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A CROSS-SECTIONAL RESEARCH TO ASSESS THE DIETARY INTAKE AND HABITS OF EXPECTING WOMEN WITH A PREVALENCE OF MULTIGRAVIDA ANEMIA

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Abstract :

Introduction: *This is a comprehensive study of anaemia. To study the effect of dietary habits on the prevalence of anaemia among multigravida. The level of Hb is indicative of anaemia and its different risk factors are studied in this research.*

Objective: *To study the impact of dietary habits of a pregnant female of DHQ hospital Faisalabad was conducted by undergraduates of 4th Year MBBS of Faisalabad Medical University Faisalabad under the supervision of the Department of Community Medicine.*

Materials and Methodology: *We carried out this cross-sectional research at Services Hospital, Lahore from July to August 2017 in a period of six weeks. The research was carried out at hospitalized patients of Gynecology Ward No 2.*

Results: *A total of 120 female were handed over the questionnaire during this study. Pie charts were then drawn according to the results. The total population is 120 among them 63% of women are anaemic and 37% of women are non-anaemic. Among anaemic women 13% are in their first trimester, 23% are in their second trimester and 27% are in their third trimester.*

Conclusion: *Majority of women i.e. 92% said that they take 3 meals a day while 23% were not having it. 76% of women said that they take chicken once a week. Out of 120 women, only 20% were consuming red meat twice a week while majority i.e. 80% were not taking it. 58% of women were taking citrus fruits daily as a source of vitamin C. Green vegetables were consumed by 102 women out of 120. 86% of women were taking beans and nuts as a part of their daily dietary intake.*

Keywords: *Effects, dietary habits, the prevalence of anaemia, multigravida, gynaecology department.*

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INTRODUCTION:

Anaemia is a condition that develops when blood lacks enough healthy red blood cells or haemoglobin. Haemoglobin is an important part of red blood cells and binds oxygen. If the body has very few or abnormal RBCs or the haemoglobin is abnormal or low, the cells will not get enough oxygen [1]. Symptoms of anaemia, like fatigue, occur because organs are not getting what they need to function properly. The prevalence of anaemia (defined by the World Health Organization) is haemoglobin level < 11.0 g/dL. Anaemia is the most common blood condition in the USA. It affects about 3.5 million of its population. Women, young children, and people with chronic diseases are at increased risk of anaemia. Women in the childbearing years are particularly prone to develop iron-deficiency anaemia because, during pregnancy, the body produces an increased amount of blood to support the development of the baby. If the mother is not getting enough iron or certain other nutrients due to a certain reason, the body might not be able to produce the required amount of red blood cells to make this additional blood. Older people also may have a greater risk of developing anaemia because of diet deficiencies and other medical conditions [2].

There are many types of anaemia. All are different in their causes and treatments. Iron-deficiency anaemia, the most common type, is easily treatable with diet changes and iron supplements. Some forms of-- like the mild anaemia (10.0-10.9 g/dl) that develops during pregnancy -- are considered normal. However, some anaemias may present lifelong health problems [3]. The overall prevalence of anaemia among the pregnant women was found to be 87.21%. Factors such as religion, level of education of women and their husbands and socioeconomic status were found to be significantly associated with the prevalence of anaemia in pregnancy (P < 0.5 only 0. 7% were severely anaemic (haemoglobin < 7.0 g/dL). Non-anaemic women were significantly taller, weighed more, and had a higher body mass index [4].

The survey data showed that 84.9% of pregnant women (n = 6,923) were anemic (hemoglobin < 110 g/L); 13.1% had severe anemia (hemoglobin < 70 g/L), and 60.1% had moderate anemia (hemoglobin ≥ 70 to 100 g/L). Among adolescent girls (n = 4,337) from 16 districts, the overall prevalence of anemia (defined as hemoglobin < 120 g/L) was 90.1%, with 7.1% having severe anemia (hemoglobin < 70 g/L) [2]. This study aims to find out the nutritional deficits that are the culprits behind anaemia in pregnancy. So that we can take prompt action to eliminate these causative factors and hence save the child and mother from long-term cardiovascular, muscular and other defects.

MATERIALS AND METHODOLOGY:

We carried out this cross-sectional research at Services Hospital, Lahore from July to August 2017 in a period of six weeks. The research was carried out at hospitalized patients of Gynecology Ward No 2.

