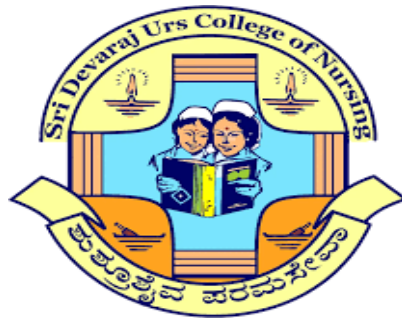


**“A STUDY TO FIND OUT THE PREVALENCE OF ANEMIA AND COMPARE
DIETARY PRACTICES AND TABOOS AMONG ANEMIC AND NON
ANEMIC ANTENATAL MOTHER ATTENDING OPD’S AT SELECTED
HOSPITALS, KOLAR IN AVIEW TO DEVELOP AN INFORMATION
BOOKLET.”**

BY

MRS.V SUPRIYA

**RESEARCH PROJECT SUBMITTED TO,
SRI DEVARAJ URS COLLEGE OF NURSING,TAMAKA, KOLAR.**



**As a part of curriculum requirement for the degree of
MASTERS OF SCIENCE IN NURSING
IN
OBSTETRICS AND GYNECOLOGICAL NURSING**

**UNDER THE GUIDANCE OF
MRS. GAYATHRI K.V
ASSOCIATE PROFESSOR
DEPARTMENT OF OBSTETRICS AND GYNAECOLOGICAL NURSING
SRI DEVARAJ URS COLLEGE OF NURSING
TAMAKA, KOLAR – 563103**

2024

DECLARATION BY THE CANDIDATES

I here by declare that this dissertation entitled “**A study to find out the Prevalence of Anemia and compare Dietary practices and taboos among Anemic and Non Anemic Antenatal Mother attending OPD’S at selected Hospitals, Kolar in a view to develop an information Booklet**” is a bonafide and genuine research work carried by me under the guidance of **Mrs. GAYATHRI K.V**, Associate Professor, Department of **Obstetrics and Gynecological Nursing**, Sri Devaraj Urs College of Nursing, Tamaka, Kolar- 563103.

Name and Signature of Candidate

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Date:

Place: Tamaka, Kolar

CERTIFICATION BY THE GUIDE

This is to certify that the dissertation entitled “**A study to find out the Prevalence of Anemia and compare Dietary practices and taboos among Anemic and Non-Anemic Antenatal Mother attending OPD’S at selected Hospitals, Kolar in a view to develop an information Booklet**”. is bonafide research done by **Mrs. V. Supriya** in partial fulfillment of the requirement for the degree of Master of Science in Obstetrics and Gynecological Nursing, Sri Devaraj Urs College of Nursing.

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ENDORSEMENT BY THE HOD, PRINCIPAL / HEAD OF THE INSTITUTION

This is to certify that the dissertation entitled by “**A study to find out the Prevalence of Anemia and compare Dietary practices and taboos among Anemic and Non-Anemic Antenatal Mother attending OPD’S at selected Hospitals, Kolar in a view to develop an information Booklet**”. is bonafide research done by **Mrs. V Supriya** under the guidance of **Mrs. Gayathri K.V, Associate Professor, Department of Obstetrics and Gynecological Nursing, Sri Devaraj Urs College of Nursing Tamaka, Kolar-563013.**

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LIST OF ABBREVIATIONS

SL.NO	ABBREVIATIONS
1.	F: Frequency
2.	%: Percentage
3.	SD: Standard deviation
4.	df: Degree of Freedom
5.	NS: Not significant
6.	SS: Statistically significant
7.	HE: Higher education
8.	WHO: World health organization

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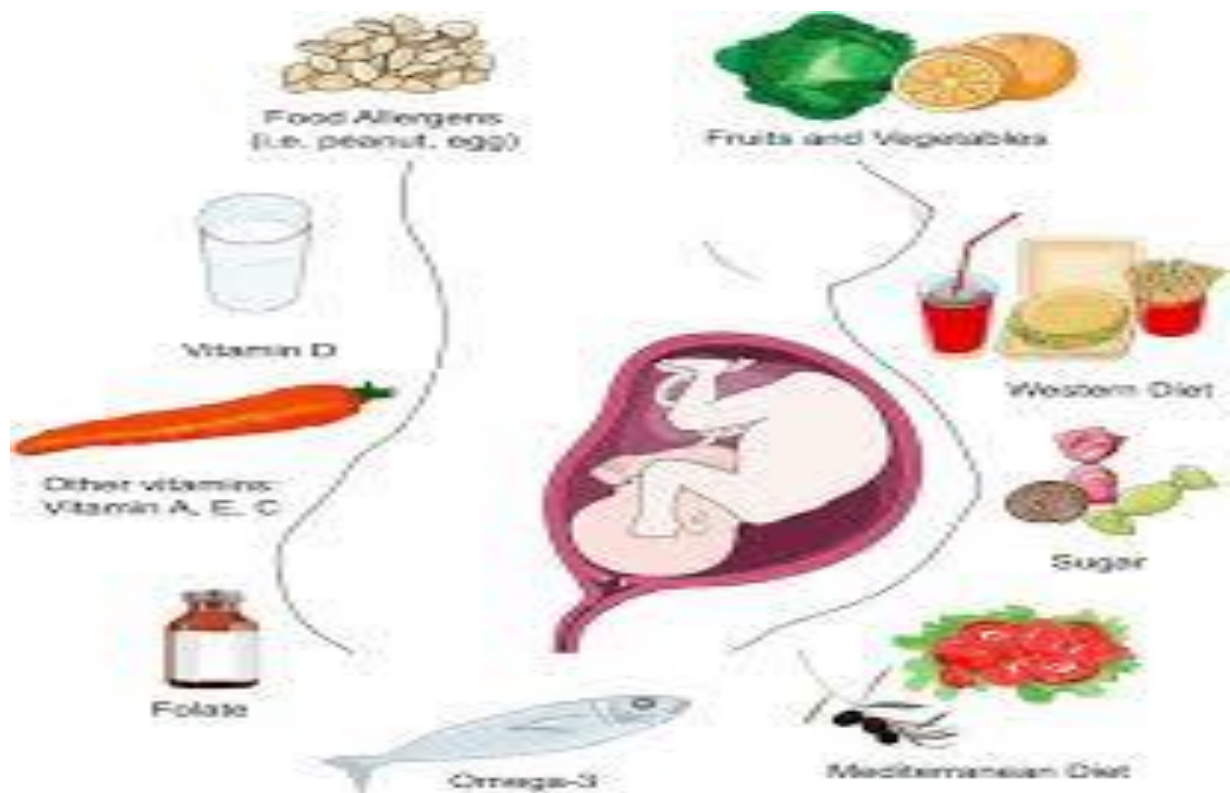
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CHAPTER- I

INTRODUCTION

BRIEF RESUME OF THE INTENDED WORK

Pregnancy is a term used to describe the period in which a fetus develops inside a women uterus or womb. Pregnancy usually lasts about 40 weeks, or just over the 9 months (280 days). As it is measured from the last menstrual period to delivery. Pregnancy period is divided in to three trimesters . First trimester 1-3 months or from 1 week to 12 weeks, Second trimester 4-6 months or from 13 to28 weeks, Third trimester is from 7 to 9 months or 29-40 weeks.¹

During pregnancy period the women needs extra iron and folate to meet both mother and child development. Here concern is the pregnant women, who become deficient in the nutrients , and they are unable to supply the sufficient quantity nutrient to their baby. Low folate nutrition before conceiving leads to increase the risk of neural tube defects for the fetus. And Low level of Iron and folate in women can cause an anemia. which can make women tired, faint, and increases the risk of infection.²

Anemia is a condition in which the number of red blood cells or the hemoglobin concentration within them is lower than normal. Hemoglobin is needed to carry oxygen and if you have too few or abnormal red blood cells, or not enough hemoglobin, there will be a decreased capacity of the blood to carry oxygen to the body's tissues. This results in symptoms such as fatigue, weakness, dizziness and shortness of breath, among others. The optimal hemoglobin concentration needed to meet physiologic needs varies by Age, Gender, residence, smoking habits and pregnancy status.³ deficiencies particularly iron deficiency though deficiencies in foliate, vitamins B12 and A are also

important causes; haemoglobinopathies and infectious diseases, such as malaria, tuberculosis, HIV and parasitic infections. According to WHO Anemia is classified in to three categories, that is mild HB level is [11.0-9.9] Moderate [9.9- 7.0], Severe less than 7.0g/dl.³ It occurs in all the stages of the life cycle. But is common in young children and women in reproductive age particularly in pregnancy.³

Anemia is derived from Greek word (Anemia meaning “lack of blood”) is defined by a decreasing the total amount of hemoglobin or the number of red blood cells leading to an Insufficient oxygen supply to meet the body's physiologic needs and may be caused by multiple factors including nutritional deficiencies, There is an increased Demand of dietary nutrients during pregnancy and in the absence of nutritional supplementation, the severity of anemia increases with increasing gestational age. Iron deficiency anemia (IDA) accounts for about 50% cases of anemia. Other factors responsible for anemia during pregnancy are gestational age, parity, consecutive birth interval, history of excessive bleeding during menstruation and intestinal parasitic infection like malaria and chronic illness, blood loss during pregnancy as well as low dietary intake and poor biological availability of iron in folate and fiber - rich Indian diet are other contributing factors.⁴

Anemia causes are classified in to two categories. Before pregnancy and during pregnancy. Before pregnancy include that faulty dietetic habit, faulty absorption mechanism and iron loss. During pregnancy includes increased demand of iron, diminished Iron intake, diminished absorption, disturbed metabolism, Pre pregnant health status, excess demand multiple pregnancy, women with widely recurring pregnancy.⁵

Anemia causes during pregnancy is Diminished intake and increased demand, certain types of anemia are brought on by unchangeable variables, such as your age or

family history. There are other types of anemia that can be controlled, such as dietary patterns or other medical problems that affect the production of red blood cells in the body. Anemia is a complex disorder with many different types and causes that is typified by a decrease in hemoglobin or red blood cells. Anemia of chronic disease, Iron deficiency anemia, vitamin B12 deficiency anemia, and folate acid deficiency anemia are the main varieties. varied communities and demographics have varying prevalence of each kind, which have varied etiologies ranging from chronic illnesses to dietary inadequacies.⁶

Anemia types Worldwide, iron deficiency anemia (IDA) is the most prevalent kind and is frequently brought on by insufficient food consumption, malabsorption, or blood loss. **Vitamin Insufficiency** Certain groups, especially the elderly, are prone to anemia's, which include deficits in B12 and folate, anemia of chronic disease is linked to inflammatory illnesses, cancers, or persistent infections.⁷

Often inherited, hemolytic anemia is brought on by the breakdown of red blood cells, as in sickle cell anemia and thalassemia. Anemia's causes Iron, vitamin B12, and folate deficits are important causes of nutritional inadequacies. **Prolonged Illnesses:** Chronic inflammation and renal failure are two conditions that can cause anemia. **Genetic Contributions:** Thalassemia and other hereditary anemia's are common in several populations. Even while the forms and causes of anemia are well understood, a significant percentage of instances are still unaccounted for, underscoring the condition's complexity.⁸

The most common causes for anemia include nutritional, excess demand in case of multigravida woman and altered metabolism along with the background characteristics like low socioeconomic status, illiteracy, early age of marriage associated with increase in susceptibility to infectious diseases like hookworm infestations may serve to be the underlying factors associated with prevalence of anemia during pregnancy.⁹

Anemia in Pregnancy all pregnant women are at risk for becoming anemic. That's because they need more iron and folic acid than usual. But the risk is higher if you:

- Are pregnant with multiples (more than one child)

- Have had two pregnancies close together
- Vomit a lot because of morning sickness
- Are a pregnant teenager
- Don't eat enough foods that are rich in iron
- Had anemia before you became pregnant
- Symptoms of Anemia During Pregnancy

The most common symptoms of anemia during pregnancy are:

- Pale skin and pale lips, and nails
- Feeling tired or weak
- Dizziness
- Shortness of breath
- Rapid heartbeat
- Trouble concentrating

In the early stages of anemia, you may not have obvious symptoms. And many of the symptoms are ones that you might have while pregnant even if you're not anemic. So be sure to get routine blood tests to check for anemia at your prenatal appointments.

Risks of Anemia in Pregnancy

Severe or untreated iron-deficiency anemia during pregnancy can increase your risk of having:

- A preterm or low-birth-weight baby
- A blood transfusion (if you lose a significant amount of blood during delivery)
- Postpartum depression
- A baby with anemia
- A child with developmental delays
- Untreated folate deficiency can increase your risk of having a:
- Preterm or low-birth-weight baby

Baby with a serious birth defect of the spine or brain (neural tube defects). Untreated vitamin B12 deficiency can also raise your risk of having a baby with neural tube defects.

Physiologic anemia occurs in pregnancy because plasma volume increases more quickly than red cell mass. Anemia is most commonly classified as microcytic, normocytic, or macrocytic. Iron deficiency anemia accounts for 75% of all anemias in

pregnancy. Some forms of anemia can be prevented from recurring; particularly those caused by iron or vitamin deficiencies. You can avoid the recurrence of these types of anemia by following your Doctor's advice and changing your diet or taking supplements.¹⁰

Anaemia can be prevented (or prevented from reoccurring) by treating its cause. For instance, if a medication is making the patient anaemic, the doctor can recommend a different kind of prescription. Patients must fully describe all signs and symptoms to their physician in order to stop anaemia from worsening. Following the treatment plan and asking what tests should be performed are also advised. It is impossible to avoid sickle cell anemia and other forms of inherited anemia. Patients with inherited anemia should speak with their physician about treatment options and continuing care.¹¹

Pregnant women had 112 dietary taboos (27.5%) Additionally, we discovered that pregnant women abstained from 80 (22.5%) of the following food types: meat, eggs, honey, milk, fruit, and cereals. Of these, 76 (21.4%), 59 (16.6%), 36 (11.0%), and 60 (16.9%) abstained from eating meat, eggs, and cereals, respectively. Despite the fact that those items are extremely necessary for expectant mothers, they abstained from eating them.¹²

Anemia during pregnancy affecting the both mother and as well as fetus. Maternal complications are divided in to three types, a) complications during pregnancy, b) During labor, c) Puerperium.⁴

Prevalence of anemia in pregnant women varies widely , across the region world in 2024 globally 37% among pregnant women. 30% Non pregnant women, 40% children 6-59 months. The high prevalence of anemia 56% in low middle class in income countries.⁸

Good dietary habits during pregnancy play a significant role in determining the long-term nutritional status of both the mother and the unborn baby. Inadequacy due to dietary habits and patterns is higher during pregnancy, than at any other stage of the life cycle . Researchers have found that many women in developing countries restrict

their food intake during pregnancy, for fear of having a large-for-gestational-age baby, which they think can predispose them to birth complications, as well as for cultural reasons. Poor dietary habits during pregnancy can result in low intake of essential nutrients like protein, vitamin C, vitamin A, and iron. Absence of these nutrients in the diet can result in anemia, which can contribute to increased rates of stillbirths, premature birth, low birth weight, and maternal and prenatal death⁹. Dietary diversity score was calculated from a single 24 hour dietary recall data. The nine specified food group were starchy staple:(cereals, rice, meat), roots, tubers , pulses ,plant sources and legumes, oil seeds and nuts, milk products, fish meat and fruits and vegetables, eggs and other fruits and vegetables. Poor dietary habits and patterns include consuming excess tea, coffee, or cocoa during meal times, reducing the number of meals per day (< 3 meals), and lack of dietary diversity. A study of nutritional habits in pregnant women revealed that the average nutrient intake was deficient in some important nutrients, resulting in anemia , and that the prevalence of anemia was higher in pregnant women with a meal frequency of ≤ 2 times per day. ¹³

Taboos means most of the societies or communities urban or rural area have many taboos regarding food to avoid during pregnancy and most have local explanations for why the specific foods are taboos, must be avoided. These taboos may have health benefits, but they came at high cost to mother and fetal public health aims on essential food taboos which are particularly in area where food supplies are few and additional, certain information about taboos. The specific types of food items avoided and the underlying reasons for the avoidance were also assessed.¹⁴

SLNO	FOOD TABOOS	REASON FOR AVOIDING
1	Banana	Bin baby
2	Cabbage	Abortion
3	Chick pea	Excessive heat leads to abortion

4	Egg	Abortion
5	Fruits	Abortion
6	Milk	Vomiting
7	Fatty meat	Big baby
8	Fish	Congenital abnormalities
9	Mango	Abortion
10	Papaya	Abortion
11	Honey	Abortion
12	Meat	Congenital defects
13	Potato	Joint pain for the fetus
14	Pumpkin	Big baby
15	Salt	Hypertension for both mother and fetus
16	Sugarcane	Congenital abnormalities
17	Vegetables	Leads to abortion
18	Guava	Stomach ache for the baby
19	Pomegranate	Abortion
20	Green leafy vegetables	Abortion

It was observed that anemia was common in the age group of 21–30 years (66.1%), SC/ST (61.6%), and OBC (30.8%). There was a significant association of anemia status with educational status and gravida. The prevalence of anemia increased with the duration of pregnancy, but it was not statistically significant. Anemia is more common in the women with birth interval <1 year (40.2% result of diminished iron stores in the body, increased loss of iron through bleeding or increased demands for iron, for example, in pregnancy).¹⁵

NEED FOR THE STUDY:

Anemia is one of the most common nutritional deficiency disorders affecting the pregnant women. The prevalence in developed countries is 14%, and developing

countries are 51%, and in India, it varies from 65% -75%. Second cause for maternal death is anemia. In India maternal death contributing 80%.⁷

Anemia in pregnancy is a major health problem across the world. In India largest number of anemic pregnant women as well as mothers and child suffering from anemia. Anemia main causes are inadequate intake of iron and foliate due to low vegetables consumption. Most of the societies or communities urban or rural area have many taboos regarding food to avoiding during pregnancy.¹¹

Over all world prevalence of anemia during pregnant women is 36.8 confidence intervals 31.5%, 42.4% the highest prevalence of anemia of mild at 70.8%, highest third trimester of with prevalence of 48.8%.¹⁶

In India over all India 46.1 % prevalence of anemia during pregnancy is significant public health problem, with 45.7 % of pregnant women in urban area 52% in rural area having hemoglobin <11 g/dl.¹⁷

According to 2024 the prevalence of Anaemia 52.2% of pregnant women suffer from anemia inclusive of 1.4% with severe anemia. The anemia proportion was higher in women living in the Karnataka.¹⁸

According to studies shown that during the pregnancy period adequate maternal nutrition is parameters paramount in improving the nutrition status of a child and reducing the risk of adverse fetal outcomes such as intrauterine growth retardation, pre-term birth, and low birth weight . Micronutrient deficiencies and inadequate dietary intake in women of reproductive age have than generational effects by altering the developmental defects of the fetus. Increased vulnerabilities and prevalence of malnutrition among women of reproductive age arise from a mismatch between enhanced demands for protein, energy, and micronutrients and improper replacement during pregnancy and lactation period. Pregnancy, in its entire duration, consumes about 60,000 kcal over and above the normal metabolic requirements.

There is empirical evidence on the suboptimal consumption of micronutrients, inadequate weight gains, and high prevalence of nutritional anemia among pregnant women from Low Middle-Income Countries.¹⁹

In India, with an average rate of 24 million births per year , ranks as the second

most populated country in the world and is also the bottom-most Asian country in the mother index rankings . The National Family Health Survey (NFHS) round four documented that 50–57% of pregnant women and lactating mothers were anemic in India, and their diet lacked food rich in micronutrients.⁸

It is imperative to understand that the determinants of maternal malnutrition are multi factorial, including poverty, ignorance, food insecurity, and inappropriate food distribution, which adds socio-economic angle to this public health problem . Together with the inadequate dietary intake, and inequitable household food distribution, food taboos, misconceptions, recurrent infections, and poor care constitute significant contributors to under nutrition among pregnant women and lactating mothers. Socio-economic and demographic factors have a substantial effect on nutritional status and the food intake of women, Especially pregnant and lactating women in the family. Previous literature has highlighted the influence of factors such as women's education status, family size, nutritional taboos and community to which a woman belongs to the nutritional status and intake.¹⁹

Taboos are defined as a social or religious custom prohibiting or restricting a particular practice or forbidding association with a particular person, place, or thing. Taboos differ from customs as custom is frequent repetition of the same behavior; way of behavior common to many; habitual practice; or method of doing which may not be inhibitory .Taboos are often integrated with the culture, traditional in nature, and are carried out as convention or as per advice of the elderly.¹³

Taboos were present regarding consumption of various fruits Banana, Papaya, Jackfruit, Coconut, Vegetables like Brinjal, Leafy vegetables, Meat, Fish, and Eggs during pregnancy. These were followed mainly to prevent miscarriage, promote easy delivery, and prevent fetal malformations. Taboos in the lactation included avoidance of small fish, foods with multiple seeds, other “cold” foods, and fluid restriction in some areas. The taboos were followed spontaneously as the inhibitions were imposed only for a definite period. Though diminished, food taboos are still prevalent in the society. Nutrition education helps to remove food taboos and improve there nutritional status in pregnancy.²⁰

A study was conducted by Usha D, a cross sectional study on social and cultural food taboos related to barriers in prevention of anemia in pregnant women of Amravati district, Maharashtra India. The objectives of the study was performing this study was to evaluate the perception and practices of anemic women. The was conducted among 100 pregnant women. Analysis was conducted to identify the socio demographic factors and diet variations associated with food of taboos practices. Overall age of participating in taboos < 26 – 36% , 25 – 30 age group 54%, 35 – 45 age group 10% and upper middle class 46%, lower middle class 20%, lower socio economic status 34%. On observation educational status were found to be negatively associated with food taboos during pregnancy. Which results leads to iron deficiency anemia those needs of nutritional education and awareness nutritional consequences of following food taboos and iron supplementations is very essential.²¹

Every society, whether Rural or urban, has own taboos in almost every aspect followed throughout the way of life. Particularly woman's life, starting from her birth through menarche, marriage, child bearing, motherhood, and finally widowhood, is governed by various taboos. Out of this, taboos related with pregnancy and immediately after child birth are enumerable. These are mostly dietary but also affect woman's personal hygiene, rest, and lifestyle. A common belief supporting these pregnancy related taboos is that breaking them may cause abortion or deformity in newborn. Pregnancy imposes the need for considerable extra calorie and nutrients for a mother. An adequate balanced diet is, therefore, of utmost importance during pregnancy and lactation to prevent “nutritional stress”. Dietary taboos related to these periods are not only fatal to a mother's health but also affect the fetus. So identification and addressing the influencing factors of the dietary habits and taboos are of utmost importance. With this background, this study was carried out to investigate existing dietary practices and food taboos during pregnancy.¹⁴

A cross sectional study was conducted by Mesert A, Abebaw G was conducted Food taboos and associated factors among pregnant women attending antenatal clinics at bihar dar city, North West Ethiopia, 2021: cross sectional study. The main aim of the study to assess the prevalence of food taboos among pregnant women attending antenatal care. The study was conducted among 421 pregnant mothers. Stratified

sampling technique was taken for this study. The prevalence of food taboo practices among pregnant women was 27.5% 95% at the Bahir Dar city. Most food items avoided during pregnancy were meat, honey, milk, fruit and cereals. Reasons for avoidance of these food items were plastered on the fetal head, and making fatty baby which is difficult for delivery. This study revealed that prevalence of food taboo is high during pregnancy. The implications of this study that needs strengthening nutrition counselling components of ANC follow-up and health professionals needs to design and implement strategic health communication intended to reorient misconceptions and myths for the pregnant women regarding the food taboo.¹⁶

A cross-sectional study was conducted Wbalem., Food taboos among pregnant women and associated factors in estern Eti-hiopia Samong randomly selected 422 pregnant women at Haramaya Demographic Surveillance System from Haramaya District, eastern Ethiopia. Data on socio demographic conditions, the presence of food taboos, and perceived reasons were collected using the face-to-face interview method by trained data collectors through arranged home visits. Collected data were entered into Ethiopia. The data 3.1 and exported to statistical package for social sciences version 23 for cleaning and analysis. Descriptive, binary, and multiple logistic regression analyses were carried out to determine the relationship between explanatory and outcome variables. Adjusted odds ratio with 95% confidence interval (CI) at p value less than 0.05 was used to declare significant association. Pregnancy related food taboos among pregnant women are unacceptably high, there fore awareness certain and malnutrition counseling at health services points are imperative actions for pregnant women to avoid food taboos norms. Further research should be done to understand the social and cultural ground of food taboos during pregnancy.¹⁷

A study was conducted by Dereje T, Food-related taboos and misconceptions during pregnancy among rural communities of Illu Aba Bor zone, Southwest Ethiopia. A community based qualitative cross sectional study. The aim of the study aimed at exploring the extent of food taboos and misconceptions during pregnancy in rural communities of Illu Aba zone, South west Ethiopia. The sample size 200. The study qualitative data was collected through using In-depth interviews of key informants and focus group discussions among purposively selected pregnant women and their husband. The data was analyzed manually using the thematic frame work method. The

primary was the belief and practices of taboos related to the intake of certain food items during pregnancy. Pregnancy women, their husbands, and mother in law believed that certain foods should be avoided during pregnancy. The most common food items held as taboo were related to the consumption of vegetables like cabbage, pumpkin, milk and milk products, sugar cane, fruits like bananas and avocado and egg. The main reasons to avoid these foods were beliefs that it can be plastered on the fetal head, making fatty baby which is difficult for delivery. The results showed a widespread practice of food taboos during pregnancy in the study area. The finding suggested that there is a need for strengthening the nutrition counseling.¹⁸

CHAPTER-II

OBJECTIVES

This chapter deals with the statement of problem, objectives of the study , operational definitions, and limitation of the study and conceptual frame work, which provides a frame of reference. the statement of the problem and objectives of the study

are as follows.

STATEMENT OF THE PROBLEM

“A study to find out the Prevalence of Anemia and compare Dietary practices and taboos among Anemic and Non Anemic Antenatal Mother attending OPD’S at selected Hospitals, Kolar in a view to develop an information Booklet”.

OBJECTIVES OF THE STUDY

1. To find out the prevalence of anemia’s among antenatal mothers who are attending Antenatal OPD at selected Hospital at Kolar, by using Automated Hemoglobin Analyzer hb test and WHO HB categorization chart.
2. To compare the Dietary practices and Dietary Taboos among Anemic and non anemic Antenatal mothers using structured questionnaires.

Assumptions:

1. Antenatal mothers have some taboos regarding dietary practices according to their cultures.
2. Anemic mothers have in adequate knowledge regarding balanced nutritional diet.
3. Non-anemic mothers has good dietary pattern.

Operational definition:

1. **Prevalence:** prevalence is the proportion of a population who have a specific characteristic in a given time period. In this study prevalence refers to number of pregnant mother who are affected with anemia in the specified time of data collection.

$$\frac{n=(Z^2pq)}{d^2}$$

2. **Dietary practices:** Dietary practices refers to choices in food consumption. In this study it refers to food pattern, types of food, frequency of food intake, quality of food,
3. **Taboos:.** A taboo is an action that is forwarded upon and considered inappropriate to practice or even talk about within a cultural group. In this study it refers to cultural, religion and food intake by the antenatal women.
4. **Anemic antenatal mother:** Anemia is a condition in which the hemoglobin concentration is lower than the normal, reflect the presence of fewer the normal RBC within the calculation which is characterized into mild (11.0 – 9.9), Moderate (9.9 – 7.0) g/dl. Severe (<7g/dl).
5. **Non-anemic antenatal mother:** Antenatal mothers whose HB is more than or equal to 12gm/dl is known as non anemic antenatal mothers.
6. **Antenatal mothers:** Mothers who are confirmed with pregnancy, in this study antenatal mothers refers to II and III trimester Women.
7. **Information booklet:** In this it consist of Antenatal balanced diet, importance of nutrition during pregnancy, Average BMI, Essential nutrition's, Common food sources, food cravings during pregnancy, Food to avoid during pregnancy and its reason for avoiding, How to control your cravings, foods advising during pregnancy.
8. **De-limitations:**
 1. The study is limited to 100 participants
 2. The study limited to physiological Anemia.
 3. The Study is covered only Antenatal mother with three trimester
 4. Pathological Anemia participants are not included
 5. Population size can be increased.
 6. Interventional studies can be conducted on anemic mother.

CHAPTER-III

REVIEW OF LITERATURE

A review of literature is an essential component of the research process. It is the critical examination of a publication related to a topic of interest. the review should be

comprehensive and evaluative . A review of literature helps to plan and systematically conduct the study.

- ❖ Studies related to prevalence of anemia among antenatal mothers
- ❖ Studies related dietary practices and dietary taboos among antenatal mothers.

STUDIES RELATED TO PREVALENCE OF ANEMIA AMONG ANTENATAL MOTHERS:

A study was conducted by **Nicario S.G.S** et al on dietary habits associate with anemia in pregnant women attending antenatal care servicers at Tanzania. The objectives of the study was to determine the prevalence and even the actually habits associated anemia. Across sectional study was conducted on 338 pregnant women. HB concentration was measured using a hemocurepathometer on capillary blood. Socio demographic data and dietary habits was collected using a structured questionnaires. Multi variant logistic regression analysis was carried out to determine the predictors of anemia in pregnant women. The over all prevalence of anemia was 80.8% of there 68.84% had mild anemia, 11.24% had moderate anemia and 0.89% had severe anemia. ⁸

A study was conducted by **Hina Z.** Etal on Dietary pattern habit association of Iron deficiency anemia and related pregnancy outcomes. The study aimed to check the prevalence effect of diet on iron deficiency anemia (IDA) and its association with the pregnancy outcome the study was conducted 500 pregnant women with 3rd trimester. HB concentration measure using a hemocusephometer on capillary blood. Demographic data and habits was collected by using structured questionnaires logistic regression prevalence of anemia in our subject was probably due to poor intake dietary, low iron intake habits. The major public health concern that requires more attention regarding pregnant mothers. Over all the 63% of sample is having Iron deficiency anemia, 24.8% are phasing severe iron deficiency anemia, only 12% of people is normal. ²²

A study was conducted by **Rain D** et al on dietary quality and diversity among anemic pregnant women. The aim of the study was to find out an association between dietary quantity and diversity among anemic pregnant women. The study was conducted on 152 anemic pregnant women. The hemoglobin concentration was measured in a cyanmethemoglobin method with capillary blood. Dietary quantity was measured by the 2-24 hours. Recall analysis carried the association between dietary diversity and quality showed that the median HB is 10.1 g./dl. 57.2% of pregnant women had mild anemia, 59.7% had moderate anemia with minimum dietary diversity.

