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AN EXPLORATORY STUDY ON KNOWLEDGE AND PRACTICE REGARDING ANTENATAL DIET AMONG PREGNANT WOMEN ATTENDING ANTENATAL O.P.D. IN SELECTED HOSPITAL DEHRADUN, UTTARAKHAND.

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ABSTRACT

Antenatal period is beautiful and crucial for both the mother and the fetus. The diet consumed during this time period is very important to the baby's growth and development as well as the maternal health throughout the pregnancy. A pregnant woman requires more essential nutrients in her diet than a non-pregnant woman during pregnancy. An exploratory study was done among 102 pregnant women **to assess the knowledge and practice regarding antenatal diet attending antenatal OPD**. Pregnant women were selected through convenient sampling technique and knowledge were assessed by using structured knowledge questionnaire and practice were assessed by self-reported practice checklist. The overall mean knowledge score was (21.9 ±3.903) and overall practice score was (8.38 ±1.5). Only 34.31% were having very good knowledge and most 58.82 % had good knowledge regarding antenatal diet and only 47% of pregnant women had good practices regarding antenatal diet. There is a need to create the awareness of women regarding folic acid and iron supplementation and aware them about consumption of plenty of fluids in pregnancy. All health care workers should explain and educate all pregnant women in each antenatal visits about the proper dietary intake which can leads to good maternal and fetal outcomes.

Key words: Knowledge, practice, pregnant women, antenatal diet.

INTRODUCTION

The antenatal period is beautiful and crucial for both the mother and the fetus. The diet consumed during this time period is very important to the baby's development as well as mother's health throughout pregnancy. A pregnant woman requires more essential nutrients in her diet than a non-pregnant woman during pregnancy. An adequate supply of food during pregnancy reduces the risk of the fetus developing several neural diseases such as neural tube defects and spina bifida.[1]

According to the WHO, each health care professional should provide enough, precise, and proper nutritional advices to antenatal women in each antenatal care visit. Some specific micronutrients, including as folate, calcium, zinc, and iron, which are needed for maintaining good reproductive health are required for appropriate foetal growth and development. From one month before conception to three months of pregnancy, 400 mg of folic acid should be consumed daily. [2]

A healthy, well-balanced diet is especially important during pregnancy. Due to insufficient nutritional intake during the antenatal period, the mother may develop anemia, hypertension, and gestational diabetes. During pregnancy, inadequate nutritional consumption can lead to poor weight and very less birth weight newborns. Improper maternal diet has a direct impact on the womb, particularly in the first month of life and can contribute to illness, which includes diabetes, overweight and several heart disorders in future. [3]

Pregnant women required more essential nutrients from the starting of second trimester until birth, as the baby requires an additional 300 calories per day to maintain growth and development. The most difficult time in a woman's life is when she is pregnant. To

maintain the growth of the fetus, placenta, and maternal tissues, a nutritious and healthy diet is needed. A nutritious diet is very important for both the baby and mothers health in pregnancy period. (WHO ,2018)[1]

According to the WHO, three serials should make up around 75% of overall diet. Fats and refined sugar supply 15% of total energy. Diet should include protein, fat, carbs, minerals, vitamins, and vital fatty acids. Mixed cereals, vegetables, pulses, and fruits should be included in the diet, which should have 400–500 calories, 50–60 percent carbohydrates, and 20–40 percent fat. The daily iron need is around 300 mg, and the daily calcium requirement is 1.0–1.2 gm. During pregnancy, the average weight gain is 11–12 kg.[1]

Women who have a poor diet throughout their pregnancy are more likely to expose their baby to long-term health conditions such as obesity, elevated cholesterol levels, and high blood sugar. To avoid serious maternal and fetal difficulties, mother should eat a good and healthy diet during their pregnancy.[1] Poor nutrition is leads to an increase risk of short and long-term effects such as preterm birth, low birth weight, IUGR and prenatal and newborn morbidity and mortality.[4]