Operational definition: Anemia in pregnancy is defined as a haemoglobin concentration of less than 110 g/L (less than 11 g/dl) in venous blood**.**

Study Variables: Anemia, nutritional status, dietary habits and socio-economic status

Sampling technique: Non-probability sampling.

Sample size: 120

Data collection: Data were collected in August through a questionnaire containing close-ended questions.

Data analysis: Returned questionnaires were checked for completeness. Data was entered in excel. Percentages were calculated and data were presented in the form of pie charts.

Ethical issues: Study was performed under-informed consents individually from patients before filling the questionnaire.

RESULTS:

To study the impact of dietary habits of a pregnant female of DHQ hospital FSD was conducted by undergraduates of 4th Year MBBS of Faisalabad Medical University Faisalabad under the supervision of the Department of Community Medicine. A total of 120 female were handed over the questionnaire during this study. Pie charts were then drawn according to the results. The total population is 120 among them 63% of women are anaemic and 37% of women are non-anaemic. Among anaemic women 13% are in their first trimester, 23% are in their second trimester and 27% are in their third trimester. Women taking 3 meals a day.

Table – I: Regular Dietary Intake

Dietary Routine	Yes		No	
	Number	Percentage	Number	Percentage
Chicken Consumption in a Week	92	77	28	23
Red Meat intake Twice a Week	7	6	4	3
Daily Intake of Citrus Fruit	24	20	96	80
Green Vegetable Twice a Week	70	58	50	42
Beans and Nuts Intake	102	85	18	15
Daily Soft Drinks Intake	86	72	34	28
Sea Food Consumption	54	45	66	55
Daily Caffeine Consumption	16	13	104	87
Two Eggs a Day	50	42	70	58
Iron Supplements Intake	42	35	78	65
Clay, Chalk, Ice or Other Pica Intake	48	40	72	60
Calcium Supplements after Conception	50	42	70	58
Uncooked Rice Intake	44	37	76	63

