A Study to Assess the Adherence to Folic Acid , Iron and Calcium Supplement and Factors Affecting it ,Among Antenatal Mothers in Selected Hospitals

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Abstract:

Issues: Anemia and calcium deficiency are the major problems faced by the antenatal mothers nowadays hence, this study has been undertaken to assess the adherence for antenatal mothers by asking the risk factors they are facing it while taking the supplements. The study aimed to assess the adherence to folic acid, iron, calcium supplements and factors affecting it, among antenatal mothers at selected hospitals. **Methods**: The study was a descriptive study. The participants were taken from the Obstetrics and Gynecological outpatient department with the estimated sample size (100 through convenient sampling method).**Findings:** To find out 90% of antenatal mothers were adherence, 10% of antenatal mother was non adherence because of 6% forgetfulness,3% during traveling and 1% was carelessness. **Conclusions:** We identified the level of adherence to folic acid, iron and calcium supplements and factors affecting it by the antenatal mothers. Forgetfulness, during travel and carelessness are the factors to affect the antenatal mothers by taking the supplements.
Keywords: 1.Adherence 2. Folic acid 3.Iron 4.Calcium 5.Antenatal mothers

1. Introduction

Minerals and vitamins are necessary for typical processes including growth and development. The nutritional needs of women change during their lifetimes. Particularly prior to, during, and after childbirth, minerals are extremely vital to the health of the mother and fetus. Anemia, hypertension, obstetric problems, even maternal mortality, and failure of proper growth and development in the fetus can all result from the deficit during pregnancy.

The survival and wellbeing of mothers and their children depend on providing women with a healthy food, enough resources, and care. (UNICEF). Because the amount of red blood cells (RBC) increases during pregnancy, more iron, folic acid, and other micronutrients like calcium and multivitamins are needed.

The likelihood that a newborn will have abnormalities in the developing spinal cord is enhanced when low folate levels are present at the time of conception. These anomalies can cause a baby to be born with spina bifida, a condition in which the lower back's spinal vertebral covering is often deficient. In many impoverished nations, anemia during pregnancy and iron deficiency are serious health issues.

Inadequate diets among women can raise the risk of disease and death in both mothers and their newborn children, as can malaria, worm (helminthic) infestations, poor sanitation, and contaminated water sources. Low hemoglobin levels during pregnancy may also increase the risk of preterm delivery and low birth weight babies. The growth and development of the baby's brain and body might be hampered by anemia in newborns.

During the second and third trimesters of pregnancy, serum calcium levels decline, mostly as a result of hemodilution. A reduced serum calcium level has been linked to certain pregnancy issues, such as pre-eclampsia during pregnancy, low birth weight, preterm delivery, and neonatal death.

2. Literature Review

This section has reviewed some literatures regarding the determinants of military expenditure in the worldwide countries and also in Ethiopia and how the determinants are influence expenses for military.

Aditi Chaudhary,Monaliza,V.Venkadalakshmi, Sujata Siwatch conducted the study, Assessment of the intake of Nutritional supplements among pregnant women attending antenatal clinic and the sample size is 71.The result is Two third (64.8%) of antenatal mothers were non adherent to the nutritional supplements. Reason for non-adherence included forgetfulness(91.5%),carelessness (56.3%)and worst feeling associated with intake of nutritional supplement(50.7%0.

Aliya Hisam-2014 conducteda Descriptive cross sectional study was conducted in Military Hospital and Combined Hospital Rawalpindi from September 2012 to February 2013.The sample size was about 400 married females of age group 21-42 years were included by convenient sampling technique.The result wasassociation between education level and practice of folic acid was significant (p=0.009) at 95% confidence level.

Fowles,Eileen R,(2013), A study was conducted at New South Wales, Australia in 2013 had explained 81.6% used supplements during their pregnancy. The outcome of the study was educated women from higher socio-economic backgrounds had better knowledge about the importance of folic acid and iodine in pregnancy.

