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Original Research Article

A study to assess the awareness and knowledge about the maternal nutrition and complications encountered by the antenatal mothers in the rural population

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ABSTRACT

Background: Nutrition plays a vital role in life. Good nutrition is an important part of leading a healthy lifestyle. A healthy pregnancy diet will promote your baby's growth and development. The purpose of this study was to highlight the knowledge, attitude and practices of pregnant women regarding the healthy diet, psychological support, regular visits, danger signs and complications during pregnancy among mothers who visit our hospital along with different socio demographic factors.

Methods: This study was conducted on 350 antenatal women from January 2016 to February 2017 at Tamil Nadu, India. A 24 point- 15 minutes' questionnaire was designed about the knowledge, attitude and practice about the nutrition, danger signs and complications in pregnancy.

Results: Around 98% of women were very clear that nutrition is necessary in pregnancy and 53% of them told that the quantity of food intake should be increased. Major source of knowledge about the nutrition was obtained from the family members (81%). The common danger sign was abdominal pain (61%) followed by bleeding per vaginum (22%). About 77% of mothers had an idea that minimum of 6-10 visit should be there in their antenatal period.

Conclusions: This study emphasizes that health professionals should concentrate more in the nutritional values and the antenatal classes should be taken regarding the role of adequate nutrition, constituents and sources of balanced diet and the consequences of over and under nutrition.

Keywords: Antenatal, Danger sign, Nutrition

INTRODUCTION

Pregnancy is a precious period, where the mother prepares herself physically and psychologically for birth and parenthood.¹ From social and medical point of view, pregnancy is a very important event. Among the health care delivery systems, antenatal care is considered as an important service. However, some problems or complications which are life threatening both for the

mother and fetus may be anticipated during pregnancy.² In 2015, approximately 303000 women and adolescent girls died as a result of pregnancy or childbirth related complications. But 99% of the maternal death can be preventable.³ In India the maternal mortality was estimated to be 556 per 1,00,000 live birth in 1990 but it gradually decreased to 174 per 1,00,000 live birth in 2015. With this statistical data, it is found that India failed to achieve the Millennium developmental goals.⁴ The most important critical strategy to reduce the

maternal mortality is proper antenatal care, because it facilitates the early identification and mitigation of risk factors in pregnancy. Essential services are provided when there is timely and frequent antenatal visit.⁵

Now the WHO has increased the number of antenatal visits to eight from four to reduce the antenatal complications.⁶ The major goal of antenatal care are health promotion, disease prevention, dietary advice, early detection and treatment of existing disease and complications, awareness about the danger signs and birth preparedness.⁷ The purpose of this study was to highlight the knowledge, attitude and practices of pregnant women regarding the healthy diet, psychological support, regular visits, danger signs and complications during pregnancy among mothers who visit our hospital.

METHODS

This is a cross-sectional institution based study conducted on 350 antenatal women from August 2016 to February 2017 at Melmaruvathur Adhiparashakthi Institute of Medical Sciences and Research Institute, Melmaruvathur, Tamil Nadu, India. A 24 point-15 minutes' questionnaire was designed in local language to collect the information about the knowledge, attitude and practice about the food habits, psychological support, regular visits, danger signs and complications in pregnancy. This questionnaire was used to collect the information from the antenatal mothers who attend our antenatal clinic situated in the rural area.

These pregnant women were very well explained about the study and they were asked to fill the questionnaire when they are waiting in the antenatal clinic. The illiterate patients were guided by our junior residents who read the questionnaire without giving any hint or leading answers.

RESULTS

Table 1: Questionnaire include the following topics.

Topics:
Demographic information about age, SES, parity, education status and inter pregnancy interval
Need of nutrition in pregnancy
Knowledge about the quantity of food intake
Knowledge about harmful effects of over or under nutrition during pregnancy
Knowledge about source of carbohydrate, proteins, iron, vitamins and minerals.
Importance of nutrition in fetus growth
Knowledge about the weight gain in pregnancy
Significance of acquiring knowledge about nutrition in pregnancy
Source of information
Danger signs in pregnancy
Knowledge about the visits

About three hundred and fifty antenatal mothers were participated in the present study. Out of them 88% of women were between 21-30 yrs of age and 66% of women had secondary and higher secondary level of education. Majority of the women were multi gravida accounting for 73% followed by primigravida (22%) and grand multi (5%). According to Modified Kuppuswami classification 46% of antenatal mothers belong to class 4 followed by 43% in class 5 (Table 2).

