

Effect of Pharmacist Intervention on Knowledge, Attitude and Practice Regarding Nutrition and Supplements in Antenatalwomen in Tertiary Health Care Center in North Kerala, India

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ABSTRACT: Pregnancy is a condition that requires extra attention. The goal of the study is to keep the mother and baby healthy throughout and after pregnancy. Since after being pregnant, the body's needs and requirements will change substantially. An important factor in the mother's and fetus healthy wellness is nutrition and supplements. Iron deficiency is the most common cause of anemia in pregnancy .

METHODS: A prospective interventional study conducted for assessing pregnant women KAP on nutrition and supplements and prevalence of anemia .Approval from an Institutional ethics committee (IEC) obtained for this study. During the study, pregnant women at 1st & 2nd trimester presenting for ANC visits ,who are willing to participate in this study will be included Informed consent will be obtained from each participant prior to the study beginning. A pre-designed and pre-tested questionnaire is used to collect data during their pre-test .The questionnaire have 3 sections . There will be 5 questions designed to assess the knowledge level of pregnant women . Meanwhile questionnaire includes 6 question to assess the attitude and 7 questions to assess dietary practice of pregnant women .Intervention of pharmacist will be done using the patient information leaflet at the first visit. Post test is scheduled after 12 weeks to pretest to assess the efficacy of the same Pretest and post test data will be compared and analysis done .From the observations recorded, the given objectives will be assessed and evaluated using suitable statistical techniques .**RESULT:** The study included 126 participants .Only a small portion of pregnant women have a positive KAP towards nutrition and supplements. From our study, Prima gravida (36%) had a higher frequency of anemia in pregnant women than multigravida (25.6%). Prevalence of anemia found to be in our study population at 50.4%.

I. BACKGROUND

All people must have a healthy lifestyle and a balanced diet in order for their bodies to function properly. The physical and hormonal changes that occur during pregnancy are numerous. Women's nutritional needs will increase during this time. However, many women do not consume enough nutrients in their diets, which can have a negative impact on both their health and the health of their unborn children. Having a good understanding of nutrition is essential to ensuring that pregnant women get enough nourishment. Women could have false beliefs and myths about what to eat. Evidence has shown that nutrition education is one of the essential elements of having a correct nutritional practice and is predictive of changes in behaviors. There is enough evidence that maternal iron deficiency anemia during early pregnancy might result in low birth weight (LBW). A risk factor for unfavorable pregnancy outcomes, maternal anemia puts the life of the unborn child in danger.

Most pregnant mothers have incorrect knowledge about nutrition and wrong opinion regarding nutrition practice. The attainment of satisfactory knowledge and practice can lead to adequate maternal nutrition, optimal maternal weight increase, and successful infant outcomes, such as suitable birth weight.¹ Prenatal nutrition education on healthy eating and living can be the ideal time to promote enough iron intake, folic acid, and other pregnancy specific nutrients. Many women are inspired to change their lifestyles during pregnancy. Since nutrition counselling by prenatal care providers has been regarded to be restricted, women have reported obtaining dietary information for themselves. Women recounted using the internet to get information. However the quality of information available on the internet can be poor and variable ²⁰Nutritional education is thought to be a key tool for encouraging a healthy lifestyle, but it has not been investigated as a factor

influencing maternal supplement use during pregnancy. These supplements included folate, calcium, vitamin D and iron. The routine use of folic acid and an individualized strategy when it comes to other vitamins and minerals is supported by a recent review of the research on supplement use during pregnancy.²

This study aims to evaluate people's attitudes, practices, and knowledge surrounding nutrition and dietary supplements. It also looks into the efficacy of an educational intervention.

II. AIMS AND OBJECTIVES

To evaluate the knowledge, attitude and practice of pregnant women on proper nutrition and supplements during pregnancy.

To investigate the effectiveness of an educational intervention on pregnant women's nutritional knowledge.

To assess the prevalence of anemia in pregnant women.

III. MATERIALS AND METHOD

STUDY DESIGN -A prospective interventional study.

STUDY SITE- Department of OBG, KMCT OBG Department Women and Child Hospital.

