NUTRITIONAL STATUS OF PREGNANT WOMEN

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Abstract

Nutrition plays a crucial role in human health and well being. At the national improvements in human development indicators like nutrition levels of the population have been unacceptability slow. The pregnant women constitute the most vulnerable segment of a population from the nutritional standpoint; in particular the conditions of pregnant women belonging to low income group are a matter of serious concern. Women who have a poor nutritional status at conception are at higher risk of disease and death; their health depends greatly on the availability of food, and they are therefore unlikely to be able to cope with their increased nutrient needs during pregnancy. This study intends to picture a new outlook on nutritional status and awareness of pregnant women. And also this study helps to identify socio-economic conditions and health conditions of the pregnant women. Primary data has been used for the present study. The primary data has been collected through interview method by using well structured questionnaire. Statistical package for social sciences were used for analytical purpose of the study and simple statistical tools such percentage and average and also chi-square test were used for this study.

Key words: Nutrition, women health, pregnant women, etc.

1. Introduction

Nutrition plays a crucial role in human health and well being. At the national improvements in human development indicators like nutrition levels of the population have been unacceptability slow. A large number of Indian children are stunted; a substantial number of Indian children and women are underweight, anemic and suffer from micronutrient deficiencies. Indian women have high mortality rates, particularly during childhood and in their reproductive years. India's maternal mortality rates in rural areas are among the worlds highest. From a global perspective, India accounts for 19 per cent of all live births and 27 per cent of all maternal deaths. The health of Indian women is intrinsically linked to their status in society, especially for those living in a rural area. The pregnant women constitute the most vulnerable segment of a population from the nutritional standpoint; in particular the conditions of pregnant women belonging to low income group are a matter of serious concern. Proper nutrition during pregnancy is critically important for both the mother and fetus. Women who have a poor nutritional status at conception are at higher risk of disease and death; their health depends greatly on the availability of food, and they are therefore unlikely to be able to cope with their increased nutrient needs during pregnancy. Tamil Nadu has played a pioneering role in brings about significant changes in the health and nutrition status of children under six years of age, pregnant women, lactating mothers and adolescent girls. The government of Tamil

Nadu's successive budget outlays for nutrition and health are the highest in the ICDS scheme and the child development blocks (385 rural, 47 urban and tribal). With steady expansion into unreached areas, increasing coverage of marginalized groups, enhanced allocations and enlarged scope of services, ICDS is now considered to be one of the world's largest programmes of its kind and a model for the holistic development of the child. Maternal nutrition plays a fundamental role in optimizing pregnancy outcome and unlike other factors, such as heredity or pre-existing conditions; the nutritional status is amenable to change. Research relating to pregnancy outcome has documented the critical need of nutrition education for optimal pregnancy outcome. This study intends to nutritional status of pregnant women. And also this study helps to identify socio-economic conditions and health conditions of the pregnant women in Theni district of Tamil Nadu.

2. Review of literature

Kavitha, et al. (2011) analysed the nutritional status of pregnant women of rural area in Ramanathapuram district of Tamil Nadu. They found that the nutrient intake of the respondent was significantly less as compared to RDA. The malnutrition problems among pregnant women are very complex. A judicious combination of varies food groups required to ensure that nutrient demands of individuals are fully met. It was also found that the mean daily dietary intake of iron anaemic pregnant women. In spite of better education and highly monthly income, nutrition intake was lower than RDA, due to poor knowledge on nutrition and ignorance about healthy by these women. The agriculture extension and home science extension officials should encourage the rural women to cultivate low fact nutrients, fruits, vegetable etc, and popularized the same for consumption in the rural families.

