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AWARENESS OF FOLIC ACID SUPPLEMENTATION IN PREGNANCY- A QUESTIONNAIRE BASED INVESTIGATION INTO MATERNAL KNOWLEDGE.

Reshma T Rajan*	Junior Resident, Department Of Obstetrics And Gynaecology, Pushpagiri Institute Of Medical Sciences And Research Centre, Thiruvalla-689101, Kerala, India. *Corresponding Author
Varsha S. B	Junior Resident, Department Of Obstetrics And Gynaecology, Pushpagiri Institute Of Medical Sciences And Research Centre, Thiruvalla-689101, Kerala, India.
Anna Shibu	Junior Resident, Department Of Obstetrics And Gynaecology, Pushpagiri Institute Of Medical Sciences And Research Centre, Thiruvalla-689101, Kerala, India.
Smitha Oommen	Junior Resident, Department Of Obstetrics And Gynaecology, Pushpagiri Institute Of Medical Sciences And Research Centre, Thiruvalla-689101, Kerala, India.

ABSTRACT **Objective:** To assess the awareness of the necessity for folic acid supplementation and the actual consumption during the periconceptional stage to avert neural tube abnormalities. **Methods:** The study comprised a questionnaire survey administered to 100 women attending antenatal visits at the Department of Obstetrics and Gynaecology, Pushpagiri Institute of Medical Sciences and Research Centre, Thiruvalla, Kerala. The data were gathered from September 2023 to November 2023. **Results:** The study revealed that among 100 participants, 58% of women were knowledgeable about folic acid, although only 31% consumed supplements containing folic acid prior to their pregnancies. Among the 84% of women who consumed folic acid supplements during pregnancy, just 31% had taken folic acid before to conception. **Conclusion:** The survey indicated that although the majority of our respondents were aware of folic acid, the real prevalence of folic acid utilization at the proper time during the pre-pregnancy phase was not significant within our study group. A public health program or strategy to enhance pre-conceptional folic acid utilization is essential in our society.

KEYWORDS : Awareness, folic acid supplementation, pre-conceptional

INTRODUCTION

Every woman aspiring to conceive must meticulously attend to her dietary and lifestyle practices. Pregnancy care should commence at the decision to conceive, as meticulous planning during gestation reduces the likelihood of congenital defects in infants. Consequently, adequate prenatal care is essential.

One such worry pertains to the utilization of folic acid, folate, or vitamin B9, which is a water-soluble B-complex vitamin. It is a vital nutrient necessary for DNA replication and serves as a substrate for various enzyme activities related to amino acid synthesis and vitamin metabolism.[2]

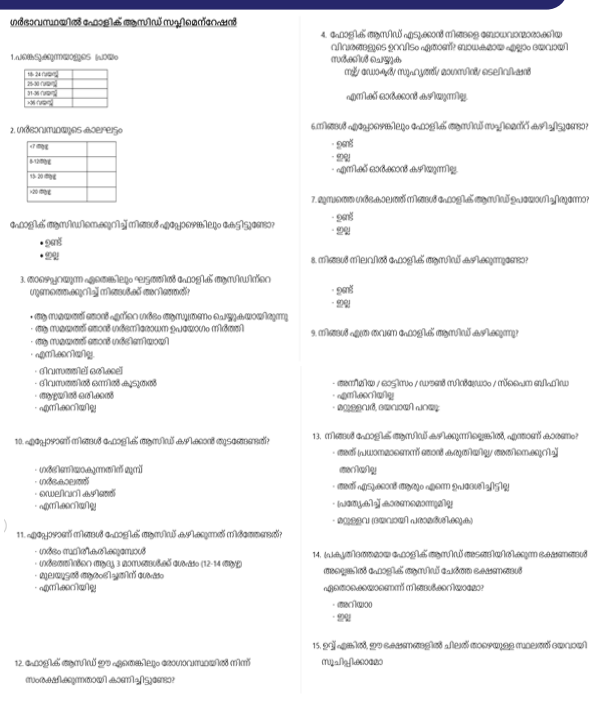
Folate requirements escalate throughout pregnancy because of its necessity for foetal growth and development. Women on antiepileptics must take a larger dose of folic acid. Folate deficiency is among the most prevalent vitamin deficits in women today. Women with insufficient folate intake during pregnancy face an increased risk of adverse pregnancy outcomes, including some congenital anomalies.

It has been linked to problems in both mothers (anaemia, peripheral neuropathy) and foetuses. Besides preventing NTD, periconceptional folic acid supplementation seems to confer additional advantages, such as the protection of congenital heart disease, cleft palate, and premature birth to some extent.[3]

Methods

The study comprised a questionnaire survey administered to 100 women who attended antenatal visits at the Department of Obstetrics and Gynaecology, Pushpagiri Institute of Medical Sciences and Research Centre, Thiruvalla, Kerala.

The data were gathered from September 2023 to November 2023.



Inclusion Criteria

Age between 18-35 years.
Antenatal women with irrespective of the period of gestation.