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The study was conducted by **Ban Nadum. A.F** et al on assessment of Iron deficiency anemia (IAD) dietary pattern among pregnant women in Baghdad city, Iraq. The objectives of the study aim the prevalence of anemia and dietary pattern among pregnant women. A cross sectional study was conducted 400 females. 135 were found anemic 87(64%) 18-35 years HB is 8.5g/dl, 70% in rural area less than 8g/dl, (47%), HB 7.4 completed primary education, 70% of multi gravid 8g/dl, 40% mild anemia, 40% of moderate anemia, 20% of severe anemia. Multi gravid and low education were associated with anemia insufficient intake of food and Iron and folic acid . overall around 91% had Iron deficiency anemia, in that 40% of mild anemia , 40% of moderate anemia, 20% severe anemia .about the 41% of had Iron and folic aid tablets . anemia prevalence among pregnant women , being house wife dwell in a rural area , causes of anemia is multigravida and low education were associated with anemia. Insufficient intake of iron and folic acid and unhealthy habits of drinking tea and poor intake of food and iron rich prominent.²⁴

The study was conducted by **Ravishankar S** prevalence of anemia of pregnant women and its outcome. A community based study the objectives estimate the prevalence of anemia pregnant women and to determine its association with maternal and fetal outcome. A prospective observational study was conducted to select 46 pregnant women. In this the hemoglobin concentration was measured by using of capillary blood sampling habits was the data collected using of structured questionnaires methods. Overall HB of pregnant women (10.3 – 10.72) g/dl. 35.6% maternal and fetal morbidity. Pregnancy related complications 62.3%, inter complications 3% preeclampsia 1.6%, abortion and still birth 3.5%, fetal complications include low birth weight 25.5%, premature delivery 0.5%, birth asphyxia 0.5%. A prevalence of anemia apparently increases the maternal and fetal risk improve the maternal and fetal outcome, strengthens and, prevention, early diagnosis and treatment of anemia in pregnancy to be given priority.²

The study was conducted by **Mohammed A A** et al, determinants of anemia among pregnant women in Mali. The objectives of the study to examine the prevalence and likely etiologies of anemia in pregnancy in a poor unborn population in 13% Bamako, Mali. A cross sectional study was conducted among pregnant mother 152, The HB concentration was measured venous capillary blood obtain complete blood count including HB. Stool and urine sample was requested to determine weather hook worms are schistose miss inspection who was present. A gynecological examine also was performed during the initial clinical contact. Data was collected using a structured questionnaires in the initial interview method, in this method data was collected. In this analysis 51% (20 – 29) 64% (13-24) years in this 3rd trimester 20 percentage, 47% percent had low hemoglobin levels, 13% had serum iron concentration below, 82% had

abnormal vaginal bleeding 45% had food restriction. Our data suggested food accessibility contributes to the role of pregnancy in Mali.²⁵

STUDIES RELATED DIETARY PRACTICES AND DIETARY TABOOS AMONG ANTENATAL MOTHERS:

A study was conducted by **Shantanu S**, et al Dietary patterns and determinants of pregnant and lactating women from marginalized communities in India .The objectives of the study dietary patterns analysis has emerged and a balanced and realistic approach that reflect how the food is consumed in real life. A cross sectional study was conducted among 476 pregnant women and 446 lactating women associated four patterns. Data was collected structure questionnaires, the dietary data were collected using qualitative food frequency questionnaires having 204 food items. The multinational logistic regression to explore association of socio demographic and nutritional services with identify dietary patterns. Over all explained 45% of variation in their food. Mixed low vegetarian 19%, non vegetarian 15%, high mixed vegetarian 11% and calorie rich diet 9%. High prevalence of low mixed vegetarian diet among women can have adverse pregnancy and birth out come²⁶

A study was conducted by **Kibret K T** et al the effect of dietary patterns on maternal anemia in north Shewa, Ethiopia. A case control study with propensity score analysis. The objectives of the study assess the effects of dietary patterns during pregnancy on anemia. Case control study was conducted among 105 cases and 312 control, 1:3 ratio control. A multi variable conditional logistics regressions model was applied after propensity scare matching to assess the effectiveness of dietary patterns on Anemia. The data was collected using of the store statement check list in this HBS $\leq 11.0\text{g/dl}$. controls and HB $\geq 11.0\text{g/dl}$. Check list and a client exit interview. The HB

was measured through capillary blood sampling overall 417 pregnant women = 105 participated (N=105), N=312 (75%) control group, age of the cases was 262 (± 4.5) control was 263 (± 5.0) years around 58% control group age 25-34 years of 70% experienced nausea and vomiting, 67% normal and no vomiting weight of the cases $58.5\% \pm 6.5$ kg, control group 58.8 ± 7.4 kg during this pregnancy intake of iron low diverted diet reduces food intake, and low educational status were associated with higher odds of anemia.²⁷

A cross sectional study was conducted by **Thoyue G H**, Dietary intake and food habits of pregnant women residing in urban and rural areas of Beyond city, Sichuan province, China. The purpose of study was to assess dietary intake data and identify risk factors nutritional inadequacy on pregnant women from unborn & rural areas living. A study was conducted 203 pregnant women. The Data was collected semi structured interviews in 24 hours dietary recalls, overall normal BMI range (18-25), 26.3 is overweight is BMI < 18.5 , 20.8% urban & 35.6% in rural areas.²⁸

A study was conducted by **Atefeh F**, on Maternal dietary pattern and their Association with Pregnancy outcome aim which aims to antenatal Dietary pattern factors analysis & Association of pattern of maternal & Neonatal outcome. A study was conducted on 150 pregnant women. The Dietary habits were collected using structure questionnaires, multi variant logistic analysis was carried out to Identify the Dietary pattern & Relation with pregnancy. Over all dietary pattern High carbohydrate lower fiber $27.67 \pm 6\%$ none 34, High carbohydrate, High fiber 27.70 ± 4.1 N = 55, High fiber 29.27 ± 58 ; N=61. According to present study expected, Adhered to healthy dietary pattern before pregnancy accurately it is beneficial for maternal & total outcome.²⁹

A study was conducted by **Hellene L. G** et al on the epidemiology and burden of plasma odium falciparum related anemia among pregnant women in sub Sarian Africa. The aim of the study was effective habiting for the inclusion of presentation strategies against malaria is safe motherhood initiative the cross sectional study was conducted among 4,00,000 pregnant women. The creational attempts to estimate the probable burden of Malaria related to severe Anemia is all parity women 8.2%, 26% malaria developed severe 4,00,000 Anemia.³⁰

A study was conducted by **Anuradha S**, Etal on Anemia and its risk factors among pregnant women attending Antenatal clinic of rural medical college of west Bengal. The aim of the study was to measure the extent of anemia in pregnancy and to assess the association of risk factors with Anemia. Across sectional descriptive study was conducted to select 200 pregnant women. This study was hospital based in rural area. The data was collection method is the pregnant women were attending ANC clinic and who filed the concord and their having of H.B report. The pregnancy conformation tests are done by their own urinates and few USG of abdomen. Socio demographic and dietary patterns habits was collected by using of predesigned and pretested semi structure schedule. Analysis was carried out to determine the assist in pregnancy over all the prevalence of anemia to be 90% among pregnant women. In this most of the Anemic moderate (60.54).⁵

A study was conducted by **Assefa P K**, etal anemia among pregnant woman attending antenatal care clinic in Adare General Hospital, southern Ethiopia prevalence associated factors. Across sectional descriptive study was conducted to select 340 pregnant women's age 15-40 years focused on the antenatal care follows trained data

collected capillary blood sampling and stool sampling. The data analysis was done by using SPSS version 20.0 factors associated with anemia were assessed by using binary logistic regression. Analysis was considered multi variable regression. The prevalence of anemia among pregnancy women with 24.1%, mildly anemia (62.2.1) monthly income (25.50-69.67) in us dollars not obtained formal education AOR -3.86:95%, CI:1.42,1054not using iron tablets 2.64;95%, CI:1.33,5.27) and infected plasmodium vivax AOR.7.58; 95% CI:3.11, 18.47) Anemia had moderately significant in this stud. Family income is low educational study iron tablets consumption during pregnancy and plasmodium infection were found.³¹

The cross section study was conducted by **Evlying B N**, The Burden of Anemia is pregnancy among women attending the Antenatal clinics in Mkuranga district Tanzania. The study was conducted among 418 pregnant women aged 15 to 49 year attending in Mkuranga district hospitals and kilemahewa health centers. The data was collected by using of face to interviews with a standardized pretested question aired for HB analysis capillary blood was collected for testing descriptive analysis was uses to determine the factors associated with anemia pregnant women in Mkuranga District . In that HB 16.3% Women include normal 59.5% to had moderate 24.4% had mild anemia, 7.2% had severe anemia more than 18% pregnant women attending ANC in Mkuranga district were anemia is prevalent in more then 8 in every 10 pregnant women attending ANC Mkuraga district. Tanzania factors associated with anemia in those women included the 3 and non consumption of vegetables, meat, eggs, fish it is necessary.³³

A study was conducted by **Sujan G**, antioxidant activity and iron deficiency

Anemia during pregnancy . the aim of the study was investigate the changes in nutritional habits and also relationship among oxidative stress, iron deficiency anemia and some antioxidant enzyme activities during the pregnancy. Across sectional study was conducted to select 200 pregnant women. The data was collected by the using of structured questionnaires. The Hemoglobin concentration was measured through capillary blood sampling. These studies need to demonstrate relationship among oxidative stress, analyze and cat enzyme activity in pregnancy. In this study 10-30.% in first trimester, 50- 65 % in third trimester.³⁴

SUMMARY

This chapter has outlined on the statement of the problem, objectives operational definitions, hypothesis, assumptions, conceptual framework and projected outcome of the present study. The investigator found that the pandor's Health promotion model was significant in the present study as the hemoglobin level among Antenatal mothers will be improved and protected them from causing anemia.

CHAPTER-IV

OBJECTIVES

RESEARCH METHODOLOGY

A problem can be solved systematically using research technique. It is the science of learning how to conduct research. Research methodology is the general term

used to describe the processes researchers use to describe the processes researcher use to describe, explain, and forecast events. It can also describe as the study of knowledge acquisition techniques. its purpose is to provide research work plan.³⁵

The research approach, research design, study environment, description of the population, sample, sample size, sampling technique, development and testing of the tool, method of data collecting, and data analysis strategy are all included in the methodology of the study.

SOURCE O THE DATA

- The source of the date for this study were antenatal mothers attending antenatal OPD at R L Jalappa Hospital and Research center, Tamaka, Kolar.

Research Approach Design:

A Research approach is a strategy that include phases from general to specific method of data collecting, analysis, and interpretation. the two main categories of research approach to data collection and method of thinking or data analysis.

Qualitative Research approach is considered appropriate for the present study.

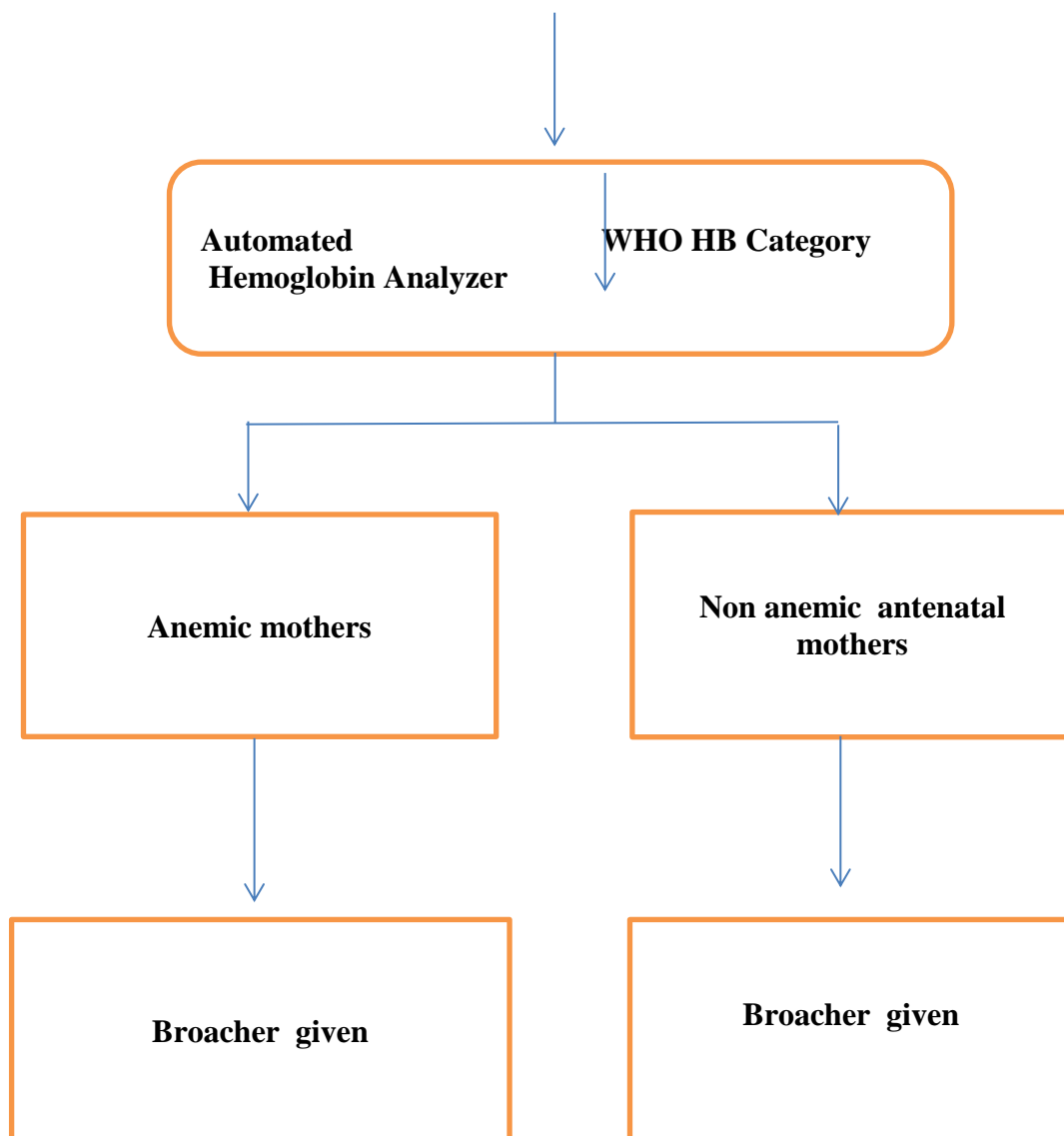
The research design is the overall strategy outlining the approaches and steps to take in order to gather and analysis the necessary data for a research study. The researchers overall strategy for addressing the research questions are putting the research to the test is known as the research design.

Cross sectional survey design was used as the research strategy for this study.

Prevalence of anemia was checked among 100 antenatal mothers who visited Antenatal OPDS using Automated Hemoglobin analyzer test in bio chemistry laboratory. according to WHO Hb scale, the antenatal mothers values was classified and they were divided into anemic and non-anemic mothers.

Diagrammatic presentation of the research design

Antenatal mothers (Purposive sampling)



VARIABLES:

Independent Variable:

The independent variable in this study is Dietary pattern and taboos among Anemic and Non Anemic Antenatal mother.

Dependent Variable:

The independent variable in this study is Hemoglobin level of Antenatal mother who are Anemic and Non-anemic.

Extraneous variables:

in this study, it refers to the selected socio demographic variables like Age of Antenatal mothers, Religion, Education, Occupation, Family income, type of family, family income, Diet pattern, frequency of food intake, Type of eating habits, Intake Iron and folic acid supplementations.

Setting:

Setting is the location where a study is conducted for the present study.³⁶

The setting was selected based on acquaintance of the investigator with the institution, feasibility of conducting the study, availability of the sample, permission and proximity of the setting to investigation. the study was conducted at antenatal OPD of R L Jalappa hospital and research center, Tamaka, Kolar. 100 Antenatal mothers were arised for Hb level at OPD. Keeping in mind, the time and available of Antenatal mothers in the OPD for data collection and familiarity to the area, the investigator has chosen these settings.

Population:

population is referred as the target population which represents the entire group of all elements like individuals or objects that need certain criteria for instruction on the study.

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In this present study the target populations are the Antenatal mothers `attending antenatal OPD's who are in 2nd and 3rd trimester.

Sample and Sample size:

Sample refers to a portion of the population which represent the entire population.³⁶

In this study the sample size consist of 2 sets of sample Anemic antenatal mothers& Non anemic antenatal mothers. Who were categorized based on WHO Hb scale from 100 Antenatal mothers who are 2nd and 3rd trimester.

Sample size:

The sample size was 100 Antenatal mothers (56 Non anemic, 44 Anemic)who are attending antenatal OPD'S at R.L.J.H.R.C.

Sampling Techniques:

Purposive sampling techniques was adopted to collect the data for the study.

Sample criteria:**Inclusion criteria**

1. The pregnant mother who are 2nd and 3rd trimester.
2. Who are participate willing to participate in this study.

Exclusive criteria:

1. Who are having and medical and surgical illness.
2. Who are critically ill.
3. who are not interested to participate in this study.

Data collection tools:

Structured interview schedule was used to collect the data the tools consist of two sections.

Section A: socio demographic profile

Age, Education, Religion, Family size, Educational status of pregnant women, Educational status of husband of pregnant women, Occupation of bread winner of the family, Income of the family, Residence, Socioeconomic status, Dietary pattern, Number of meals intake per a day, Hemoglobin level, Workers, Obstetrical score, Pregnancy interval, If multi gravida mode of delivery, Eat vegetables, Number of antenatal visits, Who will prepare food at home, Do you eat freshly prepared food, Do you like to eating heavy food, Do you follow specific dietary regimen, Have you done any changes in eating patterns during pregnancy. Does your husband give company while eating.

Section B.1: Structures questionnaires on dietary pattern and on taboos.

Eat Vitamin-c, Omega3 rich diet, Do your Family provides your favorite food, Do you consume fresh vegetable, Are you taking Iron and folic acid supplements, Eat snacks between the meals, Are you taking Iron and Folic acid supplementations, Eat carbohydrate food, Eat protein rich diet, Eat fat rich food, What are the animal sources of food you will take, What are the vegetables you eat daily, Are you taking pulses and grains daily.

Section B.2: Attitude scale related to dietary pattern

Eat additional frequency of food for a diet, Eat more carbohydrates, Eat more protein sources food such as milk, chicken, pulses egg, Preparing more milk and its products during pregnancy, are you taking Iron rich diet, Likes to eat food which is not allow to eat, eat food rich in vitamin C, B12, Omega 3, Fatty food, do you prepare food with Iodized salt.

Section B.3: Dietary pattern related to daily food habits

Are you taking additional meals for a day during pregnancy, following specific dietary regimen during pregnancy, avoiding excessive work load during pregnancy, using iodized salt cooking main meals, eating snacks between main meals daily, taking coffee or tea daily or after meals, taking Iron and folic acid supplementation, are you skipping meals during pregnancy.

Section-3 Structured questionnaires related to food taboos followed during pregnancy

What are the carbohydrate foods are you taking daily, what are the protein foods are you taking daily, what are the Vitamin-A foods are you taking daily, what are the Vitamin-C foods are you taking daily, what are the Vitamin B12 foods are you taking daily, What are the Vitamin B6 foods are you taking daily, what are the Iron rich

foods are you taking daily, what are the folic acid foods are taking daily, what are the milk and milk products are you taking daily, what are the food beverages are you taking daily, what are the Omega-3 fatty acids are you taking daily, what are the miscellaneous foods are you taking daily, list the craving food items you had during pregnancy, list the reason for avoiding the food item during pregnancy, what are the fruits you avoid, what are the vegetables you avoid, do you willingly avoid this food, what do you feel about the taboos that is followed regarding food avoidance.

Methods of Data collection:

1. Permission was obtained from IEC.
2. Permission was obtained from superintended by R L Jalappa Hospital & Research Centre.
3. Permission was obtained from HOD of OBG Dept.
4. Procedure of data collection, purpose of study, setting of data collection, confidentiality, privacy, during of data collection was explained to antenatal mother who were attending antenatal OPD'S , those who were willing to participate in the study.
5. Permission of participants were taken.
6. Their blood sample was taken and sent to Biochemistry lab for Hb value.
7. Based on Hb value mothers were categorization scale.
8. Data was collected by interview one to one method.
9. Information booklet was distributed after the data collection.
10. Confidentiality and anon amity was maintained through the study.

Plan for data analysis

Data obtained was analyzed using following statistical methods

- 1 Data obtained was analyzed using descriptive and inferential statistics the fallowing statistical test are used for analysis.
- 2 Frequency, percentage was used in the study.

SUMMARY:

The study approach, research design, setting, population, sample size, sampling procedure, development and description of the tool, and plan for data analysis were all covered in this chapter of methodology.

CHAPTER-V**THE SAMPLE SIZE ESTIMATION PROCESS****STATEMENT OF THE PROBLEM**

“A study to find out the Prevalence of Anemia and compare Dietary practices and taboos among Anemic and Non Anemic Antenatal Mother attending OPD’S at selected Hospitals, Kolar in a view to develop an information Booklet.”

Research approach: Qualitative approach

Research design: Descriptive study research design

Sampling technique: Purposive sampling technique

Sampling size: 100 Antenatal mothers with based on there Hemoglobin level categorized in R.L.J.H.R.C.

Sample size estimation:

Sample size was estimated based on the prevalence of Anemia among Antenatal mothers in Kolar. Among Antenatal mother Hemoglobin less than 11.9gm is considering Anemic and greater than 12gm are Non anemic antenatal mothers. According to WHO categorization.

$$\text{Sample size estimation formula} = \frac{n=(Z^2pq)}{d^2}$$

P = Prevalence of taboos 64%

q= 100-P

d= absolute error 10%

Z²= normal deviate at 95%

Confidence= 1.96%

CHAPTER-VI

RESULTS

The most critical phase of any research is the data analysis. Data analysis condenses gathered information. it entails the analysis of acquired data using logical and analytical reasoning to spot trends, or patient.³⁵

This chapter deals with the analysis and interpretation of data collected from 100 Antenatal mothers attended to Antenatal OPD in RLJH at Kolar. To assess the

dietary practices and dietary taboos in among antenatal mothers. The purpose of analysis was to reduce the collected data to an injectable and interpretable form so that the relation of the research problem can be studied and tested.

OBJECTIVES OF THE STUDY

1. To find out the prevalence of anemia among Antenatal mothers who are attending Antenatal OPD of R.L. Jalappa Hospital and Research center at Kolar, By using HB test and WHO Hb categorization chart.
2. To compare the Dietary practices and Dietary Taboos among Anemic and non anemic Antenatal mothers.

ORGANOZATION OF THE STUDY FINDINGS

The analyzed data is organized and presented under the following sections.

SECTION:A

Distribution of demographic variables of Antenatal mothers in Antenatal OPD.

SECTION:B

B.1 Questions related to dietary practices followed by antenatal mothers attending antenatal OPD'S.

B.2 Attitude scale related to dietary pattern

B.3 Dietary pattern related to daily food habits

SECTION:C

Structured questionnaires related to food Taboos followed during pregnancy.

SECTION: A

This section deals with data pertaining to socio-demographic characteristics of Antenatal mothers assessed for socio demographic variables.

n=56, n=44, N=100

SLNO	DEMOGRAPHIC VARIABLES	NON ANEMIC		ANEMIC	
		F	%	F	%
1.	Age of the Antenatal women				
	1.1)18-24	23	41	15	34

	1.2) 25-34	27	49	23	52
	1.3) 35-45	6	10	6	14
2.	Religion				
	2.1) Hindu	43	76	37	54
	2.2) Muslim	12	22	6	14
	2.3) Christian	1	2	1	2
	2.4) Any other	-	-	-	-
3.	Family size				
	3.1) <2	6	11	6	14
	3.2) 3-5	34	61	25	57
	3.3) 5-8	13	23	12	27
	3.4) >8	3	5	1	2
4.	Educational level of pregnant women				
	4.1) Professional degree	17	30	14	32
	4.2) Graduates	6	11	7	16
	4.3) Intermediate /Diploma	16	29	11	25
	4.4) High School	15	27	10	23
	4.5) Middle school	2	3	2	4
	4.5) Primary School	-	-	-	-
	4.6) No formal education`	-	-	-	-
5.	Educational level of husband of pregnant women				
	5.1) Professional degree	11	20	12	27
	5.2) Graduates	9	16	10	23
	5.3) Intermediate / Diploma	15	27	9	20
	5.4) High School	17	30	11	25
	5.5) Middle school	2	3	2	5
	5.6) Primary School	1	2	-	-
	5.7) No formal education	1	2	-	-
6.	Occupation of bread winner in the family.				

	6.1) Professional.	15	27	14	32
	6.2) Semiprofessional.	11	20	8	18
	6.3) Clerical / shops / farm.	3	5	10	23
	6.4) Skilled worker.	11	20	5	11
	6.5) Semi skilled worker.	5	9	1	2
	6.6) Unskilled worker.	11	19	3	7
	6.7) Un employee.	-	-	3	7
7.	Income of the family.				
	7.1) Less than RS. 10000/month	7	12	7	16
	7.2) Rs. 10,001-20,000/month	16	29	9	20
	7.3) Rs.2 0,001-30,000/month	16	29	11	25
	7.4) More than Rs.30,000/month	17	30	17	39
8.	Residence.				
	8.1) Rural.	32	57	28	64
	8.2) Urban.	21	37	14	32
	8.3) Semi urban	1	2	1	2
	8.4) Hill area	2	4	1	2
9.	Socio Economic status.				
	9.1) Below poverty line	12	21	15	34
	9.2) Above poverty line	44	79	29	66
10.	Dietary pattern				
	10.1) Vegetarian.	10	18	9	20
	10.2) Non-vegetarian.	8	14	6	14
	10.3) Mixed diet	38	68	29	66
11	Workers.				
	11.1) Sedentary.	25	45	16	36
	11.2) Moderate.	31	55	28	
12	Obstetrical score –				
	12.1) Gravida-1	32	57	27	
	12.2) Gravida-2	17	30	14	
	12.3) Gravida-3	5	9	-	-

	12.4) Gravida more than 3	2	4	3	
13	Pregnancy interval.				
	13.1) One year.	34	61	21	
	13.2) Two years.	11	20	14	32
	13.3) Three years.	4	7	3	
	13.4) More than that.	7	12	6	14
14.	If multi gravida, mode of delivery				
	14.1) LSCS	31	55	21	48
	14.2) Normal delivery	23	41	22	50
	14.3) Forceps delivery	2	4	-	-
	14.4) Vacuum delivery	-	-	1	2
15.	Hemoglobin Level				
	15.1) HB > 12 gm/dl	56	100	25	57
	15.2) Mild anemia 10-10.9gm/dl.	-	-	13	29
	15.3) Moderate anemia 7-9.9 gm/dl	-	-	6	14
	15.4) severe <7.9gm/dl	-	-	-	-
16.	Eat fruits				
	16.1) Daily.	46	82	32	73
	16.2) Every often.	3	5	5	11
	16.3) Often.	7	13	7	16
	16.4) Rarely.	-	-	-	-
17.	Eat vegetables.				
	17.1) Daily.	38	68	28	64
	17.2) Every often.	10	18	11	25
	17.3) Often.	7	12	4	9
	17.4) Rarely.	1	2	1	2
18.	No. of Meals frequencies.				
	18.1) 1– 2.	9	16	7	16
	18.2) 3 - 4.	44	78	30	68
	18.3) >5.	3	6	7	16
19.	Number of Antenatal visits				
	19.1) 2-3 times	13	23	13	29

	19.2) 4-5 times	19	34	18	41
	19.3) 6-7 times	21	38	10	23
	19.4) More than 8 times	3	5	3	7
20.	Who will prepare food at home				
	20.1) Your self	36	64	29	66
	20.2) Mother in law/ Mother	10	18	9	21
	20.3) Sister in law/ Sister	7	13	5	11
	20.4) Co sister	3	5	1	2
21.	Do you eat freshly prepared food.				
	21.1) Yes	41	73	39	88
	21.2) No.	15	27	5	12
22.	Do you like eating heavy food.				
	22.1) Yes	43	77	22	50
	22.2) No.	13	23	22	50
23.	Have you done any changes in eating patterns during pregnancy.				
	23.1) Yes	54	96	38	86
	23.2) No	2	4	6	14
24.	Are family members cooperative, loving and caring.				
	24.1) Yes	50	89	43	98
	24.2) No	6	11	1	2
25.	Do you follow specific dietary regimen.				
	25 .1) Yes	43	77	36	82
	25.2) No.	13	23	8	18
26.	Does your husband give company while eating				
	26.1) Yes	46	82	37	84
	26.2) No	10	18	7	16

TABLE:1 Distribution of demographic variables of Antenatal mothers in Antenatal OPD.

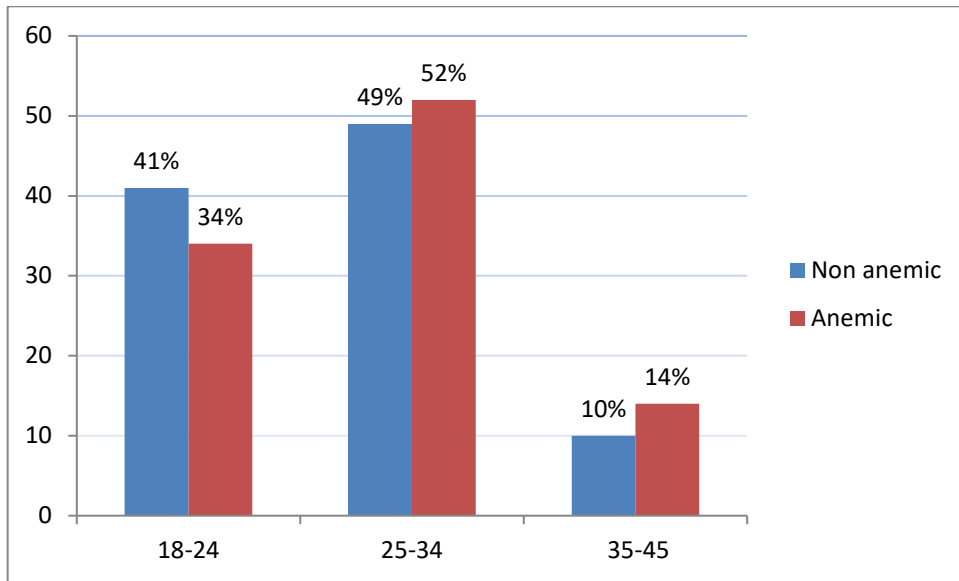


Diagram-1: Description of Age group of Antenatal mothers

It shows that Socio demographic variables of antenatal mothers in that anemic antenatal mothers Majority belongs to 25 – 30 (48%) Few are belongs to 31 – 37 years 6(10%) minimum in this age group, Non Anemic antenatal mothers Majority are belongs to the age group of 25-30 (52%) belongs to age group, Few belongs to 31-37 (14%) age group.

Anemic antenatal mothers 37 (84%) Majority are belongs to Hindu, few were 1(2%) are Belongs to Christian religion. Non anemic antenatal mothers 43(76%), majority are belongs to Hindu religion Few were Christian religion 1 (2%).

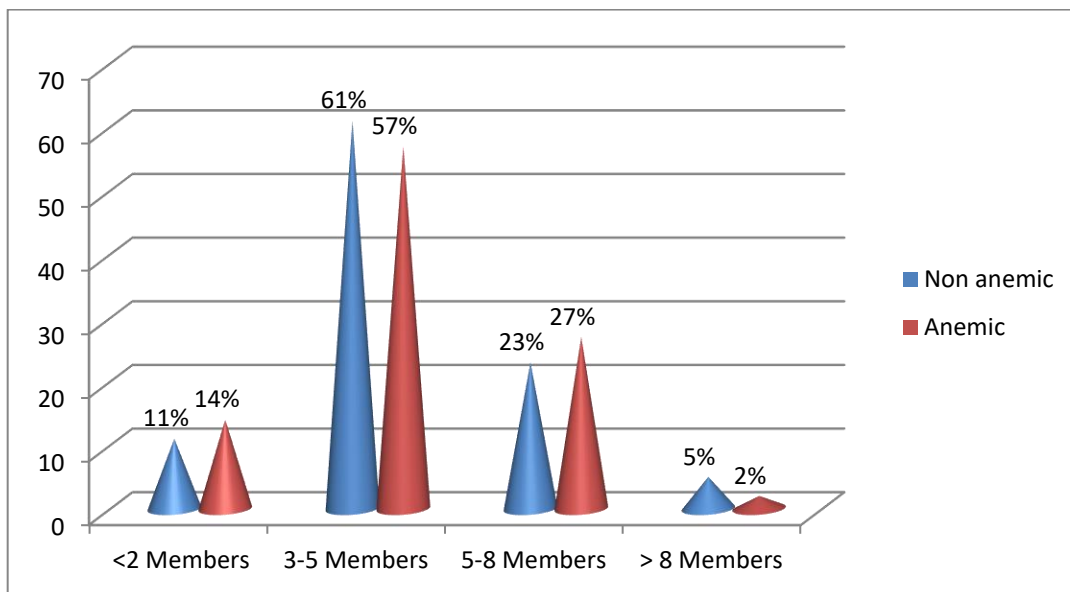


Diagram-2: Distribution of family size of antenatal mothers.

Anemic antenatal mothers 6(14%) belongs to small family with the living of < 2 members in the home few 1(2%) belongs to big family with the living of more than 8 members in the family. Non anemic antenatal mothers 34(61%) Majority belongs to medium family with the living of 3-5 members, 3(5%) few belongs to big family with the living of more than 8 members in the family.

Anemic antenatal mothers educational status 14(32%) Majority are belongs to professional degree, few belongs to 2(4%) are Middle school. Non anemic antenatal mothers educational status 17(30%) Majority are belongs to professional degree, few belongs to 2(3%) Middle school.

Anemic antenatal mothers educational status 12(27%) Majority are belongs to professional degree, few 2(5%) belongs to Middle school. Non anemic antenatal mothers Educational level of Husband 17 (30%) Majority are belongs to High school, few 1(2%) belongs to primary education.

Anemic antenatal mothers Occupation of bread winner of the family 14(32%) Majority are professional degree, few 1(2%) were semi skilled worker, 3(7%) unskilled workers,) and un employment. Non anemic antenatal mothers Occupation of bread winner of the family 15(27%)Majority are professional degree, few3(5%) were are Clerical work shop.

Anemic antenatal mothers Family majority 17(39%) are having more than 30000/- month Income and few are having 7(16%) less then Rs.10000/- per month. Non anemic antenatal mothers Family Income 17(30%) Majority are more than 30000/- month and few were 10(12%) less then Rs.10000/- per month.