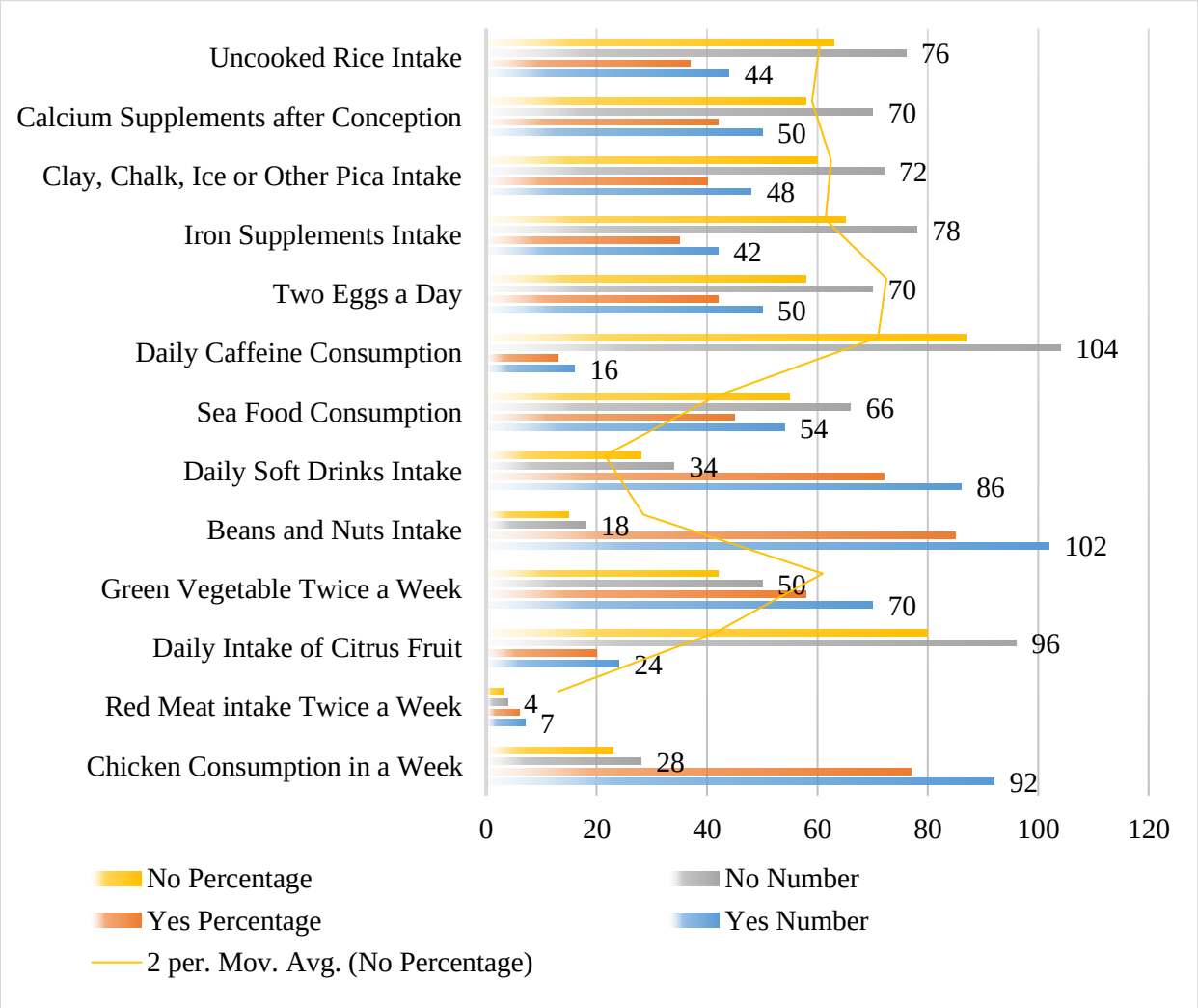


Table – II: Pregnancy Outcomes

Outcomes	Yes		No	
	Number	Percentage	Number	Percentage
Twin Pregnancies	23	28	92	77
Menorrhagia History	22	18	98	82

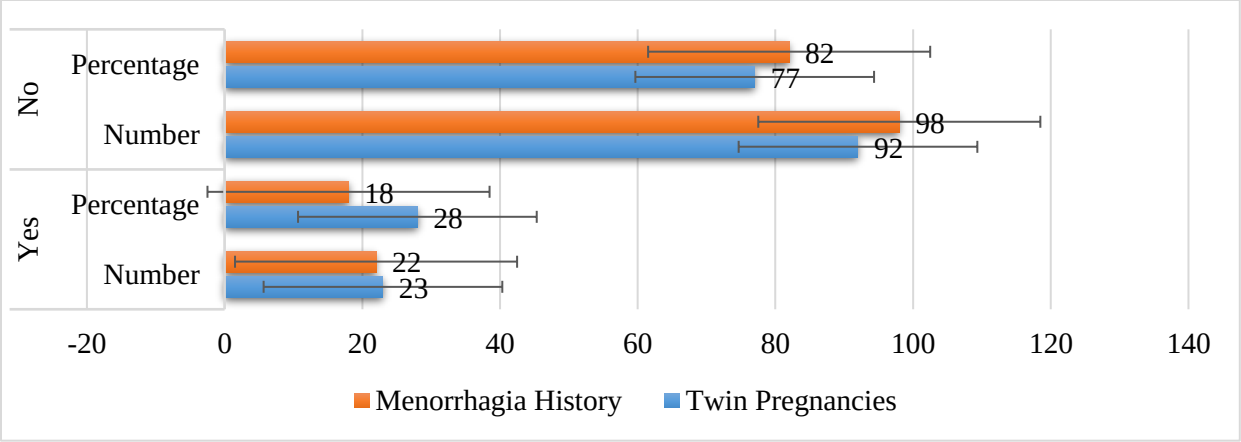


Table – III: Inter-Pregnancy Difference Stratification

Difference	Number	Percentage
Inter-Pregnancy Difference < 2 Years	76	63
Inter-Pregnancy Difference > 2 Years	44	37