Table 2: Socio-demographic variables of the study population.

Age (years)	Percent
<20yrs	5
21-30yrs	88
>30yrs	7
Education status	
Degree	26
Secondary and higher secondary	66
Primary	5
Nil	3
Parity	
G1	73
G2	22
>g3	5
Interpregnancy interval (in years)	
G1	22
<1yr	3
1-2yrs	28
2-3yrs	31
3-4yrs	10
4-5yrs	3
>6 and above	3
Ses (modified kuppuswami classification)	
Class 2	2
Class 3	9
Class 4	46
Class 5	43

Around 98% of women were very clear that nutrition is necessary in pregnancy and 53% of them told that the quantity of food intake should be increased.

Only 17% was aware about the risk of over and under nutrition. About 56% of women were conscious about the dietary supplements in the food. Adverse effects due to weight gain were known to 58% of antenatal mothers. Forty-nine percentages of mothers were aware about the importance of nutrition for fetus.

Major source of knowledge about the nutrition was obtained from the family members (81%) followed by doctors (32%) and nurses (10%) (Figure1).

The common danger sign which were commonly known to the antenatal mothers was abdominal pain (61%) followed by bleeding per vaginum (22%), pedal edema (15%), fever (12%) and decreased fetal movements

(10%) (Figure 2). About 77% of mothers had an idea that minimum of 6-10 visit should be there in their antenatal period (Table 3).

Table 3: Questionnaire results.

Need of nutrition in pregnancy	
Yes	98%
No	2%
Knowledge about the quantity of food intake	
Same quantity	34%
Decreased quantity	13%
Increased quantity	53%
Knowledge about harmful effects of over and under nutrition	
Yes	17%
No	83%
Knowledge about source of carbohydrate, proteins, iron, vitamins and minerals	
Yes	56%
No	44%
Importance of nutrition in fetus growth	
Yes	49%
No	51%
Knowledge about the weight gain in pregnancy	
Yes	58%
No	42%
Significance of acquiring knowledge about nutrition in pregnancy	
Yes	61%
No	39%
Source of information	
Doctor	32%
Husband	15%
Mother	56%
Mother in law	10%
Nurse	10%
Others	2%
Danger signs in pregnancy	
Abdominal pain	
Leaking per vagina	61%
Decreased fetal movements	9%
Bleeding per vagina	10%
Pedal edema	22%
Giddiness	15%
Vomiting	4%
Increased blood pressure	6%
Increased blood sugars	1%
Headache	2%
Fever	12%
Others	3%
No idea	23%
Knowledge about the visits	
≤ 5 visits	9%
6 – 10 visits	77%
11- 15 visits	6%
>15 visits	6%
No idea	2%

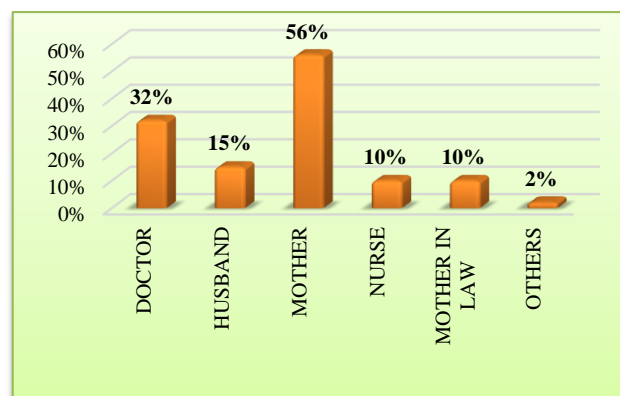


Figure 1: Source of information.