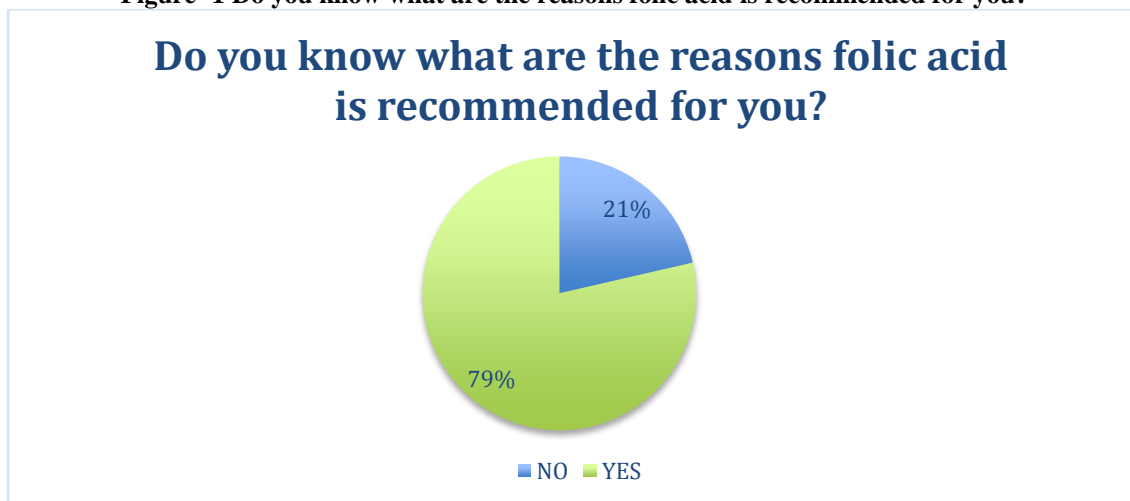
STUDY DURATION- Total duration of study was 6 months.

STUDY POPULATION Pregnant women of 1st and 2nd trimester.

SAMPLE SIZE- Greater than or equal to 126.

KNOWLEDGE

Figure- 1 Do you know what are the reasons folic acid is recommended for you?



$$n = \frac{(Z_{\alpha} + Z_{\beta})^2 SD^2}{d^2}$$

Z_{α/2}=Z value at an α error

Z_β=Z value at an β error.

SD=SD of the change in quantitative variable.

d=clinically relevant effect size (expected average change in variable to be detected).

$$n = \frac{(1.96 + 0.84)^2 (8)^2}{5} = 126$$

INCLUSION CRITERIA

Pregnant women of 1st and 2nd trimester visited OBG Department.

EXCLUSION CRITERIA

Those patients who had obstetric complications in previous pregnancies.

Those patient with CKD, ACS, Liver disease.

Those patients who were not willing to participate

IV. RESULTS

A prospective interventional study enrolled 126 patients. Data was collected from patients through data collection form and questionnaire. Data regarding knowledge, attitude and practice on nutrition and supplements was collected.

Table-2 -Weight measurement is necessary during pregnancy?

