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Research Article

A Descriptive Study to Assess the Prevalence and Treatment Adherence of Hypertension, Gestational Diabetes Mellitus, and Thyroid Disorders Among Pregnant Women Attending a Selected Government Urban Primary Health Centre, Sakthi Nagar.

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Abstract:

Introduction: Hypertensive disorders, gestational diabetes mellitus, and thyroid abnormalities are frequently encountered during pregnancy and may adversely affect the health of both mother and fetus if they remain undetected or inadequately controlled. **Aim:** To determine the prevalence of hypertension, gestational diabetes mellitus, and thyroid disorders and assess treatment adherence among pregnant women. **Methods:** A quantitative descriptive research design was employed. The study included 50 antenatal mothers diagnosed with hypertension, gestational diabetes mellitus, or thyroid disorders who were recruited through purposive sampling at a Government Urban Primary Health Centre, Sakthi Nagar, Chennai. Data were gathered using a structured tool. Descriptive and inferential statistical techniques were applied for analysis. **Results:** Hypertension was identified in 19 (38%) participants, making it the most frequently observed condition, followed by thyroid disorders in 7 (14%) and gestational diabetes mellitus in 6 (12%). Eighteen (36%) participants had none of the specified disorders. Treatment adherence was poor among 46 (92%) participants, while 4 (8%) showed moderate adherence; no participant demonstrated good adherence. **Conclusion:** The findings indicate a considerable burden of hypertension and inadequate treatment adherence, emphasizing the importance of individualized antenatal education, regular counselling, reminders, and family involvement to strengthen adherence and support safer pregnancy outcomes.

Keywords: Hypertension, Gestational diabetes mellitus, Thyroid disorders, Pregnancy, Treatment adherence, Antenatal care.

INTRODUCTION

Pregnancy is accompanied by significant physiological and hormonal changes that predispose women to noncommunicable conditions such as hypertension, gestational diabetes mellitus, and thyroid disorders. Globally, hypertensive disorders complicate approximately 5-10% of pregnancies, gestational diabetes mellitus affects nearly 7-25%, and thyroid dysfunction affects 10-15% of pregnant women, depending on the population and diagnostic criteria used. These conditions remain among the leading contributors to maternal morbidity, preterm birth, low birth weight, and neonatal complications worldwide.

In India, urbanization, sedentary lifestyles, delayed childbearing, and changing dietary patterns have increased the burden of hypertension, gestational diabetes mellitus, and thyroid disorders during pregnancy. Government Urban Primary Health Centres play an important role in screening and managing high-risk pregnancies. Poor adherence to medication, dietary advice, and follow-up may increase pregnancy-related complications. Therefore, assessing the prevalence of these disorders and treatment adherence is essential for improving antenatal care and planning effective nursing interventions.

AIM

To assess the prevalence of hypertension, gestational diabetes mellitus, and thyroid disorders, and to evaluate the level of treatment adherence, among pregnant women attending a selected Government Urban Primary Health Centre, Sakthi Nagar.

METHODOLOGY

A quantitative research approach with a non-experimental descriptive design was adopted to assess the prevalence and treatment adherence of hypertension, gestational diabetes mellitus, and thyroid disorders among pregnant women. The study was conducted at a Government Urban Primary Health Centre, Sakthi Nagar, Chennai, Tamil Nadu. Fifty antenatal mothers diagnosed with hypertension, gestational diabetes mellitus, or thyroid disorders, and who met the inclusion criteria and consented to participate, were selected using a nonprobability purposive sampling technique.

Data were collected using a structured questionnaire comprising three sections: demographic and obstetric variables, a clinical assessment checklist recording diagnosis and duration of illness, and a self-structured 20-item Treatment Adherence Scale. Content validity was established through review by a panel of nine experts (CVI = 0.92), and reliability was confirmed using Cronbach's alpha ($\alpha = 0.88$).

Prior ethical clearance was obtained from the Institutional Ethics Committee, and written informed consent was obtained from all participants; confidentiality and anonymity were maintained throughout data collection.

Data were analysed using descriptive statistics (frequency and percentage) and inferential statistics (Chi-square test) to determine the association between the level of treatment adherence and selected demographic variables.

RESULT

Among the 50 pregnant women included in the study, 58% were aged 18–25 years, 32% were 26–30 years, and 10% were above 30 years. More than half of the participants were Hindus (56%), while 68% had higher educational qualifications. The majority were homemakers (62%). Regarding monthly family income, 38% each belonged to the ₹10,000–20,000 and above ₹20,000 categories. Most participants lived in nuclear families (62%), and all participants (100%) were from urban areas. In terms of gravida, 64% were primigravida (Table 1).

Among the selected pregnancy-related disorders, hypertension had the highest prevalence, affecting 19 (38%) participants, followed by thyroid disorders in 7 (14%) and gestational diabetes mellitus in 6 (12%). Eighteen (36%) participants did not have any of the three specified conditions. Among those diagnosed with a disorder, 66% had received the diagnosis within the preceding three months, whereas 32% had been diagnosed 3–6 months earlier (Table 2).