Folic acid supplements used before conception and during pregnancy can assist to prevent neural tube abnormalities in the developing embryo. Anaemia and other dietary deficits are the most common among Indian pregnant women. Abortion, preterm birth, stillbirth, and physical and mental defects can all come from an inappropriate and unbalanced diet during the antenatal period. In India, 74 percent of pregnant women are anaemic due to a lack adequate nutrition.[5]

Premature birth, miscarriage, stillbirth, and fetal brain damage can all occur due to infection in pregnancy.[6] In recent years, there has been a link between extreme weight gain in pregnancy and a greater risk of pregnancy issues. Obesity puts babies at risk of overgrowth and growth retardation, as well as birth damage and stillbirth. Obesity during pregnancy poses numerous dangers which includes several heart disease, hypertension, diabetes, and future obesity, as well as affecting the mother's health.[7]

Seafoods, meats for sandwiches, soft cheese, raw meat, undercooked prepared meats, raw eggs, and ingesting alcohol can all enhance the chances of getting sick from food. [6] Nutritional consumption is highly important before conception till the first 12 weeks of pregnancy. Sugar and other glycaemic diets cause increased birth weight and skin thickness in new-borns. Pregnant women's glucose levels are linked to macrosomia (a baby born with a large birth weight) and increase fat levels in children. [7]

NEED OF THE STUDY

There are numerous types of beliefs and taboos in society about dietary habits that produce various deficiencies in pregnant women by avoiding certain types of nutritious food items. Nutrition education in antenatal period has a major effect on pregnant ladies eating habits, as well as maternal and birth outcomes.[8]Identifying the pregnant woman's culture is necessary while doing assessments and providing nutritional counselling during antenatal period is typically socio-cultural framed, that is denoted by various sorts of values, taboos and beliefs. [9]

About 20 million babies were born around the world underweight, and 15 million were born prematurely. Nutrition has a significant effect on a person's health across their lifetime. According to the demands of each and every pregnant woman, inadequate nutrition can have a number of negative effects. Undernourished women are more prone to get number of illnesses, can experience miscarriages, and can deliver new-born with underweight who were not survive more. Poor and inappropriate nutrition can also result in low weight gain during pregnancy, which increases the chance of small gestation age babies delivery and neonatal morbidity and mortality.[10]

Problem statement

An Exploratory study on knowledge and practice regarding antenatal diet among pregnant women attending antenatal O.P.D. in selected hospital Dehradun, Uttarakhand.

Objectives:

1. To assess the knowledge regarding antenatal diet among pregnant women.
2. To assess the practice regarding antenatal diet among pregnant women.
3. To determine correlation between the knowledge and practice regarding antenatal diet among pregnant women.
4. To find association between level of knowledge regarding antenatal diet with their selected sociodemographic variables.
5. To find association between level of practice regarding antenatal diet with their selected sociodemographic variables.

MATERIAL AND METHODS

Research approach

Quantitative research approach was adopted in this study.

Research design

Non-experimental exploratory design was used in this study.

Research setting

Present study was organized in antenatal O.P.D. of multispeciality, educational institute of Himalayan hospital Jolly grant, Dehradun Uttarakhand.

Population

Population consisted all pregnant women of selected hospital Dehradun, Uttarakhand.

Sample

All pregnant women attending antenatal O.P.D. of Himalayan hospital jolly grant, Dehradun

Sampling technique

Convenient sampling technique was used for selecting the samples from selected settings who will fulfill the inclusion criteria.

Sample size

The calculated sample size was 102.

Development and description of tool

Section-A: Socio-demographic questionnaire

Section -B: Self-structured knowledge questionnaire

Knowledge questionnaire contains seven domains: Introduction, Variety of food, iodized salt and increasing amount of food during pregnancy, food sources, maternal and fetal complications of poor nutrition intake, iron and folic acid supplementation, dietary changes and effect of poor maternal nutrition on fetal weight. Each domain contains an individual multiple-choice question- type question, and the total questions are 30 in number. For every correct response, 1 mark was assigned, and for incorrect response, 0 mark was assigned. 30 was maximum score and 0 was minimum score.