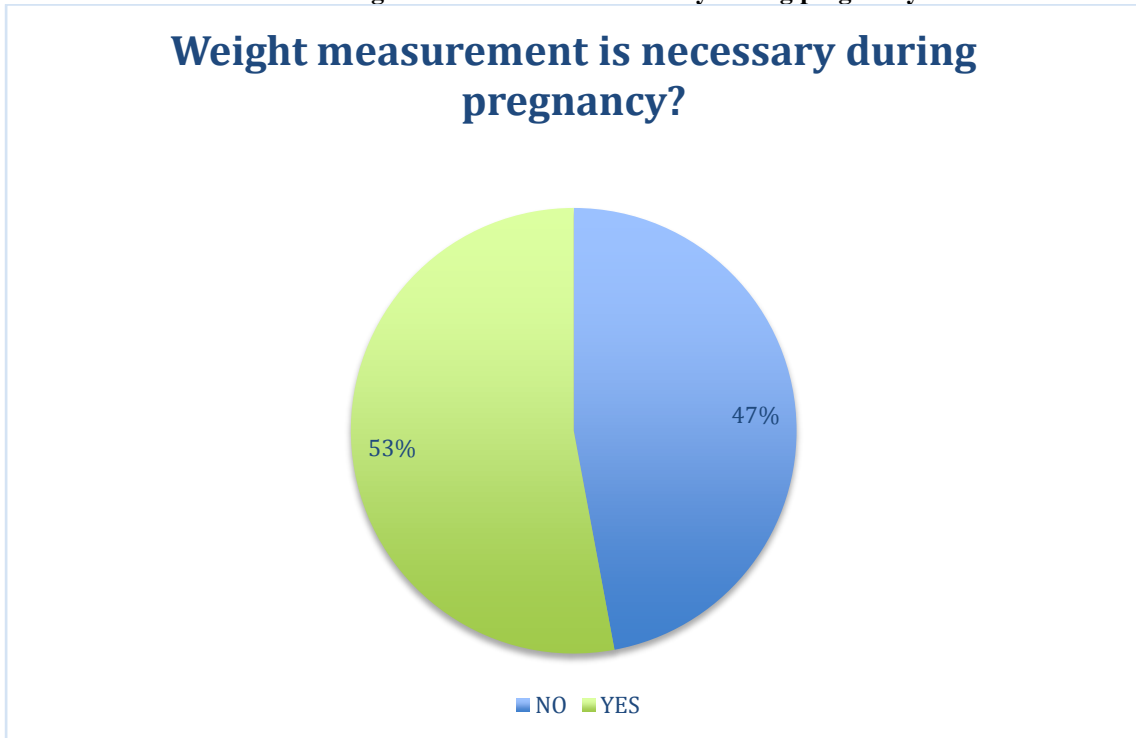
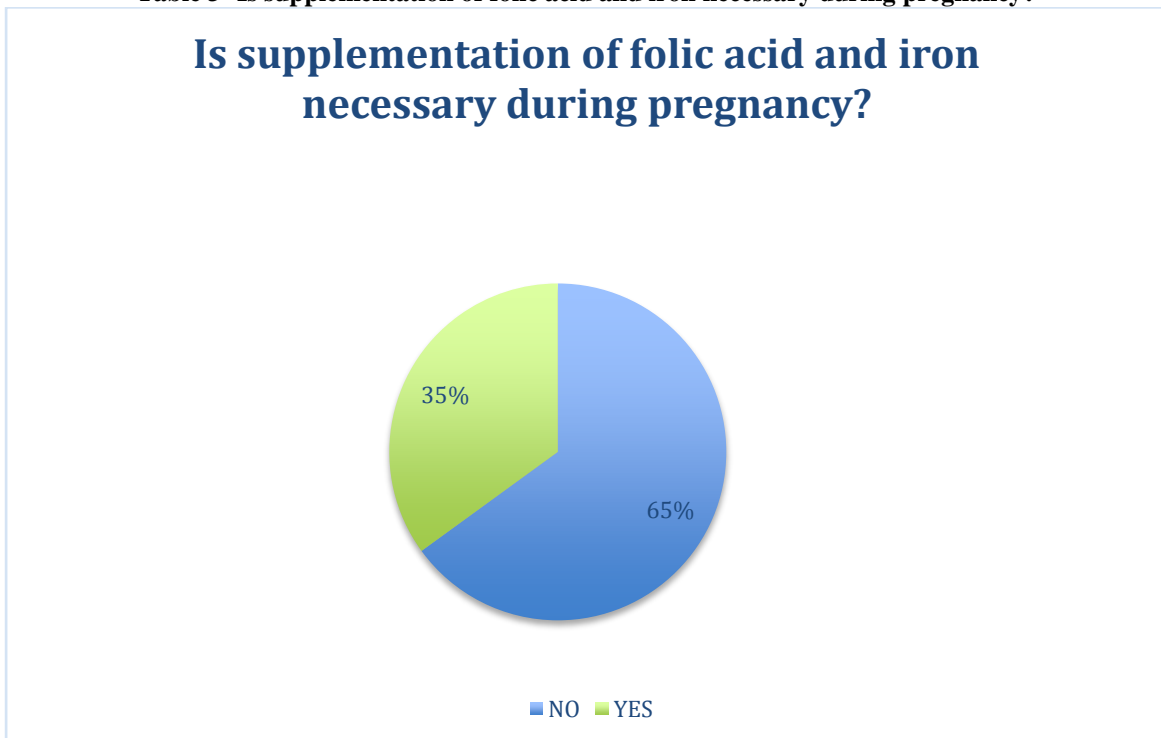


Table 3- Is supplementation of folic acid and iron necessary during pregnancy?