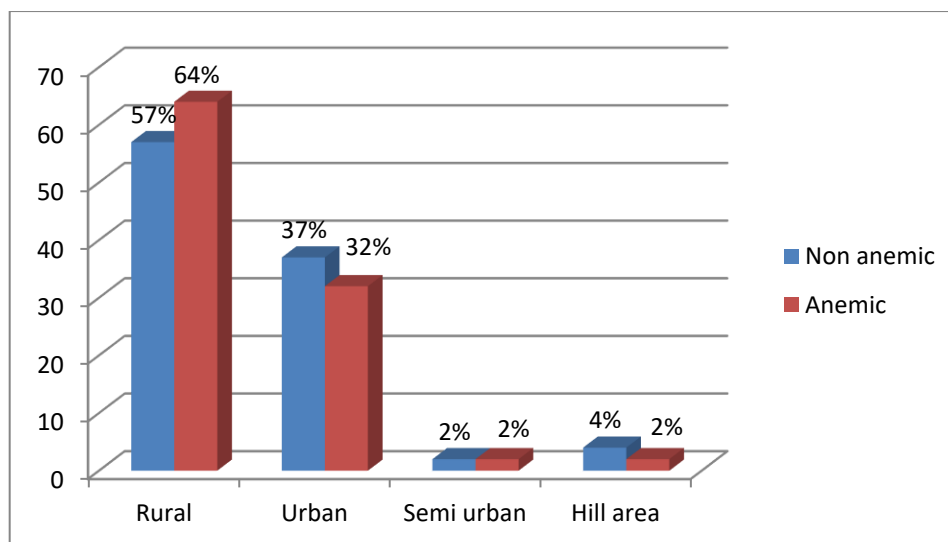


Diagram-3: Distribution of residence of the antenatal mothers.

Anemic antenatal mothers 28(64%) Majority are living in Rural area, 1(2%) Semi urban and Hill area. Non anemic antenatal mothers 32(57%) Majority are living in Rural area, few are 1(2%) Semi urban area.

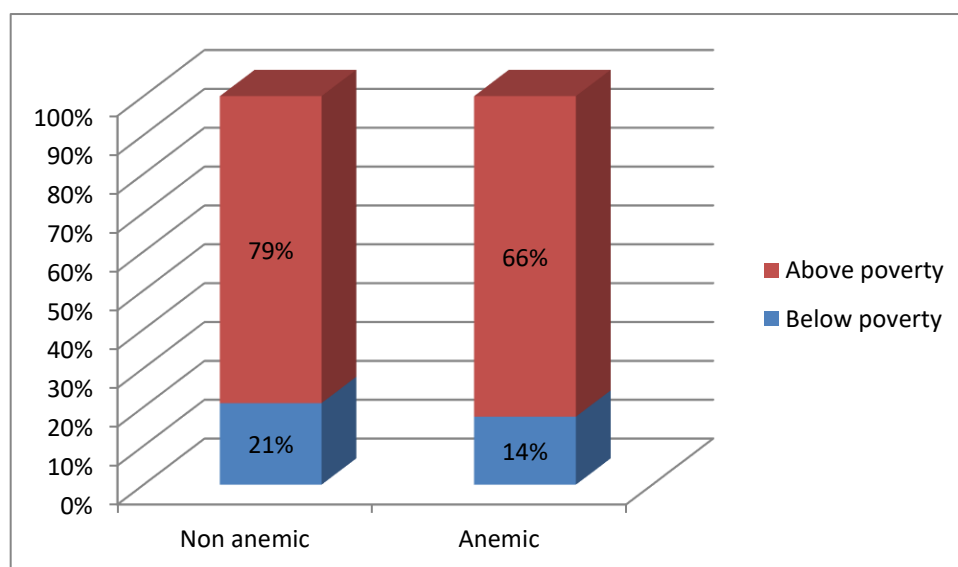


Diagram-4: Distribution of Socio economic status of the antenatal mothers.

Anemic antenatal mothers Socio economic status 29 (66%) are belong to above poverty and few 15(44%) are belongs to above poverty. Non anemic antenatal mothers Socio economic status 44(79%) Majority are belong to above poverty and few 12(21%) are belongs to above poverty.

Anemic antenatal mothers Dietary pattern 29(66%) Majority are mixed diet and 6 (14%) are Non vegetarian diet are following. Non anemic antenatal mothers majority 38(68%) are mixed diet are following and few 8 (14%) are Vegetarian.

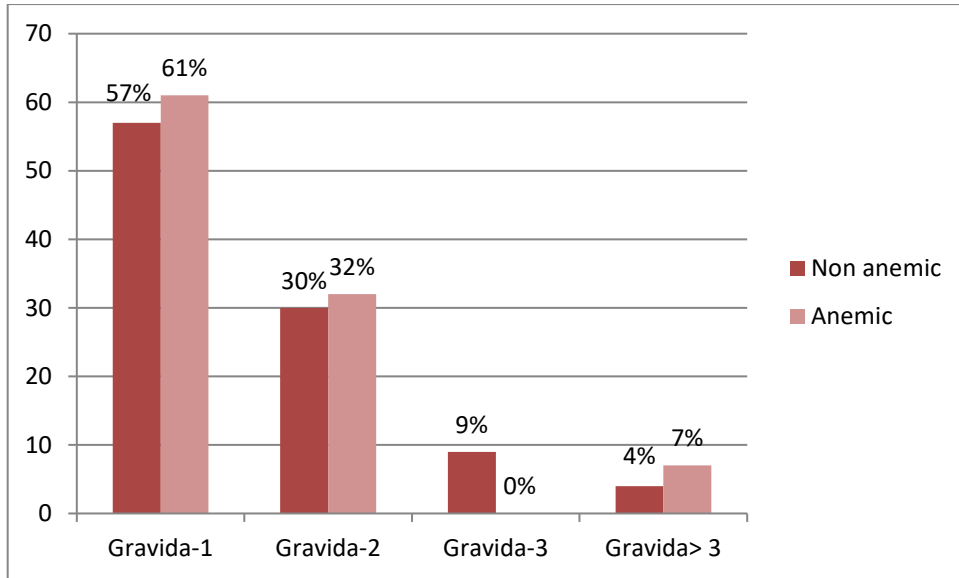


Diagram-5: Distribution of Obstetrical score of antenatal mothers

Anemic antenatal mothers Obstetrical score 27(61%) Majority are Gravida-1 and few 3(7%) are multi gravida. Non anemic antenatal mothers 32(57%) are Gravida-1 and few are 2(4%) multigravida.

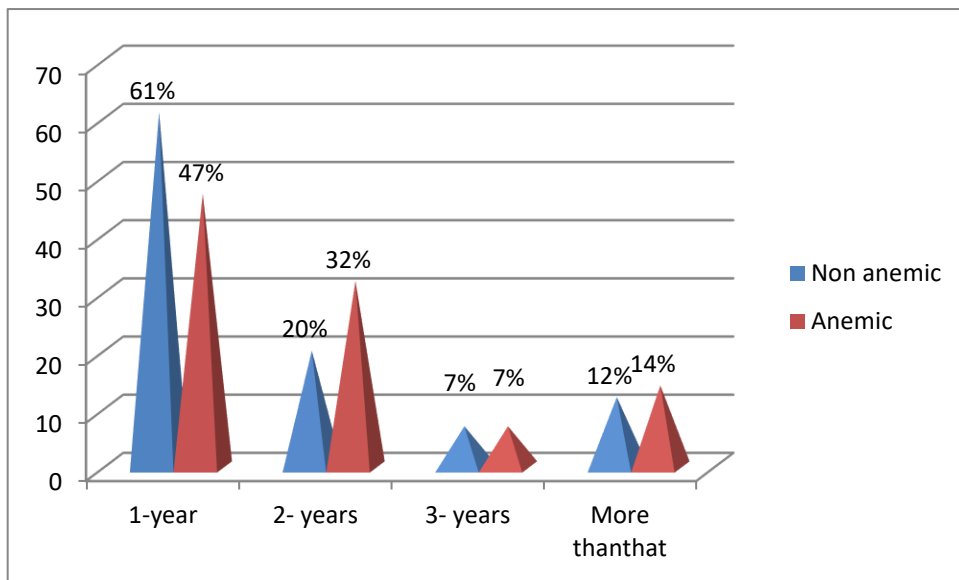


Diagram-6: Distribution of pregnancy intervals of antenatal mothers.

Anemic antenatal mothers multi gravida mode of delivery 21(48%) had Normal vaginal delivery and few are 1(2%) had Vacuum delivery. Non anemic antenatal mothers Majority 31(55%) had Lower segment caesarian section, 2(4%) had Forceps delivery.

Anemic antenatal mothers Majority 25(57%) are having Mild anemia and few 6(14%) are having severe anemia. Non anemic antenatal mothers hemoglobin level 56(100%) is having Hemoglobin more than 11.9gm.

Anemic antenatal mothers 27(61%) Majority are eating fruits 1(2%) are eating rarely. Non anemic antenatal mothers eating fruits 46(82%) are and few 1(2%) are eating rarely.

Anemic antenatal mothers 28(64%) Majority are eating fruits and few 1(2%) are eating rarely. Non anemic antenatal mothers 38(68%) Majority are eating vegetables and few 1(2%) are eating rarely.

Anemic antenatal mothers Number of meals per day 30(68%) majority are taking 3 times a and few are 7(16%) 4 times a day. Non anemic antenatal mothers majority 44(78%) 3 times a day, 3(6%) 4 times a day are of meals per day.

Anemic antenatal mothers 18(41%) majority are visited 4-5 times and few are 3(7%) times visited to hospital for antenatal checkups. Non anemic antenatal mothers 21(38%) majority 6-7 times and 3(5%) few are times visited to hospital for antenatal checkup.

Anemic antenatal mothers 29(66%)majority are self preparation of food and few 1(2%) are co sister preparing the food in the home. Non anemic antenatal mothers 36(64%) majority are self-preparation of food and 3(5%) few are co sister preparing the food in the home.

Anemic antenatal mothers Eating of freshly prepared food 39(88%) majority are responded yes, 5(12%) responded for No. Non anemic antenatal mothers 41(73%) majority are responded yes and few 15(27%) responded for No.

Anemic antenatal mothers Liking for having heavy food 22(50%) responded for Yes and 22(50%) are responded No. Non anemic antenatal mothers 43(77%) responded for Yes, 13(23%) are responded No.

Anemic antenatal mothers Any eating changes in dietary pattern 38(86%) majority are responded for yes and few 6(14%) are responded No. Non anemic antenatal mothers 54(96%) majority are responded for yes, 2(4%) are responded No.

Anemic antenatal mothers family members are caring and loving 43(98%) majority are responded Yes, 1(2%) responded No. Non anemic antenatal mothers 50(89%) majority are responded Yes, 6(11%) responded No.

Anemic antenatal mothers are following specific dietary regimen 36(82%) majority are responded for Yes and 8(18%) few responded No. Non anemic antenatal mothers 43(77%) majority are responded for Yes and 13(23%) few responded No.

Anemic antenatal mothers Husband give company while eating 37(84%) majority are responded Yes and 7(16%) few are responded No. Non anemic antenatal mothers 46(82%) majority are responded Yes and 10(18%) few are responded No.

Section – 2 Questions related to dietary practices followed by antenatal mothers attending antenatal OPD’S.

SLNO	VARIABLES	NON-ANEMIC		ANEMIC	
		F	%	F	%
1	Eats vitamin C, B12, Omega 3 rich diet include				
	1.1) Yes	12	21	7	16
	1.2) No	44	79	37	84
2.	Do your family provides your favorite food.				
	2.1) Yes	17	30	15	34
	2.2) No	39	70	29	66
3.	Do your Consume fresh vegetables like carrot, cucumber, ladies’ finger, Carrot, drumsticks, beetroot, green leafy vegetables etc.				
	3.1) Yes	21	37	15	34
	3.2) No	35	63	29	66

4	Intake Iron and Folic acid supplements like Peanuts, Green leafy vegetables like spinach, Drumstick leave, asparagus, Bitchily, Garden night shade, fruits, broccoli, red meat etc daily				
	4.1) Yes	38	68	11	25
	4.2) No	18	32	33	75
5	Eat snacks between the meals				
	5.1) Yes	36	65	23	52
	5.2) No	20	35	21	48
6	Eat carbohydrate food like rice, corns, Sweet potato, sugar, potato, Banana, peas, wheat, etc.				
	6.1) Yes	56	100	44	100
	6.2) No	-	-	-	-
7.	Eats protein diet like cereals like, Channa, peanuts, pigeon peas ,horse gram, black eyed peas, Hyacinth beans, pulses, Red gram, green gram, Green peace , eggs, meat, chicken etc.				
	7.1) Yes	38	68	30	68
	7.2) No	18	32	14	32
8.	Eats fats diet like fried food, fried puri, Fried rice, fried chicken, Ice cream, Potato chips, kabab, junk foods like Gobi Manchuria, fried Peanuts, etc.				
	8.1) Yes	30	54	35	80
	8.2) No	26	44	9	20

9.	Are you taking animal sources of food you take like milk, butter, curd, meat, chicken, Ghee, All the animal products etc.				
	9.1) Yes	37	66	20	45
	9.2) No	19	34	24	55
10.	Are you taking green leafy vegetables daily				
	10.1) Yes	29	52	24	56
	10.2) No	27	48	20	44
11.	Are you eat the vegetables daily				
	11.1) Yes	33	59	23	52
	11.2) No	23	41	24	48
12.	Are you taking pulses and grains daily				
	12.1) Yes	33	59	22	50
	12.2) No	23	41	22	50

Table-2: Distribution of Questions related to dietary practices followed by antenatal mothers attending antenatal OPD'S.

It shows that Dietary practices followed by antenatal mothers attending antenatal OPD'S. Anemic antenatal mothers eat Vitamin-C Vitamin-B12 rich diet majority are 44(79%) responded No. few 12(21%) are responded Yes, non anemic antenatal mothers majority 37(84%) responded No and few 7(16%) are responded Yes.

Anemic antenatal mothers family provide there favorite food majority 34(77%) responded No and few 10(23%) responded Yes. Non anemic antenatal mothers majority 39(70%) responded No and few 17(30%) are responded Yes.

Anemic antenatal mothers consume freshly prepared food majority 29(66%) are responded No and few 15(34%) responded Yes. Non anemic antenatal mothers majority 35(63%) responded No and few 21(37%) are responded Yes.

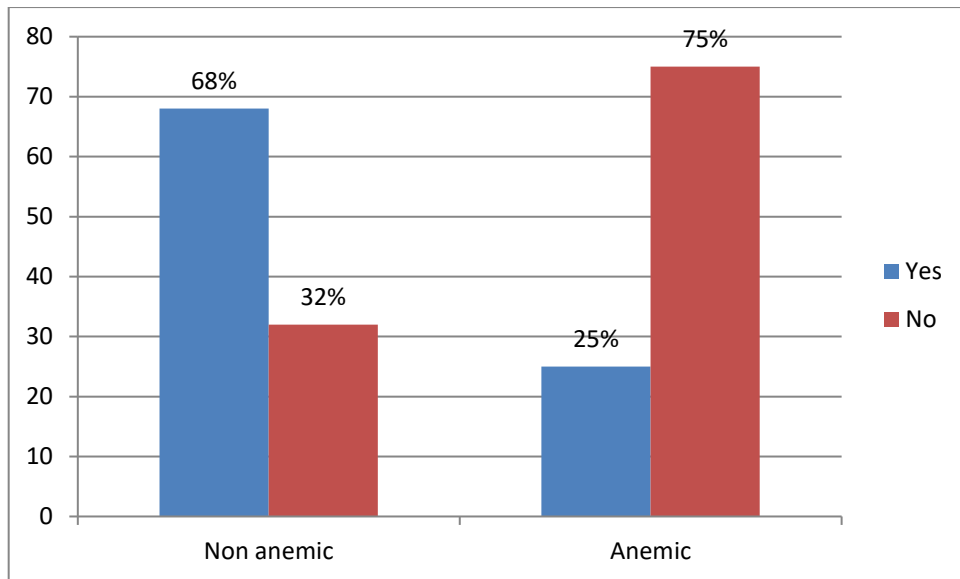


Diagram-7: Description of response of antenatal mother eating of freshly prepared food

Anemic antenatal mothers are taking Iron and folic acid source food like ladies finger, Ridge guard etc majority are responded 33(75%) responded No and 11(25%) few responded Yes. Non anemic antenatal mothers majority 38(68%) responded Yes, 18(32%) few are responded No.

Anemic antenatal mothers are Eat snacks between the meals 23(57%) responded Yes, 21(48%) responded No. Non anemic antenatal mothers 36(65%) majority are responded Yes, 20(35%) few are responded No.

Anemic antenatal mothers are taking carbohydrate diet 44(100%) responded Yes. Non anemic antenatal mothers majority 56(100%) responded Yes.

Anemic antenatal mothers are taking protein rich diet majority 30(68%) responded Yes and 14(32%) responded No. Non anemic antenatal mothers majority 38(68%) responded Yes and few 18 (32%) responded No.

Anemic antenatal mothers are taking fatty diet majority 35(80%) responded Yes and few 9(20%) responded No. Non anemic antenatal mothers majority 30(54%) responded Yes and few 26 (46%) responded No.

Anemic antenatal mothers are taking animal source food majority 20(45%) are responded Yes and few 24(55%) responded No. Non anemic antenatal mothers majority 37(66%) responded Yes and few 19 (34%) responded No.

Anemic antenatal mothers are taking Green leafy vegetables daily majority 24(56%) responded Yes, and few 20(46%) responded No. Non anemic antenatal mothers majority 29(52%) responded Yes and few 27(48%) responded No.

Anemic antenatal mothers are Eat vegetables daily majority 23(52%) responded Yes and few 21(47%) responded No. Non anemic antenatal mothers majority 33(59%) responded Yes and few 23(41%) are responded No.

Anemic antenatal mothers are taking pulses and grains daily both groups 22(50%) responded Yes and 22(50%) responded No. Non anemic antenatal mothers majority 33(59%) responded Yes and few 23(41%) are responded No.

SECTION-B.2 Attitude scale related to dietary pattern

SLNO	VARIABLES	NON ANEMIC		ANEMIC	
		F	%	F	%
13.	Do you eat additional frequency of food for a day				
	13.1) Agree	41	73	9	20
	13.2) Neutral	10	18	34	78
	13.3) Disagree	5	9	1	2
14.	Eats more carbohydrates.				
	14.1) Agree	41	73	16	36
	14.2) Neutral	12	22	25	57
	14.3) Disagree	3	5	3	7
15.	Eat more protein sources food such as beef, pulses, chicken.				
	15.1) Agree	48	86	7	16
	15.2) Neutral	6	11	32	73
	15.3) Disagree	2	3	5	11
16.	Preparing more milk and its product during pregnancy.				

	16.1) Agree	7	12	10	23
	16.2) Neutral	11	20	33	75
	16.3) Disagree	38	68	1	2
17.	Are you taking Iron rich diet				
	17.1) Agree	38	68	10	23
	17.2) Neutral	12	21	33	75
	17.3) Disagree	11	20	1	2
18.	Likes to eat food which is not allowed to eat.				
	18.1) Agree	38	68	8	18
	18.2) Neutral	12	21	14	32
	18.3) Disagree	6	11	22	50
19.	Eat food rich in vitamin C,B12, Omega 3, Fatty acids.				
	19.1) Agree	41	73	8	18
	19.2) Neutral	7	13	16	37
	19.3) Disagree	8	14	20	45
20.	Do you prepare food with Iodized salt.				
	20.1) Agree	39	70	7	17
	20.2) Neutral	14	25	35	79
	20.3) Disagree	3	5	2	4

TABLE-3 Distribution of antenatal mothers Attitude scale related to dietary pattern

It shows that Attitude scale related to dietary pattern Anemic antenatal mothers eat additional frequency of food for a day majority 34(77%) are responded Neutral and few 1(2%) are responded for agree, Non Anemic antenatal mothers majority 41(73%) responded for agree and few 5(9%) are responded for Disagree.

Anemic antenatal mothers eat additional frequency of food for a day majority 25(56%) are responded Neutral and few 3(7%) are responded Disagree. Non-Anemic antenatal mothers majority 41(73%) responded for agree and few 3(5%) are responded Disagree.

Anemic antenatal mothers eat more protein rich sources food majority 32(77%) are responded Neutral and few 5(11%) are responded Disagree. Non Anemic antenatal mothers majority 48(86%) responded for agree, and few 2(3%) are responded Disagree.

Anemic antenatal mothers majority 33(75%) are responded Neutral and few 1(2%) are responded Disagree. Non Anemic antenatal mothers are taking milk and milk products majority 38(68%) responded for agree and few 7(12%) are responded Disagree.

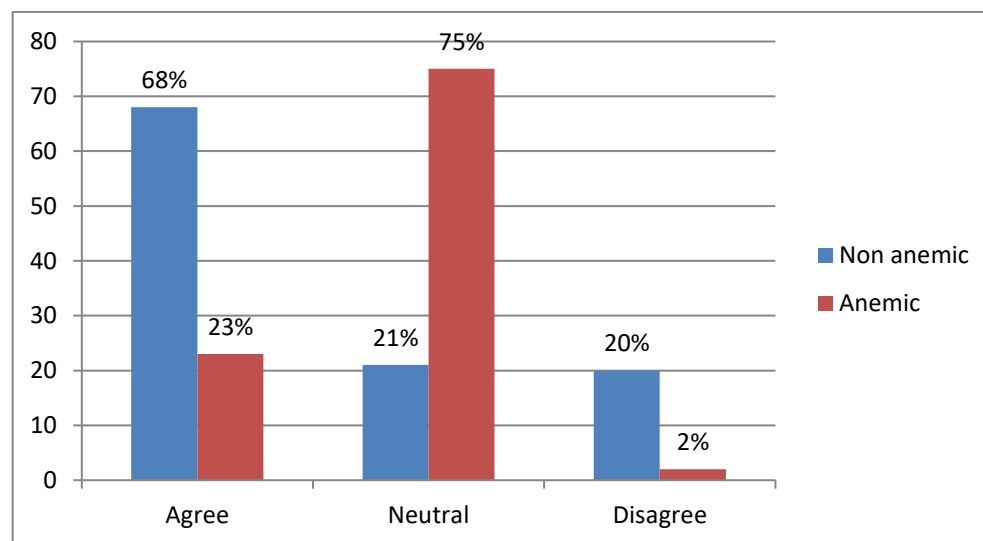


Diagram-8: Description of antenatal mothers taking milk and milk products

Anemic antenatal mothers are Iron rich diet 8(19%) responded for agree,31(70%) are responded Neutral,5(11%) Disagree. Non Anemic antenatal mothers are taking Iron rich diet 33(59%) responded for agree,12(21%) are responded Neutral,11(20%) Disagree.

Anemic antenatal mothers are Likes to eat food which is not allowed to eat 8(18%) responded for agree,14(32%) are responded Neutral, 22(50%) Disagree. Non Anemic antenatal mothers are Likes to eat food which is not allowed to eat 38(68%) responded for agree,12(21%) are responded Neutral,6(11%) Disagree.

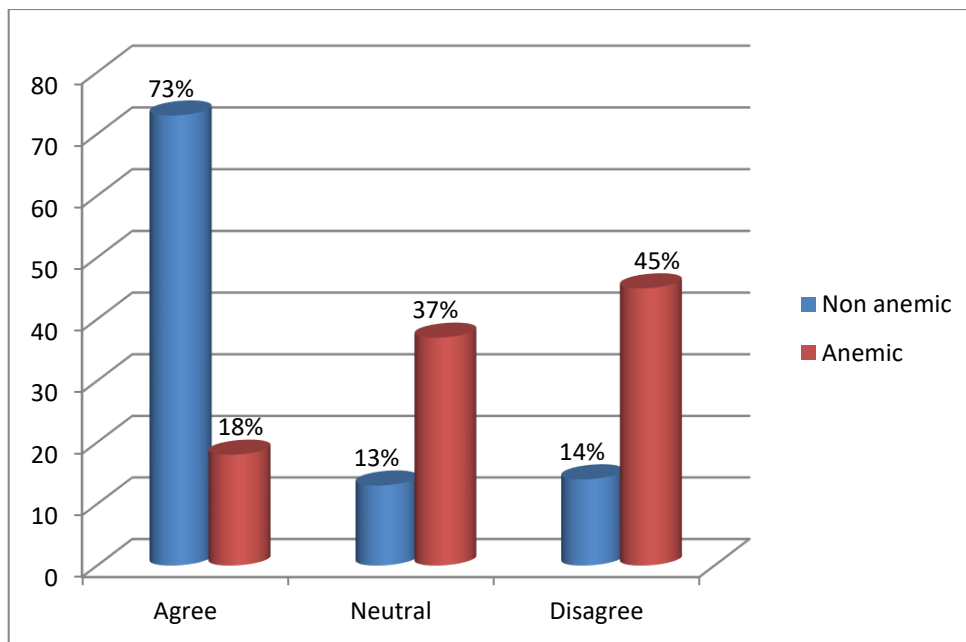


Diagram-9: Description of antenatal mothers response eat food which is not allowed to eat

Anemic antenatal mothers are Eat food rich in vitamin C,B12, Omega 3, Fatty acids 8(19%) responded for agree,16(36%) are responded Neutral, 20(45%) Disagree. Non Anemic antenatal mothers are Eat food rich in vitamin C,B12, Omega 3, Fatty acids 41(73%) responded for agree,7(13%) are responded Neutral,8(14%) Disagree.

Anemic antenatal mothers are eat prepare food with Iodized salt 7(16%) responded for agree,35(80%) are responded Neutral, 2(5%) Disagree. Non Anemic antenatal mothers are eat prepare food with Iodized salt 39(70%) responded for agree,14(25%) are responded Neutral,3(5%) Disagree.

SECTION-B. 3 Dietary pattern related to daily food habits

SL. No.	Questionnaires	NON ANEMIC		ANEMIC	
		F	%	F	%
21.	Are you taking additional meals for a day during pregnancy?				
	21.1) Yes	32	57	19	43
	21.2) No	24	43	25	57
22.	Following specific dietary regimen during pregnancy				
	22.1) Yes	20	36	18	41
	22.2) No	36	64	26	59
23.	Avoiding excessive work load during pregnancy				
	23.1) Yes	13	23	20	55
	23.2) No	43	77	20	45
24.	Are you using iodized salt cooking main meals				
	24.1) Yes	10	18	24	55
	24.2) No	46	82	20	45
25.	Eating snacks between main meals daily				
	25.1) Yes	14	25	23	52
	25.2) No	42	75	21	48
26.	Are you taking coffee or tea daily or after meals.				
	26.1) Yes	5	9	3	7
	26.2) No	52	91	41	93
27.	Are you taking Iron and Folic acid supplementation				
	27.1) Yes	25	45	44	100
	27.2) No	31	55	-	-

28.	Are you skipping meals during pregnancy				
	28.1)Yes	33	59	19	43
	28.2)No	23	41	25	57

Table -4 Distribution of antenatal mother Dietary pattern related to daily food habits

It shows that Dietary pattern related to daily food habits Anemic antenatal mothers taking additional meals for a day during pregnancy majority 26(59%) are responded No and few 18(41%) are responded yes. Non anemic antenatal mothers majority 20(36%) are responded yes and few 36(64%) are responded No.

Anemic antenatal mothers taking specific dietary regimen during pregnancy majority 26(59%) are responded No. 18(41%) are responded yes. Non anemic antenatal mothers majority 36(64%) are responded No and few 20(36%) are responded yes.

Anemic antenatal mothers are Avoiding excessive work load during pregnancy majority 23(52%) are responded Yes and few 21(48%) are responded No. Non anemic antenatal mothers majority 42(75%) are responded No and few 14(25%) are responded Yes.

Anemic antenatal mothers are using Iodized salt cooking in main meals majority 25(57%) are responded No and few 19(43%) are responded Yes. Non anemic antenatal mothers majority 34(61%) are responded No and few 22(39%) are responded Yes.

Anemic antenatal mothers are Eating snacks between main meals daily majority 24(55%) are responded Yes and few 20(45%) are responded No. Non anemic antenatal mothers majority 43(77%) are responded No and few 13(23%) are responded Yes.

Anemic antenatal mothers are Eating snacks between main meals daily 24(55%) are responded Yes and 20(45%) are responded No. Non anemic antenatal mothers majority 51(91%) are responded No and few 5(9%) are responded Yes.

Anemic antenatal mothers are taking Iron and Folic acid supplementation 44(100%) are responded Yes. Non anemic antenatal mothers majority 31(55%) are responded No

and few 25(45%) are responded No.

Anemic antenatal mothers are skipping meals during pregnancy majority 28(64%) are responded No and 16(36%) are responded Yes. Non-Anemic antenatal mothers majority 33(59%) are responded Yes and 23(41%) are responded No.

SECTION-3 Structured questionnaires related to food Taboos followed during pregnancy

29.What are the Carbohydrate foods are you taking daily

SLNO	Carbohydrate source food	Non Anemic		Anemic	
		F	%	F	%
1	Grains	51	91	41	93
2	Milletts	51	91	42	95
3	Corn	15	28	16	36
4	Potato	49	88	39	88
5	Banana	46	82	38	86
6	Sweet potato	34	61	32	73
7	Honey	45	80	38	86
8	Sugar	56	100	44	100
9	Ragi	56	100	44	100
10	Rice	56	100	44	100

Table-5 Description of Antenatal mothers are taking Carbohydrate foods daily.

It shows that Carbohydrate foods are taking daily Anemic antenatal mothers 44(100%) Sugar, 44(100%) Ragi,, 44(100%) Rice, 42(95%) millets, 41(93%) Grains, 39(88%) Potato, 38(86%) Banana, 38(86%) Sweet potato, 32(73%) Honey, 16(36%) Corn and Non anemic antenatal mothers 56(100%) Sugar, 56(100%) Ragi,56(100%) Rice 51(91%) Grains, 51(91%) millets, 49(88%) Potato, 46(82%) Banana, 45(80%) Honey, 34(61%) Sweet potato,15(28%) Corn .

30.What are the Protein foods are you taking daily

SLNO	Protein source food	Non Anemic	Anemic
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		F	%	F	%
1	Millets	54	96	44	100
2	Corn	46	82	36	82
4	Legumes	44	79	33	75
5	Beans	53	94	36	82
6	Soya beans	34	61	25	57
7	Sweet corn	37	66	32	73
8	Moong dal	54	96	21	48
9	Channadal	54	96	44	100
10	Thoor dal	54	96	44	100
11	Green gram dal	54	96	44	100
12	Egg	47	84	40	91
13	Milk	54	96	25	57
14	Meat	47	84	26	59
15	Coconut	50	89	38	86
16	Peanut	54	96	27	61
17	Walnut	42	75	18	41
18	Pumpkin seeds	32	57	8	18
19	Green peas	54	96	44	100
20	Pannier	48	86	37	84
21	Chicken	50	89	36	82
22	Mutton	44	79	32	73
23	Organ meat	6	11	4	9
24	Pork	19	34	31	70
25	Mushrooms	39	70	8	18
26	Pistachio	32	56	8	18

Table-6 Description of Antenatal mothers are taking Protein foods are you taking daily.

It shows that Protein source foods are taking daily Anemic antenatal mothers 44(100%) Millets, Channadal 44(100%), Thoordhal 44(100%), Green gram

dhal44(100%),Green peas 44(100%), Egg 40(91%), Coconut38(86%), Pannier 38 (86%), Chicken 36(82%), Legumes33(75%),Sweetcorn32(73%), Pork 31(70%), Meat26(59%), Milk 25(57%), Moongdal 21(48%), Walnut 18(41%), Pumpkinseeds 8(18%), Mushrooms 8(18%),Pistachio 8(18%), Organ meat 4(9%) and Non anemic antenatal mothers 54(96%) Millets, Moong dal, 54(96%) Thoor dal, 54(96%) Green gram dal, 54(96%) Green peas, milk 54(96%), Peanut54(96%), Green peas 54(96%), Beans 53(94%), Coconut50 (89%),Chicken50(89%), Pannier48(86%), Egg47(84%), Meat 47(84%), Corn 46(82%), Mutton 44(79%), Legumes 44(79%), Walnut 42(75%), Mushroom 39(70%), Sweet corn 37(66%), Soya bean 34(61%), Pumpkinseeds 32(57%), Pistachio32(56%), Pork19(34%), Organ meat 6(11%).

31.What are the Vitamin-A foods are you taking daily

SLNO	Vitamin-A source food	Non Anemic		Anemic	
		F	%	F	%
1	All green leafy vegetables	50	89	22	50
2	Carrot	56	100	25	57
3	Spinach	56	100	25	57
4	Drum stick leaves	47	84	36	82
5	Coriander leaves	56	100	30	68
6	Carry leaves	56	100	31	70
7	Orange	37	66	19	43

Table-7 Description of the table shows that Antenatal mother Vitamin-A foods are you taking daily

It shows that Vitamin-A foods are taking daily Anemic antenatal mothers 36(82%) Drumstick leaves, 31(70%) Curry leaves, 30(68%) Coriander leaves, 25(57%) Spinach, 25(57%) Carrot, 22(50%) All green leafy vegetables, Orange 19(43%) and Non anemic antenatal mothers 56(100%) Carrot, 56(100%) Spinach, 56(100%) Coriander leaves, 56(100%) Curry leaves, 50(89%) All green leafy vegetables, 47(83%) Drumstick leaves, 37(66%) Orange.