Section -C: Self-reported practice checklist

Self-reported practice checklists contain 12 criteria. For every correct response, 1 mark was assigned, and for incorrect response, 0 mark was assigned. The maximum score was 12 and minimum score was zero.

Ethical consideration

Ethical permission was gained from ethic committee of SRHU, administrative approval was obtained from the principal Himalayan College of Nursing, and written approval was taken from medical superintendent Himalayan hospital and head of the department of obstetrics and gynecology department of Himalayan Hospital Jolly grant. Study purpose and need were explained to each participant, written consent will be received from each participant, confidentiality will be maintained and then data was collected.

RESULT

Socio demographic Data:

Most 45.1% participants were from age group 25-30 years. Majority 75.5% of participants were between 1-5 years of marriage. Majority 82.4% of mothers were married in between 18-25 of age. Most 57.8% of participants were primigravida. Most 44.1% of participants were having 25-36 weeks of gestation period. Majority 76.5% of participants were Hindu. Most 54.9% of participants were graduate and post graduate. Majority 88.2% of participants were homemakers. Majority 67.6% of participants were living in joint family. Majority 64.7% of participants were living in urban area. Most 67.6% of participants were having income 5000 – 20,000. The average height of all participants was 152 cm, 62 kg was average weight, and the average BMI 26.8. Most 33.3% of study participants were anaemic in first trimester, 44.4% of study participants were anaemic in second trimester and in third trimester 60% were found anaemic. All 100% of participants were non-alcoholic and non-smoker. Most 52% of participants were non-

vegetarian. Majority 63.7% of participants were having previous knowledge regarding antenatal diet. Most 43.07% of participants were having knowledge from health care worker.

1-Knowledge regarding antenatal diet among pregnant women.

Table no. 1: Mean, mean percentage, median and SD of knowledge regarding antenatal diet in pregnant women. (n=102)

	Maximum score	Range	Median	Mean ±SD	Mean percentage
Knowledge score	30	9-30	22	21.9 ± 3.903	73.16%

Table no. 1 Shows the knowledge score regarding antenatal diet among pregnant women, total score was 30, lowest score was 9 and highest score was 30. The mean of knowledge score was 21.9 ± 3.93, median is 22 and the mean percentage of level of knowledge score was 73.16%.

Table no. 2 Area wise Mean, mean percentage and SD of knowledge score regarding antenatal diet among pregnant women.

(n=102)

S.no.	Area wise knowledge score related to antenatal diet	Maximum score	Mean ± SD	Mean %
1	Introduction to antenatal diet	3	2.49 ± 0.741	83%
2	Variety of food	4	3.46 ± 0.829	86.5%
3	Iodized salt and increasing amount of food during pregnancy	4	2.75 ± 1.041	68.75%
4	Food sources	5	3.65 ±1.302	73%
5	Maternal and fetal complications of poor nutrition intake	4	3.08 ± 0.930	77%
6	Iron and folic acid supplementation	5	2.30 ±1.209	46%
7	Dietary changes and effect of poor maternal nutrition on fetal weight	5	4.23 ± 0.974	84.6%

Table no. 2- This table shows knowledge score regarding antenatal diet among antenatal pregnant women in each area, the highest mean score was in variety of food (3.46 ± 0.829) and the lowest mean score was in iron and folic acid supplementation (2.30 ±1.20), in introduction to antenatal diet mean score was (2.49 ± 0.741) , iodized salt and increasing amount of food during pregnancy (2.75 ± 1.041), food sources (3.65 ±1.302) maternal and fetal complications of poor nutrition intake (3.08 ± 0.930) in dietary changes and effect of poor maternal nutrition on fetal weight the mean score was (4.23 ± 0.974).