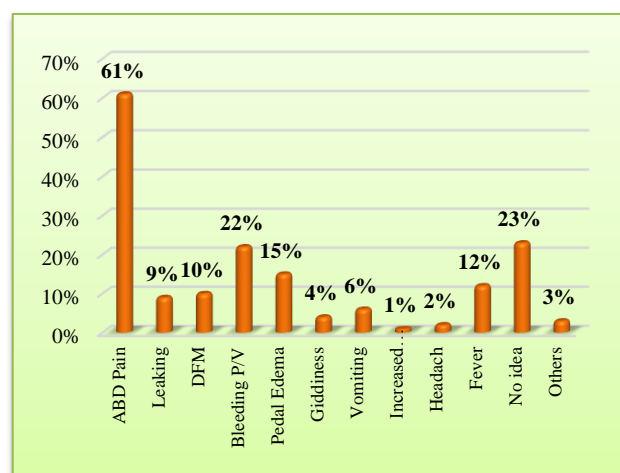


Figure 2: Danger signs.

DISCUSSION

Sufficient nutrition is essential to live a life. Pregnancy is a precious period for all women. Need of nutrition is more in pregnancy. In spite of constant plea in literature there is no adequate information regarding insufficient or too much weight gain during pregnancy. Not many studies were found regarding the need for nutrition and the knowledge about the same in pregnancy. The current study was done to audit the present knowledge of nutrition in pregnancy among gravid mothers. In the present study 98% of pregnant women were aware that nutrition is important in pregnancy. According to Mulhausler, Adam and McMillan maternal nutritional status at the time of conception influences more on the maternal and fetal mortality and morbidity.⁸ More than half (53%) of the gravid mothers were conscious that the quantity of food intake should be increased during pregnancy. Contrary to this only 17% were aware about the harmful effects of over and under nutrition in pregnancy. This may be due to low maternal education level which was similar to other studies.^{9,10} This study also revealed that 44% of mothers didn't have enough knowledge regarding balanced diet, source of macro and micronutrients. This can be attributed to the fact that most

of them were housewives hence they were not assessed to the source of information and they didn't attend the antenatal clinic in an appropriate number. This was similar to the other study.^{9,10} If the mother recognizes the importance of good nutrition then she will plan her pregnancy properly which will reflect on her pregnancy.¹¹

More than half (49%) of the mothers lack the knowledge about the importance of nutrition in fetus growth which influence on infant mortality and morbidity. The present study was conducted in the rural area where most of the gravid mothers belongs to low socioeconomic status with low education level. This was very much alike with the other two studies.^{9,10} Out of the total participants 77% of them had an idea about the danger signs in pregnancy. Among them abdominal pain was told by 62% followed by bleeding per vaginum (22%), pedal edema (15%), fever (12%) and decreased fetal movements (10%). This was much higher when compared to the study done in 2011 but similar to the study done in 2014.^{12,13} The reason may be due to different cultural and geographical variation. Along with that the health education provided by the auxiliary nurse midwifery (ANM) in their field visits also play a vital role in this. WHO has now increased the number of antenatal visits to prevent the complications during pregnancy.⁴ In our study 77% of women were aware about the increased visits during pregnancy. This may be due to ANM who taught them during their field visits. In most of the pregnant women the source of information was their family members (81%) and only very few acquired information from the doctor and ANM. This was similar to the study conducted by Gupta et al.¹⁰

CONCLUSION

One of the main aims of millennium developmental goal of India was to improve the maternal health. In spite of implementing many schemes and goals for the betterment of nutritional value in the antenatal mother, the destination is still a dream in India. The major sources of nutrition for antenatal mothers are their family members when compared to doctors and the health workers. In addition to that various myths have been followed among the pregnant mothers in the rural area. Health professionals should concentrate more in the nutritional values and the antenatal classes should be taken regarding the role of adequate nutrition, its constituents, its sources and the consequences of over and under nutrition especially in the illiterate and under educated women. The government should employ more number of health professionals to educate the women to have a healthy outcome of the mother and their children.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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