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Research Article

Antenatal Dietary Intake among Antenatal Mothers Attending Health and Wellness Centre, Kashmir

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Abstract

Nutrition is the fundamental pillar of human life. Maternal nutrient deficiency remains a significant public health problem in middle and low-income countries. Hence the study aimed to assess the nutrient intake of antenatal mothers and knowledge on dietary management during pregnancy among antenatal mothers This study used an explorative design. Among 30 mothers selected with purposive sampling all were lacking in the essential nutrient intake except protein and 22 (73.33%) mothers had inadequate knowledge on dietary intake during antenatal period. To improve maternal nutritional status during pregnancy, ANMs visiting the households can teach context-based nutritional intervention strategies that a pregnant woman should follow during every stage of her pregnancy live.

***Keywords**: Antenatal Nutrition; 24hr Recall; Nutrient Intake; Knowledge of Antenatal Diet*

Introduction

Nutrition is the fundamental pillar of human life. All human beings need a balanced amount of nutrients to body system for proper functioning. Proper food and good nutrition are essential for survival, physical growth, mental development, performance and productivity, health and well-being of all living things. Nutrition has a major effect on health for all age groups [1].

The academy of nutrition and dietetics recommends the following key components of a healthy lifestyle during pregnancy [2]:

- Appropriate weight gain
- A balanced diet
- Regular exercise
- Appropriate and timely vitamin and mineral supplementation.

Maternal nutrition is inevitable for pregnant women as adequate maternal nutrition is one of the best ways to ensure maternal and fetal wellbeing in developed and developing countries and also adequate maternal nutrition knowledge, attitude and dietary practice before and during pregnancy is necessary to ensure positive pregnancy outcomes [1].

Maternal nutrient deficiency remains a significant public health problem in middle and low-income countries, with adverse maternal and child health outcomes due to the women living in resource-limited countries consume a monotonous diet. The recommended intake for most nutrients increased during pregnancy, but the majority of pregnant women have inadequate nutrient intake when compared to the recommended standards by the world health organization [3]. During Pregnancy the women undergo physiological stress as she is nurturing a growing foetus in her body. Foetal development is accompanied by many physiological, biochemical and hormonal changes occurring in maternal body, which influence the need for nutrients and the efficiency with which the body uses them. The key factor contributing to poor fetal development is poor maternal nutrition; it also increases the risk of the baby to be born ill or die. It is well documented that inadequate nutrition during pregnancy results in increased risk of adverse consequences like IUGR, LBW, preterm birth, prenatal and intra natal mortality [1].

Rohit Kumar Chouhan, Suresh [4] conducted a comparative descriptive study to assess the awareness regarding antenatal diet among pregnant women at selected rural and urban area of Jodhpur among 100 pregnant women selected by purposive sampling. The finding showed that in rural area majority (64%) of the pregnant women had below-average awareness, while in urban area majority (74%) of the pregnant women had above-average awareness regarding antenatal diet. It can be concluded that pregnant women in rural area majority (64%) of the pregnant women had below-average awareness, while in urban area majority (74%) of the pregnant women had above-average awareness regarding antenatal diet as per current research recommendations [2].

Taddese Alemu Zerfu., *et al*. [5] conducted a prospective study involving a total of 389 eligible pregnant women, enrolled during their second antenatal care (ANC) visit. Dietary diversity practices were assessed by asking each individual pregnant woman to provide a single 24-h dietary recall. Results shows nearly half (47%) of the mothers lacked awareness on balanced and diversified diets. Conversely, nearly three fourths (73.8%) and two thirds (66.8%) of them had favorable attitudes towards dietary diversity and early initiation of antenatal care follow up. With a median dietary diversity score of four, starchy staples (100%), legumes and nuts (89.2%) were major food groups consumed by almost all of the mothers included in the study. Though pregnant mothers had limited knowledge and poor dietary diversity practices, they exhibited a relatively favorable attitude towards major nutritional recommendations.

Department of family welfare ministry of health and family welfare in 2006 has also stated that women feel it is their duty to eat less so that others in the family can have more food because in some communities women eat less food during pregnancy because they believe that they will have a smaller baby and easier delivery [6].

Aim of the Study

This study is aimed to assess the nutrient intake of antenatal mothers and knowledge on dietary management during pregnancy among antenatal mothers.

Research Methodology

- Research approach: Quantitative research approach.
- Research design: Descriptive - Explorative design.
- Population: Antenatal mothers of Kashmir.
- Samples: Antenatal mothers attending antenatal clinic in Urban Health and Wellness Centre, Baramulla, Kashmir.
- Sampling technique: Purposive sampling technique.
- Tool: Questionnaire to assess the knowledge and interview to find 24 hours recall on antenatal diet.
- Section A: Demographic variables - Assessment of background variables.

- Section B: 24 hours recall.
- Section C: Multiple choice questions (16) for assessment of knowledge on antenatal diet.