ATTITUDE

Table 4 -do you agree with notion that eat for two during pregnancy ?

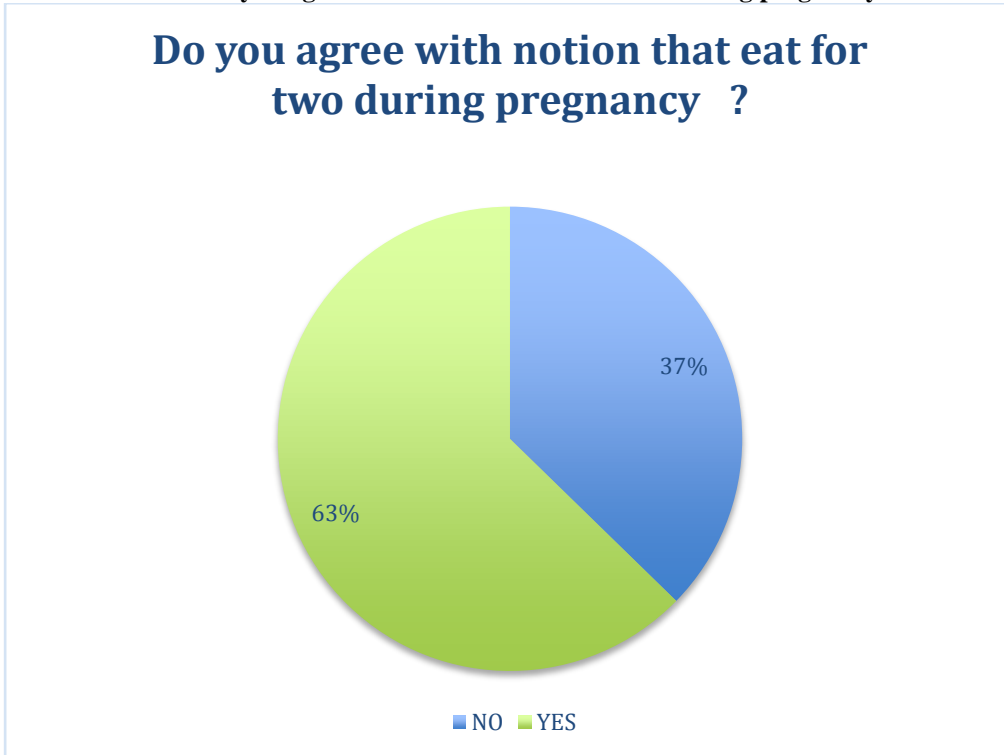
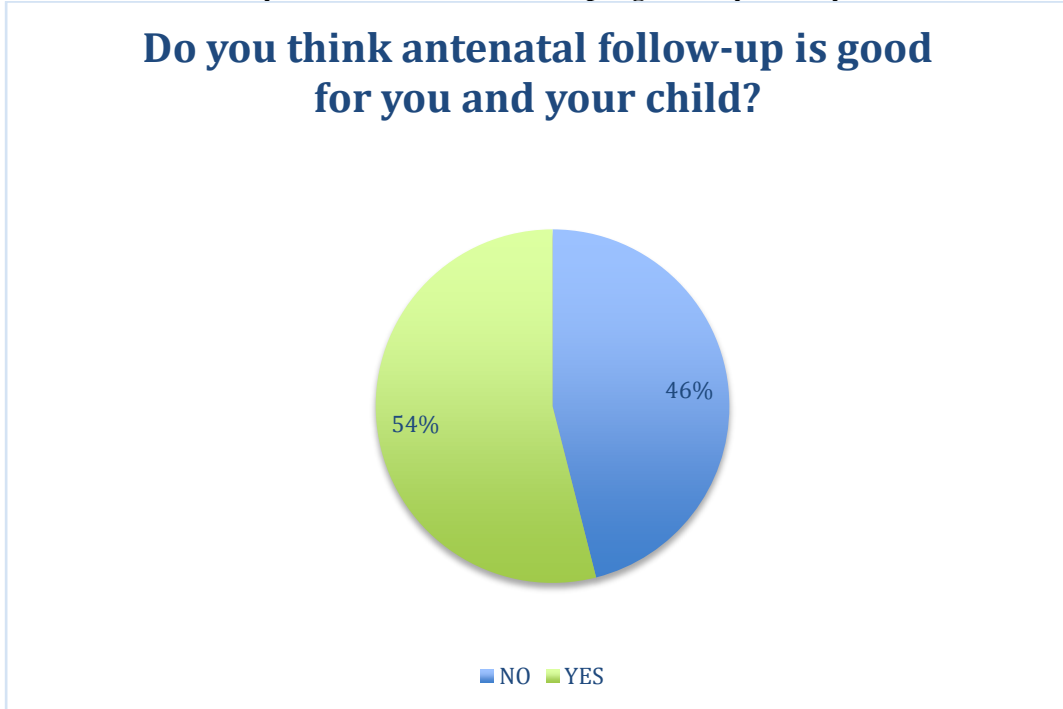