32.What are the Vitamin-C foods are you taking daily

SLNO	Vitamin-A source	Non Anemic	Anemic
------	------------------	------------	--------

	food	F	%	F	%
1	Orange	37	66	19	43
2	Lemon	24	43	16	36
3	Amla	25	45	12	27
4	Goose berries	56	100	44	100
5	Guava	56	100	44	100
6	Pineapple	10	18	44	100
7	Mango	23	41	39	89
8	Papaya	56	100	44	100
9	Tomato	51	91	40	91
10	Grapes	56	100	44	100
11	Kiwi	8	14	4	9
12	Cauliflower	8	14	4	9
13	Sweet potato	56	100	44	100
14	Pumpkin	37	66	42	95
16	Broccoli	37	66	19	43
17	Watermelon	50	89	20	45

33. What are the Vitamin B₁₂ foods are you taking daily

Table-8 Description of Antenatal mothers Vitamin-C foods are you taking daily

It shows that Vitamin-C foods are you taking daily Anemic antenatal mothers 44(100%) Grapes, 44(100%) Sweet potato, 40(91%) Tomato, 20(45%), 19(43%) Broccoli, 16(36%) Lemon, 12(27%), 4(9%) Kiwi, 4(9%) Cauliflower, 0% of Goose berries, Guava, Pine apple, Mango, Papaya. Non Anemic antenatal mothers 56(100%) Grapes, 51(91%) Tomato, 50 (89%) Watermelon, 37(66%) Orange, 37(66%) Pumpkin, 37(66%) Broccoli, 25(45%) Amla, 24(43%) Lemon, 23(41%) Mango, 10(18%) Pineapple, 8(14%) Kiwi, 8(14%) Cauliflower, (0%) Goose berries, Guava, Papaya.

SLNO	Vitamin-A source food	Non Anemic		Anemic	
		F	%	F	%
1	Liver	15	26	1	2
2	Meat	44	78	32	73
3	Egg	47	84	40	90
4	Milk products	54	96	25	57

5	Skimmed milk	15	27	9	20
6	Fresh milk	49	88	32	73
7	Goat milk	56	100	44	100

Table-9 Description of Antenatal mothers Vitamin B₁₂ foods are taking daily

It shows that Vitamin B₁₂ foods are you taking daily Anemic antenatal mothers 40(90%) Egg, 32(73%) Meat, 32(73%) Fresh milk, 25(57%) Milk and milk products, 9(20%) Skimmed milk, 1(2%) Liver, (0%) Goat milk. Non anemic antenatal mothers 54(96%) Milk and milk products, 49(88%) Fresh milk, 47(84%) Egg, 44(78%) Meat, 15(27%) Skimmed milk, 15(26%) Liver (0%) Goat milk.

Table-10 Description of Antenatal mothers Vitamin B₆ foods are taking daily

34. What are the Vitamin B₆ foods are you taking daily

SLNO	Vitamin B ₆ source food	Non Anemic		Anemic	
		F	%	F	%
1	Liver	15	26	1	2
2	Dried yeast	56	100	44	100
3	Milk and milk products	46	82	34	77
4	Fish	45	80	23	52
5	All cereals	45	80	35	80
6	Legumes	45	80	35	80
7	Dal	45	80	35	80
8	Nuts	45	80	35	80
9	Root tubes	45	80	35	80
10	Fruits	56	100	33	75
11	Green peas	49	87	34	77

It shows that Vitamin B₆ foods are you taking daily Anemic antenatal mothers 35(80%) All cereals, 35(80%) Legumes, 35(80%) Dal, 35(80%) Nuts, 35(80%) Root tubes, 34(77%) Milk and milk products, 34(77%) Green peas 33(75%) Fruits, 23 (52%) Fish, are taking. 1(2%) Liver, (0%) Dried yeast are taking and Non anemic antenatal mothers 56(100%) Fruits, 49(87%) Green peas, 46(82%) Milk and milk products, 45(80%) Fish, 45(80%) All cereals, 45(80%) Legumes, 45(80%) Dal, 45(80%) Nuts, 45(80%) Root tubes, 15(26%) Liver are taking.

35.What are the Iron rich foods are you taking daily

SLNO	Iron rich source food	Non Anemic		Anemic	
		F	%	F	%
1	Ajeera	31	55	9	20
2	Red meat	45	80	33	75
3	Chick peas	51	91	34	77
4	Kidney beans	45	80	28	63
5	Navy beans	10	18	-	-
6	Red Lentil	34	61	5	11
7	Dates	31	55	14	32
8	Raisins	26	46	4	9
9	Sun flower seeds	17	30	5	11
10	Pumpkin seeds	17	30	5	11
11	Chia seeds	17	30	5	11
12	Spinach	47	84	39	77
13	Mint leaves	13	23	1	2
14	Broccoli	17	30	5	11
15	Sweet potato	18	39	5	11
16	Beet root	39	70	34	77
17	Strawberry	40	71	5	11
18	Blueberry	56	100	44	100
19	Pomegranate	40	71	38	86
20	Black grapes	53	94	5	11
21	Pineapple	13	23	14	32
22	Drumstick leaves	47	84	13	30
23	Kish miss	49	88	36	82
24	Ground nuts	53	94	38	86

25	Jagree	52	92	38	86
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Table-11 Description of Antenatal mother Iron rich foods are taking daily

It shows that Iron rich foods are you taking daily Anemic antenatal mothers 38(86%) pomegranate, 38(86%) Groundnuts, 38(86%) Jagree, 36(82%) Kishmiss, 39(77%) Spinach, 34(77%) Beetroot, 33(77%) Red meat, 28(63%) Kidney bean, 14(32%) Pineapple, 14(32%) Dates, 13(30%) Drumstick leaves, 9(20%) Ajeera, 5 (11%) Red lentil, 5 (11%) Sunflower seeds, 5 (11%) Pumpkinseeds, 5 (11%) Chia seeds, 5 (11%) Broccoli, 5 (11%) Sweet potato, 5 (11%) Strawberry, 5 (11%) Black grapes 4 (9%) Raisins, (0%) Navy beans are taking. Non anemic antenatal mothers 53(94%) Black grapes, 53(94%) Groundnuts, 52(92%) Jagree, 51(91%) Chick peas, 49(88%) Kishmiss, 47(84%) Spinach, 47(84%) Drumstick leaves, 45(80%) Red meat, 45(80%) Kidney beans, 40(71%) Pomegranate, 40(71%) Strawberry, 39(70%) Beet root, 34(61%) Red lentil, 31(55%) Dates, 26(46%) Raisins, 17(30%) Sunflower seeds, 17(30%) Broccoli, 13(23%) Mint leaves, 13(23%) Pineapple, 10 (18%) Navy beans, (0%) Blueberries are taking.

36. what are the folic acid foods are you taking daily.

SLNO	Folic acid source food	Non Anemic		Anemic	
		F	%	F	%
1	Spinach	56	100	25	57
2	Broccoli	37	66	19	43
3	Beans	53	95	36	82

4	Peas	54	96	44	100
5	Watermelon	50	89	20	45
6	Orange	37	66	19	43
7	Banana	46	82	38	86
8	Lemon	24	43	16	36
9	Cereals	45	80	35	80
10	Tomato	51	91	40	91
11	Papaya	56	100	44	100
12	Avocados	20	36	4	9
13	Ladies finger	10	18	2	5
14	Beet root	18	32	5	11
15	Corn	15	27	16	36
16	Carrot	56	100	25	56
17	Almonds	43	77	16	36

Table-12 Description of Antenatal mothers folic acid foods are taking daily

It shows that Folic acid foods are you taking daily Anemic antenatal mothers 56(100%) Peas, 40(91%) Tomato, 38(8%) Banana, 36(82%) Beans, 35(80%) Cereals, 25(57%) Spinach, 25(56%) Carrot, 20(45%) Watermelon, 19(43%) Orange, 16(36%) Corn, 5(11%) Beetroot, 2(5%) Ladies finger, (0%) Papaya are taking and Non Anemic Antenatal mothers 44(100%) Peas, 40(91%) Tomato, 38(86%) Banana, 36(82%) Beans, 35(80%) cereals, 25(57%) Spinach, 25(57%) Carrot, 20(45%) Watermelon, Orange 19(43%), 16(36%) Lemon, 16(36%) Corn, 5(11%) Beetroot, 4(9%) Avocado, (0%) Papaya are taking.

37. What are the Milk & Milk product foods are you taking daily.

SLNO	Milk and milk products source food	Non Anemic		Anemic	
		F	%	F	%
1	Tea	5	9	3	7
2	Coffee	4	7	3	7
3	Skimmed milk	15	26	9	20

4	Milk shake	50	89	5	11
5	Curd	48	85	37	84
6	Butter milk	48	85	37	84
7	Pannier48	48	85	37	84
8	Ghee	48	85	37	84
9	Doodh peda	48	85	37	84

Table-13 Description of Table Shows that Antenatal mothers Milk and milk products are taking Daily

The findings of the table shows among Anemic antenatal mothers Milk & Milk product foods are you taking daily 37(84%) Curd, 37(84%) Butter milk, 37(84%) Pannier, 37(84%) Doodh peda, 9(20%) Skimmed milk, 5(11%) Milk shake, 3(7%) Tea are taking and Non Anemic antenatal mothers 50(89%) Milk shake 48(85%) Curd, 48(85%) Butter milk, 48(85%) Pannier, 48(85%) Doodh peda, 15(26%) Skimmed milk, 5(9%) Tea, 4(7%) Coffee are taking.

38.What are the Beverages foods are you taking daily

SLNO	Beverages source food	Non Anemic		Anemic	
		F	%	F	%
1	Tea	5	9	3	7
2	Coffee	4	7	3	7
3	Green tea	46	82	6	14
4	Herbal tea	14	25	3	7
5	Fruit juices	53	95	36	82
6	Cool drinks	54	96	40	91
7	Soft drinks	47	84	20	45

Table -14 Description of the table shows that food Beverages among antenatal mothers

The findings of the table shows that Food Beverages among Anemic antenatal

mothers 40(91%) Cold drinks,36(82%) Fruits Juices, 20(45%) Soft drinks, 6(14%) Green tea, 3(7%)Tea, 3(7%) Coffee are taking and Non anemic antenatal mothers 54(96%) Cool drinks, 53(95%) Fruits juices,47(84%) Soft drinks, 46(82%) Green tea, 14(25%) Herbal tea, 5(9%) Tea, 49(7%) Coffee are taking. Food Beverages among Anemic antenatal mothers 40(91%) Cold drinks,36(82%) Fruits Juices, 20(45%) Soft drinks, 6(14%) Green tea, 3(7%)Tea, 3(7%) Coffee are taking and Non anemic antenatal mothers 54(96%) Cool drinks, 53(95%) Fruits juices,47(84%) Soft drinks, 46(82%) Green tea, 14(25%) Herbal tea, 5(9%) Tea, 49(7%) Coffee are taking.

39.What are the Omega-3 fatty acid foods are you taking daily

SLNO	Omega-3 Fatty acids source food	Non Anemic		Anemic	
		F	%	F	%
1	Walnuts	31	55	21	48
2	Pumpkin seeds	32	57	8	18
3	Fish	45	80	23	52
4	Sea foods	10	18	44	100
5	Hemp seeds	20	36	44	100

Table-15 shows that Antenatal mothers Omega-3 fatty acid foods are taking daily

The table shows that Omega-3 fatty acid foods Anemic antenatal mothers are taking daily 23(52%) Fish, 21(48%) Walnuts, 8(18%) Pumpkinseeds, (0%) Sea foods, Hempseeds are taking and Non anemic antenatal mothers 45(80%) Fish,32(57%) Pumpkin seeds,31(55%) Walnuts, 20(36%) Hemp seeds, 10(18%) Sea foods are taking.

40.What are the Miscellaneous foods are you taking daily

SLNO	Miscellaneous source food	Non Anemic		Anemic	
		F	%	F	%
1	Almonds	43	77	16	36
2	Peas	52	93	39	89
3	Banana	56	100	40	91

4	Ground nuts	53	95	39	89
5	Blue berries	56	100	44	100
6	Mushrooms	39	70	8	18
7	Jack fruits	25	45	8	18
8	Sprouts	10	18	6	14

Table-16 shows that Antenatal mothers Miscellaneous food are taking daily

This table shows that Anemic antenatal mothers Miscellaneous foods are you taking daily 40(91%) Banana, 39(89%) Peas, 39(89%) Groundnuts, 16(36%) Almonds, 8(18%) Mashrooms, 8(18%) Jack Fruit, 6(14%) Sprouts, (0%) Blue berries are taking and Non anemic antenatal mothers 56(100%) Banana, 53(95%) Groundnuts, 52(93%) Peas, 43(77%) Almonds, 39(70%) Mushrooms, 25(45%) Jack fruits, 10(18%) Sprouts, (0%) Black berries are taking.

41. Can you list the craving food items you had during pregnancy?

SLNO	FOOD ITEM	Non anemic		Anemic	
		F	%	F	%
1	Mango	50	89	40	90
2	Pickle	26	47	37	84
3	Tamarind	20	35	20	45
4	Ghee	48	86	37	84
5	Bitter gourd	1	2	44	100
6	Grapes	54	94	5	11
7	Ragiball	3	5	2	5
8	Idli	2	3	-	-
9	Rice	3	5	-	-
10	Chapati	2	3	-	-
11	Salad	1	2	-	-
12	Grains	1	2	-	-
13	Gobi	2	3	2	5
14	Lemon rice	1	2	8	18
15	Green leafy vegetable	21	38	12	27

16	Lemon	2	3	10	23
17	Sweets	10	18	5	12
18	Orange	10	18	11	25
19	Amla	1	2	1	2
20	Non vegetarian	15	27	11	25
21	Goose berries	4	7	1	2
22	Junk food	3	5	-	-
23	Sugar cane	1	2	-	-
24	Pan cake	4	7	-	-

Table-17 Description of table shows that craving food items during pregnancy

It shows that craving food items you had during pregnancy Anemic antenatal mothers 40(90%) Mango, 84(37%) Pickle, 37(84%) Ghee, 20(45%) Tamarind,12(27%), 11(25%) Orange,11(25%) Non vegetarian, 10(23%) Lemon, 8(18%) Lemon rice, 5(12%) Sweets, 5(11%) Grapes, 2(5%) Ragiball, Grains, Junk foods, Sugarcane, Pancake and Non anemic antenatal mothers 54(94%) Grapes, 50(89%) Mango, 48(86%) Ghee, 26(47%) Pickle, 21(38%) Green leafy vegetables, 20(35%) Tamarind, 15(27%) Non vegetarian, 10(18%) Sweets, 4(7%) Gooseberries, 4(7%) Pancake, 3(5%) Ragi ball, 3(5%) Rice, 3(5%) Junk food , 2(3%) Idli , 2(3%) Gobi, 2(3%) Lemon, 1(2%) Bitter gourd, 1(2%) Salad, 1(2%) Grains, 1(2%) Lemon rice, 1(2%) Amla, 1(2%) Sugarcane cravings are having for the antenatal mothers.

42.What are the types of meals you are avoiding during pregnancy?

SLNO	FOOD ITEM	Non anemic		Anemic	
		F	%	F	%
1	Tea	5	9	3	6
2	Coffee	4	7	3	6
3	Curd rice	11	20	7	16
4	Lemon rice	1	2	8	18

5	Spicy foods	18	32	12	27
6	Juice	40	71	24	55
7	Raw egg	56	100	44	100
8	Mushrooms	39	70	8	18
9	Alcohol	56	100	44	100
10	Meat	47	84	26	59
11	Colostrum milk	56	100	44	100
12	Oil foods	20	36	36	82
13	Corn	15	27	16	36
14	Sprouts	10	18	6	14
15	Chapathi	2	3	44	100
16	Sweets	24	43	38	86
17	Cold items	47	84	40	90
18	Papaya	56	100	44	100
19	Pumpkin	32	57	8	18
20	Goose berries	56	100	44	100
21	Guava	56	100	44	100
22	Ladies finger	10	18	2	5
23	Salad	35	63	30	68
24	Potato	49	88	39	88
25	Ridge guard	25	45	13	30
26	Pineapple	13	23	14	32
27	Blackberries	56	100	44	100
28	Black grapes	53	94	5	11
29	Jack fruits	25	45	8	18
30	Alma	25	45	12	27
31	Snake guard	17	30	4	9
32	Brinjal	39	70	31	70

Table-18 Description of Antenatal mothers avoiding food during pregnancy

It shows that types of meals are avoiding during pregnancy Anemic antenatal mothers 44(100%) Raw egg, 44(100%) Colostrum milk, 44(100%) Alcohol, 44(100%) Papaya, 44(100%) Goose berries, 44(100%) Guava, 44(100%) Black berries, 40(90%)

Cold items, 39(88%) Potato, 38(86%) Sweets, 36(82%) Oil foods, 31(70%) Chapathi, 30(68%) Salad, 26(59%) Meat, 24(55%) juice, 16(36%) Corn, 14(32%) Pineapple, 13(30%) Ridge guard, 12(27%) Amla, 8(18%) Lemon rice, 8(18%) Mushrooms, 8(18%) Pumpkin, 8(18%) Jack fruit, 7(16%) Curd rice, 6(14%) Sprouts, 5(11%) Black grapes, 4(9%) Snake guard, 3(6%) Tea, 3(6%) Coffee are avoiding and Non anemic antenatal mothers 56(100%) Raw egg, 56(100%) Alcohol, 56(100%) Colostrum milk, 56(100%) Papaya, 56(100%) Goose berries, 56(100%) Guava, 56(100%) Black berries, 53(94%) Black grapes, 49(88%) Potato, 47(84%) Mushroom, 47(84%) Cold items, 47(84%) Meats, 40(71%) juice, 39(70%) Brinjal, 35(63%) Salad, 32(57%) Pumpkin, 25(45%) Jackfruits, 25(45%) Ridge guard, 25(45%) Amla, 24(43%) Sweets, 20(36%) Oil foods, 18(32%) Spicy foods, 17(30%) Snake guard, 15(27%) Corn, 13(23%) Pineapple, 11(20%) Curd rice, 18(32%) Sprouts, 5(9%) Tea, 4(7%) Coffee, 2(3%) Chapathi are avoiding the antenatal mothers.

43. List the Reason for avoiding food items during pregnancy.

SLNO	FOOD ITEM	Reason for Avoiding	Non anemic		Anemic	
			F	%	F	%
1	Tea	Decrease the appetite	5	9	3	6
2	Coffee	Decrease the blood absorption	4	7	3	6
3	Curd rice	Cold, induced vomiting	11	20	7	16
4	Lemon rice	Induced vomiting	1	2	8	18
5	Spicy foods	Gastritis	18	32	12	27
6	Juice	Cold	40	71	24	55
7	Raw egg	Fetal abnormalities	56	100	44	100
8	Mushrooms	Seizures for the Baby	39	70	8	18
9	Alcohol	Abortion, Fetal death	56	100	44	100
10	Meat	Indigestion	47	84	26	59
11	Colostrum milk	Seizures for the Baby	56	100	44	100
12	Oil foods	Indigestion	20	36	36	82
13	Corn	Intra uterine growth retardation	15	27	16	36
14	Sprouts	Indigestion, Vomiting	10	18	6	14
15	Chapathi	Indigestion	2	3	-	-

16	Sweets	Vomiting	24	43	38	86
17	Cold items	Cold, Chills for the Baby	47	84	40	90
18	Papaya	Abortion	56	100	44	100
19	Pumpkin	Big baby	32	57	8	18
20	Goose berries	Abortion	56	100	44	100
21	Guava	Stomach ache for mother and baby and also cream scale skin in the baby	56	100	44	100
22	Ladies finger	Amniotic fluid aspiration	10	18	2	5
23	Salad	Vomiting	35	63	30	68
24	Potato	Swelling, Knee pain	49	88	39	88
25	Ridge guard	Skin abnormalities for the baby	25	45	13	30
26	Pineapple	Abortion	13	23	14	32
27	Blackberries	Abortion	56	100	44	100
28	Black grapes	Abortion	53	94	5	11
29	Jack fruits	Seizures for the Baby	25	45	8	18
30	Alma	Vomiting, Cold	25	45	12	27
31	Snake guard	Skin abnormalities	17	30	4	9
32	Brinjal	Swelling, Knee pain	39	70	31	70
33	Cucumber	Skin abnormalities	20	36	3	10

Table-19 Description of Antenatal mothers Avoiding food and Reason for avoiding the food

It shows that Reason for avoiding food items during pregnancy Anemic antenatal mothers 44(100%) Raw egg leads to Fetal abnormalities, 44(100%) Alcohol leads to Abortion and fetal death, 44(100%) Colostrum milk Indigestion, 44(100%) Chapathi leads indigestion,, 44(100%) Papaya leads to abortion, , 44(100%) Gooseberries leads to abortion, , 44(100%) Guava leads to stomachache for the mother and baby and also scares on the skin, 44(100%) Black berries leads to abortion, , 40(90%) Cold item leads to cold and chills for the baby, 39(88%) Potato leads to swelling and nee pain, 38(86%) Sweets leads vomiting, 36(82%) Oil foods leads to Indigestion, 31(70%) Brinjal leads to swelling and nee pain, 30(68%) Salad leads to vomiting, 26(59%) Meat leads to Indigestion, 24(55%) Juice leads cold, 16(36%) Corn leads to intrauterine groth

retardation, 14(32%) Pineapple leads to abortion, 13(30%) Ridge guard leads to skin abnormalities for the baby, 12(27%) Spicy food leads to gastritis, 12(27%) Amla leads to vomiting and cold, 8(18%) Lemon rice leads to induced vomiting, 8(18%) Mushrooms leads to seizures for the baby, 8(18%) Pumpkin leads to big baby, 8(18%) Jack fruit leads to seizures for the baby, 7(16%) Curd rice, 5(11%) Black grapes leads to abortion, 4(9%) Snake guard leads to skin abnormalities, 3(6%) Tea leads to decreased appetite, 3(6%) Coffee leads to Decreased blood absorption. 3(6%) Cucumber leads to skin abnormalities over the skin, 2(5%) Ladies finger leads to amniotic fluid aspiration, Non anemic antenatal mothers 56(100%) Raw egg leads to Fetal abnormalities, 56(100%) Alcohol leads to Abortion and fetal death, 56(100%) Colostrum milk Indigestion, 56(100%) Chapathi leads indigestion, 56(100%) Papaya leads to abortion, , 56(100%) Gooseberries leads to abortion, 56(100%) Guava leads to stomachache for the mother and baby and also scares on the skin, 56(100%) Black berries leads to abortion, 53(94%) Black grapes, 49(88%) Potato leads to swelling and knee pain for the baby , 47(84%) Cold item leads to cold and chills for the baby, 40(71%) Juice leads to cold, 39(70%) Mushroom leads to seizures for the baby, 35(63%) Salad leads to vomiting, 32(57%) pumpkin leads to big baby, 25(48%) Ridge guard leads to skin abnormalities for the baby, 24(43%) sweets leads to vomiting, 20(36%) Oil foods leads to Indigestion, 18(32%) spicy food leads to Gastritis, 15(27%) corn leads to Intra uterine growth retardation, 13(23%) Pineapple leads to abortion, 11(20%) curd rice leads to cold and induced vomiting, 10(18%) Sprouts leads to Indigestion and vomiting, 5(9%) tea leads to decrease the appetite, 4(7%) Coffee leads to decrease the blood absorption, 2 (3%) Chapathi leads to Indigestion, 1(2%) Lemon rice leads to induced vomiting these are the reasons the antenatal mothers are avoiding the food.

44. What are the fruits you avoid –

SLNO	FOOD ITEM	Non anemic		Anemic	
		F	%	F	%
1	Papaya	56	100	44	100
2	Alma	25	45	12	27
3	Pineapple	13	23	14	32
4	Blackberries	56	100	44	100
5	Black grapes	53	94	5	11
6	Jack fruits	25	45	8	18

8	Pumpkin	32	57	8	18
9	Goose berries	56	100	44	100

Table-20 Distribution of antenatal mothers avoiding of Fruits during pregnancy

It shows that Fruits are avoid during pregnancy Anemic antenatal mothers 44(100%) papaya, 44(100%) Black berries, 44(100%) Goose berries, 14(32%) Pineapple, 12(27%) Amla, 8(18%) Jack fruit, 8(18) Pumpkin, 5(11%) Black grapes are avoiding and Non anemic antenatal mothers 56(100%) papaya, 56(100%) Black berries, 56 (100%) Goose berries, 53(94%) Black grapes, 32(57%) Pumpkin, 25(45%) Amla, 25(45%) Jack fruit, 13(23%) Pineapple these are the fruits are avoiding during pregnancy.

45.What are the vegetables you avoid –

SLNO	FOOD ITEM	Non anemic		Anemic	
		F	%	F	%
1	Snake guard	17	30	4	9
2	Brinjal	39	70	31	70
3	Potato	49	88	39	88
4	Ridge guard	25	45	13	30
5	Ladies finger	10	18	2	5
6	Cucumber	20	36	3	7
7	Pumpkin	32	57	8	18
8	Gobi	2	3	2	5

Table-21 Distribution of antenatal mothers avoiding vegetables during pregnancy

It shows that Vegetables are avoid during pregnancy Anemic antenatal mothers 39(88%) popato, 31(70%) Brinjal, 13(30%) Ridge guard, 8 (18%) Pumpkin, , 4(9%) Snake guard, 3(7%) Cucumber, 2(5%) Ladies finger are avoiding and Non anemic antenatal mothers 49(88%) Potato, 39(70%) Brinjal, 32(57%) Pumpkin, 25(45%) Ridge guard, 20(36%) Cucumber, 17(30%) Snake guard, 10(18%) Ladies finger, 2(3%) are avoiding.

46.Do you willingly avoid this food –

SLNO	Question	Non Anemic		Anemic	
		F	%	F	%
1	Yes	54	95	38	86
2	No	2	5	6	14

Table-22 Shows that Distribution of antenatal mothers are willingly avoiding the food

It shows that Willingly avoid the Anemic antenatal mothers 38(86%) are responded Yes, 6(14%) are responded No. Non anemic antenatal mothers 54(95%) are responded Yes, 2(5%) are responded No.

47.What do you feel about the taboos that is followed regarding food avoidance-

SLNO	Question	Non Anemic		Anemic	
		F	%	F	%
1	Happy	13	23	31	70
2	Feeling to eat	11	20	18	41
3	It cause harm to fetus	0	0	7	16
4	Safe for health	10	18	1	2
5	Consent from parents	5	9	4	9

Table-23 Shows that Antenatal mothers are feeling food followed regarding food taboos avoidance

It shows that feel about the Taboos that is followed regarding food avoidance Anemic antenatal mothers 31(70%) are feeling happy, 18(41%) are Feeling to eat, 7(16%) are feeling to it cause harm to fetus, 4(9%) are feeling consent from parents, 1(2%) are safe for the health and Non anemic antenatal mothers 5(100%) are feeling to it cause harm to fetus, 13(23%) are feeling happy, 11(20%) are Feeling to eat, 10(18%) are safe for the health and 5(9%) are feeling consent from parents these is feeling of antenatal mothers regarding food taboos.

CHAPTER-VII

DISCUSSION

The main aim of the study to assess the prevalence of anemia & Assess the Dietary practices and Dietary Taboos among anemic and Non anemic antenatal mothers. The study was conducted by using Descriptive survey research design. The present study was conducted at OPD of R.L.Jalappa Hospital and research center, Tamaka, Kolar District. The sampling technique was Purposive sampling simple random technique was used for this study. The total sample was 100, among them Non anemic antenatal mothers are 56 and 44 is Anemic antenatal mothers. According the

Hemoglobin level the anemic and Non anemic antenatal mothers are classified and data was collection. After data collection, Data was organized, Analyzed. The study findings were discussed in this chapter with the reference to the objectives of the study.

OBJECTIVES OF THE STUDY .

The objectives of the study are to:

1. To find out the prevalence of anaemia among antenatal mothers who are attending antenatal OPD at selected hospital at Kolar, by using Automated cell count method Hb test and WHO categorization chart.
2. To compare the Dietary practices and Dietary Taboos among Anemic and non anemic Antenatal mothers using structured questionnaire.

MAJOR FINDINGS OF THE STUDY

Section A: Socio-demographic data

Distribution of participants according to the Socio-demographic variables of both Anemic and Non anemic antenatal mothers Age ,Religion, Educational status of the antenatal mothers, Educational status of the Non anemic antenatal mothers, Type of family, Family income, Type of diet, Residence, socio economic status, Dietary pattern, workers, Obstetrical score, Pregnancy interval etc.

A total of 100 samples with Anemia44 out of which 56 in Non anemic antenatal mothers were included in the study.

Study findings revealed that in Anemic antenatal mothers Majority belongs to 25 – 30 (48%) Few are belongs to 31 – 37 years 6(10%) minimum in this age group, 37 (84%) Majority are belongs to Hindu, few were1(2%) are Belongs to Christian religion, 6(14%) belongs to small family with the living of < 2 members in the home few 1(2%) belongs to big family with the living of more than 8 members in the family, Educational status 14(32%) Majority are belongs to professional degree, few belongs to 2(4%) are Middle school, Educational status of Antenatal mother husband 12(27%) Majority are belongs to professional degree, few 2(5%) belongs to Middle school,

Occupation of bread winner of the family 14(32%) Majority are professional degree, few 1(2%) were semi skilled worker, 3(7%) unskilled workers,) and un employment, Family majority 17(39%) are having more than 30000/- month Income and few are having 7(16%) less then Rs.10000/- per month, 28(64%) Majority are living in Rural area, 1(2%) Semi urban and Hill area, Socio economic status 29 (66%) are belong to above poverty and few 15(44%) are belongs to above poverty, Dietary pattern 29(66%) Majority are mixed diet and 6 (14%) are Non vegetarian diet are following, Obstetrical score 27(61%) Majority are Gravida-1 and few 3(7%) are multi gravida, Majority 25(57%) are having Mild anemia and few 6(14%) are having severe anemia, 27(61%) Majority are eating fruits 1(2%) are eating rarely, 28(64%) Majority are eating fruits and few 1(2%) are eating rarely. Number of meals per day 30(68%) majority are taking 3 times a and few are 7(16%) 4 times a day, 18(41%) majority are visited 4-5 times and few are 3(7%) times visited to hospital for antenatal checkups, 29(66%)majority are self preparation of food and few 1(2%) are co sister preparing the food in the home, Eating of freshly prepared food 39(88%) majority are responded yes, 5(12%) responded for No, Liking for having heavy food 22(50%) responded for Yes and 22(50%) are responded No, Any eating changes in dietary pattern 38(86%) majority are responded for yes and few 6(14%) are responded No, Family members are caring and loving 43(98%) majority are responded Yes, 1(2%) responded No, following specific dietary regimen 36(82%) majority are responded for Yes and 8(18%) few responded No, Husband give company while eating 37(84%)majority are responded Yes and 7(16%) few are responded No.

Study findings revealed that in Non Anemic antenatal mothers age group of 25-30 (52%) belongs to age group, Few belongs to 31-37 (14%) age group, 43(76%), majority are belongs to Hindu religion Few were Christian religion 1 (2%), 34(61%) Majority belongs to medium family with the living of 3-5 members, 3(5%) few belongs to big family with the living of more than 8 members in the family, Educational status 17(30%) Majority are belongs to professional degree, few belongs to 2(3%) Middle school, Educational level of Husband 17 (30%) Majority are belongs to High school, few 1(2%) belongs to primary education, Occupation of bread winner of the family 15(27%)Majority are professional degree, few3(5%) were are Clerical work shop, 32(57%) Majority are living in Rural area, few are 1(2%) Semi urban area, Socio economic status 44(79%) Majority are belong to above poverty and few 12(21%) are

belongs to above poverty, majority 38(68%) are mixed diet are following and few 8(14%) are Vegetarian, 32(57%) are Gravida-1 and few are 2(4%) multigravida, multi gravida mode of delivery 21(48%) had Normal vaginal delivery and few are 1(2%) had Vacuum delivery. Majority 31(55%) had Lower segment caesarian section, 2(4%) had Forceps delivery, Hemoglobin level 56(100%) is having Hemoglobin more than 11.9gm, Eating fruits 46(82%) are and few 1(2%) are eating rarely. 38(68%) Majority are eating vegetables and few 1(2%) are eating rarely, majority 44(78%) 3 times a day, 3(6%) 4 times a day are of meals per day, 21(38%) majority 6-7 times and 3(5%) few are times visited to hospital for antenatal checkup, 36(64%) majority are self-preparation of food and 3(5%) few are co sister preparing the food in the home, 41(73%) majority are responded yes and few 15(27%) responded for No, Eating of freshly prepared food 41(73%) majority are responded yes and few 15(27%) responded for No, Liking for having heavy food 43(77%) responded for Yes, 13(23%) are responded No, Any eating changes in dietary pattern 54(96%) majority are responded for yes, 2(4%) are responded No, family members are caring and loving 50(89%) majority are responded Yes, 6(11%) responded No. following specific dietary regimen 43(77%) majority are responded for Yes and 13(23%) few responded No, Husband give company while eating 46(82%) majority are responded Yes and 10(18%) few are responded No, was seen in the study conducted by Nural M, which shows that Inadequate food diversity and food Taboos associated with maternal Iron deficiency among pregnant women it leads to Anemia among Antenatal mothers. the reason could be Food Taboos during pregnancy.³⁷

Section – 2 Questions related to dietary practices followed by antenatal mothers attending antenatal OPD'S.

