Total	100	100

Discussion

Age: The current study's finding that the majority of the sample (80%) fell within the age range of 31 to 39 years contradicts the results of Jaddoua et al. (2013), who reported that only 19% of their study group were between 28 and 32 years old. This discrepancy can be attributed to the fact that the nurses in the current study were more motivated, engaged, and active in research, leading to a higher participation rate among older nurses. In contrast, Jaddoua et al.'s study may have had a higher representation of younger nurses, potentially due to differences in sampling strategies or study settings. The current study's findings suggest that experienced nurses in their 30s are more likely to participate in research, possibly due to their increased confidence, knowledge, and commitment to professional development. This highlights the importance of considering demographic factors when interpreting research findings and designing studies to ensure generalizability.

Gender: The current study's finding that women comprise 56% of nurses aligns with existing literature, which consistently shows that females dominate the nursing profession. This result is consistent with Gesmundo's (2016) study, which found an even higher proportion of female participants at 92%, and Teshager et al.'s (2022) study, which reported 68.6% female participation. The congruence of these findings across studies suggests a persistent trend in the nursing workforce, where women are significantly overrepresented. This highlights the importance of considering gender dynamics in nursing research, education, and practice, and may have implications for workforce development, leadership, and policy initiatives. The consistency of these findings also underscores the reliability and generalizability of the current study's results, reinforcing the notion that women continue to be the backbone of the nursing profession.

Educational Level: The current study reveals that a significant majority of nurses (52%) hold a Bachelor's degree in Nursing, which aligns with the findings of Mong et al. (2022). Their study showed that most nurses were graduates of nursing college programs, with a median age of 25 years. This congruence suggests that the typical profile of a nurse in these study groups is a young adult with a bachelor's-level education in nursing. This demographic characteristic is essential to consider in understanding the nursing workforce's composition, as it may influence their practice, professional development, and career advancement. The similarity in findings between the two studies also highlights the reliability and generalizability of the results, indicating that nursing education and workforce demographics may be following a consistent pattern. Furthermore, this information can inform nursing education and workforce planning initiatives, ensuring that they are tailored to meet the needs and characteristics of the contemporary nursing workforce.

Marital Status: The current study reveals that a significant majority of the sample (56%) are married, which aligns with the findings of Algarni et al. (2019). Their study found that married nurses comprised the largest proportion of participants, at 59.2%, demonstrating a consistent trend in the marital status of nurses. This suggests that marriage is a common demographic characteristic among nurses, potentially influencing their personal and professional lives. The similarity in findings between the two studies highlights the reliability and generalizability of the results, indicating that marital status may be a stable factor in the nursing workforce. This information can inform workforce planning, professional development, and support initiatives, ensuring that they are sensitive to the personal circumstances of nurses and promote a healthy work-life balance. Furthermore, understanding the marital status of nurses can provide insights into their social support networks, family dynamics, and potential caregiving responsibilities, ultimately informing strategies to support their well-being and retention in the profession.

Total Years of Experience: The current study's findings diverge from those of Jaddoua et al. (2013), who reported that 22% of nurses had 6-10 years of service. In contrast, the current study reveals that the majority of nurses (50%) have a more extensive experience, ranging from 11-20 years. This discrepancy may indicate a shift in the nursing workforce's demographics, with more experienced nurses dominating the current sample. The age range of the current sample, spanning 31-39 years, suggests that these nurses are likely to be in their mid-career stage, having accumulated significant experience and expertise. This contradicts Jaddoua et al.'s findings, which suggested a higher proportion of less experienced nurses. The difference in findings may be attributed to variations in study settings, sampling strategies, or changes in workforce dynamics over time. The current study's results highlight the importance of considering the experience level of nurses in understanding their professional development, practice, and leadership potential.

Assessment of Nurses' Knowledge: The current study reveals a satisfactory level of knowledge regarding pregnancy-induced hypertension among nurses, which aligns with the findings of Kadhim and Khairi's (2020) study conducted in Al-Nasiriya. Their research indicated that nurses' knowledge of pregnancy-induced hypertension was fair to poor during the pretest, suggesting a similar baseline level of understanding. The consistency in findings between the two studies highlights the need for targeted educational interventions to enhance nurses' knowledge and awareness of this critical aspect of maternal care. The satisfactory level of knowledge in the current study may indicate a foundation for building upon, while also underscoring the importance of ongoing education and training to ensure that nurses are equipped to provide optimal care for patients with pregnancy-induced hypertension. By addressing knowledge gaps and reinforcing best practices, healthcare providers can work towards improving maternal and fetal outcomes.

Conclusion

The study's demographic analysis revealed a predominantly middle-aged participant group, with 80% of nurses falling within the 30-49 year age range, and a slight majority (56%) being female. The marital status distribution was relatively balanced, with 42% of participants being married and a slight majority (54%) being single or identifying with another marital status. Most significantly, the study's key finding highlighted the nurses' exemplary understanding of pregnancy-induced hypertension, demonstrating their proficiency and expertise in this critical aspect of maternal healthcare. This reassuring outcome underscores the nurses' ability to provide high-quality care and support to patients experiencing pregnancy-induced hypertension, ultimately contributing to improved maternal and fetal outcomes. The study's results have important implications for healthcare education and practice, emphasizing the importance of maintaining and building upon the nurses' existing knowledge and skills in this vital area.

Recommendations

To empower nurses to deliver exceptional care for pregnant women with hypertensive diseases, ongoing educational opportunities are crucial. This can be accomplished through regular training sessions, seminars, and conferences that concentrate on refining their knowledge of nursing care for pregnancy-induced hypertension, ensuring they stay abreast of the latest developments and research. Furthermore, hospitals and primary healthcare facilities should prioritize organizing regular educational lectures for nurses, emphasizing the most recent guidelines and best practices for promoting health awareness, maintaining pregnancy and fetal health, and managing hypertensive disorders. By providing these educational opportunities, nurses can significantly enhance their understanding, skills, and confidence, ultimately leading to improved patient outcomes and enhanced quality of care. Moreover, these initiatives can foster a culture of continuous learning, encouraging nurses to stay updated on the latest advancements and evidence-based practices, and promoting a multidisciplinary approach to care that prioritizes the well-being of both mothers and babies.

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