S. Shakya ShresthaR. AdhikariS. Tamrakaret al., conducted a study to determine the adherence pattern and factors affecting adherence in antenatal care patients under iron, folic acid, and calcium therapy.Sample size was 191 antenatal women.In this study the result showsmajority (39.3%) of them belonged to age group 26-30 years. More than half (61.3%) of the patients were illiterate. Of the total 191, 64.40% were non-adherent to the medication. Forgetfulness was the main reason for missing the dose in majority (52.06%) of the non-adherent subjects while adverse effects (55.40%) was the most prominent.

3. Objective of the study

The objectives of this studyis

- To evaluate the adherence to taking folic acid, iron, and calcium among antenatal mothers.
- To evaluate the barriers of maternal consumption of folic acid, iron and calcium among antenatal mothers.
- To find association between the Adherence and demographic variables.

4. Methods of the Study

As mentioned in the introduction, this paper aims to assess the adherence to folic acid,iron and calcium supplement and factors affecting it,among antenatal mothers in selected hospitals.

5. Data used

Samples were chosen using the purposive sampling technique.Data was collected using self-structured questionnaires through pen paper method. The questionnaires were distributed and explained about the study to obtain consent

6. Data Analysis

Table 1: Frequency and percentage distribution of the demographic variables of samples based on age, educational status, type of family, occupational status, monthly income, area of residence, dietary pattern(N=100)

S.No	Demographic variable	Frequency	Percentage
1.	Age group a)<20 b)21 to 25 years c)26 to 30 years d)31 to 45 years	 1 38 51 10	 1 38 51 10
2.	Education of the mother a)Illiterate b)Higher secondary c)Diploma d)Degree	 0 20 5 75	 0 20 5 75
3.	Type of family a)Joint family b)Nuclear family	 49 51	 49 51
4.	Occupational status a)Private sector b)Government sector c)Self employer d)House wife	 17 1 1 81	 17 1 1 81
5.	Monthly income a)11837 – above b)7102 – 11837 c)2791 -7102 d)Less than 2390	 83 15 2 0	 83 15 2 0
6.	Area of residence a)Rural b)Urban	 39 61	 39 61
7.	Dietary pattern a)Vegetarian b)Non Vegetarian	 13 87	 13 87

Table 1 shows that the frequency and distribution of samples with reference of age, education, type of family, occupational status , monthly income, area of residence, and dietary pattern antenatal mothers with total sample of N - 100 from this the majority (51%) of them belonged to the age group of 26-30years , all mothers are educated ,the majority (51%) of nuclear family, The majority(81%) of mothers are house wife, The majority(83%) of mothers family monthly income is 11837 and above, The majority (61%) them resides in urban area, majority (87%) of mothers are non vegetarian .

Section: B
Obstetrical Data
Frequency and Percentage Distribution of Obstetrical Data
Table :2

S.No	Obstetrical data	Frequency	Percentage
1.	Age at marriage		
	a)18-21	22	22
	b)22-25	46	46
	c)26-27	23	23
	d)28-30	9	9
2.	Gravida		
	a)1	62	62
	b)2	36	36
	c)3	1	1
	d)4	1	1
3.	Gestational weeks		
	a)24-28 weeks	4	4
	b) 29-32 weeks	35	35
	c)33-36 weeks	46	46
	d)37-40 weeks	5	5

It shows that out of 100 antenatal mothers 62 (62%) is primi mothers and other 38%is multi mothers. Majority (46%) of mother had marriage at 22-25. All mothers have registered their pregnancy in hospital, majority 46% gestation weeks are 33-36weeks.

Section-C
Level of Adherence
Table:3

S.No	Level of adherence	Frequency	Percentage	Standard deviation
1.	Adherence	90	90	.302
2.	Non adherence	10	10	

Table:3 The majority (90%) of mothers are adherence,10% of mothers are non adherence.

