



AWARENESS OF ANTENATAL NUTRITIONAL EDUCATION AMONG PREGNANT WOMEN IN JODHPUR, RAJASTHAN – A SURVEY*

Community Medicine

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ABSTRACT

BACKGROUND: Poor maternal nutritional status and substandard antenatal care, which result in increased women's risk, low birth weight and stillbirth, afflict many countries with weak or emerging economies even today. Studies that address the effect of extending nutrition awareness among pregnant women to the net outcome of pregnancy remain scarce.

OBJECTIVES: The present study aimed to estimate the level of awareness about nutritional needs in expectant mothers in western India.

METHODS: An intervention survey of nutrition awareness was conducted involving 100 pregnant women. Awareness was assessed through one-to-one interview of the participants in the local language.

Observations and results: Study revealed that 27% pregnant women were found not aware about nutrient requirement during pregnancy, 55% were partially aware and 18% were fully aware

Conclusion: Study revealed that the most of the pregnant woman living in the urban study region were partially aware about nutrition intake during pregnancy. It is desirable to inform pregnant women about their nutritional status and effects of unbalanced diets on the mother and her fetus. Dietary advice must be tailored, must be based on weight and body mass before pregnancy and spontaneous food intake of each woman.

KEYWORDS:

Pregnancy, Awareness, Nutrition,

INTRODUCTION

Pregnancy is one of the most critical and unique period in a women's life cycle. Due to higher nutritional requirement this group is considered vulnerable and critical in life span. In India, despite improvement in life expectancy, national family health survey reported that neonatal mortality, infant mortality rate has risen from 42.1 to 38 percent and 76.3 to 57 percent in the year 1993 to 2011 respectively in Rajasthan.1 Maternal mortality rate in Rajasthan was 255/lakh live birth (2011) as compared to the national average of 178. Adequate nutrition before and during pregnancy is very important for a long term health of women and child. Women who has been well nourished before conception begins her pregnancy with reserves of several nutrients so that the needs of the growing foetus can be met without affecting her health. Infant, who are well nourished in the womb, have enhanced chance of entering life in good health. Mother's diet should provide adequate nutrients so that maternal stores do not get depleted.2 Antenatal care provides an opportunity to educate the pregnant woman about pregnancy and child birth. Under usage of antenatal care has been repeatedly associated with adverse maternal outcomes. However there is controversy about the impact of antenatal education on pregnancy outcome.3,4,5 Antenatal education programmes are a very important component of antenatal care worldwide since it makes women contribute to the maximum for a better pregnancy outcome and care of the neonate.6,7 Antenatal care provides advice, reassurance, education on nutrition during pregnancy. There is very limited published data regarding the use of antenatal care in this part of country. Therefore present study was undertaken to study the awareness of nutritional requirements and dietary adequacy of pregnant women residing in western Rajasthan.

METHODOLOGY

This cross sectional study in the form a questionnaire based survey was performed in the urban and semi urban area of Jodhpur district of the state of Rajasthan, India. All the participants were included after written informed consent. Inclusion criteria included pregnant female resident of district of Jodhpur, willing to participate in the study. A convenient sample size of 100 subjects in all trimesters of pregnancy were included enrolled in the study. Subjects were investigated on the basis of nutritional questionnaire. They underwent an interview with investigator and their response to the questionnaire which was based on what they eat and drink and what are the special diet plans during pregnancy days was recorded. Scoring was made by the investigator on the basis of answering of each question by the participant. Every satisfactory answer was rewarded with 10 marks and if not satisfactory

then rewarded with 5 marks.

These data were obtain through individually analysis of nutrient intake in the form of snack, breakfast, lunch and dinner in the aspect of all food products. Then the subjects were advised about the awareness of her nutrition plan and how to correct the diet plan on the basis of calorie intake and socioeconomically aspect.

OBSERVATIONS AND RESULTS:

Without adequate nutrition during pregnancy, foetal growth and infant health are compromised. In general, consequences of malnutrition during pregnancy including fetal growth retardation, congenital malformation. Besides malnutrition, a variety of lifestyle factor and social demographic can adverse effect on pregnancy.9 In pregnancy anemia has a significant impact on the health of the fetus as well as that of the mother. It is the most widespread nutritional disorder in the world effecting 30 percent of the world's population. It is more common among the expectant mother. The presence of endemic goitre, functional disorders of the thyroid gland, prenatal death, mental retardation, cretinism, abortions and increased infant mortality are some of the serious problems facing public health due to micronutrient deficiencies. These diseases and disorders directly affect social and economic development of countries and their population.16 Half of children with vitamin and mineral deficiencies suffer from multiple deficiencies. (Vitamin and mineral deficiency, a global Progress report).15,16,17 . In this perspective, pregnancy can be seen as an important turning point in the life of women who were not really aware of, or interested in, nutrition before. The provision of general lifestyle and nutrition information to women with a child wish and women who are already pregnant is then of importance as a first step in realising behaviour changes that go beyond the pregnancy alone.18

To explore this in more detail, this study was performed on nutrition awareness and nutrition information-seeking behaviours during the child wishing period and throughout the different trimesters in pregnancy. We particularly focused on nutrition which is one of the most important aspect contributing to a healthy pregnancy.

