

Iron Folic Acid Tablet Adherence And Perceived Symptoms of Primigravida Mothers: A Descriptive Study

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ABSTRACT

Background: Iron and folic acid (IFA) supplements are vital during pregnancy, particularly for primigravida mothers to prevent anaemia and support healthy fetal development. Adherence to these supplements ensures adequate iron is stored and reduces the risk of complications such as low birth weight, preterm delivery and neural tube defects. However, adherence can be affected by factors like perceived side effects, lack of knowledge and inconsistent counselling from healthcare providers. This study explores the adherence patterns among primigravida mothers, alongside the symptoms they report while taking IFA supplements to provide insights that can enhance prenatal care and improve maternal health outcomes.

Objectives: The study's main objectives were to assess the levels of adherence to Iron folic acid tablet and perceived symptoms among primi gravida mothers, examine their correlation and identify associations with demographic variables.

Materials and Methods: The present study uses a Probability Simple random sampling technique and the researcher adopted a non-experimental descriptive research design with 60 samples. The tools include Socio-Demographic data, the Morisky Medication Adherence Scale and the Memorial Symptom Assessment Scale.

Results: The findings revealed that 76.67% exhibited good adherence, while 80% reported mild symptoms. A significant negative moderate correlation was found indicating that increased adherence scores were associated with decreased symptom scores. Additionally, mothers over 25 years old were aware of anaemia's complications in low-birth-weight babies and informed about iron-rich foods showed better adherence. Statistical significance was assessed using the chi-square test.

Conclusion: The study concluded that primigravida mothers' adherence to iron-folic acid supplementation

was influenced by their knowledge, perceived side effects and the quality of healthcare counselling they received. Improved education on the importance of supplementation and addressing concerns regarding side effects can significantly enhance adherence. This will contribute to better maternal and fetal health outcomes by ensuring proper nutrient intake during pregnancy.

Keywords: Iron Folic acid tablet, Adherence, Symptoms Perceived, Primigravida Mothers, Primary health centre.

Introduction

Iron and folic acid (IFA) supplementation plays a crucial role in ensuring the health of both the mother and the developing foetus during pregnancy. Iron is essential for producing haemoglobin which helps in transporting oxygen to tissues, while folic acid helps in the development of the neural tube in the foetus preventing neural tube defects. For primigravida mothers (those pregnant for the first time), the need for these supplements is particularly vital as their bodies are adjusting to the new demands of pregnancy.

Despite the recognized benefits, adherence to IFA supplements remains a challenge for many pregnant women especially primigravida mothers. Non-adherence can result from a variety of factors including lack of knowledge, forgetfulness or the perception that the supplements cause uncomfortable side effects. Addressing these barriers is important to improve maternal health outcomes, as failure to take these supplements can lead to iron deficiency anaemia which poses risks to both the mother and the baby.

Primigravida mothers are at a unique point in their lives, navigating pregnancy for the first time often without prior personal experience to guide them. This makes them more vulnerable to misinformation or misunderstandings about the importance of adhering to prescribed supplements. Healthcare providers play a critical role in educating these mothers about the necessity of IFA supplements and guiding them through the common side effects, such as nausea or constipation which can be managed with proper care.

Research has shown that women who receive proper counselling from healthcare providers regarding the benefits of IFA supplementation are more likely to adhere to the regimen. In contrast, those who are inadequately informed or have negative perceptions about the supplements tend to be less consistent in their intake. This underlines the importance of effective communication and education in prenatal care, particularly for first-time mothers.

Understanding the barriers to IFA adherence is essential for designing effective interventions. Studies indicate that combining educational efforts with practical solutions, such as making the supplements more accessible and addressing common side effects, can significantly improve adherence rates. Tailoring these efforts to meet the specific needs of primigravida mothers is key to ensuring both maternal and foetal health.

Improving adherence to iron and folic acid supplements among primigravida mothers requires a multifaceted approach. Healthcare providers must offer clear, consistent education, address concerns about side effects, and ensure that mothers have access to the supplements. By doing so, they can significantly reduce the risks associated with iron deficiency anaemia and other complications, leading to healthier pregnancies and better outcomes for both mothers and their babies.

Materials and methods.

A non-experimental descriptive research design was chosen to describe and analyse the levels of adherence to iron folic acid and symptoms perceived by the primi mothers. The study was conducted

among Primigravida mothers at a selected primary health centre, Choolai, Chennai. The data collection took place in 4 weeks

The study was conducted among Primigravida mothers at a selected primary health centre, Choolai, Chennai which met the inclusion criteria at the time of study.

Sample size

In this study, sample size consists of 60 Primigravida mothers attending antenatal OPD at Choolai Urban Primary Health Centre, Chennai.

The sample size was calculated based on Christine Nimwesiga et al previous study Adherence to Iron and Folic Acid Supplementation percentage of 22.37 % with 95% confidence limit and 48% of relative precision of estimate using the following formula.

$$\text{Formula for sample calculation} = \frac{(z)^2 \times (1 - p)}{(p) \times (e)^2}$$

Z=1.96= 5% level, p=22.37%, e=48%

Sample size (N) = $(1.96)^2 \times (1 - 0.2237) / 0.2237 \times (0.48)^2 = 58 = 60$ primi mothers

Content validity was established by experts from Nursing and obstetricians, who suggested certain modifications to the tool. After the modifications, they agreed on this tool for assessment. Reliability was assessed using Cronbach's alpha method, yielding a coefficient 0.7, which indicated high reliability. A Probability Simple random sampling technique was selected based on the research objectives.