Table 5 do you think your diet is sufficient and you don't need supplements?



Table 6:- Do you think antenatal follow-up is good for you and your child?



PRACTICE

Table 7- do you check your Hb level regularly?

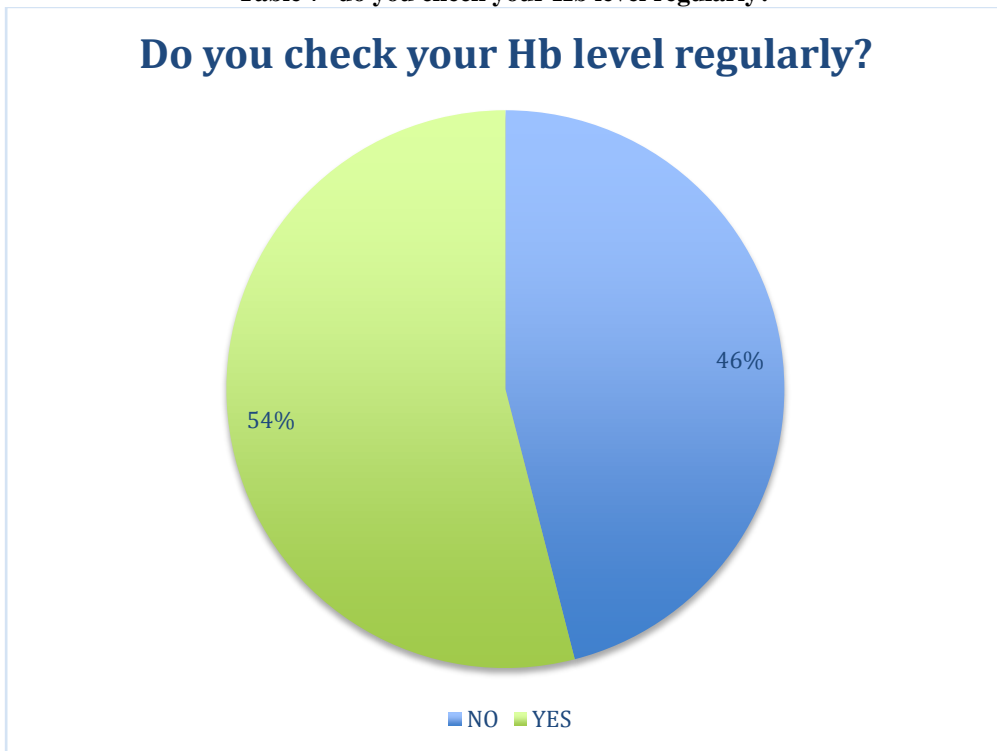


Table-8; Are you taking any natural remedies

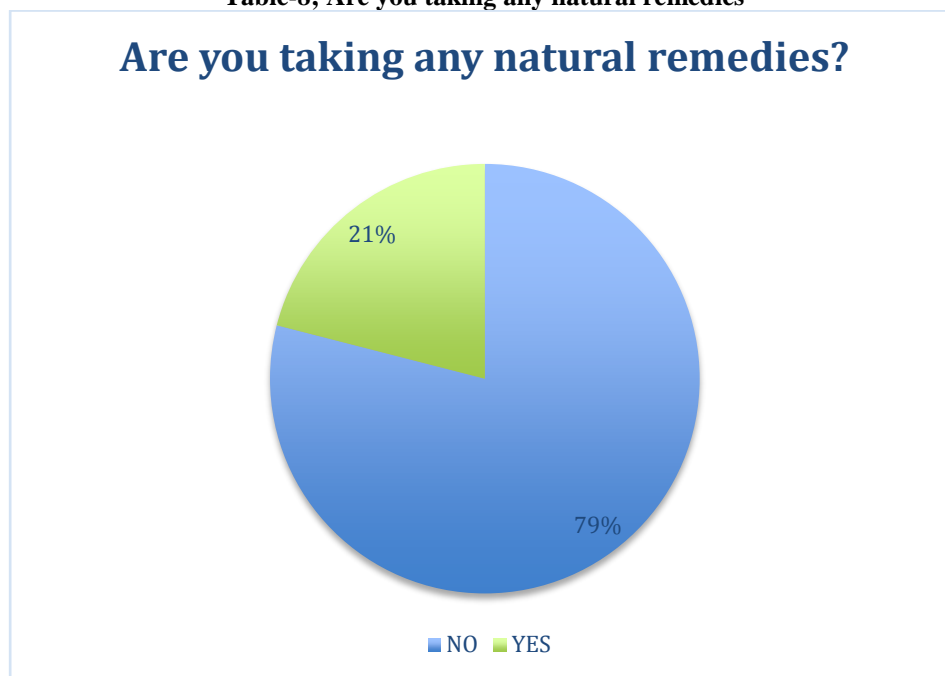


Table-10 Prevalence of Anemia

GRAVIDA	COUNTS	%
ST ₁	46	36.5%
ND ₂	45	35.7%
RD ₃	32	25.4%
TH ₄	3	2.4%

Data from our study indicates that prima gravida have a higher prevalence of anemia than multi gravida. Compared to prima gravida, multi gravida is more knowledgeable about anemia.

Consequently, it demonstrates the significance of improving monitoring and education about nutrition and supplements during pregnancy.

Summary

Weight measurement is necessary during pregnancy?	66	60
	YES	NO
Do you know about the health risk of gaining too much weight during pregnancy?	53	73
Is supplementation of folic acid and iron necessary during pregnancy?	99	27

Do you believe that physical activity is beneficial for pregnant women?	79	47
What is your opinion about the theme that "Nutrition is just so important for me and my baby ?i have to pay attention?"	113	13
Do you think you diet is sufficient and you don't need supplements?	37	89
Do you think antenatal follow-up is good for you and your child?	68	58
Are you currently breastfeeding or pumping milk?	67	59
Do you check your Hb level regularly?	68	58
Are you using any sort of iron supplements?	20	106
Has the doctor/nurse tested your BP level	39	87
Are you using any sort of calcium supplements?	16	110
Are you taking any natural remedies?	99	27
Do you follow specific dietary regimen during pregnancy?	86	40

V. DISCUSSION

The most frequent hematologic disorder in pregnancy is anaemia. Negative foetal , neonatal, and childhood outcomes are linked to maternal anaemia, however the link between the two has not been prove. Anaemia in the mother increases the chance of a blood transfusion during delivery. Iron deficiency is the most frequent cause of anaemia in pregnancy, secondly to hemodilution.

This educational intervention's implementation has a significant impact on enhancing maternal nutrition knowledge. The pregnant women were able to enhance their food and supplement intake thanks to the leaflet that was provided. The prevalence of anemia in pregnant women will also be examined in this study. The frequency of anemia among pregnant women, which was reported to be 50.4%, shows that anemia is still a serious public health issue. Gravida is a significant risk factor for developing anemia Prima gravida are observed to have a higher prevalence of anemia than multigravida. Study by Ravishankar

Suryanarayanan³ was done to estimate prevalence of anemia among pregnant women to determine its association.