Results

S. No	Study variables	f	%
1.	**Age**		
	a) 21 - 25 years	22	73.33
	b) 26 - 30 years	7	23.33
	c) 31 - 35 years	1	3.33
2.	**Education**		
	a) Upto High school	4	13.33
	b) Upto Higher secondary	2	6.66
	c) Graduate and above	24	80
3.	**Occupation**		
	a) Unemployed	27	90
	b) Employed	3	10
4.	**Weeks of gestation**		
	a) < 12 weeks	2	6.67
	b) 12 weeks - 24 weeks	10	33.33
	c) > 24 weeks	18	60
5.	**Other health problems**		
	a) Yes	5	16.67
	b) No	25	83.33

Table 1: *Frequency and percentage distribution of study variables (n = 30).*

Table 1 reveals that most of the mothers were between the age of 22 - 30 years, 50% were graduated, 10% were employed, 93.3% were in their second and third trimester of gestation and 13.3% were affected with pregnancy related illnesses.

Nutrient	Recommended Daily Allowances for Pregnant Women [7,8]	Average Nutritional Intake	Inference
Calories	2200 - 2500 kcal	1980 kcal	Less
Carbohydrates	175 - 210g	68g	Less
Protein	75 - 100g	78 g/day	Adequate
Fat	40 - 90g	30g	Less
Iron	27 mg	19 mg	Less
Calcium	1000 mg	850 mg	Less

Table 2: *Average nutritional intake of the participants based on 24 hours recall (n = 30).*

Table 2 reveals that all the mothers were lacking in the essential nutrient intake as compared with the recommended daily allowances during pregnancy except protein.

Range	Frequency	Percentage
Inadequate knowledge	22	73.33%
Adequate knowledge	8	26.67%

Table 3: *Frequency and percentage of knowledge level on dietary management among antenatal mothers (n = 30).*

Table 3 shows that 22 (73.33%) mothers had inadequate knowledge and 8 (26.67%) had adequate knowledge on dietary management during antenatal period.

There was no significant association between socio-demographic variables and level of knowledge among mothers.

Discussion

The present study found that most of the mothers were between the age of 22 - 30 years, 50% (n = 15) were graduated, 10% (n = 3) were employed, 93.3% (n = 28) were in their second and third trimester of gestation and 13.3% (n = 4) were affected with pregnancy related illnesses.

It also found all the mothers were lacking in the essential nutrient intake as compared with the recommended daily allowances during pregnancy except Protein. Ajantha., *et al*. [9] conducted a cross sectional study evaluation of dietary choices, preferences, knowledge and related practices among pregnant women living in an Indian Setting who also infer that none of the participants were able to achieve excellent status on 24 hour food record scoring sheet. It is hence found that mother's lack intake of specific nutrients during pregnancy and is of great concern. Phuong Hong Nguyen., *et al*. [10] also address that in India; cereals and millets form the bulk of rural diets, as indicated by the National Nutrition Monitoring Bureau (NNMB) surveys in 10 Indian states, with only about half of pregnant women consuming adequate quantities of protein and energy.

22 (73.33%) mothers had inadequate knowledge and there was no significant association between socio-demographic variables and level of knowledge among mothers. A study conducted by Renu Gupta., *et al*. [1], Uttar Pradesh also found a similar percentage of 22 with adequate knowledge on antenatal diet. The review by Phuong Hong Nguyen., *et al*. [10] found that higher maternal knowledge was associated with higher diet diversity (OR = 2.2) and greater number of food groups consumed which may the reason the present study found a less intake of nutrients. Another study reported from America at El-Menshawy [11,12] Hospital showed that about half of the childbearing women did not have enough knowledge regarding the meaning, the importance, and the constituents of a well-balanced diet.

It is inferred from the present study that there was no association between gestational week nutritional knowledge score among antenatal mothers and socio-demographic variables, which is parallel with this study in Western Kenya [13] that reported gestational age was negatively associated with health knowledge score This interpretation also differs from an Ethiopian study 2013 [14] which found that age had a strong Statistical association with nutritional knowledge of mothers during pregnancy in a bivariate analysis. Another study from Ethiopia [15] did a multiple logistic regression and found a positive significant relation between information about nutrition, educational status of mothers and family income and nutrition knowledge of mothers during pregnancy ($p < 0.001$) but the present study found no association may be due to the varied group of samples [16-21].

Conclusion

The study concludes that mother's lack intake of specific nutrients during pregnancy which is of great concern and adding to this they also lack knowledge.

Thus, the nurses working with antenatal mothers at any health care setting should impart community awareness programmes on the recommended daily allowances of different nutrients and the need for good nutrition during pregnancy by strengthening the ANC package, community mobilization for empowering women through self-help groups and ICDS food-based programs.

To improve maternal nutritional status during pregnancy, ANMs visiting the households can teach context-based nutritional intervention strategies that a pregnant woman should follow during every stage of her pregnancy live.

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