The study findings shows that Dietary practices of Anemic antenatal mothers eat Vitamin-C Vitamin-B12 rich diet majority are 44(79%) responded No. few 12(21%) are responded Yes, family provide there favorite food majority 34(77%) responded No and few 10(23%) responded Yes. majority 39(70%) responded No and few 17(30%) are responded Yes, consume freshly prepared food majority 29(66%) are responded No and few 15(34%) responded Yes, taking Iron and folic acid source food like ladies finger ,Ridge guard 36(65%) majority are responded Yes, 20(35%) few are responded No, taking carbohydrate diet 44(100%) responded Yes majority 56(100%) responded

Yes, taking protein rich diet majority 30(68%) responded Yes and 14(32%) responded No, taking fatty diet majority 30(54%) responded Yes and few 26 (46%) responded No, animal source food majority 37(66%) responded Yes and few 19 (34%) responded No, Green leafy vegetables daily majority 24(56%) responded Yes, and few 20(46%) responded No, majority 29(52%) responded Yes and few 27(48%) responded No, Eat vegetables daily majority 23(52%) responded Yes and few 21(47%) responded No, taking pulses and grains daily both groups 22(50%) responded Yes and 22(50%) responded No. Attitude scale related to dietary pattern eat additional frequency of food for a day majority 34(77%) are responded Neutral and few 1(2%) are responded for agree, eat additional frequency of food for a day majority 25(56%) are responded Neutral and few 3(7%) are responded Disagree. majority 41(73%) responded for agree and few 3(5%) are responded Disagree, eat more protein rich sources food majority 32(77%) are responded Neutral and few 5(11%) are responded Disagree, majority 33(75%) are responded Neutral and few 1(2%) are responded Disagree, Iron rich diet 8(19%) responded for agree,31(70%) are responded Neutral,5(11%) Disagree, Anemic antenatal Likes to eat food which is not allowed to eat 8(18%) responded for agree,14(32%) are responded Neutral, 22(50%) Disagree. Eat food rich in vitamin C,B12, Omega 3, Fatty acids 8(19%) responded for agree,16(36%) are responded Neutral, 20(45%) Disagree. eat prepare food with Iodized salt 7(16%) responded for agree,35(80%) are responded Neutral, 2(5%) Disagree, Dietary pattern related to daily food habits taking additional meals for a day during pregnancy majority 26(59%) are responded No and few 18(41%) are responded yes, taking specific dietary regimen during pregnancy majority 26(59%) are responded No. 18(41%) are responded yes, Avoiding excessive work load during pregnancy majority 23(52%) are responded Yes and few 21(48%) are responded No, Iodized salt cooking in main meals majority 25(57%) are responded No and few 19(43%) are responded Yes. Eating snacks between main meals daily majority 24(55%) are responded Yes and few 20(45%) are responded No, Eating snacks between main meals daily 24(55%) are responded Yes and 20(45%) are responded No, taking Iron and Folic acid supplementation 44(100%) are responded Yes. majority 31(55%) are responded No and few 25(45%) are responded No, skipping meals during pregnancy majority 28(64%) are responded No and 16(36%) are responded Yes.

The study findings shows that Dietary practices of Non anemic antenatal mothers

eat Vitamin-C Vitamin-B12 rich diet majority are 37(84%) responded No and few 7(16%) are responded Yes. Family provide there favorite food majority 39(70%) responded No and few 17(30%) are responded Yes, Consume freshly prepared food majority 35(63%) responded No and few 21(37%) are responded Yes. Anemic antenatal mothers are taking Iron and folic acid source food like ladies finger ,Ridge guard etc majority are responded 33(75%) responded No and 11(25%) few responded Yes. Non anemic antenatal mothers majority 38(68%) responded Yes, 18(32%) few are responded No, Eat snacks between the meals 36(65%) majority are responded Yes, 20(35%) few are responded No, taking carbohydrate diet majority 56(100%) responded Yes, taking protein rich diet majority 38(68%) responded Yes and few 18 (32%) responded No, taking fatty diet majority 30(54%) responded Yes and few 26 (46%) responded No, taking animal sources majority 37(66%) responded Yes and few 19 (34%) responded No. taking Green leafy vegetables daily majority 29(52%) responded Yes and few 27(48%) responded No, Eat vegetables daily majority 33(59%) responded Yes and few 23(41%) are responded No, taking pulses and grains daily both groups majority 33(59%) responded Yes and few 23(41%) are responded No. Attitude scale related to dietary pattern eat additional frequency of food for a day majority 41(73%) responded for agree and few 5(9%) are responded for Disagree, eat additional frequency of food for a day majority 41(73%) responded for agree and few 3(5%) are responded Disagree, eat more protein rich sources food majority 48(86%) responded for agree, and few 2(3%) are responded Disagree, taking milk and milk products majority 38(68%) responded for agree and few 7(12%) are responded Disagree, Iron rich diet 33(59%) responded for agree,12(21%) are responded Neutral,11(20%) Disagree, Likes to eat food which is not allowed to eat are Likes to eat food which is not allowed to eat 38(68%) responded for agree,12(21%) are responded Neutral,6(11%) Disagree. Eat food rich in vitamin C,B12, Omega 3, Fatty acids 8(19%) responded for agree,16(36%) are responded Neutral, 20(45%) Disagree. Eat food rich in vitamin C,B12, Omega 3, Fatty acids 41(73%) responded for agree,7(13%) are responded Neutral,8(14%) Disagree, eat prepare food with Iodized salt 39(70%) responded for agree,14(25%) are responded Neutral,3(5%) Disagree. Dietary pattern related to daily food habits majority 20(36%) are responded yes and few 36(64%) are responded No, taking specific dietary regimen during pregnancy majority 36(64%) are responded No and few 20(36%) are responded yes, Avoiding excessive work load during pregnancy majority 42(75%) are responded No and few 14(25%) are responded Yes, Iodized salt

cooking in main meals majority 34(61%) are responded No and few 22(39%) are responded Yes, Eating snacks between main meals daily majority 43(77%) are responded No and few 13(23%) are responded Yes, Eating snacks between main meals daily majority 51(91%) are responded No and few 5(9%) are responded Yes, taking Iron and Folic acid supplementation majority 31(55%) are responded No and few 25(45%) are responded No, skipping meals during pregnancy majority 33(59%) are responded Yes and 23(41%) are responded No, was Ugwa EA was conducted the study related to nutritional practices and food taboos among antenatal mothers results shows that intake of good nutrition and abstinence from nutrition taboos were satisfactory.³⁸

SECTION-3 Structured questionnaires related to food Taboos followed during pregnancy.

Carbohydrate foods are taking daily Anemic antenatal mothers 44(100%) Sugar, 44(100%) Ragi, 44(100%) Rice, 42(95%) millets, 41(93%) Grains, 39(88%) Potato, 38(86%) Banana, 38(86%) Sweet potato, 32(73%) Honey, 16(36%) Corn and Non anemic antenatal mothers 56(100%) Sugar, 56(100%) Ragi, 56(100%) Rice 51(91%) Grains, 51(91%) millets, 49(88%) Potato, 46(82%) Banana, 45(80%) Honey, 34(61%) Sweet potato, 15(28%) Corn, Protein source foods are taking daily Anemic antenatal mothers 44(100%) Millets, Channa dal 44(100%), Thoordhal 44(100%), Green gram dhal 44(100%), Green peas 44(100%), Egg 40(91%), Coconut 38(86%), Pannier 38(86%), Chicken 36(82%), Legumes 33(75%), Sweetcorn 32(73%), Pork 31(70%), Meat 26(59%), Milk 25(57%), Moongdal 21(48%), Walnut 18(41%), Pumpkinseeds 8(18%), Mushrooms 8(18%), Pistachio 8(18%), Organ meat 4(9%) and Non anemic antenatal mothers 54(96%) Millets, Moong dal, 54(96%) Thoor dal, 54(96%) Green gram dal, 54(96%) Green peas, milk 54(96%), Peanut 54(96%), Green peas 54(96%), Beans 53(94%), Coconut 50(89%), Chicken 50(89%), Pannier 48(86%), Egg 47(84%), Meat 47(84%), Corn 46(82%), Mutton 44(79%), Legumes 44(79%), Walnut 42(75%), Mushroom 39(70%), Sweet corn 37(66%), Soybean 34(61%), Pumpkinseeds 32(57%), Pistachio 32(56%), Pork 19(34%), Organ meat 6(11%), Vitamin-A foods are taking daily Anemic antenatal mothers 36(82%) Drumstick leaves, 31(70%) Curry leaves, 30(68%) Coriander leaves, 25(57%) Spinach, 25(57%) Carrot, 22(50%) All green leafy vegetables, Orange 19(43%) and Non anemic antenatal mothers 56(100%) Carrot, 56(100%) Spinach, 56(100%) Coriander leaves, 56(100%) Curry leaves, 50(89%) All green leafy vegetables, 47(83%) Drumstick leaves, 37(66%) Orange, Vitamin-C foods

are you taking daily Anemic antenatal mothers 44(100%) Grapes,44(100%) Sweet potato, 40(91%) Tomato,20(45%), 19(43%) Broccoli, 16(36%)Lemon, 12(27%), 4(9%) Kiwi, 4(9%) Cauliflower, 0% of Goose berries, Guava, Pine apple, Mango, Papaya. Non Anemic antenatal mothers 56(100%) Grapes, 51(91%) Tomato, 50 (89%) Watermelon, 37(66%) Orange, 37(66%) Pumpkin, 37(66%) Broccoli, 25(45%) Amla, 24(43%) Lemon, 23(41%) Mango, 10(18%) Pineapple, 8(14%) Kiwi, 8(14%) Cauliflower, (0%) Goose berries, Guava, Papaya. Vitami B₁₂ foods are you taking daily Anemic antenatal mothers 40(90%) Egg, 32(73%) Meat, 32(73%) Fresh milk, 25(57%) Milk and milk products, 9(20%) Skimmed milk,1(2%) Liver, (0%) Goat milk. Non anemic antenatal mothers 54(96%) Milk and milk products, 49(88%) Fresh milk, 47(84%) Egg, 44(78%) Meat, 15(27%) Skimmed milk, 15(26%) Liver (0%) Goat milk. Vitamin B₆ foods are you taking daily Anemic antenatal mothers 35(80%) All cereals, 35(80%) Legumes, 35(80%) Dal, 35(80%) Nuts, 35(80%) Root tubes, 34(77%) Milk and milk products, 34(77%) Green peas 33(75%) Fruits, 23 (52%) Fish, are taking. 1(2%)Liver,(0%) Dried yeast are taking and Non anemic antenatal mothers 56(100%) Fruits, 49(87%) Green peas, 46(82%) Milk and milk products, 45(80%) Fish, 45(80%) All cereals, 45(80%) Legumes, 45(80%) Dal, 45(80%) Nuts, 45(80%) Root tubes, 15(26%) Liver are taking, Iron rich foods are you taking daily Anemic antenatal mothers 38(86%) pomegranate, 38(86%) Groundnuts, 38(86%) Jagree, 36(82%) Kishmiss, 39(77%) Spinach, 34(77%) Beetroot, 33(77%) Red meet, 28(63%) Kidney bean, 14(32%)Pineapple, 14(32%) Dates, 13(30%) Drumstick leaves, 9(20%) Ajeera, 5 (11%) Red lentil, 5(11%) Sunflower seeds, 5(11%) Pumpkinseeds, 5(11%) Chia seeds, 5(11%) Broccoli, 5(11%) Sweet potato, 5(11%) Strawberry, 5(11%) Black grapes, 4(9%) Raisins, (0%) Navy beans are taking. Non anemic antenatal mothers 53(94%) Black grapes, 53(94%) Groundnuts, 52(92%) Jagree, 51(91%) Chick peas, 49(88%) Kishmiss, 47(84%) Spinach, 47(84%) Drumstick leaves, 45(80%) Red meat, 45(805) Kidney beans, 40(71%) Pomegranate, 40(71%) Strawberry, 39(70%) Beet root,34(61%) Red lentil, 31(55%) Dates,26(46%) Raisins, 17(30%) Sunflower seeds, 17(30%) Broccoli, 13(23%) Mint leaves, 13(23%) Pineapple, 10 (18%) Navy beans,(0%) Blueberries are taking, Folic acid foods are you taking daily Anemic antenatal mothers 56(100%) Peas, 40(91%)Tomato,38(8%) Banana, 36(82%) Beans, 35(80%) Cereals, 25(57%) Spinach,25(56%) Carrot, 20(45%) Watermelon, 19(43) Orange, 16(36%) Corn, 5(11%) Beetroot, 2(5%) Ladies finger, (0%) Papaya are taking and Non Anemic Antenatal mothers 44(100%) Peas, 40(91%) Tomato, 38(86%)

Banana, 36(82%) Beans, 35(80%) cereals, 25(57%) Spinach, 25(57%) Carrot, 20(45%) Watermelon, Orange 19(43%), 16(36%) Lemon, 16(36%) Corn, 5(11%) Beetroot, 4(9%) Avocado, (0%) Papaya are taking, mothers Milk & Milk product foods are you taking daily 37(84%) Curd, 37(84%) Butter milk, 37(84%) Pannier, 37(84%) Doodh peda, 9(20%) Skimmed milk, 5(11%) Milk shake, 3(7%) Tea are taking and Non Anemic antenatal mothers 50(89%) Milk shake 48(85%) Curd, 48(85%) Butter milk, 48(85%) Pannier, 48(85%) Doodh peda, 15(26%) Skimmed milk, 5(9%) Tea, 4(7%) Coffee are taking, Food Beverages among Anemic antenatal mothers 40(91%) Cold drinks, 36(82%) Fruits Juices, 20(45%) Soft drinks, 6(14%) Green tea, 3(7%) Tea, 3(7%) Coffee are taking and Non anemic antenatal mothers 54(96%) Cool drinks, 53(95%) Fruits juices, 47(84%) Soft drinks, 46(82%) Green tea, 14(25%) Herbal tea, 5(9%) Tea, 49(7%) Coffee are taking. Food Beverages among Anemic antenatal mothers 40(91%) Cold drinks, 36(82%) Fruits Juices, 20(45%) Soft drinks, 6(14%) Green tea, 3(7%) Tea, 3(7%) Coffee are taking and Non anemic antenatal mothers 54(96%) Cool drinks, 53(95%) Fruits juices, 47(84%) Soft drinks, 46(82%) Green tea, 14(25%) Herbal tea, 5(9%) Tea, 49(7%) Coffee are taking, Omega-3 fatty acid foods Anemic antenatal mothers are taking daily 23(52%) Fish, 21(48%) Walnuts, 8(18%) Pumpkinseeds, (0%) Sea foods, Hempseeds are taking and Non anemic antenatal mothers 45(80%) Fish, 32(57%) Pumpkin seeds, 31(55%) Walnuts, 20(36%) Hemp seeds, 10(18%) Sea foods are taking, Miscellaneous foods are you taking daily 40(91%) Banana, 39(89%) Peas, 39(89%) Groundnuts, 16(36%) Almonds, 8(18%) Mashrooms, 8(18%) Jack Fruit, 6(14%) Sprouts, (0%) Blue berries are taking and Non anemic antenatal mothers 56(100%) Banana, 53(95%) Groundnuts, 52(93%) Peas, 43(77%) Almonds, 39(70%) Mushrooms, 25(45%) Jack fruits, 10(18%) Sprouts, (0%) Black berries are taking, craving food items you had during pregnancy Anemic antenatal mothers 40(90%) Mango, 84(37%) Pickle, 37(84%) Ghee, 20(45%) Tamarind, 12(27%), 11(25%) Orange, 11(25%) Non vegetarian, 10(23%) Lemon, 8(18%) Lemon rice, 5(12%) Sweets, 5(11%) Grapes, 2(5%) Ragiball, Grains, Junk foods, Sugarcane, Pancake and Non anemic antenatal mothers 54(94%) Grapes, 50(89%) Mango, 48(86%) Ghee, 26(47%) Pickle, 21(38%) Green leafy vegetables, 20(35%) Tamarind, 15(27%) Non vegetarian, 10(18%) Sweets, 4(7%) Gooseberries, 4(7%) Pancake, 3(5%) Ragi ball, 3(5%) Rice, 3(5%) Junk food, 2(3%) Idli, 2(3%) Gobi, 2(3%) Lemon, 1(2%) Bitter gourd, 1(2%) Salad, 1(2%) Grains, 1(2%) Lemon rice, 1(2%) Amla, 1(2%) Sugarcane cravings are having for the antenatal mothers, types

of meals are avoiding during pregnancy Anemic antenatal mothers 44(100%) Raw egg, 44(100%) Colostrum milk, 44(100%) Alcohol, 44(100%) Papaya, 44(100%) Goose berries, 44(100%) Guava, 44(100%) Black berries, 40(90%) Cold items, 39(88%) Potato, 38(86%) Sweets, 36(82%) Oil foods, 31(70%) Chapathi, 30(68%) Salad, 26(59%) Meat, 24(55%) juice, 16(36%) Corn, 14(32%) Pineapple, 13(30%) Ridge guard, 12(27%) Amla, 8(18%) Lemon rice, 8(18%) Mushrooms, 8(18%) Pumpkin, 8(18%) Jack fruit, 7(16%) Curd rice, 6(14%) Sprouts, 5(11%) Black grapes, 4(9%) Snake guard, 3(6%) Tea, 3(6%) Coffee are avoiding and Non anemic antenatal mothers 56(100%) Raw egg, 56(100%) Alcohol, 56(100%) Colostrum milk, 56(100%) Papaya, 56(100%) Goose berries, 56(100%) Guava, 56(100%) Black berries, 53(94%) Black grapes, 49(88%) Potato, 47(84%) Mushroom, 47(84%) Cold items, 47(84%) Meats, 40(71%) juice, 39(70%) Brinjal, 35(63%) Salad, 32(57%) Pumpkin, 25(45%) Jackfruits, 25(45%) Ridge guard, 25(45%) Amla, 24(43%) Sweets, 20(36%) Oil foods, 18(32%) Spicy foods, 17(30%) Snake guard, 15(27%) Corn, 13(23%) Pineapple, 11(20%) Curd rice, 18(32%) Sprouts, 5(9%) Tea, 4(7%) Coffee, 2(3%) Chapathi are avoiding the antenatal mothers, Reason for avoiding food items during pregnancy Anemic antenatal mothers 44(100%) Raw egg leads to Fetal abnormalities, 44(100%) Alcohol leads to Abortion and fetal death, 44(100%) Colostrum milk Indigestion, 44(100%) Chapathi leads indigestion,, 44(100%) Papaya leads to abortion, , 44(100%) Gooseberries leads to abortion, , 44(100%) Guava leads to stomachache for the mother and baby and also scares on the skin, 44(100%) Black berries leads to abortion, , 40(90%) Cold item leads to cold and chills for the baby, 39(88%) Potato leads to swelling and nee pain, 38(86%) Sweets leads vomiting, 36(82%) Oil foods leads to Indigestion, 31(70%) Brinjal leads to swelling and nee pain, 30(68%) Salad leads to vomiting, 26(59%) Meat leads to Indigestion, 24(55%) Juice leads cold, 16(36%) Corn leads to intrauterine groth retardation, 14(32%) Pineapple leads to abortion, 13(30%) Ridge guard leads to skin abnormalities for the baby, 12(27%) Spicy food leads to gastritis, 12(27%) Amla leads to vomiting and cold, 8(18%) Lemon rice leas ti induced vomiting, 8(18%) Mushrooms leads to seizures for the baby, 8(18%) Pumpkin leads to big baby, 8(18%) Jack fruit leads to seizures for the baby, 7(16%) Curd rice, 5(11%) Black grapes leads to abortion, 4(9%) Snake guard leads to skin abnormalities, 3(6%) Tea leads to decreased appetite, 3(6%) Coffee leads to Decreased blood absorption. 3(6%) Cucumber leads to skin abnormalities over the skin, 2(5%) Ladies finger leads to amniotic fluid aspiration, Non anemic antenatal mothers 56(100%) Raw egg leads to Fetal abnormalities, 56(100%)

Alcohol leads to Abortion and fetal death, 56(100%) Colostrum milk Indigestion, 56(100%) Chapathi leads indigestion, 56(100%) Papaya leads to abortion, , 56(100%) Gooseberries leads to abortion, 56(100%) Guava leads to stomachache for the mother and baby and also scares on the skin, 56(100%) Black berries leads to abortion, 53(94%) Black grapes, 49(88%) Potato leads to swelling and knee pain for the baby , 47(84%) Cold item leads to cold and chills for the baby, 40(71%) Juice leads to cold, 39(70%) Mushroom leads to seizures for the baby, 35(63%) Salad leads to vomiting, 32(57%) pumpkin leads to big baby, 25(48%) Ridge guard leads to skin abnormalities for the baby, 24(43%) sweets leads to vomiting, 20(36%) Oil foods leads to Indigestion, 18(32%) spicy food leads to Gastritis, 15(27%) corn leads to Intra uterine growth retardation, 13(23%) Pineapple leads to abortion, 11(20%) curd rice leads to cold and induced vomiting, 10(18%) Sprouts leads to Indigestion and vomiting, 5(9%) tea leads to decrease the appetite, 4(7%) Coffee leads to decrease the blood absorption, 2 (3%) Chapathi leads to Indigestion, 1(2%) Lemon rice leads to induced vomiting these are the reasons the antenatal mothers are avoiding the food, Fruits are avoid during pregnancy Anemic antenatal mothers 44(100%) papaya, 44(100%) Black berries, 44(100%) Goose berries, 14(32%) Pineapple, 12(27%) Amla, 8(18%) Jack fruit, 8(18%) Pumpkin, 5(11%) Black grapes are avoiding and Non anemic antenatal mothers 56(100%) papaya, 56(100%) Black berries, 56 (100%) Goose berries, 53(94%) Black grapes, 32(57%) Pumpkin, 25(45%) Amla, 25(45%) Jack fruit, 13(23%) Pineapple these are the fruits are avoiding during pregnancy, Vegetables are avoid during pregnancy Anemic antenatal mothers 39(88%) potato, 31(70%) Brinjal, 13(30%) Ridge guard, 8 (18%) Pumpkin, , 4(9%) Snake guard, 3(7%) Cucumber, 2(5%) Ladies finger are avoiding and Non anemic antenatal mothers 49(88%) Potato, 39(70%) Brinjal, 32(57%) Pumpkin, 25(45%) Ridge guard, 20(36%) Cucumber, 17(30%) Snake guard, 10(18%) Ladies finger, 2(3%) are avoiding, Willingly avoid the Anemic antenatal mothers 38(86%) are responded Yes, 6(14%) are responded No. Non anemic antenatal mothers 54(95%) are responded Yes, 2(5%) are responded No, Taboos that is followed regarding food avoidance Anemic antenatal mothers 31(70%) are feeling happy, 18(41%) are Feeling to eat, 7 (16%) are feeling to it cause harm to fetus, 4(9%) are feeling consent from parents, 1(2%) are safe for the health and Non anemic antenatal mothers 5(100%) are feeling to it cause harm to fetus, 13(23%) are feeling happy, 11(20%) are Feeling to eat, 10(18%) are safe for the health and 5(9%) are feeling consent from parents these is feeling of antenatal mothers regarding food

taboos was Tanvi G Food related Taboos during pregnancy and Lactation among women due to fear of Caught /cold and cllic in baby.³⁹

SUMMARY

This discussion chapter dealt with statistical analysis regarding Dietary practices and Food Taboos are playing a major role in increasing the level of hemoglobin between Dietary practices and dietary taboos among level of Hemoglobin among antenatal mothers. This chapter described that there was a significant of dietary taboos and dietary practices among antenatal mothers like food taboos are more in anemic antenatal mothers compared than Non anemic antenatal mothers. Dietary practices include anemic antenatal mothers are not taking proper food like Iron supplementations, Folic acid supplementation, Vitamin-C supplementation Vitamin-B16 & B6 compared than Non anemic antenatal mothers.

CHAPTER-VIII

SUMMARY

Anemia is a reduction in oxygen carrying capacity of the blood; this may be caused by a decrease in red blood cells (RBC) production, or reduction in Hemoglobin content of the blood , or combination of these. it is also contributing factor to women developing health problems and dying during pregnancy and child birth. In order to help to prevent anemia among antenatal mothers, the nurse must help them to understand the medical problems that affect in failure. iron and Folic acid supplementation sources contribute to improve the hemoglobin in the blood.

So researcher to the present study to show the effectiveness of Iron and Folic acid sources on improving hemoglobin level among antenatal mothers in selected OPD at Kolar.

The aim of the study is to follow specific dietary practices and changes to maintain hemoglobin among antenatal mothers.

Objectives of the study:

1. To find out the prevalence of anaemia among antenatal mothers who are attending Antenatal OPD at selected hospital at Kolar, by using automated cell count method Hb test and WHO categorization chart.
2. To compare the Dietary practices and Dietary Taboos among Anemic and non anemic Antenatal mothers.

It shows that Socio demographic variables of study findings revealed that in Anemic antenatal mothers Majority belongs to 25 – 30 (48%) Few are belongs to 31 – 37 years 6(10%) minimum in this age group, 37 (84%) Majority are belongs to Hindu, few were 1(2%) are Belongs to Christian religion, 6(14%) belongs to small family with the living of < 2 members in the home few 1(2%) belongs to big family with the living of more than 8 members in the family, Educational status 14(32%) Majority are belongs to professional degree, few belongs to 2(4%) are Middle school, Educational status of Antenatal mother husband 12(27%) Majority are belongs to professional degree, few 2(5%) belongs to Middle school, Occupation of bread winner of the family 14(32%) Majority are professional degree, few 1(2%) were semi-skilled worker, 3(7%) unskilled workers and un employment, Family majority 17(39%) are having more than 30000/- month Income and few are having 7(16%) less then Rs.10000/- per month, 28(64%) Majority are living in Rural area, 1(2%) Semi urban and Hill area, Socio economic status 29 (66%) are belong to above poverty and few 15(44%) are belongs to above poverty, Dietary pattern 29(66%) Majority are mixed diet and 6 (14%) are Non vegetarian diet are following, Obstetrical score 27(61%) Majority are Gravida-1 and few 3(7%) are multi gravida, Majority 25(57%) are having Mild anemia and few 6(14%) are having severe anemia, 27(61%) Majority are eating fruits 1(2%) are eating rarely, 28(64%) Majority are eating fruits and few 1(2%) are eating rarely. Number of meals per day 30(68%) majority are taking 3 times a and few are 7(16%) 4 times a day, 18(41%) majority are visited 4-5 times and few are 3(7%) times visited to hospital for antenatal checkups, 29(66%)majority are self preparation of food and few 1(2%) are co sister preparing the food in the home, Eating of freshly prepared food 39(88%) majority are responded yes, 5(12%) responded for No, Liking for having heavy food 22(50%) responded for Yes and 22(50%) are responded No, Any eating changes in dietary pattern 38(86%) majority are responded for yes and few 6(14%) are responded

No, Family members are caring and loving 43(98%) majority are responded Yes, 1(2%) responded No, following specific dietary regimen 36(82%) majority are responded for Yes and 8(18%) few responded No, Husband give company while eating 37(84%)majority are responded Yes and 7(16%) few are responded No.

Study findings revealed that in Non Anemic antenatal mothers age group of 25-30 (52%) belongs to age group, Few belongs to 31-37 (14%) age group, 43(76%), majority are belongs to Hindu religion Few were Christian religion 1 (2%), 34(61%) Majority belongs to medium family with the living of 3-5 members, 3(5%) few belongs to big family with the living of more than 8 members in the family, Educational status 17(30%) Majority are belongs to professional degree, few belongs to 2(3%) Middle school, Educational level of Husband 17 (30%) Majority are belongs to High school, few 1(2%) belongs to primary education, Occupation of bread winner of the family 15(27%)Majority are professional degree, few3(5%) were are Clerical work shop, 32(57%) Majority are living in Rural area, few are 1(2%) Semi urban area, Socio economic status 44(79%) Majority are belong to above poverty and few 12(21%) are belongs to above poverty, majority 38(68%) are mixed diet are following and few8 (14%) are Vegetarian, 32(57%) are Gravida-1 and few are 2(4%) multigravida, multi gravida mode of delivery 21(48%) had Normal vaginal delivery and few are 1(2%) had Vacuum delivery. Majority 31(55%) had Lower segment caesarian section, 2(4%) had Forceps delivery, Hemoglobin level 56(100%) is having Hemoglobin more than 11.9gm, Eating fruits 46(82%) are and few 1(2%) are eating rarely. 38(68%) Majority are eating vegetables and few 1(2%) are eating rarely, majority 44(78%) 3 times a day, 3(6%) 4 times a day are of meals per day, 21(38%) majority 6-7 times and 3(5%) few are times visited to hospital for antenatal checkup, 36(64%) majority are self-preparation of food and 3(5%) few are co sister preparing the food in the home, 41(73%) majority are responded yes and few 15(27%) responded for No, Eating of freshly prepared food 41(73%) majority are responded yes and few 15(27%) responded for No, Liking for having heavy food 43(77%) responded for Yes, 13(23%) are responded No, Any eating changes in dietary pattern 54(96%) majority are responded for yes, 2(4%) are responded No, family members are caring and loving 50(89%) majority are responded Yes, 6(11%) responded No. following specific dietary regimen 43(77%) majority are responded for Yes and 13(23%) few responded No, Husband give company while eating 46(82%) majority are responded Yes and 10(18%) few are

responded No, was seen in the study conducted by Nural M, which shows that Inadequate food diversity and food Taboos associated with maternal Iron deficiency among pregnant women it leads to Anemia among Antenatal mothers. the reason could be Food Taboos during pregnancy.

Section – 2 Questions related to dietary practices followed by antenatal mothers attending antenatal OPD'S.

The study findings shows that Dietary practices of Anemic antenatal mothers eat Vitamin-C Vitamin-B12 rich diet majority are 44(79%) responded No. few 12(21%) are responded Yes, family provide there favorite food majority 34(77%) responded No and few 10(23%) responded Yes. majority 39(70%) responded No and few 17(30%) are responded Yes, consume freshly prepared food majority 29(66%) are responded No and few 15(34%) responded Yes, taking Iron and folic acid source food like ladies finger ,Ridge guard 36(65%) majority are responded Yes, 20(35%) few are responded No, taking carbohydrate diet 44(100%) responded Yes majority 56(100%) responded Yes, taking protein rich diet majority 30(68%) responded Yes and 14(32%) responded No, taking fatty diet majority 30(54%) responded Yes and few 26 (46%) responded No, animal source food majority 37(66%) responded Yes and few 19 (34%) responded No, Green leafy vegetables daily majority 24(56%) responded Yes, and few 20(46%) responded No, majority 29(52%) responded Yes and few 27(48%) responded No, Eat vegetables daily majority 23(52%) responded Yes and few 21(47%) responded No, taking pulses and grains daily both groups 22(50%) responded Yes and 22(50%) responded No. Attitude scale related to dietary pattern eat additional frequency of food for a day majority 34(77%) are responded Neutral and few 1(2%) are responded for agree, eat additional frequency of food for a day majority 25(56%) are responded Neutral and few 3(7%) are responded Disagree. majority 41(73%) responded for agree and few 3(5%) are responded Disagree, eat more protein rich sources food majority 32(77%) are responded Neutral and few 5(11%) are responded Disagree, majority 33(75%) are responded Neutral and few 1(2%) are responded Disagree, Iron rich diet 8(19%) responded for agree,31(70%) are responded Neutral,5(11%) Disagree, Anemic antenatal Likes to eat food which is not allowed to eat 8(18%) responded for agree,14(32%) are responded Neutral, 22(50%) Disagree. Eat food rich in vitamin C,B12, Omega 3, Fatty acids 8(19%) responded for agree,16(36%) are responded Neutral, 20(45%) Disagree. eat prepare food with Iodized salt 7(16%) responded for

agree, 35(80%) are responded Neutral, 2(5%) Disagree, Dietary pattern related to daily food habits taking additional meals for a day during pregnancy majority 26(59%) are responded No and few 18(41%) are responded yes, taking specific dietary regimen during pregnancy majority 26(59%) are responded No. 18(41%) are responded yes, Avoiding excessive work load during pregnancy majority 23(52%) are responded Yes and few 21(48%) are responded No, Iodized salt cooking in main meals majority 25(57%) are responded No and few 19(43%) are responded Yes. Eating snacks between main meals daily majority 24(55%) are responded Yes and few 20(45%) are responded No, Eating snacks between main meals daily 24(55%) are responded Yes and 20(45%) are responded No, taking Iron and Folic acid supplementation 44(100%) are responded Yes. majority 31(55%) are responded No and few 25(45%) are responded No, skipping meals during pregnancy majority 28(64%) are responded No and 16(36%) are responded Yes.