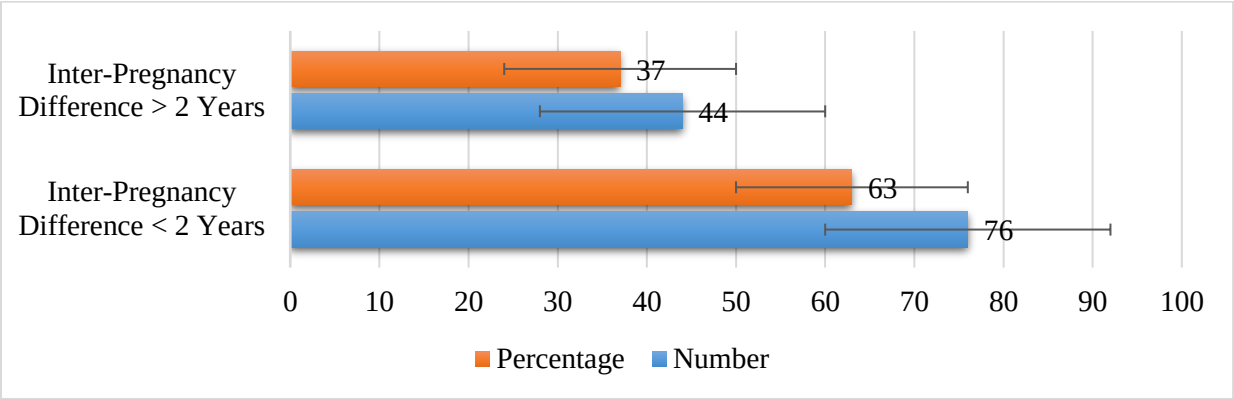
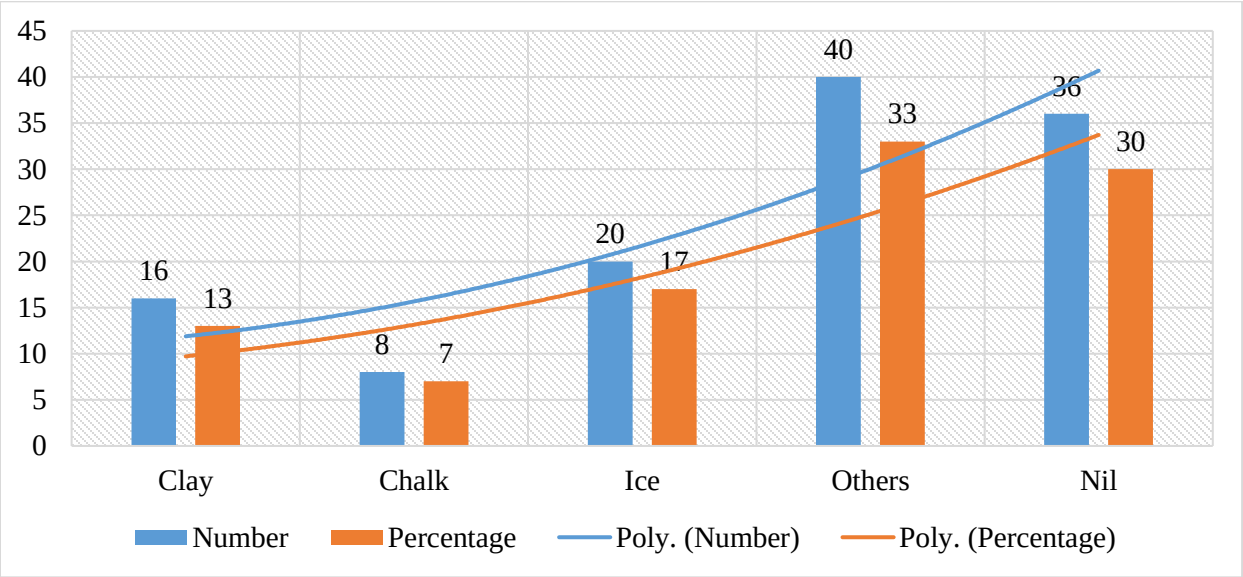


Table – IV: Pica Intake Distribution

Pica Intake	Number	Percentage
Clay	16	13
Chalk	8	7
Ice	20	17
Others	40	33
Nil	36	30



DISCUSSION:

Our research based on the effect of dietary habits on the prevalence of anaemia among multigravida. Anaemia is one of the major health issues that affect the pregnant women and which ultimately has some effect on fetus like IUGR, stillbirth as well as in pregnant women like fatigue and shortness of breath. Anaemia can also increase the risk of C -section and preterm delivery. There are multiple causes of anaemia like iron deficiency, folate deficiency, malaria, hookworm infestation. Among these causes, nutritional iron deficiency anaemia (IDA) is the commonest (90%) cause of anaemia in pregnancy [9]. Therefore, anaemia in a normal pregnant woman in this environment is usually attributed to iron deficiency, and successful treatment is often achieved with iron and folic acid without further investigations. [10]. Hb level is indicative of anaemia. The normal level of Hb is (12 to 16 g/dl). During pregnancy, this level falls (11.5 to 15 g/dl). This is because the blood volume increases by 50% in the course of pregnancy for providing essential nutrients for the developing baby [11]. The level of haemoglobin falls to 10.5 g/dl is quite normal in pregnancy. When it goes below 10g/dl, then it can cause health issues that affect the mother and child and the normal progression of the pregnancy. On the basis of Hb level anaemia can be mild, moderate and severe.