The data was meaningfully assorted by evaluation of Mean & Standard Deviation. Standard deviation (SD) shows minimum that is 2.66. which indicate that most of the pregnant woman living at Jodhpur city were aware about nutrition intake during pregnancy.

These data also shown through pie chart:

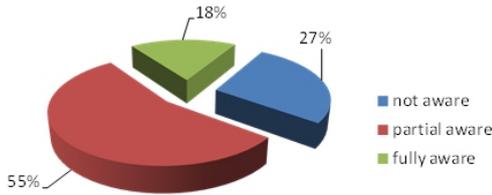


Figure: Nutritional awareness in pregnant woman at Jodhpur city

Pie chart shows Only 27% pregnant women were found to not aware about nutrient requirement during pregnancy, 55% are partially aware and 18% are fully aware.

Daily nutrient intake analysis of the subjects:

Frequency of meals taken

The meal is the most consumed daily lunch followed by breakfast and dinner with the same proportion (73.85%) (Figure 1) 6.15% of pregnant women never take supper.

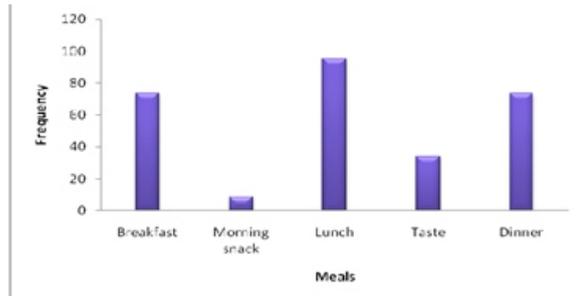


Figure 1: Frequency of eating meals in women studied Breakfast

At breakfast, the foods most consumed by pregnant women were: dairy products (milk, yogurt and cheese) and grains (bread, cake and cake). Then came the sweet butter .

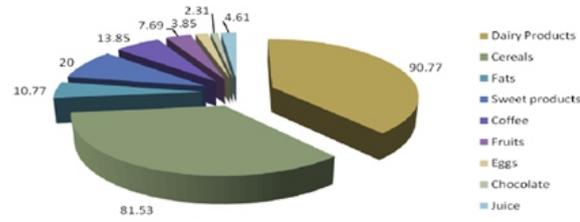


Figure 2: Frequency of food consumption at breakfast

Morning snack

The morning snack was taken by 8.46% of pregnant women. The foods most consumed were: juices, dairy products and fruits (Figure 3).

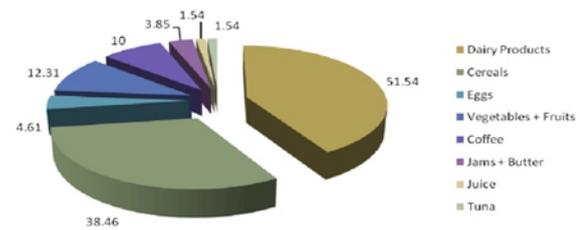
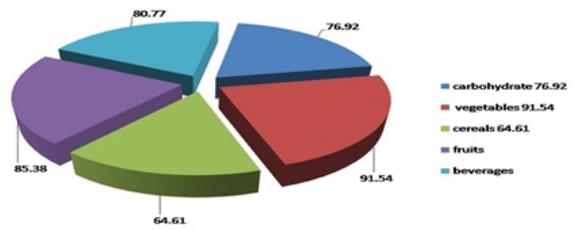


Figure 3: Frequency of consumption of food at morning snack Lunch

The results of this study, we found that the composition of lunch for pregnant women was diverse. However, carbohydrate main source of energy was taken by 76.92% of pregnant women (Figure 4).



The snack

The snack was taken by 33.85% of pregnant women. The foods most consumed were: dairy products and cereals. Followed by vegetables and fruits, coffee etc.

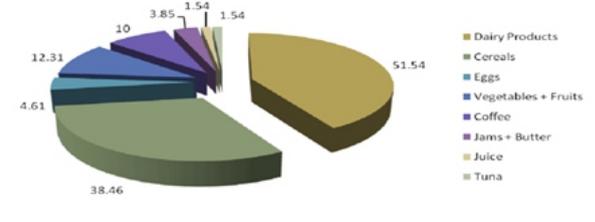


Figure 5: Frequency of food consumption at snack Dinner

We found a marked decrease in the consumption of all food groups at lunch compared to breakfast (Figure 6). This was certainly due to the fact that pregnant women wanted to have a light stomach the night before bed to avoid vomiting and stomach burns.