Treatment adherence was poor in 46 (92%) participants, while 4 (8%) demonstrated moderate adherence. None of the participants achieved a good adherence level. Regarding individual adherence practices, 100% reported stopping medication when they felt better or experienced side effects. Forgetting medication was reported by 76%, and 52% did not consistently follow the prescribed dietary recommendations. However, 54% attended follow-up appointments regularly (Table 3).

The association between treatment adherence and selected demographic characteristics was not statistically significant for age ($\chi^2 = 0.923$, $p = 0.630$), religion ($\chi^2 = 1.475$, $p = 0.478$), educational status ($\chi^2 = 0.098$, $p = 0.754$), occupation ($\chi^2 = 1.538$, $p = 0.464$), monthly family income ($\chi^2 = 0.360$, $p = 0.835$), family type ($\chi^2 = 2.665$, $p = 0.103$), or gravida status ($\chi^2 = 2.665$, $p = 0.103$). Since all participants were urban residents, an association with place of residence could not be assessed. Overall, none of the examined demographic variables showed a statistically significant relationship with treatment adherence.

DISCUSSION

In the present study, hypertension was the most prevalent disorder (38%), followed by thyroid disorders (14%) and gestational diabetes mellitus (12%). Similar patterns have been reported by Patel et al. (2020), Verma et al. (2020), and Sharma and Gupta (2021), highlighting the importance of routine antenatal screening, particularly blood pressure monitoring.

Treatment adherence was poor in 92% of mothers, with none demonstrating good adherence. All participants reported stopping medication when they felt better or experienced side effects, while 52% did not follow the recommended diet consistently. In contrast, Sharma et al. (2022) and Ramesh et al. (2021) reported better adherence with structured counselling and regular follow-up. The limited counselling (38%) and disease monitoring (44%) in the present study may have contributed to poor adherence.

No significant association was found between treatment adherence and age, education, occupation, income, family type, or gravida status. Lack of awareness (36%) and forgetfulness (32%) were common barriers. Since 74% of mothers preferred SMS or telephone reminders and 62% reported family support, structured counselling, reminder systems, and family involvement may help strengthen treatment adherence among high-risk antenatal mothers.

CONCLUSION

The study concluded that hypertension, gestational diabetes mellitus, and thyroid disorders are prevalent among pregnant women attending the selected Government Urban Primary Health Centre, with hypertension being the most common. Treatment adherence was predominantly poor, driven largely by forgetfulness, discontinuation of medication after symptom relief or side effects, and inconsistent dietary compliance, rather than by any of the demographic characteristics studied. Strengthening antenatal counselling, structured health education, and reminder based follow-up systems may help improve treatment adherence and reduce the risk of pregnancy-related complications associated with these disorders.

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Table 1: Frequency and percentage distribution of demographic variables of the pregnant women. (N = 50)

Demographic Variables	F	%
Age (in years)		
18-25	29	58.0
26-30	16	32.0
Above 30	5	10.0
Religion		
Hindu	28	56.0
Muslim	14	28.0
Christian	8	16.0
Educational Status		
Secondary education	16	32.0
Higher education	34	68.0
Occupation		
Homemaker	31	62.0
Employed	12	24.0
Self-employed	7	14.0
Family Monthly Income		
< ₹10,000	12	24.0
₹10,000-20,000	19	38.0
Above ₹20,000	19	38.0
Family Type		
Nuclear family	31	62.0
Joint family	19	38.0
Place of Residence		
Urban	50	100.0
Gravida Status		
First pregnancy	32	64.0
Multiple pregnancies	18	36.0

Table 2: Frequency and percentage distribution of the conditions diagnosed among pregnant women during the current pregnancy. (N = 50)

Condition diagnosed during current pregnancy	F	%
Hypertension	19	38.0
Gestational Diabetes Mellitus	6	12.0
Thyroid Disorder	7	14.0
None of the above	18	36.0

Table 3: Frequency and percentage distribution of the level of treatment adherence among pregnant women with hypertension, gestational diabetes mellitus, or thyroid disorders. (N = 50)

Level of Treatment Adherence	F	%
Poor treatment adherence (20-33)	46	92.0
Moderate treatment adherence (34-46)	4	8.0
Good treatment adherence (47-60)	0	0.0

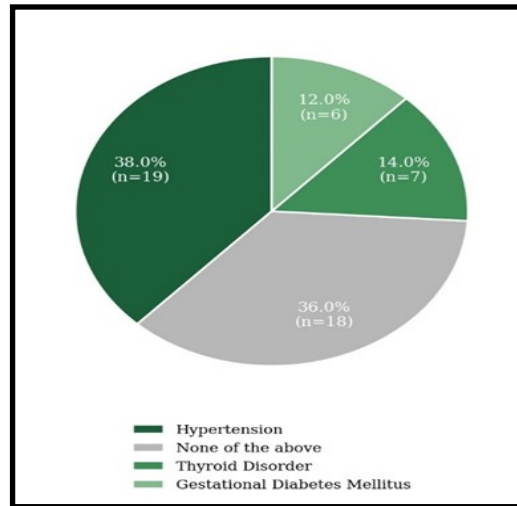


Figure 1: Prevalence of conditions diagnosed among pregnant women (N=50)

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