

Food intake of pregnant women: A study among the pregnant women of a tertiary care hospital in Ajmer, Rajasthan, India.

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Abstract- *Introduction: Nutritional diet is an important pillar of good health during pregnancy. A healthy diet is essential for every pregnant woman especially for the development of foetus. Knowledge and importance about healthy diet is essential for them as they are responsible for the growth of their foetus and her own health in order to prevent adverse pregnancy outcomes. Objective: To determine the association between intake of nutritional diet and personal habits among pregnant women. Methods: A descriptive cross sectional study was conducted among the pregnant women of a tertiary care hospital of Ajmer. The study included 975 pregnant women. A structured interview questionnaire composed which contained questions regarding their dietary intake. They were asked about the amount of food they consumed and their use of fast food, alcohol, tobacco and sugary snacks. The data collected was tabulated and analyzed. Results: The study revealed that 72.2% of the interviewed women were aged 25-30 years, 66.5% of them were from rural area. Illiterate women represented 35.6% of the studied group. 87.6% of the pregnant women were housewives. Intake of fewer servings than the recommended amount in all food groups was recorded. Pregnant women frequently reduced intake of foods. Due to nausea and vomiting, many pregnant women refused to take proper nutritional diet. Only 58.6% of pregnant women consumed fruits and green vegetables. Majority (52.3%) of pregnant women show high consumption of fast food and sweets. Most of the rural pregnant women used tobacco products which are harmful for their baby. 43.6% pregnant women consumed carbonated drinks instead of fruit juices. Many women used sour, spicy and chilled food due to pregnancy cravings. Only 31.3% of pregnant women consumed milk and sprouts. Positive attitude toward nutritional diet was significantly higher among urban, educated, working and prim gravidae pregnant women ($p=0.0001$). Conclusion: The study showed that majority (62%) of pregnant women have poor dietary intake with many lacunae present. The different factors responsible for it were determined. Pregnant women can potentially improve their food habits by modifying their lifestyle and following healthier nutritional practices. A better dietary knowledge is necessary for the pregnant women.*

Keywords: pregnancy, nutrition, diet, women, food habits.

Introduction

A nutritional, healthy, balanced diet during pregnancy is very important and essential to supporting growth and development of the foetus and the transient physiological and psychological changes that occur in the mother¹. Fundamental aspects of nutritional dietary behaviors during pregnancy include consumption of foods rich in macro as well as micro-nutrients and also that contain an optimal amount of energy, helping in achieving appropriate weight gain during pregnancy². Several studies have shown that if such dietary behaviour is not adopted by pregnant women, there is enhanced risk of adverse pregnancy outcomes such as low birth weight, pre-eclampsia, preterm birth and many neurodevelopmental problems³.

Several dietary recommendations help pregnant women to meet their increased caloric and nutrient needs, which include increasing water intake and avoiding under-cooked foods, unpasteurized products, fast food, and tobacco products etc⁴.

During pregnancy, motivation and advice for eating a nutritional diet from health professionals, physicians and gynecologists may decrease the impact of adverse pregnancy outcomes⁵. Although many pregnant women are not aware that healthy eating is important during pregnancy. They lack knowledge of specific dietary recommendations and may not have skills required to manage or improve their diet⁶. During pregnancy, healthy eating may also be challenging as pregnant women face barriers such as nausea, vomiting, pregnancy cravings, tiredness, food aversions, constipation, heartburn and hemorrhoids⁷.

A nutritional diet is an important pillar of good health during pregnancy. A healthy diet is essential for every pregnant woman, especially for the development of the foetus. Knowledge and importance of a healthy diet is essential for them as they are responsible for the growth of their foetus and her own health, in order to prevent adverse pregnancy outcomes. Therefore, the objectives of this study were to determine the dietary intake of pregnant women.

Material and Method

A descriptive cross sectional study was conducted among the pregnant women of a tertiary care hospital in Ajmer. The study included 975 pregnant women. A structured interview questionnaire which contained questions regarding their dietary intake. They were asked about the amount of food they consumed and the intake of fast food, alcohol, tobacco and sugary snacks. The data collected was tabulated and analyzed. Maternal demographics information included current age, pre-pregnancy weight, self reported gestational age, ethnicity, level of education, gravida status, household income, occupation, blood pressure etc. was collected by a questionnaire. The food intake questionnaire was an open- ended survey that asked respondents to use their own words to describe the intake of food servings.

The respondents were asked to indicate the consumed number of servings of various food groups, such as dairy products, fast food, beverages, tobacco products and sugary snacks (sweets, cookies and chocolate etc.). the data were analyzed using the Statistical Package for the Social

Sciences (SPSS) for windows (version 21; SPSS Inc; Chicago IL, USA). Statistical significance was considered when $p < 0.05$ in all tests.

Results

The results of demographic data (table 1) revealed that 89% of urban pregnant women had a mean age of 32.76 years and 98% of rural pregnant women had a mean age of 31.64 years that were surveyed. A minority of illiterate respondents were found in the urban area (2.8%) whereas the majority was in the rural areas (23.8%). As much as 4% of urban and 1.7% of rural respondents had a salary <Rs 50,000. The pregnancy characteristics of the respondents indicate that most of the pregnant women of urban area were in the second trimester of pregnancy 62.5% and 49.3% in the first trimester of pregnancy in rural area. 58.9% of urban pregnant women were primiparous and 47.6% of the rural pregnant women were multiparous.

