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Knowledge, Attitude and Practice (KAP) Study on Iron–Folic Acid Supplementation in Pregnancy: A Case–Control Study

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Abstract

Background: Despite national programs in India distributing IFA tablets, maternal anemia persists due to gaps in knowledge, attitudes, and practices (KAP). **Objective**: Compare KAP regarding IFA supplementation between anemic (cases) and non-anemic (controls) pregnant women.

Methods: Case–control study at a tertiary hospital, n = 400 pregnant women (Hb < 11 g/dL = cases, ≥ 11 g/dL = controls). Structured pre-tested questionnaire assessed KAP. Chi-square and logistic regression; $p < 0.05$ significant.

Results: Knowledge adequate in 68% of cases vs. 84% of controls ($p < 0.01$); positive attitude in 60% vs. 78% ($p < 0.05$); regular intake in 42% vs. 70% ($p < 0.001$). Side effects (35%), forgetfulness (22%), and lack of counselling (18%) were main barriers. Women with good knowledge had ~5× higher odds of compliance (aOR ≈ 5.4) similar to recent Indian data.

Conclusion: Significant KAP gaps exist among anemic women. Enhancing counselling, minimizing side effects, and promoting early ANC can improve compliance.

Keywords: Anemia, Crucial, Misconceptions.

Introduction

Iron deficiency anemia contributes to nearly 40– 50% of maternal morbidity worldwide. In India, despite free distribution of IFA tablets under national programs, compliance remains poor. KAP studies provide insights into barriers and facilitators of IFA consumption. This study aimed to assess KAP regarding IFA use in pregnancy and compare between anemic and non-anemic women. Maternal iron deficiency anemia remains prevalent globally. Even when supplements are provided, adherence is suboptimal due to sociocultural beliefs, poor awareness, and side effects. Recent studies from India and Ethiopia show that knowledge and counselling are strongly associated with compliance.

Methods

Study Design: Hospital-based case–control

Sample: 200 cases (Hb < 11 g/dL), 200 controls (Hb ≥ 11 g/ dL)

Instrument: Pre tested Structured questionnaire on KAP adapted from validated tools, piloted locally

Data analysis: Descriptive statistics, chi-square test, p-value <0.05 considered significant

Results

Table 1: Knowledge regarding IFA supplementation

Knowledge parameter	Case (200)	Control (200)	P value
Heard about IFA importance	68%	84%	<0.01
Knows correctly daily dose	40%	62%	<0.01
Knows benefits (prevent anemia, healthy baby)	58	80	<0.001

Table 2: Attitude toward IFA supplementation

Attitude parameter	Case	Control	P -value
Believe IFA is necessary in pregnancy	60%	78%	<0.05
Concerned about side effects	44%	28%	<0.05
Motivated to continue	48%	72%	<0.01

Table 3: Practice of IFA intake

Practice parameter	Case	Control	P- value
Take IFA daily as prescribed	42%	70%	<0.001
Miss > 3 doses per week	38%	16%	<0.001
Completed >80 tablets in pregnancy	34%	66%	<0.001

Barriers to compliance

- Gastrointestinal side effects: 35%
- Forgetfulness: 22%
- Lack of counseling: 18%
- Misconceptions (“tablet increases baby’s size”):

Multivariate analysis

- Good knowledge → higher compliance (aOR ≈ 5.4)
- ≥ 4 ANC visits associated with compliance (aOR ≈ 5.7)
- Counselling improves adherence

Discussion

Our findings reflect consistent patterns in recent studies: knowledge, ANC contacts, counselling, and sociocultural factors influence IFA compliance. For instance, an Ethiopian study found that husband/family support and knowledge of anemia had strong associations with compliance (aORs 4–7×). In Puducherry, individualized education plus SMS reminders significantly increased KAP scores and Hb levels among anemic women. Based on Indian mixed-methods work, misbeliefs (e.g. “IFA

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causes big baby"), unpleasant taste/odor, and side effects undermine adherence despite physical availability.

Conclusion

Anemic pregnant women in our study had significantly lower knowledge, less favourable attitudes, and poorer practices compared to controls. Interventions like repeated individual counselling, reminder systems (e.g. telephonic/SMS), involving family support, and addressing side effects are crucial to enhance adherence and reduce anemia burden.

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