In this study, a total of 81 multigravida and 45 prima gravida pregnant women were enrolled. That is, more than half of women who were pregnant had multiple births. In our study, it was discovered that the majority of pregnant women had less knowledge of the necessary nutrition and supplements to take while they were carrying. Low levels of practices were discovered for the same Wubishet Gezimu⁴ et al; also revealed that pregnant women's Knowledge, Attitude, Practice towards nutrition were low. Therefore, community nutritional education and antenatal nutritional counselling need to be strengthened. Study by Farnoush Fallah et al.⁵ revealed that awareness level of pregnant women regarding nutrition was significantly increased from 3% before intervention to 31% after the program.

Study by Ashenafi Zelelam et al⁶ to asses

effect of nutrition education on knowledge and practice of pregnant women during pregnancy. They conclude that After nutrition education program intervention, Proportion of pregnant women with knowledge on proper nutrition during pregnancy increased from 59 to 97%.

Study by Kraemer K et al.⁷ find that most pregnant women were not knowing the right time to start multi vitamin supplements, not knowing their benefits, how they contribute to the health of both baby and mother. This study suggests that there is a immediate need for awareness raising among all pregnant women, family members and providers.

Additionally, it was discovered that many pregnant women were living unhealthy lifestyles. These include eating too much fast food and not getting enough exercise, both of which can raise body weight or potentially contribute to obesity. The main factor contributing to many health risks both during and after pregnancy is obesity. So BMI is a crucial parameter to estimate body adiposity, categorized as under- weight, normal weight, over - weight or obese.

Study by Ahmmed Gaheen et al.⁸ to asses knowledge, attitude and practices among calcium intake among pregnant women showed that 76.8% of the studied women had poor knowledge while 23.2 had fair knowledge about calcium intake. The result also showed that 60.4% of the studied women had negative attitude and 39.6% of them had positive attitude towards calcium intake.

Study by Abdulbari Bener et al⁹. showed that 53.7% of them heard of folate. Overall, 20.3% of the respondent took folic acid. Awareness and use of folic acid was less prevalent. Similar study by Lidia Ghirmai¹⁰ in resulted in a significant increase on the mean score of their knowledge from 29.01 to 42.73. However, the score declined significantly from immediate after intervention to 6 week follow-up by 1.79. The pregnancy specific dietary specific score at 6 week follow up (M=13.13) was significantly higher than that of pre-intervention

VI. CONCLUSION

This prospective interventional study, which was carried out to evaluate pregnant women's knowledge, attitudes, and practices regarding nutrition and supplements, has demonstrated that the current intervention was successful in raising the women's knowledge and practice levels. This educational intervention's implementation has a significant impact on

enhancing maternal nutrition knowledge. The pregnant women were able to enhance their food and supplement intake thanks to the leaflet that was provided. The prevalence of anemia in pregnant women will also be examined in this study. The frequency of anemia among pregnant women, which was reported to be 50.4%, shows that anemia is still a serious public health issue. Gravida is a significant risk factor for developing anemia. Prima gravida are observed to have a higher prevalence of anemia than multigravida.

LIMITATIONS

Study is based on a tertiary care center. The result may therefore not be generalizable to all patients in the community.

As the study duration is small, the result obtained may not be always accurate.

Lack of response from patients is a major drawback.

Data obtained from patients may not always be accurate as they may give dishonest answers.

Data collection from illiterate patients is a problem as they are not very much aware of their condition.

AUTHOR CONTRIBUTION :

Aparna S Kumar, Safa Sherin C, Shareena K prepared the protocol, collected data, assessed eligibility and methodological quality of studies and wrote the review. Jereena K and Heera Shenoy T conceived the idea, conducted searches, assessed eligibility and quality of studies.

CONFLICT OF INTEREST: None declared.

AUTHOR'S FUNDING: None.

ETHICAL CONSIDERATION: The ethical approval for the research was provided by the following institutions KMCT MEDICAL COLLEGE, NATIONAL COLLEGE OF PHARMACY according to the principles of Helsinki Declaration.

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