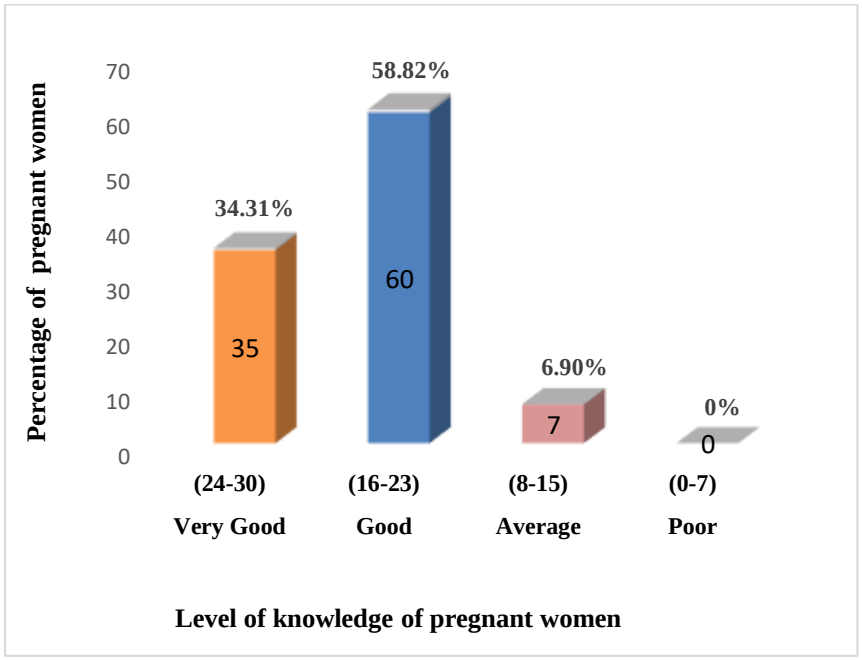

Figure no. 1: Percentage of pregnant women according to level of knowledge with scoring.

Figure no. 1 shows that most 58.82 % of pregnant women had good knowledge, 34.31 % of pregnant women were having very good knowledge and only 6.90 % of pregnant women were having average knowledge and no pregnant women were having poor knowledge regarding antenatal diet during pregnancy.

2-Practice regarding antenatal diet among pregnant women.

Table no. 3- Mean, mean percentage, median and SD of practice regarding antenatal diet among pregnant women. (n=102)

	Total score	Range of score	Median	Mean ± SD	Mean percentage
Practice checklist	12	4-12	8	8.38 ± 1.5	69.83%

Table no. 3: Shows practice score of pregnant women regarding antenatal diet, total score was 12. The lowest and highest scoring ranges were 4 and 12, respectively. The mean score was 8.38 ± 1.5, median is 8 and mean percentage of practice score was 69.83%.

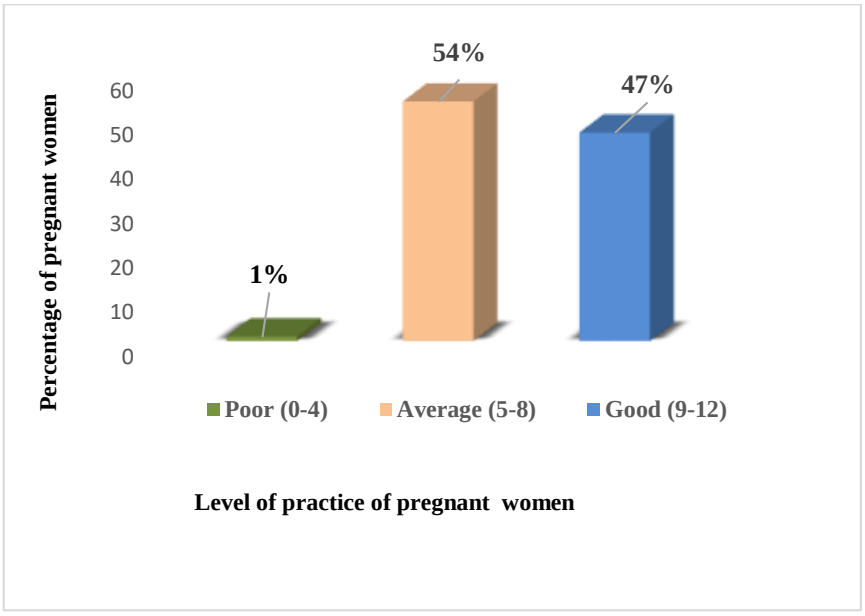

Figure no. 2- Percentage of practice score of pregnant women regarding antenatal diet.