The study findings shows that Dietary practices of Non anemic antenatal mothers eat Vitamin-C Vitamin-B12 rich diet majority are 37(84%) responded No and few 7(16%) are responded Yes. Family provide there favorite food majority 39(70%) responded No and few 17(30%) are responded Yes, Consume freshly prepared food majority 35(63%) responded No and few 21(37%) are responded Yes. Anemic antenatal mothers are taking Iron and folic acid source food like ladies finger ,Ridge guard etc majority are responded 33(75%) responded No and 11(25%) few responded Yes. Non anemic antenatal mothers majority 38(68%) responded Yes, 18(32%) few are responded No, Eat snacks between the meals 36(65%) majority are responded Yes, 20(35%) few are responded No, taking carbohydrate diet majority 56(100%) responded Yes, taking protein rich diet majority 38(68%) responded Yes and few 18(32%) responded No, taking fatty diet majority 30(54%) responded Yes and few 26(46%) responded No, taking animal sources majority 37(66%) responded Yes and few 19(34%) responded No. taking Green leafy vegetables daily majority 29(52%) responded Yes and few 27(48%) responded No, Eat vegetables daily majority 33(59%) responded Yes and few 23(41%) are responded No, taking pulses and grains daily both groups majority 33(59%) responded Yes and few 23(41%) are responded No. Attitude scale related to dietary pattern eat additional frequency of food for a day majority 41(73%) responded for agree and few 5(9%) are responded for Disagree, eat additional frequency of food for a day majority 41(73%) responded for agree and few 3(5%) are

responded Disagree, eat more protein rich sources food majority 48(86%) responded for agree, and few 2(3%) are responded Disagree, taking milk and milk products majority 38(68%) responded for agree and few 7(12%) are responded Disagree, Iron rich diet 33(59%) responded for agree, 12(21%) are responded Neutral, 11(20%) Disagree, Likes to eat food which is not allowed to eat are Likes to eat food which is not allowed to eat 38(68%) responded for agree, 12(21%) are responded Neutral, 6(11%) Disagree. Eat food rich in vitamin C, B12, Omega 3, Fatty acids 8(19%) responded for agree, 16(36%) are responded Neutral, 20(45%) Disagree. Eat food rich in vitamin C, B12, Omega 3, Fatty acids 41(73%) responded for agree, 7(13%) are responded Neutral, 8(14%) Disagree, eat prepare food with Iodized salt 39(70%) responded for agree, 14(25%) are responded Neutral, 3(5%) Disagree. Dietary pattern related to daily food habits majority 20(36%) are responded yes and few 36(64%) are responded No, taking specific dietary regimen during pregnancy majority 36(64%) are responded No and few 20(36%) are responded yes, Avoiding excessive work load during pregnancy majority 42(75%) are responded No and few 14(25%) are responded Yes, Iodized salt cooking in main meals majority 34(61%) are responded No and few 22(39%) are responded Yes, Eating snacks between main meals daily majority 43(77%) are responded No and few 13(23%) are responded Yes, Eating snacks between main meals daily majority 51(91%) are responded No and few 5(9%) are responded Yes, taking Iron and Folic acid supplementation majority 31(55%) are responded No and few 25(45%) are responded No, skipping meals during pregnancy majority 33(59%) are responded Yes and 23(41%) are responded No, was Ugwa EA was conducted the study related to nutritional practices and food taboos among antenatal mothers results shows that intake of good nutrition and abstinence from nutrition taboos were satisfactory.

SECTION-3 Structured questionnaires related to food Taboos followed during pregnancy.

Carbohydrate foods are taking daily Anemic antenatal mothers 44(100%) Sugar, 44(100%) Ragi, 44(100%) Rice, 42(95%) millets, 41(93%) Grains, 39(88%) Potato, 38(86%) Banana, 38(86%) Sweet potato, 32(73%) Honey, 16(36%) Corn and Non anemic antenatal mothers 56(100%) Sugar, 56(100%) Ragi, 56(100%) Rice 51(91%) Grains, 51(91%) millets, 49(88%) Potato, 46(82%) Banana, 45(80%) Honey, 34(61%) Sweet potato, 15(28%) Corn, Protein source foods are taking daily Anemic antenatal mothers 44(100%) Millets, Channadal 44(100%), Thoordhal 44(100%), Green gram

dhal 44(100%), Green peas 44(100%), Egg 40(91%), Coconut 38(86%), Pannier 38(86%), Chicken 36(82%), Legumes 33(75%), Sweetcorn 32(73%), Pork 31(70%), Meat 26(59%), Milk 25(57%), Moong dal 21(48%), Walnut 18(41%), Pumpkin seeds 8(18%), Mushrooms 8(18%), Pistachio 8(18%), Organ meat 4(9%) and Non anemic antenatal mothers 54(96%) Millets, Moong dal, 54(96%) Thoor dal, 54(96%) Green gram dal, 54(96%) Green peas, milk 54(96%), Peanut 54(96%), Green peas 54(96%), Beans 53(94%), Coconut 50(89%), Chicken 50(89%), Pannier 48(86%), Egg 47(84%), Meat 47(84%), Corn 46(82%), Mutton 44(79%), Legumes 44(79%), Walnut 42(75%), Mushroom 39(70%), Sweet corn 37(66%), Soya bean 34(61%), Pumpkin seeds 32(57%), Pistachio 32(56%), Pork 19(34%), Organ meat 6(11%), Vitamin-A foods are taking daily Anemic antenatal mothers 36(82%) Drumstick leaves, 31(70%) Curry leaves, 30(68%) Coriander leaves, 25(57%) Spinach, 25(57%) Carrot, 22(50%) All green leafy vegetables, Orange 19(43%) and Non anemic antenatal mothers 56(100%) Carrot, 56(100%) Spinach, 56(100%) Coriander leaves, 56(100%) Curry leaves, 50(89%) All green leafy vegetables, 47(83%) Drumstick leaves, 37(66%) Orange, Vitamin-C foods are you taking daily Anemic antenatal mothers 44(100%) Grapes, 44(100%) Sweet potato, 40(91%) Tomato, 20(45%), 19(43%) Broccoli, 16(36%) Lemon, 12(27%), 4(9%) Kiwi, 4(9%) Cauliflower, 0% of Goose berries, Guava, Pine apple, Mango, Papaya. Non Anemic antenatal mothers 56(100%) Grapes, 51(91%) Tomato, 50(89%) Watermelon, 37(66%) Orange, 37(66%) Pumpkin, 37(66%) Broccoli, 25(45%) Amla, 24(43%) Lemon, 23(41%) Mango, 10(18%) Pineapple, 8(14%) Kiwi, 8(14%) Cauliflower, (0%) Goose berries, Guava, Papaya. Vitamin B₁₂ foods are you taking daily Anemic antenatal mothers 40(90%) Egg, 32(73%) Meat, 32(73%) Fresh milk, 25(57%) Milk and milk products, 9(20%) Skimmed milk, 1(2%) Liver, (0%) Goat milk. Non anemic antenatal mothers 54(96%) Milk and milk products, 49(88%) Fresh milk, 47(84%) Egg, 44(78%) Meat, 15(27%) Skimmed milk, 15(26%) Liver (0%) Goat milk. Vitamin B₆ foods are you taking daily Anemic antenatal mothers 35(80%) All cereals, 35(80%) Legumes, 35(80%) Dal, 35(80%) Nuts, 35(80%) Root tubes, 34(77%) Milk and milk products, 34(77%) Green peas 33(75%) Fruits, 23(52%) Fish, are taking. 1(2%) Liver, (0%) Dried yeast are taking and Non anemic antenatal mothers 56(100%) Fruits, 49(87%) Green peas, 46(82%) Milk and milk products, 45(80%) Fish, 45(80%) All cereals, 45(80%) Legumes, 45(80%) Dal, 45(80%) Nuts, 45(80%) Root tubes, 15(26%) Liver are taking, Iron rich foods are you taking daily Anemic antenatal mothers 38(86%) pomegranate, 38(86%)

Groundnuts, 38(86%) Jagree, 36(82%) Kishmiss, 39(77%) Spinach, 34(77%) Beetroot, 33(77%) Red meat, 28(63%) Kidney bean, 14(32%) Pineapple, 14(32%) Dates, 13(30%) Drumstick leaves, 9(20%) Ajeera, 5 (11%) Red lentil, 5 (11%) Sunflower seeds, 5 (11%) Pumpkinseeds, 5 (11%) Chia seeds, 5 (11%) Broccoli, 5 (11%) Sweet potato, 5 (11%) Strawberry, 5 (11%) Black grapes 4 (9%) Raisins, (0%) Navy beans are taking.

Non anemic antenatal mothers 53(94%) Black grapes, 53(94%) Groundnuts, 52(92%) Jagree, 51(91%) Chick peas, 49(88%) Kishmiss, 47(84%) Spinach, 47(84%) Drumstick leaves, 45(80%) Red meat, 45(80%) Kidney beans, 40(71%) Pomegranate, 40(71%) Strawberry, 39(70%) Beet root, 34(61%) Red lentil, 31(55%) Dates, 26(46%) Raisins, 17(30%) Sunflower seeds, 17(30%) Broccoli, 13(23%) Mint leaves, 13(23%) Pineapple, 10 (18%) Navy beans, (0%) Blueberries are taking, Folic acid foods are you taking daily Anemic antenatal mothers 56(100%) Peas, 40(91%) Tomato, 38(86%) Banana, 36(82%) Beans, 35(80%) Cereals, 25(57%) Spinach, 25(56%) Carrot, 20(45%) Watermelon, 19(43%) Orange, 16(36%) Corn, 5(11%) Beetroot, 2(5%) Ladies finger, (0%) Papaya are taking and Non Anemic Antenatal mothers 44(100%) Peas, 40(91%) Tomato, 38(86%) Banana, 36(82%) Beans, 35(80%) cereals, 25(57%) Spinach, 25(57%) Carrot, 20(45%) Watermelon, Orange 19(43%), 16(36%) Lemon, 16(36%) Corn, 5(11%) Beetroot, 4(9%) Avocado, (0%) Papaya are taking, mothers Milk & Milk product foods are you taking daily 37(84%) Curd, 37(84%) Butter milk, 37(84%) Pannier, 37(84%) Doodh peda, 9(20%) Skimmed milk, 5(11%) Milk shake, 3(7%) Tea are taking and Non Anemic antenatal mothers 50(89%) Milk shake 48(85%) Curd, 48(85%) Butter milk, 48(85%) Pannier, 48(85%) Doodh peda, 15(26%) Skimmed milk, 5(9%) Tea, 4(7%) Coffee are taking, Food Beverages among Anemic antenatal mothers 40(91%) Cold drinks, 36(82%) Fruits Juices, 20(45%) Soft drinks, 6(14%) Green tea, 3(7%) Tea, 3(7%) Coffee are taking and Non anemic antenatal mothers 54(96%) Cool drinks, 53(95%) Fruits juices, 47(84%) Soft drinks, 46(82%) Green tea, 14(25%) Herbal tea, 5(9%) Tea, 4(7%) Coffee are taking. Food Beverages among Anemic antenatal mothers 40(91%) Cold drinks, 36(82%) Fruits Juices, 20(45%) Soft drinks, 6(14%) Green tea, 3(7%) Tea, 3(7%) Coffee are taking and Non anemic antenatal mothers 54(96%) Cool drinks, 53(95%) Fruits juices, 47(84%) Soft drinks, 46(82%) Green tea, 14(25%) Herbal tea, 5(9%) Tea, 4(7%) Coffee are taking, Omega-3 fatty acid foods Anemic antenatal mothers are taking daily 23(52%) Fish, 21(48%) Walnuts, 8(18%) Pumpkinseeds, (0%) Sea foods, Hempseeds are taking and Non anemic antenatal mothers 45(80%) Fish, 32(57%) Pumpkin seeds, 31(55%) Walnuts,

20(36%) Hemp seeds, 10(18%) Sea foods are taking, Miscellaneous foods are you taking daily 40(91%) Banana, 39(89%) Peas, 39(89%) Groundnuts, 16(36%) Almonds, 8(18%) Mashrooms, 8(18%) Jack Fruit, 6(14%) Sprouts, (0%) Blue berries are taking and Non anemic antenatal mothers 56(100%) Banana, 53(95%) Groundnuts, 52(93%) Peas, 43(77%) Almonds, 39(70%) Mushrooms, 25(45%) Jack fruits, 10(18%) Sprouts, (0%) Black berries are taking, craving food items you had during pregnancy Anemic antenatal mothers 40(90%) Mango, 84(37%) Pickle, 37(84%) Ghee, 20(45%) Tamarind, 12(27%), 11(25%) Orange, 11(25%) Non vegetarian, 10(23%) Lemon, 8(18%) Lemon rice, 5(12%) Sweets, 5(11%) Grapes, 2(5%) Ragiball, Grains, Junk foods, Sugarcane, Pancake and Non anemic antenatal mothers 54(94%) Grapes, 50(89%) Mango, 48(86%) Ghee, 26(47%) Pickle, 21(38%) Green leafy vegetables, 20(35%) Tamarind, 15(27%) Non vegetarian, 10(18%) Sweets, 4(7%) Gooseberries, 4(7%) Pancake, 3(5%) Ragi ball, 3(5%) Rice, 3(5%) Junk food, 2(3%) Idli, 2(3%) Gobi, 2(3%) Lemon, 1(2%) Bitter gourd, 1(2%) Salad, 1(2%) Grains, 1(2%) Lemon rice, 1(2%) Amla, 1(2%) Sugarcane cravings are having for the antenatal mothers, types of meals are avoiding during pregnancy Anemic antenatal mothers 44(100%) Raw egg, 44(100%) Colostrum milk, 44(100%) Alcohol, 44(100%) Papaya, 44(100%) Goose berries, 44(100%) Guava, 44(100%) Black berries, 40(90%) Cold items, 39(88%) Potato, 38(86%) Sweets, 36(82%) Oil foods, 31(70%) Chapathi, 30(68%) Salad, 26(59%) Meat, 24(55%) juice, 16(36%) Corn, 14(32%) Pineapple, 13(30%) Ridge guard, 12(27%) Amla, 8(18%) Lemon rice, 8(18%) Mushrooms, 8(18%) Pumpkin, 8(18%) Jack fruit, 7(16%) Curd rice, 6(14%) Sprouts, 5(11%) Black grapes, 4(9%) Snake guard, 3(6%) Tea, 3(6%) Coffee are avoiding and Non anemic antenatal mothers 56(100%) Raw egg, 56(100%) Alcohol, 56(100%) Colostrum milk, 56(100%) Papaya, 56(100%) Goose berries, 56(100%) Guava, 56(100%) Black berries, 53(94%) Black grapes, 49(88%) Potato, 47(84%) Mushroom, 47(84%) Cold items, 47(84%) Meats, 40(71%) juice, 39(70%) Brinjal, 35(63%) Salad, 32(57%) Pumpkin, 25(45%) Jackfruits, 25(45%) Ridge guard, 25(45%) Amla, 24(43%) Sweets, 20(36%) Oil foods, 18(32%) Spicy foods, 17(30%) Snake guard, 15(27%) Corn, 13(23%) Pineapple, 11(20%) Curd rice, 18(32%) Sprouts, 5(9%) Tea, 4(7%) Coffee, 2(3%) Chapathi are avoiding the antenatal mothers, Reason for avoiding food items during pregnancy Anemic antenatal mothers 44(100%) Raw egg leads to Fetal abnormalities, 44(100%) Alcohol leads to Abortion and fetal death, 44(100%) Colostrum milk Indigestion, 44(100%) Chapathi leads indigestion, 44(100%) Papaya leads to abortion, 44(100%) Gooseberries leads

to abortion, , 44(100%) Guava leads to stomachache for the mother and baby and also scares on the skin, 44(100%) Black berries leads to abortion, , 40(90%) Cold item leads to cold and chills for the baby, 39(88%) Potato leads to swelling and nee pain, 38(86%) Sweets leads vomiting, 36(82%) Oil foods leads to Indigestion, 31(70%) Brinjal leads to swelling and nee pain, 30(68%) Salad leads to vomiting, 26(59%) Meat leads to Indigestion, 24(55%) Juice leads cold, 16(36%) Corn leads to intrauterine groth retardation, 14(32%) Pineapple leads to abortion, 13(30%) Ridge guard leads to skin abnormalities for the baby, 12(27%) Spicy food leads to gastritis, 12(27%) Amla leads to vomiting and cold, 8(18%) Lemon rice leas ti induced vomiting, 8(18%) Mushrooms leads to seizures for the baby, 8(18%) Pumpkin leads to big baby, 8(18%) Jack fruit leads to seizures for the baby, 7(16%) Curd rice, 5(11%) Black grapes leads to abortion, 4(9%) Snake guard leads to skin abnormalities, 3(6%) Tea leads to decreased appetite, 3(6%) Coffee leads to Decreased blood absorpton. 3(6%) Cucumber leads to skin abnormalities over the skin, 2(5%) Ladies finger leads to amniotic fluid aspiration, Non anemic antenatal mothers 56(100%) Raw egg leads to Fetal abnormalities, 56(100%) Alcohol leads to Abortion and fetal death, 56(100%) Colostrum milk Indigestion, 56(100%) Chapathi leads indigestion, 56(100%) Papaya leads to abortion, , 56(100%) Gooseberries leads to abortion, 56(100%) Guava leads to stomachache for the mother and baby and also scares on the skin, 56(100%) Black berries leads to abortion, 53(94%) Black grapes, 49(88%) Potato leads to swelling and knee pain for the baby , 47(84%) Cold item leads to cold and chills for the baby, 40(71%) Juice leads to cold, 39(70%) Mushroom leads to seizures for the baby, 35(63%) Salad leads to vomiting, 32(57%) pumpkin leads to big baby, 25(48%) Ridge guard leads to skin abnormalities for the baby, 24(43%) sweets leads to vomiting, 20(36%) Oil foods leads to Indigestion, 18(32%) spicy food leads to Gastritis, 15(27%) corn leads to Intra uterine growth retardation, 13(23%) Pineapple leads to abortion, 11(20%) curd rice leads to cold and induced vomiting, 10(18%) Sprouts leads to Indigestion and vomiting, 5(9%) tea leads to decrease the appetite, 4(7%) Coffee leads to decrease the blood absorption, 2 (3%) Chapathi leads to Indigestion, 1(2%) Lemon rice leads to induced vomiting these are the reasons the antenatal mothers are avoiding the food, Fruits are avoid during pregnancy Anemic antenatal mothers 44(100%) papaya, 44(100%) Black berries, 44(100%) Goose berries, 14(32%) Pineapple, 12(27%) Amla, 8(18%) Jack fruit, 8(18) Pumpkin, 5(11%) Black grapes are avoiding and Non anemic antenatal mothers 56(100%) papaya, 56(100%) Black berries, 56 (100%) Goose berries, 53(94%) Black

grapes, 32(57%) Pumpkin, 25(45%) Amla, 25(45%) Jack fruit, 13(23%) Pineapple these are the fruits are avoiding during pregnancy, Vegetables are avoid during pregnancy Anemic antenatal mothers 39(88%) potato, 31(70%) Brinjal, 13(30%) Ridge guard, 8 (18%) Pumpkin, , 4(9%) Snake guard, 3(7%) Cucumber, 2(5%) Ladies finger are avoiding and Non anemic antenatal mothers 49(88%) Potato, 39(70%) Brinjal, 32(57%) Pumpkin, 25(45%) Ridge guard, 20(36%) Cucumber, 17(30%) Snake guard, 10(18%) Ladies finger, 2(3%) are avoiding, Willingly avoid the Anemic antenatal mothers 38(86%) are responded Yes, 6(14%) are responded No. Non anemic antenatal mothers 54(95%) are responded Yes, 2(5%) are responded No, Taboos that is followed regarding food avoidance Anemic antenatal mothers 31(70%) are feeling happy, 18(41%) are Feeling to eat, 7 (16%) are feeling to it cause harm to fetus, 4(9%) are feeling consent from parents, 1(2%) are safe for the health and Non anemic antenatal mothers 5(100%) are feeling to it cause harm to fetus, 13(23%) are feeling happy, 11(20%) are Feeling to eat, 10(18%) are safe for the health and 5(9%) are feeling consent from parents these is feeling of antenatal mothers regarding food taboos.

It shows that feel about the taboos that is followed regarding food avoidance Non anemic antenatal mothers 13(23%) are feeling happy, 11(20%) are Feeling to eat, (0%) are feeling to it cause harm to fetus, 10(18%) are safe for the health and 5(9%) are feeling consent from parents. Anemic antenatal mothers 31(70%) are feeling happy, 18(41%) are Feeling to eat, 7 (16%) are feeling to it cause harm to fetus, 1(2%) are safe for the health and 4(9%) are feeling consent from parents.

CHAPTER-IX

CONCLUSION

This chapter deals with conclusion, limitation and recommendation of the study. further it includes implications for the nursing practice, Nursing Education, Nursing administration and Nursing Research.

The main aim of the study to find out the prevalence of anemia and Dietary taboos and Dietary practices among Anemic and Non anemic antenatal mothers. The data was gathered from 100 Antenatal mothers [Non anemic group- 56, Anemic group-44 are given below.

A worth and efficacious health care regimen through the consumption of Iron and Folic acid supplementation and intake of Iron rich and Vitamin-C rich diet have a positive impact on improving hemoglobin levels.

Use of Iron folic acid supplementations consuming diet constructed to increase the hemoglobin levels, improve in the metabolization, if we are taking Iron and folic acid appropriate dose as per the purpose of using it.

Especially antenatal mothers have a tendency to consume junk foods, Lack of diet intake due to minor disorders neglecting the fact that it has an adverse effect on the health. However, in other hand Iron and folic acid sources easily available, accessible

and cost effective about which most of the antenatal are unaware. instead of running behind expensive and lavish remedy. We can adopt and recommend our ancient tradition of health care routine to have a health body and mind.

IMPLICATION OF THE STUDY:

Nursing implication includes specific information for Nursing practice, Nursing education, Nursing administration and Nursing research. Nursing implication for this study is,

NURSING PRACTICE

- ❖ The outcome of the present study implies that:
- ❖ Educating the mothers avoid Food Taboos on Iron rich diet and its methods of intake helps the antenatal mothers health.
- ❖ Educating the mothers on nutritious diet and bring awareness on taboos which antenatal mothers and finally, have on food helps to increase intake of balanced and nutritious diet.
- ❖ Iron and Folic acid sources can be incorporated in to routine nursing intervention.
- ❖ Iron & folic acid sources play a very effective and non invasive intervention for treating anemia.
- ❖ It will also help the nursing personnel to conduct regular health assessment at community level and out patient department in pediatric hospital.
- ❖ Iron & folic acid sources will help the nurse and nursing student to educate the antenatal mothers, parents, teachers, adolescent girls and about the Iron deficiency anemia and its symptoms.
- ❖ Instructional modules and pamphlets can be distributed in the out patient department in community area, PHC,CHC, and hospital on the use of available Iron and Iron rich foods such as ragi, rice flackes, green leafy vegetables, cabbage and jagree in improving anemia status.

NURSING EDUCATION

- ❖ The findings of the study will help the antenatal mothers gain confidence to health care and to manage further problem associated with anemia by using home remedies.
- ❖ It is important to have educational programme on Iron and Folic acid for antenatal mothers, so that they can apply this technique to increase the hemoglobin experienced by the in patients in the Hospital.
- ❖ Antenatal mothers are greater risk to develop anemia.
- ❖ The nursing curriculum must give importance far early detection and prevention of anemia among antenatal mothers by using cost effective and pharmacological intervention.
- ❖ Antenatal mothers are to be taught regarding risk assessment on antenatal mothers for Iron deficiency anemia.
- ❖ The study enable the nursing personnel to give more emphasized on physical assessment as an approach to determine the level of Iron deficiency anemia among Antenatal mothers.
- ❖ The study will help to conduct conference, seminar and panel discussion on dietary management of Iron deficiency anemia.
- ❖ The continuing nursing education program needs to be implemented to learn updated information in prevention of anemia.

NURSING ADMINISTRATION

- ❖ Nursing administrator can organize in- service education programme for staff nurses regarding Iron and folic acid sources food.
- ❖ Nurse administrator should make the public aware about the nutritional problems among Antenatal mothers in institutionalized living.
- ❖ In service education may be conducted for nurse especially community health nurses regarding various non pharmacological intervention to treat anemia among antenatal mothers.
- ❖ Every administration should provide adequate support to conduct prevalence of anemia program periodically.
- ❖ The nurse administrator give more emphasized on conducting health checkup once in six months among antenatal mothers to detect Iron deficiency anemia.

- ❖ To promote knowledge on detecting and treating Iron deficiency anemia for antenatal mothers and village health guides.

NURSING RESEARCH

- ❖ Research should focus on pharmacological interventions to increase hemoglobin level.
- ❖ The finding should be disseminated through conferences, seminars and publications in professional, national and international journals.
- ❖ Extensive research can be done to identify the risk factors and methods of primary prevention.
- ❖ Meta analysis needs to be conducted to find out appropriate evidence- based interventions, measures to control and prevent the morbidity of Iron deficiency anemia.
- ❖ Collaborative research could be initiated to try various preventive measures to control Iron deficiency anemia.
- ❖ Epidemiological studies can be conducted in primary care setting to prevent Iron deficiency anemia and its complications.

LIMITATIONS

- ❖ The setting of the study was single area.
- ❖ The study is limited to antenatal mothers.
- ❖ Estimation of hemoglobin level was said to be Non invasive procedure.
- ❖ Samples are limited to 100.

RECOMMENDATIONS

Recommendations include ;

- Similar study can be done in larger samples.
- Comparative study can be done between rural and urban area inmate antenatl mothers.
- Similar study can be done for adolescent girls.
- ongitudinal study can be conducted to assess Iron deficiency anemia.
- A similar study can be conducted with other age groups.
-

DELIMITATIONS

Study can be conducted on Large samples

Experimental studies can be conducted.

In various settings study can be conducted.

REFERENCES:

- 1.NIH. About pregnancy..[(online ;31 jan 2017,cited 8 mar 2023)].Available from N<https://www.nichd.nih.gov/health/topics/pregnancy/conditioninfo#:~:text=Pregnancy%20is%20the%20term%20used,segments%20of%20pregnancy%2C%20called%20trimesters.>
- 2 .Ravishankar S Prospective study on prevalence of anemia of pregnant women and its out come: A community based study ,Journal of family medicine and primary care.[(online ;Dec 2017, cited 11 Apr 2023)];739-743. Available from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5848390/#:~:text=The%20prevalence%20of%20anemia%20was,with%20educational%20status%20and%20gravida.>
- 3.Berger J, Wieringa FT, Lacroux A, Dijkhuizen MA. Strategies to prevent iron deficiency and improve reproductive health. Nutrition Reviews.[online ; Nov 2011 ,cited9apr2023)];86availablefrom; https://www.who.int/data/gho/data/themes/topics/anaemia_in_women_and_children.
- 4.Dutta's Obstetrics and gynecology text book . fifth edition, publication at New Delhi; japee brothers; [(online ; 2025, cited 9 Apr 2023)];307- 309.
- 5.Anuradha S, moumitha A, Jyothi P P ,Sonal K, Tirthokar S. A study of anemia and its risk fact among pregnant women attending antenatal clinic of a rural medical college of West Bengal. Journal of family medicine. [(online ;10 mar 2012 , cited [(online;10mar2012,cited2023)];1327-1331.

Available from; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8140236/>

6. Abere M, Azene AG. Food Taboo and associated factors among pregnant women attending antenatal clinics at Bahir Dar City, North West Ethiopia, 2021: cross-sectional study. Scientific Reports. 2023 May 13;13(1):7790.

Available from: <https://www.nature.com/articles/s41598-023-34964-5>

7. Mehrotra M, Yadav S, Deshpande A, Mehrotra H. A study of the prevalence of anemia and associated sociodemographic factors in pregnant women in Port Blair, Andaman and Nicobar Islands. J Family Med Prim Care [(online : Jul 2018, cited on 28 Apr 2023)] page no :1288-93.

Available from: https://www.readcube.com/articles/10.4103%2Fjfmprc.jfmprc_139_18.

8. Nisario S G, Agatha F N, Mariam J M, Mwanaisha M A, Dietary habits associated with anemia in pregnant women attending antenatal care services. Current development in nutrition [(online 2021 Jan, cited on 29 march 2023)] : page no 178.

Available from: [ncbi.nlm.nih.gov/pmc/article/pmc7809361](https://www.ncbi.nlm.nih.gov/pmc/article/pmc7809361)

9. Amare W, Tura AK, Semahegn A, Teji Roba K. Food taboos among pregnant women and associated factors in eastern Ethiopia: A community-based cross-sectional study. SAGE Open Medicine. 10 Nov 2023 , cited on 29 mar 2023):20503121221133935.

Available: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9679342/#:~:text=Pregnant%20women%20had%20food%20taboos>

10. Nair MS, Raphael L, Chandran P. Prevalence of anemia and associated factors among antenatal women in rural Kozhikode, Kerala. Journal of Family Medicine and Primary Care. [(11 may 2022 , cited on 28 mar 2023)]; page no 1851. available <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9679342/#:~:text=Pregnant%20women%20had%20food%20taboos>.

11. Araujo Costa E, de Paula Ayres-Silva J. Global profile of anemia during pregnancy versus country income overview: 19 years estimative (2000–2019). Annals of Hematology. 2023 Aug;102(8):2025-31.

Available from: <https://link.springer.com/article/10.1007/s00277-023-05279-2>

12. Saxena V, Singh M. Anemia in Indian Men: An Emerging Public Health Challenge. *Indian Journal of Community Medicine*. 2023 Nov 1;48(6):817-22. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10795878/>
13. Alem AZ, Efendi F, McKenna L, Felipe-Dimog EB, Chilot D, Tonapa SI, Susanti IA, Zainuri A. Prevalence and factors associated with anemia in women of reproductive age across low-and middle-income countries based on national data. *Scientific Reports*. 2023 Nov 20;13(1):20335. Available from: <https://www.nature.com/articles/s41598-023-46739-z>
14. Deshmukh U. Across Sectional Study on Social and Cultural Food Taboos Related Barriers in Prevention of Anemia in Pregnant Women of Amravati District, Maharashtra India. *Journal of Nutrition & Food Sciences*. [(Online 30 Mar 2022, cited on 29 Apr 2023)]; page no1-3. <https://www.longdom.org/abstract/across-sectional-study-on-social-and-cultural-food-taboos-related-barriers-in-prevention-of-anemia-in-pregnant-women-of--87519.html>
15. Kuppusamy P, Prusty RK, Khan SA. Assessing the prevalence and predictors of anemia among pregnant women in India: findings from the India National Family Health Survey 2019–2021. *Current Medical Research and Opinion*. 2024 Jan 2;40(1):51-8. available
- Available: <https://pubmed.ncbi.nlm.nih.gov/37888841/> As per the statistical Records.
16. Kaushal S, Priya T, Thakur S, Marwaha P, Kaur H. The Etiology of Anemia Among Pregnant Women in the Hill State of Himachal Pradesh in North India: A Cross-Sectional Study. *Cureus*. [(online 20 Jan 2022 cited on 24 mar 2023);] volume ,14(1). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8857868/>.
17. Konje ET, Ngaila BV, Kihunrwa A, Mugassa S, Basinda N, Dewey D. High Prevalence of Anemia and Poor Compliance with Preventive Strategies among Pregnant Women in Mwanza City, Northwest Tanzania: A Hospital-Based Cross-Sectional Study. *Nutrients*. [(online 17 sep 2022 , cited on 26 mar 2023)]; page no 3850. Available from: <https://www.mdpi.com/2072-6643/14/18/3850>.

18.Sharma S, Akhtar F, Kumar Singh R, Mehra S. Dietary patterns and determinants of pregnant and lactating women from marginalized communities in india: A community-based cross-sectional study. *Frontiers in nutrition*. [(online 13 Nov 2020, cited on 03 Apr 2023)]; page no 595170. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7691489/>..

19.Abere M, Azene AG. Food Taboo and associated factors among pregnant women attending antenatal clinics at Bahir Dar City, North West Ethiopia, 2021: cross-sectional study. *Scientific Reports*. 2023 May 13;13(1):7790. Available from: <https://www.nature.com/articles/s41598-023-34964-5>

20. Amare W, Tura AK, Semahegn A, Teji Roba K. Food taboos among pregnant women and associated factors in eastern Ethiopia: A community-based cross-sectional study. *SAGE Open Medicine*. 2022 Nov;10:20503121221133935.

Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC9679342/>

21.Tsegaye D, Tamiru D, Belachew T. Food-related taboos and misconceptions during pregnancy among rural communities of Illu Aba Bor zone, Southwest Ethiopia. A community based qualitative cross-sectional study. *BMC pregnancy and childbirth*. 2021 Dec;21:1-9.

Available

from: <https://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/s12884-021-03778-6>

22.Hina Z, Imran S, Mohammed, Mohammed H, Banaras A, dietary association of iron deficiency anemia and related to pregnancy outcomes ,food science and nutrition . [(online 21Jun 2021 cited on1 Mar 2023)]; page no 4127-4133. Available from https://www.google.com/search?q=dietary+association+of+iron+deficiency+anemia+and+related+pregnancy+outcomes&rlz=1C1CHBF_enIN1037IN1037&oq=dietory+a ssociation.

23.Diana R, etal. Dietary quantity and diversity among anemic pregnant women in

Madura Island, Indonesia. Journal of nutrition and metabolism. [(online 24 mar 2019,cited12 Apr 2023)];. on ;2019.