Table 1: Demographic characteristics of respondents	
Characteristic	n (%)
Age	
<20	236(24.2)
20-25	284(29.1)
25-30	246(25.2)
>30	209(21.4)
Education	
Illiterate	224(22.9)
Primary	336(34.5)
Secondary	299(30.6)
Higher	116(11.8)
Trimester	
First	307(31.4)
Second	462(47.3)
Third	206(21.1)
Occupation	
Employed	216(32)
Unemployed	762(78.1)
Gravida status	
Primigravida	387(39.6)
Multigravida	588(60.3)
Residence	
Urban	468(48)
Rural	507(52)

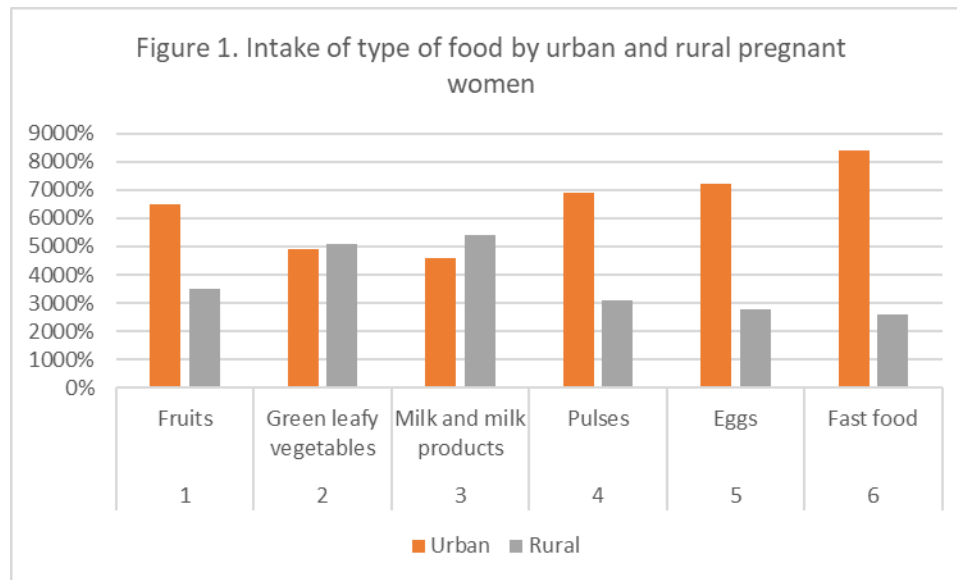


Figure 1 shows the levels of intake of the various food groups. 69.4% of pregnant women reported they sometimes consumed sugary snacks and 32% reported they regularly consumed them compared to 3.2% who indicated they never used sugary snacks. Intake of fewer servings than the recommended amount in all food groups was recorded. Pregnant women frequently reduce intake of foods. Due to nausea and vomiting, many pregnant women refuse to take a proper nutritional diet. Only 58.6% of pregnant women consume fruits and green vegetables. The majority (52.3%) of pregnant women show high consumption of fast food and sweets. Most of the rural pregnant women use tobacco products which are harmful for their baby. 43.6% of pregnant women consumed carbonated drinks instead of fruit juices. Many pregnant women use sour, spicy and chilled food due to pregnancy cravings. Only 31.3% of pregnant women consumed milk and sprouts. Positive attitudes toward nutritional diet was significantly higher among urban, educated, working and primigravidae pregnant women ($p=0.0001$).

Discussion

The patterns of food intake during pregnancy reported in this study indicate that pregnant women understand and reduce intake of foods that could harm their pregnancy, but do not enhance their foods that provide beneficial nutrients required for pregnancy. This shows that pregnant women do not prioritize having a nutrient having rich diet when having various dietary fluctuations which may result in lower intake of nutrients that are a key factor for prenatal development.

Majority of pregnant women (68%) did not take the proper balanced diet in urban and rural areas. Similar findings showed by M Stravik 2019 in Sweden that only 5% of the women took selenium supplements regularly and in the case of iodine, no supplements were registered. The diet contained white bread, French fries, pizza, meat, soft drinks, candy and snacks were reported⁸. Another study done by LE Forbes et. al. 2018 in Canada shows that women frequently reduced intake of foods for the baby's health and increased foods to satisfy cravings such as caffeine, alcohol intake, tobacco products, sugary snacks and beverages etc⁹. Another study done

by N E Marshall et. al. 2021 in America shows that proper intake of a balanced diet which includes fruits, vegetables, legumes, wholegrain, healthy fats with omega 3 fatty acids etc. reduces pregnancy complications and adverse child health outcomes¹⁰. Another study done by SE Santiago et.al. 2013 in Southern California showed that intake of caffeine, alcohol, beverages and certain medication may adversely affect growth and development of foetus and pregnant women¹¹. Similar findings shown by S Sharma et. al. 2020 in India showed that Hindus and women who lived in rural areas had higher odds of consuming a low mixed vegetarian diet and lower odds of a high mixed vegetarian diet. This can result in adverse pregnancy outcomes¹².

Conclusion

The study showed that majority (62%) of pregnant women have poor dietary intake with many lacunae of knowledge of nutritional diet were present. The different factors responsible for it were determined. Pregnant women can potentially improve their food habits by modifying their lifestyle and following healthier nutritional practices. A better dietary knowledge is necessary for the pregnant women.

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