Figure no. 2 shows that the level of practice among antenatal women, most 53% of pregnant women had average practice, 46% of women had good practice and only 1% of pregnant women had poor practices regarding antenatal diet.

3-Correlation between knowledge score and practice score regarding antenatal diet among pregnant women.

There was significant week positive correlation (r = 0.32), p=0.001 between knowledge score and practice score of pregnant women regarding antenatal diet.

4-Association between level of knowledge regarding antenatal diet among pregnant women with their selected socio demographic variable.

Only education and haemoglobin level has significant association with level of knowledge regarding antenatal diet among pregnant women and age, duration of marriage, age at marriage, gravida, occupation, family, residence, monthly income, body mass index, diet, and previous knowledge of antenatal diet has no significant association with the level of knowledge regarding antenatal diet.

5-Association between level of practice regarding antenatal diet among pregnant women with their selected socio demographic variable.

There was no significant association between level of practice regarding antenatal diet among pregnant women with their selected socio demographic variable like age, duration of marriage, religion, gravida, education, occupation, family, residential area, monthly income, body mass index, haemoglobin, type of diet and previous knowledge of antenatal diet.

DISCUSSION

Knowledge regarding antenatal diet

Most 86.5% of women were having knowledge of variety of food, 68.75% of women were having knowledge on iodized salt and increasing amount of food during pregnancy. Only 46% of women were having knowledge of iron and folic acid supplementation and 73% of women were having knowledge on food sources. The findings were supported by a study which was done by Sangwan, et.al in which 42.6% subjects had knowledge about various food groups, 93.6% were having knowledge about use of iodized salt, 91.5% subjects had good knowledge of increasing food during pregnancy, 95.1 % subjects were having knowledge of iron and folic acid supplementation, 43.6% subjects had knowledge about different sources of food. [11]

Practice Regarding antenatal diet

Only 46% of pregnant women had good practices regarding antenatal diet. A study which was done by Delil , et. al in which the prevalence of adequate dietary diversity practices was observed 42.6%.[12]

Correlation Between knowledge and practice regarding antenatal diet.

There was significant moderate positive correlation (r = 0.32) between knowledge score and practice score regarding antenatal diet among pregnant women, which support by the study done by Spronk I et, al in which there was significant positive (r< 0·5) correlation between higher nutrition knowledge and dietary intake (adequacy).[13]

STRENGTH

- Large sample size
- Structured questionnaire
- The sample size calculation was done on the basis of previous research findings.

LIMITATIONS

- ❖ Generalizability of the study findings may be limited due to selection of single hospital and limited sample size.

RECOMMENDATIONS

- ❖ Experimental research can be performed on the effectiveness of structured teaching programmes on the knowledge and practice level of pregnant women in antenatal period.
- ❖ Comparative research can be done on knowledge level and practices related to antenatal diet among pregnant women of rural and urban area.

CONCLUSION

From the findings of the study most 58.82% of pregnant women had good knowledge of antenatal diet mainly in the varieties of food consumptions during pregnancy, dietary changes during pregnancy and effect of poor nutrition on fetal weight, but they were having poor knowledge in folic acid and iron supplements. Whereas most 54% of pregnant women were having average practices regarding antenatal diet. There is a need to create the awareness of women regarding folic acid and iron supplementation and aware them about consumption of plenty of fluids in pregnancy. Knowledge of antenatal women was greatly influenced by education level, and haemoglobin level. All health care workers should explain and educate all the pregnant women in each antenatal visits about the proper dietary intake which can leads to good maternal and fetal outcomes.

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