Exclusion Criteria

Those who did not agree to participate.
Those who came with gynaecological complaints.

RESULTS

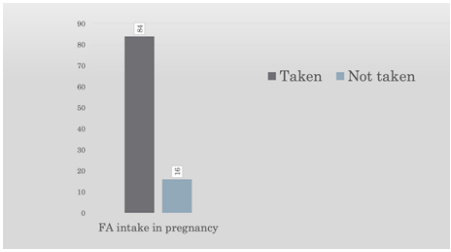


Fig. 1: percentage distribution of participants who took folic acid in pregnancy

Among the 84% of women who consumed folic acid supplements throughout pregnancy (Fig. 1), merely 31 had taken folic acid prior to conception. Among 100 participants, 58 of women were cognizant of folic acid, although only 31 consumed supplements containing folic acid prior to their pregnancies (Fig. 2).

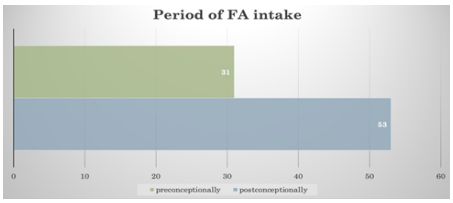


Fig. 2: distribution of participants who took folic acid pre-conceptionally and post- conceptionally.

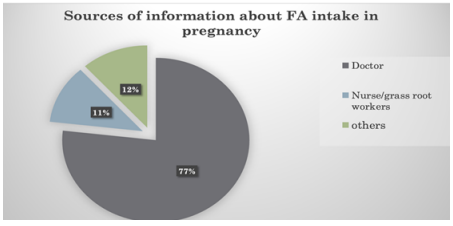


Fig. 3: sources of information about folic acid

In the current investigation, the predominant source of knowledge regarding folic acid was the attending physicians (77%). The second most prevalent source was nurses and grassroots workers (11%), whereas 12% of information originated from other sources such as media and friends (Fig. 3). While 72% of women identified leafy green vegetables as a significant source of folic acid, over half were unaware of the recommended dosage and time for folic acid supplementation.

DISCUSSION

The study revealed that among 100 participants, around 58% of women were knowledgeable about folic acid, although only 31% consumed folic acid supplements prior to their pregnancies. A study by Giselle Medawar et al. revealed that 93.9% of women consumed folic acid supplements during pregnancy, whereas only 33.6% of participants ingested folic acid before to pregnancy. Neural tube defects (NTDs) are significant congenital malformations of the neural tube that arise by the 28th day of gestation. The pre-conceptional prescription of folic acid can significantly diminish a woman's risk of conceiving a fetus with neural tube defects (NTDs). Government policy significantly influences folic acid consumption among women of reproductive age. Folic acid fortification is an economical strategy that ensures a daily intake of folic acid at an average dosage of 100 mcg, effectively diminishing the incidence of neural tube defects (NTDs). The daily need of folic acid during a normal pregnancy is 400 mcg. The daily requirement of folic acid for women with a history of abnormalities in their infants is 4 mg, and the same dosage applies to women on antiepileptic medications. The prevention of neural tube defects (NTDs) primarily relies on awareness and the utilization of folic acid supplements, in addition to antenatal screening for NTDs. Recent years have seen a heightened awareness of folic acid among women of reproductive age. [14]

In October 2009, a working group from the European Food Safety Authority (EFSA) released a paper titled Analysis of Risks and Benefits of Food Fortification with Folic Acid. The EFSA report deemed the preliminary meta-analytic analysis from the B-Vitamin Treatment Trialist's Collaboration [16] statistically inadequate for assessing cancer risk and identified the adverse effects of folic acid in individuals with vitamin B12 deficiency, including the acceleration of cognitive decline and the unintended alleviation of megaloblastic macrocytic anaemia, as insufficiently investigated. The report reiterated that the daily intake of folic acid should not surpass the recognized upper limit of 1 mg, and that uncertainty concerning elevated folic acid consumption and cancer risk necessitated national monitoring systems to evaluate total folate intake.

In the current investigation, the predominant source of knowledge regarding folic acid was the attending physicians (77%). Hei-Jen Jou et al. conducted a comparable study in which 44.4% identified their physician. Multiple additional sources were identified as reliable, including the media (12%). While 72% of women identified leafy green vegetables as a significant source of folic acid, over half were unaware of the necessary dosage for folic acid supplementation. Healthcare providers and the media must disseminate more information regarding this concern for women.

CONCLUSION

A limited percentage of women have utilized folic acid prior to their pregnancies.

Although the majority of our respondents were aware of folic acid, the actual prevalence of its use at the right time throughout the pre-pregnancy phase was low among our group. Typically, women consult a gynaecologist after becoming pregnant and once the protective period for folic acid has elapsed. Unplanned pregnancies, insufficient information, and the interval between pregnancy planning and conception may contribute to the limited utilization of pre-conceptional folic acid. A public health program or strategy to enhance pre-conceptional folic acid utilization is essential.

Conflict of Interest

There was no conflict of interest

Financial Support

There was no financial support for the study

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