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Research Article

A study to assess the level of knowledge regarding the predisposing factors of pregnancy-induced hypertension among antenatal mothers at a selected hospital, Puducherry

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Abstract:

Introduction: Pregnancy-induced hypertension (PIH) is a major contributor to maternal and fetal complications. Adequate knowledge regarding its predisposing factors may promote early identification and preventive practices among antenatal mothers. **Aim:** To assess the level of knowledge regarding the predisposing factors of pregnancy-induced hypertension among antenatal mothers and determine its association with selected demographic variables. **Methods:** A quantitative descriptive research design was adopted at Sri Manakula Vinayagar Medical College and Hospital, Puducherry. Fifty antenatal mothers attending the antenatal outpatient department were selected using convenient sampling. Data were collected using a structured demographic questionnaire and a structured knowledge questionnaire on the predisposing factors of pregnancy-induced hypertension. Descriptive and inferential statistics were used for analysis. **Results:** Most antenatal mothers had moderate knowledge regarding the predisposing factors of pregnancy-induced hypertension, whereas the remaining mothers had adequate knowledge, and none had inadequate knowledge. Among the selected demographic variables, area of residence showed a statistically significant association with the level of knowledge. **Conclusion:** The findings indicate that most antenatal mothers possessed moderate knowledge regarding the predisposing factors of pregnancy-induced hypertension. Strengthening antenatal health education may help improve awareness and early identification of risk factors.

Keywords: Pregnancy-induced hypertension, antenatal mothers, knowledge, predisposing factors, maternal health.

INTRODUCTION

Pregnancy is a unique physiological process that involves significant anatomical, hormonal, and cardiovascular changes in the mother. Although most pregnancies progress normally, some women may develop complications that can affect both maternal and fetal health. Hypertensive disorders are among the important complications of pregnancy and remain a major cause of maternal and perinatal morbidity and mortality. Pregnancy-induced hypertension (PIH) can lead to serious complications when it is not identified and managed at an early stage.

Pregnancy-induced hypertension generally refers to the development of elevated blood pressure during pregnancy. It may range from mild hypertension to severe conditions associated with complications affecting multiple organ systems. If left untreated or inadequately managed, PIH may progress to severe maternal complications and may also affect fetal growth and well-being. Therefore, early identification of women who are at risk and timely antenatal care are essential for preventing adverse outcomes.

Several factors may predispose women to the development of pregnancy-induced hypertension. Maternal characteristics and pregnancy-related factors such as advanced maternal age, primigravida status, previous history of hypertension during pregnancy, family history of hypertension, obesity, multiple pregnancy, and other associated health conditions may increase the risk. Awareness of these predisposing factors can help antenatal mothers recognize their susceptibility and seek appropriate medical care.

Knowledge among antenatal mothers plays an important role in promoting maternal health and preventing complications. Adequate knowledge regarding the factors associated with PIH may encourage women to attend regular antenatal check-ups, follow the advice of healthcare professionals, and recognize the importance of early screening and monitoring. Conversely, inadequate knowledge may result in poor awareness of risk factors and delayed identification of potential complications.

Antenatal care provides an important opportunity to educate mothers regarding pregnancy-related complications and their prevention. Nurses and other healthcare professionals have a significant role in providing appropriate information regarding PIH, its predisposing factors, and the importance of regular monitoring. Assessing the existing level of knowledge among antenatal mothers is therefore necessary to identify gaps in understanding and plan appropriate educational interventions.

With this background, the present study was undertaken to assess the level of knowledge regarding the predisposing factors of pregnancy-induced hypertension among antenatal mothers at a selected hospital in Puducherry and to determine its association with selected demographic variables.

AIM

To assess the level of knowledge regarding the predisposing factors of pregnancy-induced hypertension among antenatal mothers at a selected hospital, Puducherry.

MATERIAL AND METHODS

A quantitative research approach with a descriptive research design was adopted. The study was conducted at Sri Manakula Vinayagar Medical College and Hospital, Puducherry. The accessible population comprised antenatal mothers attending the antenatal outpatient department. A total of 50 antenatal mothers were selected using a convenient sampling technique. Antenatal mothers who were willing to participate, had a gestational age of 20 weeks or above, and could understand Tamil or English were included. Mothers diagnosed with medical or obstetric complications other than PIH and those unwilling to participate during data collection were excluded.

Data were collected using a structured questionnaire consisting of demographic variables and knowledge questions related to the predisposing factors of pregnancy-induced hypertension. Knowledge scores were categorized as adequate (>75%), moderate (50–75%), and inadequate (<50%). Descriptive statistics were used to summarize demographic variables and knowledge levels, while the Chi-square test was used to determine associations with selected demographic variables.