Section-D

Factors Affecting the Adherence

Table:4

S.No	Factors	Frequency	Percentage
1.	My spouse encourages me to take daily supplements Yes No	 100 0	 100 0
2.	Supplements make me have constipation Yes No	 0 100	 0 100
3.	Supplements are too expensive Yes No	 0 100	 0 100
4.	Supplements are too many to be taken daily Yes No	 0 100	 0 100
5.	I do not take supplement daily because my baby might grow too big Yes No	 0 100	 0 100
6.	Taking the supplements daily is too tiring Yes No	 0 100	 0 100
7.	I do not take supplement daily because it makes my urine smell badly. Yes No	 0 100	 0 100
8.	I do not take supplement because it turns my stool black. Yes No	 0 100	 0 100
9.	I do not take my supplements daily because my family members are against it. Yes No	 0 100	 0 100
10.	I do not take supplements daily because I forget. Yes No	 6 94	 6 94
11.	I do not take my supplements daily because they are not available whenever I go to the hospital. Yes No	 0 100	 0 100
12.	I do not take my supplements daily because the hospital I get them from is far from my house. Yes No	 0 100	 0 100
13.	I do not take my supplements daily because the nurse\midwife did not explain how I am expected to use them. Yes No	 0 100	 0 100

14.	I do not take supplements daily because it won't make any difference in my health status. Yes No	 0 100	 0 100
15.	I do not take supplements during travelling Yes No	 3 97	 3 97
16.	I do not takes supplements sometimes because of carelessness. Yes No	 1 99	 1 99

Table:4 The 6% mothers were non adherence due to forgotfullness,3% of mothers were non adherence because of during travelling,1% of mother was non adherence because of carelessness.

Section –E

Association between Adherence and Demographical variable:

Table:5

S.No	Demographic variable	Category	Adherence	Non adherence	X^2	df	P
1.	Age	a)<20	1	0	4.301	3	.231
		b)21-25	37	1			
		c)26-30	44	7			
		d)31-35	8	2			
2.	Education	a)Illiterate	0	0	1.444	3	.120
		b)Higher secondary	17	3			
		c)Diploma	4	1			
		d)Degree	69	6			
3.	Type of family	a)Joint family	44	5	.133	1	.945
		b)Nuclear family	46	5			
4.	Occupational status	a)private sector	14	14	1.493	3	.122
		b)Government sector	1	1			
		c)Self employer	1	1			
		d)House wife	74	74			

5.	Monthly income of the family	a)11837 and above	75	8	.419	3	.065
		b)7102-11836	13	2			
		c)2391-7102	2	0			
		d)Less than 2390	0	0			
6.	Area of residence	a)Rural	33	6	2.060	1	.144
		b)Urban	57	4			
7.	Dietary pattern	a)Vegetarian	12	1	.88	1	.030
		b)Non Vegetarian	78	9			

Table:5 The majority of age group 26-30 (44%) of samples were undergone the adherence and (7%) of samples were undergone non adherence. The majority of degree (69%)got mothers are adherence,6% were undergone non adherence. The majority (46%) of samples had nuclear family, 5% of samples had non adherence. The majority of mothers (74%) house wife was adherence, 7%of house wife non adherence. The majority (75%) of samples were undergone the monthly income 11837 and above .The majority (57%) of samples were undergone the urban people was adherence and 4% of samples were undergone the rural area people was non adherence.

6. Conclusions

The study intends to assess the adherence to folic acid,iron, and calcium supplements and factors affecting it, among antenatal mothers achieve the objectives of the study non experimental descriptive design was adopted .purposive sampling techniques was used to select samples .Data was collected from 100 antenatal mothers by using semi structured questionnaires to assess the adherence to supplements and factors affecting it.Data gathered was analysed by using descriptive statistics.The findings of the study were discussed based on the objectives.We identified the level of adherence to folic acid, iron and calcium supplements and factors affecting it by the antenatal mothers. Forgetfulness, during travel and carelessness are the factors to affect the antenatal mothers by taking the supplements.

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