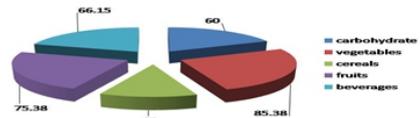


Figure 6: Frequency of food consumption at dinner Snacking

Eight percent (8% of pregnant women reported snacking all day. The foods most eroded were: dairy products, cereals, fruits and vegetables ... (Figure 7).

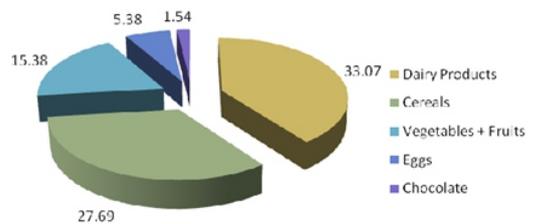


Figure 7: Frequency of consumption of food intake

DISCUSSION

Maternal nutrition and health is considered as the most important regulator of human fetal growth. A healthy mother can produce a healthy child. If women are not well nourished, they are more likely to give birth to weak babies resulting in a high infant mortality rate. Pregnancy is the period of dynamic change for a mother requiring a lot of care. During this period the foetus is nourished directly by the mother through the placenta.8 Pregnancy is the most nutritionally demanding times of a woman's life. The body needs enough nutrients every day to support the growth of the baby and the maintenance of the mother's body. Eating is a vital activity for the individual and more for

pregnant women. Women are generally vulnerable to under nutrition especially during pregnancy and lactation where the food and nutrient requirements are more during that period. Now it is clear that during pregnancy, the woman lives in almost pathological paradox in so far as it is subject to nutritional desires.

Generally, at household level, cultural norms and practices and socio-economic factors determines the extent of nutritional status. The high fertility of Indian women is one of the most detrimental socio-cultural influences on nutritional status because the metabolic stresses of pregnancy and lactation may not be adequately compensated by dietary intake before, during or even after these physiological processes. During pregnancy women is access to foods even more restricted in the traditional Indian household through taboos and ritual observances, which are widely documented in both rural and tribal population (Chatterjee 1989).

A recent study conducted by Dharmalingam et al. 2009 indicated that the impact of Nutritional Status of mother is more pervasive than the impact of other factors on birth weight (19). Jood et al. 2002 concluded that the dietary intake of rural pregnant women was lower than the recommended level.(20)

The poor nutritional status of pregnant women in present investigation can be attributed to dietary inadequacy resulting due to illiteracy, ignorance and low income as majority of the study group belong to lower middle class. Dietary intake of micronutrients was assessed by Pathak et al. (2004) results revealed that the consumption of food groups rich in micronutrient (pulses, vegetables, fruits, nuts and oil seeds, flesh foods) was inadequate similar results were obtained in present study also.(21)

The nutrition of pregnant women interviewed in this study was based on grain products, meats, fruits and vegetables, dairy products and beverages. These are foods allowed during pregnancy. Dairy products and coffee were consumed at breakfast, tea and snacks. Milk occupied the first position among the foods mentioned. The foods most consumed at breakfast were dairy products (milk, yogurt and cheese), followed by bread and cake and in last place the butter and jam. They were the main foods consumed at breakfast in the town of Jodhpur and also throughout the country. Dairy products are the richest food sources of calcium.

They also contain protein and some fat-soluble vitamins. On the other meals, consumption of fruits and vegetables was very important because of their availability on the market during the execution of our survey (spring period) and made affordable. These are the main sources of vitamins and minerals. Beverages also showed significant frequency of consumption, including fruit juice was the most consumed 64% of women surveyed drank it as a snack. Pregnant women consumed no soft drinks for digestive reasons.

The consumption of cereals (bread, cake, etc...) was also important. These foods are therefore a source of carbohydrate energy source. Energy requirements of pregnant women increase during pregnancy because of fetal development, placenta and its annexes, and because the heavier the mother more is the energy consumption for her activities of daily living. Feeding surveyed appeared to be diverse because different foods were found in different meals.

We found that the consumption of different foods varies depending on the term of pregnancy. Women who were first-term pregnancy had a reduced percentage of consumption of different foods from those that were in the third quarter. This was due to mental changes as well as vomiting, nausea and disgust that appeared in early pregnancy.

The results of the present study revealed that nutritional status of pregnant women should be monitored closely to avoid gaps in nutritional status that can have serious repercussions on the life of the mother and fetus.

CONCLUSION

According to our results, we noticed that the most of the pregnant woman living in the urban study region were partially aware about nutrition intake during pregnancy. It is desirable to inform pregnant women about their nutritional status and effects of unbalanced diets on the mother and her fetus. Dietary advice must be tailored, must be based on weight and body mass before pregnancy and spontaneous food intake of each woman. The diet should be varied with inclusion of

food groups to cover the needs for vitamins, minerals and fatty acids.

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