Available from: <https://downloads.hindawi.com/journals/jnme/2019/2647230.pdf>.

24.Ban N A F, Rafal M M, Tarff E A Assessment of iron deficiency anemia (IAG) and dietary pattern among pregnant women in Baghdad city, Iraq. (journal September 2018 cited 29 march 2023) ; 2284.

Available from research govt.net/publication/328234204 assessment of iron and dietary pattern women -in - Baghdad - city, Iraq.

25. Ayoya MA, Spiekermann-Brouwer GM, Traoré AK, Stoltz RJ, Garza C. Determinants of anemia among pregnant women in Mali. Food and nutrition bulletin.[(online: Mar 2006, cited on 10 Apr 2023)]; volume 1, page no 27.

Available from: <https://pubmed.ncbi.nlm.nih.gov/1657271>

26.Sharma S, Akhtar F, Kumar Singh R, Mehra S. Dietary patterns and determinants of pregnant and lactating women from marginalized communities in India: A community-based cross-sectional study. Frontiers in nutrition.[(online:13 Nov 2020, cited on 10 Apr 2023)];page no595170.

Available from:<https://www.frontiersin.org/articles/10.3389/fnut.2020.595170/full>.

27.Kibret KT, Chojenta C, D'Arcy E, Loxton D. The effect of dietary patterns on maternal anaemia in North Shewa, Ethiopia: A case–control study with Propensity Score Analysis. Nutrition and Health. 2023;02601060231152345.

Available from:<https://pubmed.ncbi.nlm.nih.gov/36683461/>

28.Gao H, Stiller CK, Scherbaum V, Biesalski HK, Wang Q, Hermann E, Bellows AC. Dietary intake and food habits of pregnant women residing in urban and rural areas of Deyang City, Sichuan Province, China. Nutrients. [(online 31 Jul 2013, cited on 8 Apr 2023)]; volume 5(8): page no:2933-54.

Available from ; <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3775236/>.

29. Atefeh .F , Amir R H, Maternal Dietary pattern & Their Association with pregnancy out come [(online 30 Jan 2019, Cited 30 March 2023); page: 64 – 73.

Available from: [Synapse.koreamed.org/articles/1115523](https://synapse.koreamed.org/articles/1115523).

30.Helen L.G, Robert W.S, The epidemiology and burden of plasma odium falciparum related among Anemia among pregnant women in sub Sarian Africa, [(online Sep 2001 , cited on 12 Apr 2023)]; page no: 56-340.

Available cite server.ist.psu.edu/document?repid=1115523&typepdf&doi=49dsfe5faf3ffor2141d87.ebecedaf3cb7975eay.

31.Assefa P K, Anelo B G Anemia among pregnant women attending antenatal care clinic in Adare general hospital, SpouthernEtheopia prevalence associated factors. SAGE Journals. [(Online: 29 Jul 2021, cited 02 Apr 2023)]: page no1177 – 1178.

32. Sinha A, Adhikary M, Phukan JP, Kedia S, Sinha T. A study on anemia and its risk factors among pregnant women attending antenatal clinic of a rural medical college of West Bengal. Journal of family medicine and primary care. 2021 Mar 1;10(3):1327-31. https://journals.lww.com/jfmpc/fulltext/2021/10030/a_study_on_anemia_and_its_risk_factors_among.42.aspx

33.Eveliyne B N, Sirel N M, Brunos the burden of anemia in pregnancy among women attending the antenatal clinical in mkurangas district. Tanzania. Original research article: Sec-public health and nutrition [(online 02 Dec 2021 , cited on 12 Apr 2023)]; volume 9; page no :202.

34. Sujana G, Ismail M, Mertihan k, Halit D The nutritional habits and relationship between the accident activity and iron deficiency anemia during the pregnancy .[(online :Oct 2022, cited on 30 mar 2023)]; page no 317-324.

35.Polit DF Beck CT. Nursing research: Principles and methods. 7th edition Philadelphia:Lippincott and William and wilkins;017.

36.Maran CM. Evaluation of Anti- Anaemic Activity of phyllanthus Emblica Linn, on Streptozotocin Induced rats(Doctoral dissertation, college of pharmacy, Madras Medical college Chennie).

37. Magfirah N, Ansariadi A, Amiruddin R, Wijaya E, Maria IL, Salmah U, Ibrahim E. Inadequate food diversity and food taboo associated with maternal iron deficiency among pregnant women living in slum settlements in Makassar City, Indonesia.

Journal of Education and Health Promotion. 2024 Feb 1;13(1):67.

Available from: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10979773/>

38. Ugwa EA. Nutritional practices and taboos among pregnant women attending antenatal care at general hospital in Kano, Northwest Nigeria. Annals of medical and health sciences research. 2016;6(2):109-14.

Available from : <https://pmc.ncbi.nlm.nih.gov/articles/PMC4866363/>

39. Goel T, Silan VK, Jha SK, Yadav P. Food-related Taboos during Pregnancy and Lactation among Women of Rural Haryana: A Cross-sectional Study. www. ijphrd. com. 2024 Apr;15(2):401. Available from:

<https://medicopublication.com/index.php/ijphrd/article/view/20736>

ANNEXURE-I
ETHICAL COMMITTEE CLEARANCE CERTIFICATE



SRI DEVARAJ URS COLLEGE OF NURSING

TAMAKA, KOLAR-563 103.

(Affiliated to RGUHS, Bangalore and Recognized by KNC, Bangalore & INC, New Delhi)

ISO 9001: 2015 Certified & NAAC Accredited

Phone: 9480880802

E-mail: sduconson@yahoo.com,

Website: sducon.ac.in


Ref: No. SDUCON/IEC/131/2023

Date: 28/7/2023

To

Ms. Supriya
I MSc(N)
OBG Nursing,
SDUCON Tamaka, Kolar 563-103

This is to certify that the Institutional Ethics Committee of Sri Devaraj Urs College of Nursing, Tamaka Kolar has unanimously approved the PG Mini project on Topic: **A study to find out the Prevalence of Anemia and compare Dietary practices and taboos among Anemic and Non-Anemic Antenatal Mother attending OPD'S at selected Hospitals, Kolar in a view to develop an information Booklet.** of Ms. Supriya, I MSc(N) Principal Investigator and Mrs. Gayathri.K.V. Assoc. Professor, OBG Dept, as co-investigator of SDUCON.


Member secretary

JOINT SECRETARY
ETHICS COMMITTEE

SRI DEVARAJ URS COLLEGE OF NURSING
TAMAKA KOLAR - 563103.


Chairperson

CHAIRPERSON
ETHICS COMMITTEE

SRI DEVARAJ URS COLLEGE OF NURSING
TAMAKA KOLAR - 563103.

ANNEXURE-II LETTER REQUESTING PERMISSION FOR CONDUCTING RESEARCH

LETTER REQUESTING PERMISSION TO CONDUCT RESEARCH STUDY

From:
Mrs. V Supriya,
I year M.Sc. Nursing,
Sri Devaraj Urs College of Nursing,
Tamaka, Kolar – 563101.

Date: 27.11.2023
Place: Kolar

To,
DR. MUNIKRISHNAPPA,
PROF & I/C HOD,
[ALL THE UNITS HODS (I,II,III,IV),
Sri Devaraj Urs medical college,
Tamaka, Kolar – 563101.

Through,
The Principal,
Sri Devaraj Urs College of Nursing, Tamaka, Kolar.

Respected Sir/Madam,

Sub:-Requesting Permission to conduct a research study at R.L Jalappa Hospital, Tamaka, Kolar
With due respect I Mrs. V. Supriya student of Ist year M.Sc.(N) of Sri Devaraj Urs College of Nursing, Tamaka, Kolar under the Department of O.B.G Nursing specialty has to conduct a research study under the guidance of Mrs. Gayathri K V Assoc. Professor, Department of O.B.G Nursing. I Have selected the below mentioned topic or my research study.

Title of the Topic:

“A study to find out the Prevalence of Anemia and compare Dietary practices and taboos among Anemic and Non Anemic Antenatal Mother attending OPD’S at selected Hospitals, Kolar in a view to develop an information Booklet. “

As a partial fulfillment of M.Sc. Nursing department. Hence I request you to grant permission to conduct study among Antenatal mothers who are attending to antenatal OPD at R.L.J.H Kolar. So kindly consider and do the needful.

Thanking You,

Yours faithfully
V SUPRIYA

Enclosure:-

- Synopsis
- Ethical clearance
- Standardized tool
- Patient information sheet (in Kannada and English),


PROFESSOR
R.L. Jalappa Hospital & Research Centre
TAMAKA KOLAR

ANNEXURE-III
LETTER REQUESTING PERMISSION FOR CONDUCTING
RESEARCH

LETTER REQUESTING PERMISSION FOR CONDUCTING STUDY

From,
V Supriya
I Year M.Sc. Nursing,
SDUCON,
Tamaka, Kolar.

Date: 21.11.2023
Place: Kolar

To,
Chief Nursing Officer,
R.L Jalappa Hospital, Kolar.

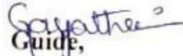
Forwarding through,
Through The Principal,
SDUCON, Tamaka, Kolar.

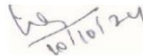
Respected Madam,


Sub: Requesting permission to collect data for my study in R L Jalappa Hospital.

With the subject to the above, I the undersigned student of I year M.Sc. Nursing under the department of Obstetrics and gynecology Nursing specialty would like to conducted "a study to find out the prevalence of Anemia and compare Dietary practices and taboos among Anemia and Non-Anemic Antenatal mothers attending OPD's at selected Hospital, Kolar in a view to develop an information Booklet". As a part of my partial syllabus requirement. Hence, I request you to grant permission to collect data from antenatal mothers at R L Jalappa Hospital. Kindly consider this letter and do the needful.

Thank You,


Mrs. Gayathri K. V
Associate Professor.
Department of Obstetrics and gynecology
SDUCON Tamaka, Kolar.


Dr. Zeanath Cariena Jos
Chief Nursing Officer,
R.L Jalappa Hospital, Kolar.

Yours faithfully,

V Supriya

Respected madam,
Kindly permit her for collecting data for the completion
of her project work.
Gayathri

ANNEXURE-IV LETTER REQUESTING PERMISSION FOR CONDUCTING RESEARCH

LETTER REQUESTING PERMISSION FOR CONDUCTING STUDY

From,
V Supriya,
I Year MSc Nursing,
S.D.U.C.O.N,
Tamaka Kolar.

Date:- 27/09/2023
Place:- Kolar

To,
The Principal,
S.D.U.C.O.N,
Tamaka, Kolar.

Respected Madam/Sir,

Sub:-Requesting permission to collect data for my study in R. L.Jalappa Hospital.

With the subject to the above, I the under signed student of I year MSc Nursing under the department of Obstetrics and gynecology Nursing Specialty would like to conducted a study to find out the prevalence of Anemia and compare Dietary practices and taboos among Anemic and Non Anemic Antenatal mothers attending OPD'S at selected Hospital, Kolar in a view to develop an information Booklet. " as a part of my partial syllabus requirement Hence I request you to grant permission to collect data from antenatal mothers at R. L. Jalappa Hospital Kindly consider this letter and do the needful.

Thanking you

yours faithfully

Gayathri
Guide,
Mrs. Gayathri K V,
Associate professor,
Dept. of OBG Nursing,
SDUCON, Kolar.

V Supriya
V Supriya

Respected madam,

*Kindly permit her for collecting data for the completion
of her project work.
Gayathri*

ANNEXURE-V LETTER REQUESTING PERMISSION FOR CONDUCTING RESEARCH

LETTER REQUESTING PERMISSION FOR CONDUCTING STUDY

From,
V Supriya,
I Year MSc Nursing,
S.D.U.C.O.N,
Tamaka, Kolar.

Date:-
Place:- Kolar.

To,
Dr. Rathnamma. P
Assoc. Professor & I/c HOD,
Dept. of OBG
SDUMC, Kolar.

Forwarded through,
Through The Principal,
S.D.U.C.O.N. Tamaka, Kolar.

Respected Madam/Sir,


Sub:- Requesting permission to collect data for my study in R. L. Jalappa Hospital.

With the subject to the above, I the under signed student of 1st year M.Sc Nursing under the department of Obstetrics and gynecology Nursing Specialty would like to conducted a study to find out the prevalence of **"Anemia and compare Dietary practices and taboos among Anemic and Non Anemic Antenatal mothers attending OPD'S at selected Hospital, Kolar in a view to develop an information Booklet"**. As a part of my partial syllabus requirement. Hence I request you to grant permission to collect data from antenatal mothers at R. L. Jalappa Hospital.

Kindly consider this letter and do the needful.

Thanking you

yours faithfully


Guide,

V Supriya

Mrs. Gayathri K. V.,
Associate professor,
Dept. of OBG Nursing,
SDUCON, Kolar.

ANNEXURE-VI PARTICIPANT LIST

PARTICIPANT LIST

SLNO	NAME	CONTACT NUMBER	SIGNATURE
1	Divya K.V.	9741836993	Divya K.V.
2	Rashmi N.	9980639306	Rashmi N.
3	Radha S	9141544133	Radha S
4	Muskan Taj	9538929489	Muskan Taj
5	Sujatha	9206969570	Sujatha
6	pavithra H.N	9980557194	pavithra H.N
7	Anjun Taj	8431319731	Anjun Taj
8	Lakshmi	9964683578	Lakshmi
9	Renuka	7019816581	Renuka
10	Anitha N	8861996366	Anitha N
11	Bibi Ayisha	9901825532	Bibi Ayisha
12	poojitha	63693100010	poojitha
13	kallamma	6869510001	kallamma
14	Arshiya Taj	7259555798	Arshiya Taj
15	Meharaj	9448821425	Meharaj
16	Vybhavi	9994578152	Vybhavi
17	Narayamma	748259577	Narayamma
18	Maajula	9658545856	Maajula
19	susheela	6869611101	susheela
20	Madha kousar	9844421225	Madha kousar
21	G.N. Suresha	984465050	G.N. Suresha
22	Ramadevi	9110412922	Ramadevi
23	Surya Arubabu	6380449011	Surya Arubabu
24	Shilpa V	7090853781	Shilpa V
25	Rekha N	9880638527	Rekha N
26	Gayathri	9886659793	Gayathri
27	Manashta N	8123964812	Manashta N
28	Hemavathi	6361711304	Hemavathi
29	Aysha Khan	68693100102	Aysha Khan
30	Muskan	7259621934	Muskan
31	Sumitha J.H	8431582466	Sumitha J.H
32	Soundarya B.k	7338127072	Soundarya B.k
33	Hemanti	8310445978	Hemanti
34	Tasmiya kousar	8867770766	Tasmiya kousar
35	Seema firdose	9482788178	Seema firdose
36	Manjula	8904794608	Manjula

37	shyla	7892584998	Shyl
38	Sangeetha	9535992894	Sangeetha
39	Supriya M	8861967083	Supriya M
40	Meenakshi M.	8095921557	Meenakshi M.
41	Hallika	6364357953	Hallika
42	Anupama K.S	6364579625	Anupama
43	Shafiya B.	9804162439	Shafiya B.
44	Seema Sultana	9986040209	Seema Sultana
45	Nandini K.M	8970943148	Nandini K.M
46	Jasmiya Aftreen	7899767183	Jasmiya Aftreen
47	Parimala S	7620132023	Parimala S
48	Gayathri	9739194814	Gayathri
49	Sharanvani S	7204222520	Sharanvani S
50	Sravanthi	9008295006	Sravanthi
51	Usharani	9110887140	Usharani
52	Sunanda V	9620266828	Sunanda V
53	Pavithra	7200201407	Pavithra
54	Shwetha Raju	7483369598	Shwetha Raju
55	Nethravathi	9741806809	Nethravathi
56	Roopa C.M	9164073064	Roopa C.M
57	Harshitha	6361597828	Harshitha
58	Asha	6363822706	Asha
59	K.Silpa	9550144580	K.Silpa
60	Sumathi A.	9019570056	Sumathi A.
61	Bhavani N	7338415837	Bhavani N
62	Sailaja	6364008262	Sailaja
63	Priya S	9590278996	Priya S
64	Anitha	7259251615	Anitha
65	Rajya Bharu	9894278956	Rajya Bharu
66	Shwetha N	9606179898	Shwetha N
67	Amrutha R.	8553962037	Amrutha R.
68	Bhavani V	8105420703	Bhavani V
69	Lakshmi	9611842423	Lakshmi
70	Sindhu	8970717448	Sindhu
71	Shrinisha V.M	9663245094	Shrinisha V.M
72	Deepika	8867131752	Deepika
73	Aishwarya	9740434599	Aishwarya
74	Sowmya	9538581298	Sowmya
75	Ashwini	8548939427	Ashwini

76	Annapoorneshwari	8310941616	అన్నపూర్ణేశ్వరి
77	Pavithra.H.K.	9449859231	పవిత్ర H.K.
78	Bhagya lakshmi	8489004608	Bhagya lakshmi
79	sofiya	9448844464	Sofiya
80	Saidhajani	8453691232	Saidhajani
81	Tajashwini	7834296228	Tajashwini
82	Jareniya	8088 344575	జారేనియా
83	prema	8449629129	ప్రేమ
84	Pavithra	9438048114	పవిత్ర
85	Meena	7893210585	మీనా
86	shasikala	9848326492	Shashikala
87	Roopa	8861489310	రూప
88	Roshini	9900848326	రోషిని
89	Geetha	9449558428	గీత
90	Sharavani	6364099823	Sharavani
91	Sumathi	9019540560	Sumavani
92	Bhargavi	7338412461	Sumathi
93	Saroja	64638004261	Bhargavi
94	Priyanka	9968429095	ప్రియా
95	Kavitha	92516155972	కవిత
96	Sampangi	949848956	సంపంగి
97	swathi	9896960614	స్వాతి
98	Ankitha	9620348553	Ankitha
99	Bhar gavi	8105420403	Bharghavi
100	lakshmi priya	9611842423	లక్ష్మిప్రియా

ANNEXURE-VII DATA COLLECTION TOOL

Questionnaire regarding prevalence of anemia and dietary practices and taboos among antenatal mothers.

Instructions: kindly answer to all the questions. Give response to the option selected. Don't leave any questions unanswered. Your answers will be kept confidential. The information collected will be only for study purpose.

SECTION –A SOCIODEMOGRAPHIC VARIABLES

SL.NO	Socio demographic and biophysical profile	Response
1.	Age of the Antenatal women	
	1.1)18-24	
	1.2) 25-34	
	1.3) 35-45	
2.	Religion	
	2.1)Hindu	
	2.2)Muslim	
	2.3) Christian	
	2.4) Any other	
3.	Family size	
	3.1) <2	
	3.2) 3-5	
	3.3) 5-8	
	3.4) >8	
4.	Educational level of pregnant women	
	4.1)Professional degree	
	4.2) Graduates	
	4.3) Intermediate /Diploma	
	4.4) High School	
	4.5) Middle school	
	4.6)Primary School	
	4.7)No formal education`	
5.	Educational level of husband of pregnant women	
	5.1) Professional degree	
	5.2) Graduates	
	5.3) Intermediate /Diploma	
	5.4) High School	

	5.5) Middle school	
	5.6) Primary School	
	5.7) No formal education`	
6.	Occupation of bread winner in the family.	
	6.1) Professional.	
	6.2) Semiprofessional.	
	6.3) Clerical / shops / farm.	
	6.4) Skilled worker.	
	6.5) Semi skilled worker.	
	6.6) Unskilled worker.	
	6.7) Un employee.	
7.	Income of the family .	
	7.1) >47348.	
	7.2) 26374 - 47347	
	7.3) 17756 – 23673.	
	7.4) 11837 – 17755.	
	7.5)7102 – 11836.	
	7.6) 2390 – 7101.	
	7.7) <2390.	
8.	Residence.	
	8.1) Rural.	
	8.2) Urban.	
	8.3) semi urban	
9.	Socio Economic status.	
	9.1) Upper class.	
	9.2) Upper middle class.	
	9.3) Lower middle class.	
	9.4) Upper lower class.	
	9.5) Poor.	
10.	If multi gravid mode of delivery	
	10.1) LSCS	
	10.2) Normal delivery	
	10.3) Forceps delivery	
	10.4) Vacuum delivery	
11.	Pregnancy interval.	
	11.1) One year.	
	11.2) Two years.	
	11.3) Three years.	
	11.4) More than that.	

12.	Dietary pattern	
	12.1) Vegetarian.	
	12.2) Non vegetarian.	
13.	Workers.	
	13.1) Sedentary.	
	13.2) Moderate.	
14.	Do you eat freshly prepared food.	
	14.1) Yes	
	14.2) No.	
15.	Do you like eating heavy food.	
	15.1) Yes	
	15.2) No.	
16.	Do you like vegetarian or non vegetarian food.	
	16.1) Yes	
	16.2) No.	
17.	Have you done any changes in eating patterns during pregnancy.	
	17.1) Agree	
	17.2) Neutral	
	17.3) Disagree	
18.	Are family members cooperative, loving and caring.	
	18.1) Agree	
	18.2) Neutral	
	18.3) Disagree	
19.	Hemoglobin Level	
	19.1) Mild anemia 10-10.9mg/dl.	
	19.2) Moderate anemia 7-9.9 mg/dl	
	19.3) Severe anemia <7	
20.	Eat fruits.	
	20.1) Daily.	
	21.2) Every often.	
	22.3) Often.	
	23.4) Rarely.	
21.	Meals frequencies.	
	21.1) 1– 2.	
	21.2) 3 - 4.	
	21.3) >5.	
22.	Eat Vegetables.	
	22.1 Daily.	

	22.2 Every often.	
	22.3 Often.	
	22.4 Rarely.	
23.	Do you follow specific dietary regimen.	
	23.1 Yes	
	23.2 No.	

24. Obstetrical score –

25. Number of meals intake for a day-

26. Number of Antenatal visits –

27. Who will prepare food at home

28. Does your husband give company while eating –

Section – 2 Questions related to dietary practices followed by antenatal mothers attending antenatal OPD'S.

Sl.No	Questions	Yes	No
1.	Eats vitamin C, B12, Omega 3 rich diet like Orange, Mango, Lemon, Guava, Banana ,Tomato, Capsicum, Fish, kiwi, Grapes ,Bell peppers, Eggs, fresh milk, Milk products like cheese, Butter, kidney beans, Hemp seeds, Broccoli, soya been, Spinach, Drumstick leaves, Basil, Cashews, etc,		
2.	Do your family provides your favorite food.		
3.	Do your Consume fresh vegetables like carrot, cucumber, ladies finger, Carrot, drumsticks, beetroot, green leafy vegetables etc.		

4.	Intake Iron and Folic acid supplements like Peanuts, Green leafy vegetables like spinach, Drumstick leave, asparagus, Bitchily, Garden night shade, fruits, broccoli, red meat etc daily		
5.	Eat snacks between the meals		
6.	Eat carbohydrate food like rice, corns, Sweet potato, sugar, potato, Banana, peas, wheat, etc.		
7.	Eats protein diet like cereals like, Channa, peanuts, pigeon peas, horse gram, black eyed peas, Hyacinth beans, pulses, Red gram, green gram, Green peace, eggs, meat, chicken etc.		
8.	Eats fats diet like fried food, fried puri, Fried rice, fried chicken, Ice cream, Potato chips, kabab, junk foods like Gobi Manchuria, fried Peanuts, etc.		
9.	What are the animal sources of food you take like milk, butter, curd, meat, chicken, Ghee, All the animal products etc.		

10. What are the green leafy vegetables you eat daily–

11. What are the vegetables you eat daily –

12. What are the animal products you eat daily –

13. What are the pulses and grains you eat daily –

14. What type of food you eat (items) –

Section 2: b. Attitude scale related to dietary pattern

Sl. No.	Question	Agree	Neutral	Disagree
1.	Do you eat additional frequency of food for a day			
2.	Eats more carbohydrates.			
3.	Eat more protein sources food such as beef, pulses, chicken.			
4.	Preparing more milk and its product during pregnancy.			
5.	Preparing iron rich diet			
6.	Likes to eat food which is not allowed to eat.			
7.	Eat food rich in vitamin C, B12, Omega 3, Fatty acids.			
8.	Do you prepare food with Iodized salt.			

Section 2: c. Dietary pattern related to daily food habits

1. Following specific dietary regimen during pregnancy
2. Eating more carbohydrates source food daily.
3. Eating protein sources daily.
4. Eating fresh fruits daily.
5. Eating fresh vegetables daily.
6. Avoiding excessive work load during pregnancy.

7. Eating snacks between main meals daily.
8. Using iodized salt cooking main meals.
9. Are you taking coffee or tea daily or after meals.
10. In take of daily iron & folic supplementation.
11. Are you following diet during pregnancy
12. Are you taking additional meals for a day during pregnancy?
13. Are you Skipping meals during pregnancy, if yes kindly specify the reason.
14. What are the types of meals you are avoiding during pregnancy?
15. Can you list the craving food items you had during pregnancy?
16. List the Reason for avoiding food items during pregnancy.

Section – 3 Structured questionnaires related to food Taboos followed during pregnancy.

1. What are the food you avoid-
2. What are the fruits you avoid –

3. What are the vegetables you avoid –
4. What is the reason to avoid above specified food-
5. Do you willingly avoid this food –
6. What do you feel about the taboos that is followed regarding food avoidance-

ANNEXURE-VIII
DATA COLLECTION TOOL IN KANNADA

ಪ್ರಸವಪೂರ್ವ ತಾಯಂದಿರಲ್ಲಿ ರಕ್ತಹೀನತೆಯ ಹರಡುವಿಕೆ ಮತ್ತು ಆಹಾರ ಪದ್ಧತಿಗಳು ಮತ್ತು ನಿಷೇಧಗಳ ಕುರಿತು ಪ್ರಶ್ನಾವಳಿ.

ಸೂಚನೆಗಳು: ಎಲ್ಲಾ ಪ್ರಶ್ನೆಗಳಿಗೆ ದಯವಿಟ್ಟು ಉತ್ತರಿಸಿ. ಆಯ್ಕೆ ಮಾಡಿದ ಆಯ್ಕೆಗೆ ಪ್ರತಿಕ್ರಿಯೆ ನೀಡಿ. ಯಾವುದೇ ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸದೆ ಬಿಡಬೇಡಿ. ನಿಮ್ಮ ಉತ್ತರಗಳನ್ನು ಗೌಪ್ಯವಾಗಿ ಇರಿಸಲಾಗುತ್ತದೆ. ಸಂಗ್ರಹಿಸಿದ ಮಾಹಿತಿಯು ಅಧ್ಯಯನ ಉದ್ದೇಶಕ್ಕಾಗಿ ಮಾತ್ರ.

ವಿಭಾಗ ಒಂದು ಸೋಶಿಯೊಡೆಮೊಗ್ರಾಫಿಕ್ ವೇರಿಯಬಲ್ಸ್ -

ಕ್ರಮ ಸಂಖ್ಯೆ	ಸಾಮಾಜಿಕ ಜನಸಂಖ್ಯಾ ಮತ್ತು ಬಯೋಫಿಸಿಕಲ್ ಪ್ರೊಫೈಲ್	ಪ್ರತಿಕ್ರಿಯೆ
1.	ಪ್ರಸವಪೂರ್ವ ಮಹಿಳೆಯರ ವಯಸ್ಸು	
	1.1) 18-24	
	1.2) 25-34	
	1.3) 35-45	
2.	ಧರ್ಮ	
	2.1) ಹಿಂದೂ	
	2.2) ಮುಸ್ಲಿಂ	
	2.3) ಕ್ರಿಶ್ಚಿಯನ್	
	2.4) ಯಾವುದೇ ಇತರ	
3.	ಕುಟುಂಬದ ಗಾತ್ರ	
	3.1) <2	
	3.2) 3-5	
	3.3) 5-8	
	3.4) >8	
4.	ಗರ್ಭಿಣಿ ಮಹಿಳೆಯರ ಶೈಕ್ಷಣಿಕ ಮಟ್ಟ	
	4.1) ವೃತ್ತಿಪರ ಪದವಿ	
	4.2) ಪದವೀಧರರು	
	4.3) ಮಧ್ಯಂತರ / ಡಿಪ್ಲೊಮಾ	
	4.4) ಪ್ರೌಢಶಾಲೆ	
	4.5) ಮಧ್ಯಮ ಶಾಲೆ	
	4.6) ಔಪಚಾರಿಕ ಶಿಕ್ಷಣವಿಲ್ಲ	
5.	ಗರ್ಭಿಣಿಯರ ಪತಿಯ ಶೈಕ್ಷಣಿಕ ಮಟ್ಟ	
	5.1) ವೃತ್ತಿಪರ ಪದವಿ	
	5.2) ಪದವೀಧರರು	
	5.3) ಮಧ್ಯಂತರ / ಡಿಪ್ಲೊಮಾ	
	5.4) ಪ್ರೌಢಶಾಲೆ	
	5.5) ಮಧ್ಯಮ ಶಾಲೆ	
	5.6) ಪ್ರಾಥಮಿಕ ಶಾಲೆ	
	5.7) ಔಪಚಾರಿಕ ಶಿಕ್ಷಣವಿಲ್ಲ	
6.	ಕುಟುಂಬದಲ್ಲಿ ಬ್ರೆಡ್ ವಿಜೇತರ	

	ಉದ್ಯೋಗ.	
	6.1) ವೃತ್ತಿಪರ	
	6.2) ಅರೆ ವೃತ್ತಿಪರ	
	6.3) ಕ್ಲರಿಕಲ್ / ಅಂಗಡಿಗಳು / ಫಾರ್ಮ್	
	6.4) ನುರಿತ ಕೆಲಸಗಾರ	
	6.5) ಅರೆ ನುರಿತ ಕೆಲಸಗಾರ	
	6.6) ಕೌಶಲ್ಯರಹಿತ ಕೆಲಸಗಾರ	
	6.7) ಅನ್ ಉದ್ಯೋಗಿ.	
7.	ಕುಟುಂಬದ ಆದಾಯ	
	7.1) >47348.	
	7.2) 26374 – 47347	
	7.3) 17756 – 23673	
	7.4) 11837 – 17755	
	7.5) 7102 – 11836	
	7.6) 2390 – 7101	
	7.7) <2390	
8	ನಿವಾಸ	
	8.1) ಗ್ರಾಮೀಣ	
	8.2) ನಗರ	
	8.3) ಅರೆ ನಗರ	
9.	ಸಾಮಾಜಿಕ ಆರ್ಥಿಕ ಸ್ಥಿತಿ	
	9.1) ಮೇಲ್ವರ್ಗ	
	9.2) ಮೇಲ್ಮಧ್ಯಮ ವರ್ಗ	
	9.3) ಕೆಳ ಮಧ್ಯಮ ವರ್ಗ	
	9.4) ಮೇಲಿನ ಕೆಳ ವರ್ಗ	
	9.5) ಕೆಳಪೆ	
10.	ಒಂದಕ್ಕಿಂತ ಹೆಚ್ಚು ಬಾರಿ ಹೆರಿಗೆಯಾಗಿದ್ದರೆ ಈ ಕೆಳಗಿನ ವಿಭಾಗ	
	10.1) ಸಿಸೇರಿಯನ್ ವಿಭಾಗ	
	10.2) ಸಾಮಾನ್ಯ ಹೆರಿಗೆ	
	10.3) ಪ್ರೋಸ್ಟರ್ವಿ ವಿತರಣೆ	
	10.4) ನಿರ್ವಾತ ವಿತರಣೆ	
11.	ಗರ್ಭಧಾರಣೆಯ ಮಧ್ಯಂತರ	
	11.1) ಒಂದು ವರ್ಷ	
	11.2) ಎರಡು ವರ್ಷಗಳು	
	11.3) ಮೂರು ವರ್ಷಗಳು	
	11.4) ಅದಕ್ಕಿಂತ ಹೆಚ್ಚು	
12.	ಆಹಾರ ಪದ್ಧತಿ	
	12.1) ಸಸ್ಯಾಹಾರಿ	
	12.2) ಮಾಂಸಾಹಾರಿ	
13.	ಕೆಲಸ ಮಾಡುವ ವಿಧಾನ	
	13.1) ಕುಳಿತುಕೊಂಡು ಮಾಡುವ ಕೆಲಸ	
	13.2) ಮಧ್ಯಮ	

14.	ನೀವು ಹೊಸದಾಗಿ ತಯಾರಿಸಿದ ಆಹಾರವನ್ನು ತಿನ್ನುತ್ತೀರಾ	
	14.1) ಹೌದು	
	14.2) ಇಲ್ಲ	
15.	ನೀವು ಭಾರವಾದ ಆಹಾರವನ್ನು ತಿನ್ನಲು ಇಷ್ಟಪಡುತ್ತೀರಾ.	
	15.1) ಹೌದು	
	15.2) ಇಲ್ಲ	
16.	ನೀವು ಸಸ್ಯಾಹಾರಿ ಅಥವಾ ಮಾಂಸಾಹಾರಿ ಆಹಾರವನ್ನು ಇಷ್ಟಪಡುತ್ತೀರಾ	
	16.1) ಹೌದು	
	16.2) ಇಲ್ಲ	
17.	ಗರ್ಭಾವಸ್ಥೆಯಲ್ಲಿ ನೀವು ಆಹಾರ ಪದ್ಧತಿಯಲ್ಲಿ ಯಾವುದೇ ಬದಲಾವಣೆಗಳನ್ನು ಮಾಡಿದ್ದೀರಾ	
	17.1) ಒಪ್ಪುತ್ತೇನೆ	
	17.2) ತಟಸ್ಥ	
	17.3) ಒಪ್ಪುವುದಿಲ್ಲ	
18.	ಕುಟುಂಬದ ಸದಸ್ಯರು ಸಹಕಾರ, ಪ್ರೀತಿ ಮತ್ತು ಕಾಳಜಿಯುಳ್ಳವರಾಗಿದ್ದಾರೆ	
	18.1) ಒಪ್ಪುತ್ತೇನೆ	
	18.2) ತಟಸ್ಥ	
	18.3) ಒಪ್ಪುವುದಿಲ್ಲ	
19.	ಹಿಮೋಗ್ಲೋಬಿನ್ ಮಟ್ಟ	
	19.1) ಸೌಮ್ಯ ರಕ್ತಹೀನತೆ 10-10.9mg/dl.	
	19.2) ಸಾಧಾರಣ ರಕ್ತಹೀನತೆ 7-9.9 mg/dl	
	19.3) ತೀವ್ರ ರಕ್ತಹೀನತೆ <7	
20.	ಹಣ್ಣುಗಳನ್ನು ಸೇವಿಸುತ್ತೀರಾ	
	20.1) ಪ್ರತಿದಿನ	
	20.2) ಪ್ರತಿ ಬಾರಿ	
	20.3) ಆಗಾಗ್ಗೆ	
	20.4) ವಿರಳವಾಗಿ	
21.	ಊಟದ ಆವರ್ತನಗಳು	
	21.1) 1- 2	
	21.2) 3 - 4	
	21.3) >5	
22.	ತರಕಾರಿಗಳನ್ನು ಸೇವಿಸುತ್ತೀರಾ	
	20.1) ಪ್ರತಿದಿನ	
	21.2) ಪ್ರತಿ ಬಾರಿ	
	22.3) ಆಗಾಗ್ಗೆ	
	23.4) ವಿರಳವಾಗಿ	

23.	ನೀವು ನಿರ್ದಿಷ್ಟ ಆಹಾರಕ್ರಮವನ್ನು ಅನುಸರಿಸುತ್ತೀರಾ	
	23.1) ಹೌದು	
	23.2) ಸಂಖ್ಯೆ	

24. ಪ್ರಸೂತಿ ಸ್ಕೋರ್-

25. ದಿನಕ್ಕೆ ಎಷ್ಟು ಬಾರಿ ಆಹಾರವನ್ನು ಸೇವಿಸುತ್ತೀರಿ?