RESULT

Table 1 presents the demographic characteristics of the antenatal mothers. Table 2 shows that most antenatal mothers had moderate knowledge regarding the predisposing factors of pregnancy-induced hypertension, while the remaining mothers had adequate knowledge, and none had inadequate knowledge. Table 3 shows that area of residence was significantly associated with the level of knowledge, whereas the other selected demographic variables showed no significant association.

DISCUSSION

The present study assessed the level of knowledge regarding the predisposing factors of pregnancy-induced hypertension among 50 antenatal mothers. The findings revealed that 40 (80%) antenatal mothers had moderate knowledge, whereas 10 (20%) had adequate knowledge. None of the participants had inadequate knowledge. This finding indicates that most antenatal mothers possessed a moderate level of awareness regarding the predisposing factors of pregnancy-induced hypertension, highlighting the need for further antenatal education to improve their knowledge.

Regarding the demographic characteristics, the majority of antenatal mothers were below 20 years of age (42%), had secondary education (48%), belonged to nuclear families (64%), and were residing in urban areas (64%). Most participants were primigravida (60%) and followed a non-vegetarian diet (60%).

The association analysis revealed that area of residence had a statistically significant association with the level of knowledge ($\chi^2 = 9.149$, $df = 3$, $p = 0.027$). The other selected demographic variables did not show a statistically significant association with the level of knowledge.

CONCLUSION

The study concluded that most antenatal mothers had moderate knowledge regarding the predisposing factors of pregnancy-induced hypertension, while a smaller proportion had adequate knowledge and none had inadequate knowledge. Area of residence was significantly associated with the level of knowledge. The findings highlight the importance of focused antenatal education to improve awareness regarding the predisposing factors and early identification of PIH.

RECOMMENDATION

Similar studies may be conducted with larger samples and in different settings. Educational interventions may be developed and evaluated to improve antenatal mothers' knowledge regarding the predisposing factors, warning signs, prevention, and early identification of pregnancy-induced hypertension.

LIMITATION

The study was limited to 50 antenatal mothers attending a single selected hospital in Puducherry and used a convenient sampling technique. Therefore, the findings may have limited generalizability to other settings and populations.

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Table 1. Frequency and Percentage Distribution of Selected Demographic Variables of Antenatal Mothers (N = 50)

S. No.	Demographic Variable	Options	Frequency	Percentage
1	Age of mother	Below 20 years	21	42%
		20–25 years	14	28%
		26–30 years	12	24%
		Above 30 years	3	6%
2	Educational status	No formal education	6	12%
		Primary education	11	22%
		Secondary education	24	48%
		Graduate and above	9	18%
3	Occupation of mother	Housewife	21	42%
		Daily wage worker	18	36%
		Private employee	11	22%
		Government employee	3	6%
4	Religion	Hindu	27	54%
		Muslim	9	18%
		Christian	13	26%
		Others	1	2%
5	Type of family	Nuclear family	32	64%
		Joint family	16	32%
		Extended family	1	2%
		Single-parent family	1	2%
6	Monthly family income	Below ₹10,000	16	32%
		₹10,001–20,000	19	38%
		₹20,001–30,000	13	26%
		Above ₹30,000	2	4%
7	Area of residence	Urban	32	64%
		Rural	9	18%
		Semi-urban	7	14%
		Slum area	2	4%
8	Parity/gravida	Primigravida (G1)	30	60%
		Gravida 2	18	36%
		Gravida 3	2	4%
		Gravida 4 and above	0	0%
9	Food pattern	Vegetarian	20	40%
		Non-vegetarian	30	60%

Table 2. Frequency and Percentage Distribution of the Level of Knowledge Regarding the Predisposing Factors of Pregnancy-Induced Hypertension Among Antenatal Mothers (N = 50)

S. No.	Level of Knowledge	Frequency	Percentage (%)
1	Adequate knowledge	10	20
2	Moderate knowledge	40	80
3	Inadequate knowledge	0	0

Table 3. Significant Association Between the Level of Knowledge Regarding the Predisposing Factors of Pregnancy-Induced Hypertension and Selected Demographic Variables (N = 50)

Variable	Adequate Knowledge n	Moderate Knowledge n	Inadequate Knowledge n (%)	χ^2 value	df	p-value
Area of residence				9.149	3	0.027*
Urban	5 (10)	27 (54)	0 (0)			
Rural	1 (2)	8 (16)	0 (0)			
Semi-urban	2 (4)	5 (10)	0 (0)			
Slum area	2 (4)	0 (0)	0 (0)			

*Significant at $p < 0.05$.

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