Ethical consideration

The study was carried out after obtaining ethical clearance from the ethical committee (No. IEC-MMC/Approval/44042023), and the city health officer, Greater Chennai Corporation and the Medical officer of Choolai Urban Primary Health Centre. Participants are informed about the study's goal, and informed consent was secured. The confidentiality of participants' data was upheld consistently, and their choice to withdraw from the study at any moment was acknowledged.

DATA COLLECTION PROCEDURE AND STATISTICAL ANALYSIS

Samples would be selected by the Probability lottery method. The purpose of the study would be explained to the participant. Informed consent was obtained from the participants. Structured interview questionnaires will be administered to study participants; it took 10-15 minutes.

Demographic variables in categorical/dichotomous were given in frequencies with their percentages. Scores were given in mean and standard deviation. The association between medication adherence and Perceived symptoms among Primigravida mothers scores with demographic variables were analyzed using the Chi-square test. Multiple bar diagrams and simple bars were used to represent the data. A p-value of ≤ 0.05 was considered statistically significant, and two-tailed tests were used for testing significance. Statistical analysis was carried out using the Statistical Package for Social Sciences (version 22).

Results

Demographic Characteristics of Primigravida mothers

A majority of primi mothers are aged 21-25 years (40.00%), followed by 26-30 years (33.33%). Most

mothers have 9-12 years of education (40.00%), with 36.67% had more than 14 years. The majority are homemakers (90.00%), with only 10.00% employed. The predominant religion is Hinduism (88.33%). Most reside in urban areas (93.33%). A small percentage reported a history of stillbirth (1.67%), while 25.00% have a history of abortion. The majority are in their second trimester (51.67%). Most are informed about anaemia (65.00%). Awareness of the cause of anaemia shows that 55.00% attribute it to imbalanced nutrition. The most recognized clinical sign of anaemia is decreased working capacity/tiredness (48.33%). Delivery complications are noted as a major complication of anaemia by 50.00%. Iron-rich food intake is the most recognized prevention method for anaemia (56.67%). Awareness of iron-rich foods is high for legumes and green leafy vegetables (70.00%). Tea and coffee are identified as major inhibitors of iron absorption by 60.00%.

Medication adherence

TABLE 1: LEVEL OF MEDICATION ADHERENCE SCORE

Level of Adherence	Number of primi mothers	%
Good	46	76.67%
Moderate	14	13.33%
Poor	0	0.00%
Total	60	100.0%

The above table shows the adherence score among primi mothers. 76.67% of them had a good level of adherence, 13.33% of them had a moderate level of adherence and none of them had a poor level of adherence score.

Perceived symptoms

TABLE 2: LEVEL OF PERCEIVED SYMPTOMS SCORE

LEVEL OF SYMPTOMS	NUMBER OF PRIMI MOTHERS	%
No symptoms	12	20.00%
Low	48	80.00%
Moderate	0	0.00%
High	0	0.00%
Total	60	100.0%

The above table shows the symptom score among primi mothers. 20.00% of them had no symptoms 80.00% of them had a mild level of symptoms score, and none of them had a moderate and high level of symptoms score.

Table 3: Correlation between the level of medication adherence and perceived symptoms.

VARIABLES	MEAN	SD	PEARSON CORRELATION COEFFICIENT	INTERPRETATION
Medication Adherence Score	3.28	2.21	r=- 0.43 P=0.05*	There was a significant negative, moderate correlation
Perceived symptoms Score	0.82	0.65		

				between adherence score and symptom score. It means their adherence score increases their symptoms score decreases moderately
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There was a significant negative, moderate correlation between adherence score and symptom score. It means their adherence score increases their symptoms score decreases moderately

DISCUSSION

Medication adherence score among primi mothers.

76.67% of them had a good level of adherence, 13.33% of them had a moderate level of adherence and none of them had a poor level of adherence score.

Perceived symptom score among primi mothers.

20.00% of them had no symptom, 80.00% of them had a mild level of symptoms score, and none of them had a moderate and high level of symptoms score.

Correlation between the level of medication adherence and Perceived symptoms.

There was a significant negative, moderate correlation between adherence score and symptom score. It means their adherence score increases their symptoms score decreases moderately

The association with demographic variables.

>25 years, awareness of complications of anaemia in LBW babies and awareness about iron-rich food primi mothers had more good adherence. Awareness about the prevention of anaemia (iron-rich food intake), Awareness about the prevention of anaemia (IFAS tablet intake) and awareness about iron-rich food (Red and organ meat) primi mothers had no symptoms score than others. Statistical significance was calculated using the chi-square test.

CONCLUSION:

The study underscores the critical importance of awareness and education in improving adherence to iron-folic acid supplementation among primigravida mothers. The findings indicate that factors such as maternal knowledge about anaemia and its complications, along with access to healthcare resources, significantly influence adherence levels. By highlighting these associations, the research emphasizes the need for targeted educational interventions to raise awareness among pregnant women about the benefits of iron-folic acid supplementation and the risks associated with anaemia.

In conclusion, addressing the gaps in knowledge and access to information about anaemia prevention is essential for improving adherence to iron-folic acid supplementation. The study's findings call for the implementation of comprehensive educational programs and increased healthcare engagement to support primigravida mothers. By fostering awareness and providing continuous support, healthcare systems can enhance adherence rates, ultimately leading to healthier pregnancies and improved maternal and infant health outcomes.

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