26. ಪ್ರಸವಪೂರ್ವ ಭೇಟಿಗಳ ಸಂಖ್ಯೆ-

27. ಮನೆಯಲ್ಲಿ ಯಾರು ಆಹಾರವನ್ನು ತಯಾರಿಸುತ್ತಾರೆ

28. ನಿಮ್ಮ ಪತಿ ನಿಮ್ಮೊಡನೆ ಊಟ ಮಾಡುತ್ತಾರೆಯೇ-

**ವಿಭಾಗ 2 -ಪ್ರಸವಪೂರ್ವ OPD'S ಗೆ ಹಾಜರಾಗುವ ಪ್ರಸವಪೂರ್ವ
ತಾಯಂದಿರು ತೆಗೆದುಕೊಳ್ಳುವ ಆಹಾರ ಪದ್ಧತಿಗಳಿಗೆ ಸಂಬಂಧಿಸಿದ ಪ್ರಶ್ನೆಗಳು.**

ಕ್ರಮ ಸಂಖ್ಯೆ	ಪ್ರಶ್ನೆಗಳು	ಹೌದು	ಇಲ್ಲ
1.	ಕಿತ್ತಳೆ, ಮಾವು, ನಿಂಬೆ, ಪೇರಲ, ಬಾಳೆಹಣ್ಣು, ಟೊಮೆಟೊ, ಕ್ಯಾಪ್ಸಿಕಂ, ಮೀನು, ಕಿವಿ ಹಣ್ಣು, ದ್ರಾಕ್ಷೆ, ಬೆಲ್ ಪೆಪರ್, ಮೊಟ್ಟೆ, ತಾಜಾ ಹಾಲು, ಹಾಲಿನ ಉತ್ಪನ್ನಗಳಾದ ಚೀಸ್, ಬೆಣ್ಣೆ, ಮೊಸರು, ಕಿಡ್ನಿ ಬೀನ್ಸ್, ಬ್ರೂಕೊಲಿ, ಸೋಯಾಬೀನ್, ಪಾಲಕ್, ನುಗ್ಗಸೊಪ್ಪು, ತುಳಸಿ, ಗೋಡಂಬಿ, ಮೊದಲಾದ ವಿಟಮಿನ್ ಸಿ, ಒಮೆಗಾ ಭರಿತ ಆಹಾರ ಸೇವಿಸುತ್ತಿದ್ದೀರಾ?		
2.	ನಿಮ್ಮ ಕುಟುಂಬದವರು ನಿಮ್ಮ ನೆಚ್ಚಿನ ಆಹಾರವನ್ನು ಒದಗಿಸುತ್ತಾರೆಯೇ		
3.	ನಿಮ್ಮ ತಾಜಾ ತರಕಾರಿಗಳಾದ ಕ್ಯಾರೆಟ್, ಸೌತೆಕಾಯಿ, ಬೆಂಡೆಕಾಯಿ, ನುಗ್ಗೆಕಾಯಿ, ಬೀಟ್‌ರೂಟ್, ಹಸಿರು ಎಲೆಗಳ ತರಕಾರಿಗಳನ್ನು ಸೇವಿಸುತ್ತೀರಾ?		

4.	ಕಬ್ಬಿಣ ಮತ್ತು ಫೋಲಿಕ್ ಆಸಿಡ್ ಪೂರಕಗಳಾದ ಶೇಂಗಾ, ಹಸಿರು ಎಲೆಗಳ ತರಕಾರಿಗಳಾದ ಪಾಲಕ್, ನುಗ್ಗಿಸೊಪ್ಪು, ಶತಾವರಿ, ಬಿಚಿಲಿ, ಗಾರ್ಡನ್ ನೈಟ್ ಶೇಡ್, ಹಣ್ಣುಗಳು, ಕೋಸುಗಡ್ಡೆ, ಕೆಂಪು ಮಾಂಸ ಇತ್ಯಾದಿಗಳನ್ನು ಪ್ರತಿದಿನ ಸೇವಿಸುತ್ತೀರಾ?		
5.	ಊಟದ ನಡುವೆ ತಿಂಡಿ ತಿನ್ನುತ್ತೀರಾ?		
6.	ಅಕ್ಕಿ, ಜೋಳ, ಸಿಹಿ ಗೆಣಸು, ಸಕ್ಕರೆ, ಆಲೂಗಡ್ಡೆ, ಬಾಳೆಹಣ್ಣು, ಬಟಾಣಿ, ಗೋಧಿ ಮುಂತಾದ ಕಾರ್ಬೋಹೈಡ್ರೇಟ್ ಆಹಾರವನ್ನು ಸೇವಿಸುತ್ತೀರಾ?		
7.	ಪ್ರೋಟೀನ್ ಆಹಾರಗಳಾದ ಕಡಲೆಕಾಯಿ, ತೊಗರಿಕಾಯಿ, ಹುರುಳಿಕಾಳು, ಹಸಿ ಹಲಸಂದೆ ಕಾಳು, ದ್ವಿದಳ ಧಾನ್ಯಗಳು, ತೊಗರಿ ಬೇಳೆ, ಹೆಸರುಕಾಳು, ಬಟಾಣಿಕಾಳು, ಮೊಟ್ಟೆ, ಮಾಂಸ, ಕೋಳಿ ಇತ್ಯಾದಿಗಳನ್ನು ಸೇವಿಸುತ್ತೀರಾ?		
8.	ಹುರಿದ ಆಹಾರ, ಹುರಿದ ಪೂರಿ, ಫ್ರೈಡ್ ರೈಸ್, ಫ್ರೈಡ್ ಚಿಕನ್, ಐಸ್ ಕ್ರೀಮ್, ಆಲೂಗಡ್ಡೆ ಚಿಪ್ಸ್, ಕಬಾಬ್, ಜಂಕ್ ಫುಡ್‌ಗಳಾದ ಗೋಬಿ ಮಂಚೂರಿಯನ್, ಹುರಿದ ಕಡಲೆ, ಇತ್ಯಾದಿಗಳಂತಹ ಕೊಬ್ಬಿನ ಆಹಾರವನ್ನು ಸೇವಿಸುತ್ತೀರಾ.		
9.	ಹಾಲು, ಬೆಣ್ಣೆ, ಮೊಸರು, ಮಾಂಸ, ಕೋಳಿ, ತುಪ್ಪು, ಎಲ್ಲಾ ಪ್ರಾಣಿ ಉತ್ಪನ್ನಗಳು ಮುಂತಾದ ಪ್ರಾಣಿಗಳ ಯಾವ ಆಹಾರ ಮೂಲಗಳನ್ನು ಸೇವಿಸುತ್ತೀರಿ?		

10. ನೀವು ಪ್ರತಿದಿನ ತಿನ್ನುವ ಹಸಿರು ಎಲೆಗಳ ತರಕಾರಿಗಳು ಯಾವುವು-

11. ನೀವು ಪ್ರತಿದಿನ ಸೇವಿಸುವ ತರಕಾರಿಗಳು ಯಾವುವು-

12. ನೀವು ಪ್ರತಿದಿನ ತಿನ್ನುವ ಪ್ರಾಣಿ ಆಹಾರದ ಉತ್ಪನ್ನಗಳು ಯಾವುವು-

13. ನೀವು ದಿನನಿತ್ಯ ಸೇವಿಸುವ ಬೇಳೆಕಾಳುಗಳು ಮತ್ತು ಧಾನ್ಯಗಳು ಯಾವುವು -

14. ನೀವು ಯಾವ ರೀತಿಯ ಆಹಾರವನ್ನು ಸೇವಿಸುತ್ತೀರಿ (ಐಟಂಗಳು)

ವಿಭಾಗ :2 ಬಿ. ಆಹಾರ ಪದ್ಧತಿಗೆ ಸಂಬಂಧಿಸಿದ ವರ್ತನೆಯ ಪ್ರಮಾಣ

ಕ್ರಮ ಸಂಖ್ಯೆ	ಪ್ರಶ್ನೆ	ಒಪ್ಪಿಗೆ	ತಟಸ್ಥ	ಅಸಮ್ಮತಿ
1.	ನೀವು ದಿನಕ್ಕೆ ಹೆಚ್ಚುವರಿ ಆವರ್ತನದ ಆಹಾರವನ್ನು ಸೇವಿಸುತ್ತೀರಾ			
2.	ಹೆಚ್ಚು ಕಾರ್ಬೋಹೈಡ್ರೇಟ್‌ಗಳನ್ನು ತಿನ್ನುತ್ತೀರಾ.			
3.	ಗೋಮಾಂಸ, ಬೇಳೆಕಾಳುಗಳು, ಚಿಕನ್ ಮುಂತಾದ ಹೆಚ್ಚು ಪ್ರೋಟೀನ್ ಮೂಲ ಆಹಾರಗಳನ್ನು ಸೇವಿಸುತ್ತೀರಾ			
4.	ಗರ್ಭಾವಸ್ಥೆಯಲ್ಲಿ ಹೆಚ್ಚು ಹಾಲು ಮತ್ತು ಅದರ ಆಹಾರ ಉತ್ಪನ್ನವನ್ನು ತಯಾರಿಸಿ ಸೇವಿಸುತ್ತೀರಾ?			
5.	ಕಬ್ಬಿಣದ ಭರಿತ ಆಹಾರವನ್ನು ಸಿದ್ಧಪಡಿಸುವುದು			
6.	ತಿನ್ನಲು ಅನುಮತಿಸದ ಆಹಾರವನ್ನು ತಿನ್ನಲು ಇಷ್ಟಪಡುತ್ತೀರಾ?			
7.	ವಿಟಮಿನ್ ಸಿ, ಬಿ 12, ಒಮೆಗಾ 3, ಕೊಬ್ಬಿನಾಮ್ಲಗಳು ಸಮೃದ್ಧವಾಗಿರುವ ಆಹಾರವನ್ನು ಸೇವಿಸಿ.			
8.	ನೀವು ಅಯೋಡಿಕರಿಸಿದ ಉಪ್ಪಿನೊಂದಿಗೆ ಆಹಾರವನ್ನು ತಯಾರಿಸುತ್ತೀರಾ.			

ವಿಭಾಗ :2 ಸಿ. ದೈನಂದಿನ ಆಹಾರ ಪದ್ಧತಿಗೆ ಸಂಬಂಧಿಸಿದ ಆಹಾರ ಪದ್ಧತಿ

1. ಗರ್ಭಾವಸ್ಥೆಯಲ್ಲಿ ನಿರ್ದಿಷ್ಟ ಆಹಾರ ಕ್ರಮವನ್ನು ಅನುಸರಿಸುವುದು
2. ಪ್ರತಿದಿನ ಹೆಚ್ಚು ಕಾರ್ಬೋಹೈಡ್ರೇಟ್ ಮೂಲ ಆಹಾರವನ್ನು ಸೇವಿಸುವುದು.
3. ಪ್ರತಿದಿನ ಪ್ರೋಟೀನ್ ಆಹಾರದ ಮೂಲಗಳನ್ನು ತಿನ್ನುವುದು.
4. ಪ್ರತಿದಿನ ತಾಜಾ ಹಣ್ಣುಗಳನ್ನು ತಿನ್ನುವುದು.

5. ಪ್ರತಿದಿನ ತಾಜಾ ತರಕಾರಿಗಳನ್ನು ತಿನ್ನುವುದು.
6. ಗರ್ಭಾವಸ್ಥೆಯಲ್ಲಿ ಅತಿಯಾದ ಕೆಲಸದ ಹೊರೆ ತಪ್ಪಿಸುವುದು.
7. ದೈನಂದಿನ ಮುಖ್ಯ ಊಟಗಳ ನಡುವೆ ತಿಂಡಿಗಳನ್ನು ತಿನ್ನುವುದು.
8. ಮುಖ್ಯ ಆಡುಗೆ ತಯಾರಿಸುವಾಗ ಅಯೋಡಿಕರಿಸಿದ ಉಪ್ಪು ಬಳಸುತ್ತೀರಾ?
9. ನೀವು ಪ್ರತಿದಿನ ಅಥವಾ ಊಟದ ನಂತರ ಕಾಫಿ ಅಥವಾ ಟೀ ತೆಗೆದುಕೊಳ್ಳುತ್ತಿದ್ದೀರಾ.
10. ಪ್ರತಿದಿನ ಕಬ್ಬಿಣ ಮತ್ತು ಫೋಲಿಕ್ ಆಮ್ಲೀಯ ಆಹಾರ ತೆಗೆದುಕೊಳ್ಳುತ್ತಿರುವಿರಾ?
11. ಗರ್ಭಾವಸ್ಥೆಯಲ್ಲಿ ನೀವು ಆಹಾರವನ್ನು ಅನುಸರಿಸುತ್ತಿದ್ದೀರಾ?
12. ಗರ್ಭಾವಸ್ಥೆಯಲ್ಲಿ ನೀವು ದಿನಕ್ಕೆ ಹೆಚ್ಚುವರಿ ಊಟವನ್ನು ತೆಗೆದುಕೊಳ್ಳುತ್ತಿರುವಿರಾ?
13. ಗರ್ಭಾವಸ್ಥೆಯಲ್ಲಿ ನೀವು ಊಟವನ್ನು ಬಿಡುತ್ತೀರಾ, ಹೌದು ಎಂದಾದರೆ ದಯವಿಟ್ಟು ಕಾರಣವನ್ನು ಸೂಚಿಸಿ.
14. ಗರ್ಭಾವಸ್ಥೆಯಲ್ಲಿ ನೀವು ಯಾವ ರೀತಿಯ ಊಟವನ್ನು ತಪ್ಪಿಸುತ್ತಿರುವಿರಿ?
15. ಗರ್ಭಾವಸ್ಥೆಯಲ್ಲಿ ನೀವು ಹೊಂದಿದ್ದ ಕಡುಬಯಕೆ ಆಹಾರ ಪದಾರ್ಥಗಳನ್ನು ನೀವು ಪಟ್ಟಿ ಮಾಡಬಹುದೇ?
15. ಗರ್ಭಾವಸ್ಥೆಯಲ್ಲಿ ಆಹಾರ ಪದಾರ್ಥಗಳನ್ನು ತಪ್ಪಿಸುವ ಕಾರಣವನ್ನು ಪಟ್ಟಿ ಮಾಡಿ.

**ವಿಭಾಗ 3 - ಗರ್ಭಾವಸ್ಥೆಯಲ್ಲಿ ಅನುಸರಿಸುವ ಆಹಾರ ನಿಷೇಧಗಳಿಗೆ
ಸಂಬಂಧಿಸಿದ ರಚನಾತ್ಮಕ ಪ್ರಶ್ನಾವಳಿಗಳು.**

1. ನೀವು ತಪ್ಪಿಸುವ ಆಹಾರ ಯಾವುದು-
2. ನೀವು ತಪ್ಪಿಸುವ ಹಣ್ಣುಗಳು ಯಾವುವು-
3. ನೀವು ತಪ್ಪಿಸುವ ತರಕಾರಿಗಳು ಯಾವುವು-
4. ಮೇಲಿನ ನಿರ್ದಿಷ್ಟಪಡಿಸಿದ ಆಹಾರವನ್ನು ತಪ್ಪಿಸಲು ಕಾರಣವೇನು-
5. ನೀವು ಈ ಆಹಾರವನ್ನು ಸ್ವಇಚ್ಛೆಯಿಂದ ತಪ್ಪಿಸುತ್ತೀರಾ-
6. ಆಹಾರ ತಪ್ಪಿಸುವ ಬಗ್ಗೆ ಅನುಸರಿಸುವ ನಿಷೇಧಗಳ ಬಗ್ಗೆ ನಿಮಗೆ ಏನನಿಸುತ್ತದೆ-

ANNEXURE - IX CERTIFICATE FROM STATISTICIAN


CERTIFICATE FROM STATISTICIAN

I hereby certify that I have provided statistical guidance in analysis to Mrs.V Supriya, II year M.Sc.[N] student of Sri Devaraj Urs College of Nursing, Tamaka, Kolar. For the study titled as

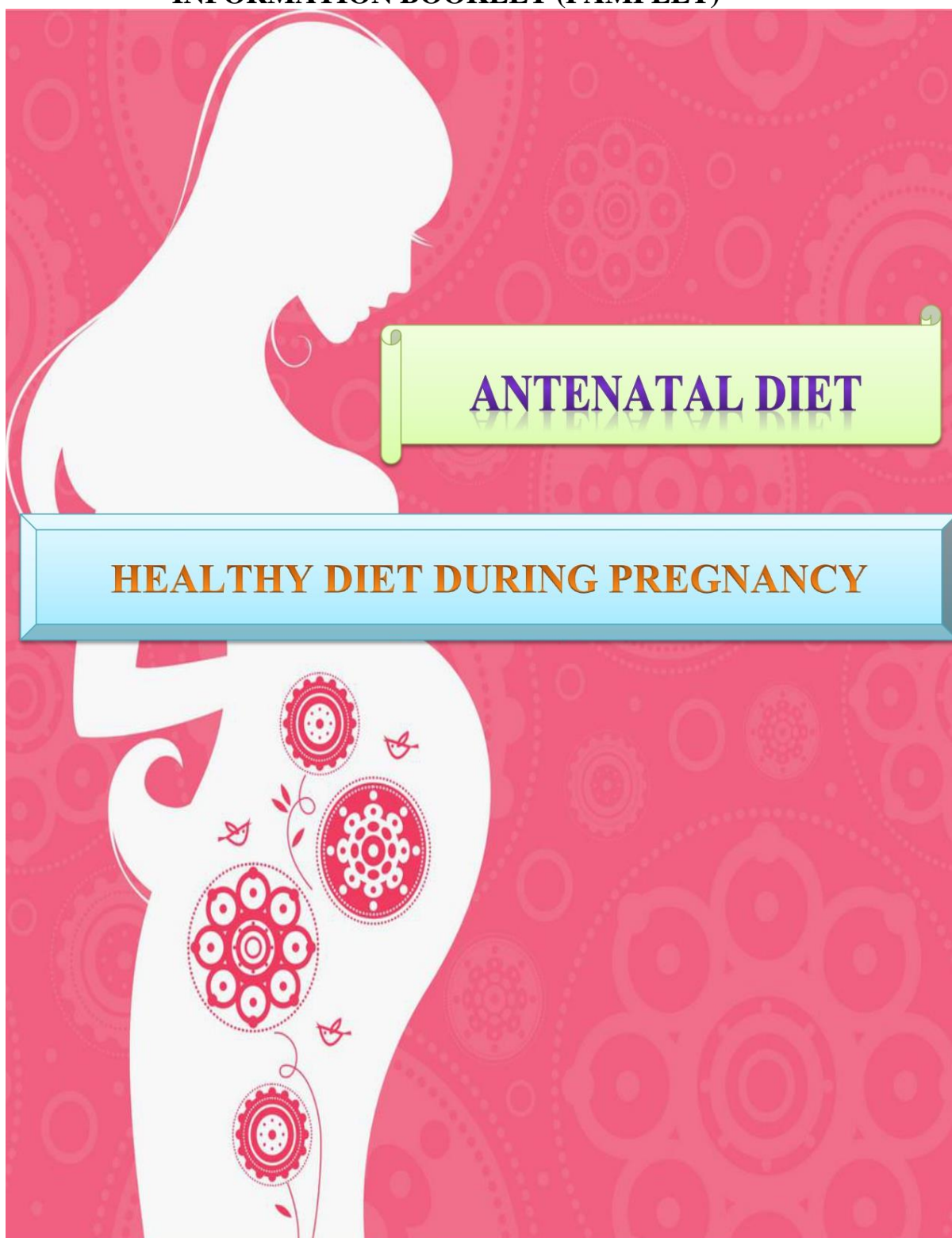
“A STUDY to find out the prevalence of Anemia and Compare Dietary practices and Taboos among Anemic and Non anemic Antenatal mother attending OPD’s at selected hospitals, Kolar in a view to develop an Information Booklet”.

Place: *Tamaka*
3/08/2024

Date: 3/08/2024


Signature of Statistician
S. RAVISHANKAR, M.Sc. Statist
Lecturer/Asst. Prof. of Bio-Statistics
Dept. of Community Health
Sri Devaraj Urs Medical College
TAMAKA KOLAR 553101

ANNEXURE - X
INFORMATION BOOKLET (PAMPHLET)



HEALTHY MOTHER AND HEALTHY BABY

A healthy diet is an important part of a healthy lifestyle at any time but is especially vital if you're pregnant or planning a pregnancy. During pregnancy period good health and healthy nutrition is very important to maintain the mother health and the unborn baby's health. Here we need to choose quality of the food, then we need to focus on the quantity of the food.

How many extra calories do I need?

It is actually a myth that you need to "eat for two" during pregnancy. You do need extra calories, but a gradual increase in calories as your baby develops will be just right!

First Trimester	No extra calories needed
Second Trimester	~300-350 extra calories/day
Third Trimester	~450 extra calories/day

Daily calories should be around 2,200-2,500 calories/day. These extra calories should come from nutritious foods, such as lean meats, low-fat dairy products, fruits, vegetables, & whole grains.

Pregnancy Anemia

During pregnancy mother is having Hemoglobin < 12 gm/dl is called Anemia.

Classifications

Level	Values
Mild	11.9 – 10gm
Moderate	9.9 – 7.0gm
Severe	< 7.0 gm

Importance of nutrition during pregnancy

- Healthy development of fetus bones and blood cells.
- Prevent malformation and abnormalities.
- Prevent Anemia during pregnancy.
- Promote Immunity of the baby and mother.
- Prevent from infectious disease.
- Reduce the discomfort and restlessness during pregnancy.
- Promote the strengthening the mother's body and mind preparation during child birth.
- Promotion of breast feeding during lactation period



1 Trimester 2 Trimester 3 Trimester

Ideal weight gain during pregnancy depends on your pre-pregnancy BMI

BMI	Weight gain
<18.5	28-40 lb.
18.5-24.9	25-35 lb.
25-29.9	15-25 lb.
> 30	11-20 lb.

ESSENTIAL NUTRIENTS

PROTEIN

Protein helps your baby's tissue develop and also develops & repairs breast and uterine tissue, muscles, and blood during pregnancy.



IRON

Iron makes hemoglobin, a protein in red blood cells that brings oxygen to your tissues. The amount of blood in your body increases during pregnancy, so iron is needed to make your baby's blood supply.

DHA

DHA is needed for your baby's brain development and growth. It also helps you stay pregnant long enough.



VITAMIN C

Vitamin C is needed for wound healing and helps develop your baby's teeth and bones.



FOLIC ACID

Folic acid is needed for your baby's brain and spine. Folic acid also helps make blood during pregnancy. Enough folic acid is important in preventing neural tube defects (NTD), a major birth defect of baby's brain or spine.

70% of all NTD can be avoided with enough folic acid.

FAT

Fat gives energy and helps make your baby's organs & placenta. Poly-unsaturated fatty acids (PUFAs) help with your baby's brain, nervous system, and retina development.



CALCIUM

Calcium helps develop your baby's bones, teeth, muscles, heart and nerve function. It is also needed for fluid control.



IODINE

Iodine helps develop your baby's brain and nervous system. Enough iodine will help your baby move, think and feel.



Daily Nutrition Requirements

Iron	27 mg/day
Folic Acid	60 mcg/day
Protein	75-100 g/day
Calcium	1000 mg/day
Vitamin C	85mg/day
Vitamin D	600IU/day
Iodine	220 mcg/day
DHA	200MG/DAY

COMMON FOOD SOURCES

Iron	Thick green leafy vegetables, Peanuts, Pomegranate, carrot, Beetroot, Dates, Jaggery, beans, Nuts, Dried fruits	
Folic Acid	Green leafy vegetables, avocado, legumes, lentils, beans, orange juice, ladies finger and cereal.	
Protein	Eggs, Milk and Milk products, Chicken, dairy, Cereals and pulses, legumes, nuts, seeds.	
Calcium	Milk, cheese, yogurt, broccoli, Sesame seeds, Curd, Butter milk, Egg, nuts	
Vitamin C	Fruits, vegetables, especially red and yellow peppers, orange, Lemon, Broccoli, cabbage, Citrus fruits.	
Vitamin D	Sunlight, Mushrooms, eggs, vitamin D fortified milk and cereal.	
Iodine	Fish, milk, cheese, yogurt, iodized salt, fortified cereal.	
DHA	Orange juice, milk, Fish, Fish oil and eggs	
Fat	Coconut, Nuts, Seeds, flaxseed, Cashew nuts and Vegetable oil.	

Should I still take antenatal vitamins?

Even if you eat a balanced diet, you can still miss out on essential nutrients. A prenatal vitamin, ideally started 3 months before you get pregnant, is recommended to make sure you get all the nutrients needed for a healthy pregnant. The recommend women still take prenatal vitamins while breastfeeding.

FOOD CRAVINGS AND FOOD TO AVOID



PICA

If you are craving substances such as ice, clay, wax, laundry detergent, dirt, toothpaste, soap, coffee grounds, baby powder, chalk, or cotton balls etc., this is called Pica. Pica can be a sign of iron or calcium deficiency and should be addressed promptly by your doctor.

How to control your craving

If you're craving...	choose
Spice	Vitamin C, Salads& sauces
Sweet	Fresh fruit
Crunchy	Carrots, celery, nuts

Food taboos

Nutrition Contains

❖ Ladies finger	Folic Acid & Vitamin A
❖ Pumpkin	Carbohydrate & Amino Acids
❖ Ridge gourd	Vitamin A & Fiber
❖ Sweet corn	Carbohydrates and Amino Acids
❖ Guava	Vitamin C & Vitamin A
❖ Mango	Vitamin A & Vitamin C
❖ Jack Fruit	Carbohydrate, Fiber & Saturated Fat.
❖ Mushrooms	Protein
❖ Tomato	Vitamin C

**LISTERIA CAUSE ABORTION
MISCARRIAGE, PREMATURE
LOABOUR, LOW BIRTH WEIGHT &
INFANT DEATH**

FOODS TO AVOID DURING PREGNANCY

SLNO	FOOD ITEM	REASON	CAUSED BY	IMAGE
1.	Un washed fruits	Salmonella bacteria	Miscarriage	
2.	Raw eggs	Salmonella	Miscarriage	
3.	Unpasteurized milk and milk products	Listeria and E.coli	Tuberculosis	
4.	Raw or uncooked sprouts	salmonella	Infection for fetus and mother	
5.	High mercury fish	mercury	High mercury food leads to abortion	
6.	Pre made Egg & chicken salad	Listeria	Abortion and fetal infection	
7.	Tea & Coffee	Caffine	Abortion	
8.	Sea food	Listeria	Abortion	
9.	Liver	High vitamin-A	Miscarriage	
10.	Uncooked meat	Lesteria	Miscarriage	



FOODS DURING PREGNANCY

ENJOY:

VEGETABLES



Carrots,
Cooked greens,
Pumpkin,
Spinach,
Sweet Potatoes,
Red sweet,
Peppers.

Benefits:
Vitamin A &
Potassium,

FRUITS



Apricots,
Bananas,
Cantaloupe,
Grapes,
Honeydew,
Mangos,
Orange,
Prunes,
Tomatoes

Benefits:
Potassium.

DAIRY



Skim or 1% milk,
Soy milk,
Fat free or low-fat
yogurt

Benefits:
Calcium,
Potassium,
Vitamin A &
Vitamin D

GRAINS



Ready to eat
cereal
Cooked cereal.

Benefits:
Iron & Folic
Acid.

PROTEINS



Beans and Peas.
Lean beef,
Lamb and Pork,
Nuts and Seeds,
Poultry, Salmon,
Sardines and
Spinach.

Benefits:
Amino Acids.

Prepared By:

Mrs. V Supriya
II year, MSc. Nursing,
SDUCON.
MOB:9542201882

Guided By:

Mrs. Gayathri K V
Assoc. Professor,
SDUCON.
Mob: 9035659442

ANNEXURE - XI

ENGLISH EDITING CERTIFICATE

ENGLISH EDITING CERTIFICATE


This is to certify that Mrs. V Supriya , II year MSc. [N] student of Sri Devaraj Urs College of Nursing, Tamaka, Kolar. Has done a dissertation study on “A STUDY TO FIND OUT THE PREVALENCE OF ANEMIA AND COMPARE DIETARY PRACTICES AND TABOOS AMONG ANEMIC AND NON ANEMIC ANTENATAL MOTHER ATTENDING OPD'S AT SELECTED HOSPITALS, KOLAR IN A VIEW TO DEVELOP AN INFORMATION BOOKLET”.

This study was edited for English language for its appropriateness by:

Date: 8.8.2024.

place: Begli Horahalli.

Signature


ಮುಖ್ಯಪಾಠ್ಯಾಧ್ಯಾಪಕರು
ಸರ್ಕಾರಿ ಪ್ರೌಢ ಶಾಲೆ
ಬೆಳ್ಳಿಹೊಸಹಳ್ಳಿ 8/8/24.
ಕೋಲಾರ ತಾ||, ಕೋಲಾರ

ANNEXURE- XII KANNADA EDITING CERTIFICATE

KANNADA EDITING CERTIFICATE


This is to certify that Mrs. V Supriya , II year MSc. [N] student of Sri Devaraj Urs College of Nursing, Tamaka, Kolar. Has done a dissertation study on "A STUDY TO FIND OUT THE PREVALENCE OF ANEMIA AND COMPARE DIETARY PRACTICES AND TABOOS AMONG ANEMIC AND NON ANEMIC ANTENATAL MOTHER ATTENDING OPD'S AT SELECTED HOSPITALS, KOLAR IN A VIEW TO DEVELOP AN INFORMATION BOOKLET".

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ಬೆಂಗಳೂರು
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ANNEXURE- XIII PHOTOGALLERY



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5 5	3 2	1	1	2	2	2	1	2	2	1	1	1	3	2	4	1	1	2	1		0	0	0	0	1	1	1	1	1	1	1	1	0	1	0		2	2	2	2	2	2	2	2		0	1	1	1	1	1	1	1	0	1	0	1		
5 6	2 8	1	3	4	4	2	2	1	2	2	2	2	3	2	4	1	2	2	1		1	1	1	1	1	1	0	0	1	1	1	0	0	1	1	1		2	2	2	2	2	2	2	2		1	1	1	1	1	1	1	0	0	1	0	1	

57	23	1	2	1	1	1	1	2	2	1	1	1	3	2	1	3	3	1	1	0	0	0	1	0	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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