Based on WHO study 42% of pregnant women have anaemia. Dietary habits have a great effect on the prevalence of anaemia. Our study found that 63% of multigravida are anaemic.

In the present study, the prevalence of anaemia was higher among pregnant women having a meal frequency of fewer than 3 times a day as compared to pregnant women who had a meal frequency of more than 2 times a day. This might be due to the reason that pregnancy is a critical period with increased energy and nutrient demand for the mother which should be fulfilled with increased meal frequency per day. This result is consistent with other studies conducted in North Western Zone of Tigray, Northern Ethiopia. In our study, the consumption of fruit daily was associated with a decreased risk of anaemia. This is because fruits are a rich source of non-heme iron. Fruits are also a rich source of vitamin C which enhances the absorption of iron in

the body. And this result is consistent with the study conducted in Pakistan.

In our study women taking red meat twice a week have a high concentration of Hb. Meat is a rich source of iron. This result is the same as a study conducted in Pakistan and Ethiopia. In our study, the prevalence of anaemia was higher among pregnant women who did not take iron and folate supplement during pregnancy as compared to those pregnant women who took their iron and folic acid supplementation. This result is the same as a study conducted in Ethiopia [12] and West Bengal. In our research, women having short interpregnancy difference are anaemic as compared to other women. This is consistent as a study conducted in Pakistan and Ethiopia.

In our study prevalence of anemia was higher in pregnant women in their second (23% out of 63%) and third (27% out of 63%) trimesters This is because during pregnancy the need for calorie and nutrients are increased to support increased maternal metabolism, blood volume and nutrients to fetus and this demand increases during the second and third trimester. In the first trimester, there is a marked decrease in the absorption of iron probably because of lower iron requirements and menstruation stops, saving a median of 0.56 mg Fe/day (160 mg/pregnancy) [13]. However, in the second-trimester iron absorption from a diet of very high iron bioavailability increases by 1.9mg/day and in the last trimester it increases by up to 5.0 mg/day [14]. In our study soft drinks, caffeine, pica has a negative impact on the Hb level and increases the risk of anaemia. In our research green vegetables, beans and nuts and seafood all have a positive impact on the Hb level. The rate of low birth weight babies was high in mothers who were anaemic in their third trimester. Preterm deliveries occurred highly in mothers who were anaemic in their second and third trimesters [15]. Therefore, the government needs to take action to improve the quality of education and socioeconomic status of females and to increase the number of health care providers.

CONCLUSION:

Majority of women i.e 92% said that they take 3 meals a day while 23% were not having it. 76% of women said that they take chicken once a week. Out of 120 women, only 20% were consuming red meat twice a week while majority i.e 80% were not taking it. 58% of women were taking citrus fruits daily as a source of vitamin C. Green vegetables were consumed by 102 women out of 120. 86% of women were taking beans and nuts as a part of their daily dietary intake. 54% of the patients were taking soft drinks daily. Seafood was only part of the diet in 13% women and 87% were not consuming seafood. Out of 120 42% of women were taking caffeine daily. Only 35% of the women were taking 2 eggs as a part of their daily routine. Only 40% of women were taking iron supplements to meet their increased demands of iron. When women were asked about their habits of consuming pica 13% said that they have craving for clay, 7% said they consume chalk, 10% said they consume ice, 33% were habitual of eating other items while 30% said that they don't crave for anything like this during pregnancy. 44% of women had a habit of eating raw uncooked rice. The inter-pregnancy difference was found to be >2yr in 37% of people while it was <2yr in 63%. None of them was having a family history of blood disorder like thalassemia or sickle cell anaemia. Only 18% had a history of menorrhagia. 23% of women were having twin pregnancies. 42% of women were taking calcium supplements to fulfil the increased need during pregnancy.

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