Sherin Daniel, et al. (2016) assessed the effect of nutrition education on dietary awareness and practice among undernourished pregnant women. They found that the mean age of the pregnant women enrolled into the intervention was 23.2 years (SD: 3.4) and non-intervention group 24.8 years (SD: 3.7). Weight gain is the difference in weight before labour and weight as on first ANC visit, gestational weight gain in the intervention arm was significant over those in the non intervention arm. Women enrolled into the intervention had a mean weight gain of 8.7 kg, however those in the non intervention group had a mean weight gain of 6.8 kg . Birth weight was observed in 94 observations and recorded, in which low birth weight was identified as birth weight less than 2.5kg. On comparing two arms for difference in proportion for low birth weight it was not significant by Equality of variances test indicates that there is a significant difference in variances ($F=2.00$, $p=0.0215$) between the two groups further on the Satterthwaite method the two groups are significantly different ($t=-5.43$, $p<0.0001$) On linear mixed effects model a fitting model 3 was selected based on Akaike Information Criterion (AIC) and Bayesian information criterion (BIC) comparison, when adjusting for the effects of age and weight and allowing for variation in village, weight gain in intervention group is significantly higher than non intervention group by 2.1 Kg. However birth weight was found weakly associated with changes in mothers' weight. The key informant interview conducted before the intervention found that the minimal meal frequency among women were compromised to twice a day, moreover on 24 hour recall it was observed that diversity in their daily diet

was minimal comprising of either rice or chapathi and dhal with reduced intake of green leafy vegetables. After the intervention, anecdotes show that women had a minimum of 3 ANC visits with regular attendance at ICDS center every month. Women in the intervention group adopted practicing a minimum of 3 meals or more during pregnancy and adopting a serving of vegetables, lentils and greens into their daily diet along with cereals. Women also developed the habit of regular hand washing before meals and after toilet which was recorded through self reporting. They had enough rest and avoided hard labor during pregnancy; it could be possibly due to the participation of mother in laws in this intervention. They concluded the education and counselling with regular follow up on maternal growth anthropometry, house visits, food demo sessions, minimum meal practice of 3 or more, proper hand washing before meals and after toilet and adequate rest had contribute to healthy pregnancy and outcome. Intervention also provided change in perceptions on food habits and health seeking behaviour among women and their household members especially among mother in laws.

3. Objectives

The objectives of the paper are:

1. To examine the nutritional status of pregnant women in the study area.
2. To investigate the influence of educational level and family income on the nutritional status of pregnant women.

4. Methodology

Methodology includes area of the study, data collection, and sampling, period of the study and tools of analysis. For the purpose of the present study Theni district of Tamil Nadu has been chosen. Primary data has been used for the present study. The primary data has been collected through interview method by using well structured questionnaire. 125 sample pregnant women were identified using convenience sampling technique. In order to test the hypotheses that there is no association between nutritional status and educational level of the sample pregnant women and there is no association between nutritional status and family income of the sample pregnant women, the Chi-square test was used.

5. Analysis and discussion

The level of nutritional status of the pregnant women, the influence of educational level and family income of the sample pregnant women on their nutritional status were analyzed.

a. Nutritional status of pregnant women

Over all nutritional health status of pregnant women is determined by body mass index, weight gain during pregnancy, hemoglobin level, general appearance of the pregnant women, frequency of cereal, pulses consumption, leafy vegetable consumption, root and tuber consumption, other vegetable

consumption, fruit consumption, milk and milk product consumption, non-vegetarian consumption and frequency of meal taken. The level of the nutritional status of pregnant women is classified into three categories as low (whose nutritional score is less than 50 percent), medium (whose nutritional score is between 50 and 75 percent) and high (whose nutritional score is more than 75 percent). Table 1 describes the level of nutritional status of the pregnant women in the study area.

TABLE 1

Level of Nutritional Status of the Pregnant Women

Nutritional level	No.of.Respondents	Percentage
High	12	9.6
Medium	87	69.6
Low	26	20.8
Total	**125**	**100**

Source: Primary Data

It is clear from the above table that out of 125 sample women respondents 12 respondents (9.6 percentage) are in high level of nutritional status, 87 respondents (69.6 percentage) are in medium level of nutritional status and remaining 26 respondents (20.8 percentage) are in low level of nutritional status.

b. Educational level and nutritional status

There is a direct relationship between education and nutritional status of women and their children. If Women have good education she is aware about health, thus it is very important to study the influence of educational level on the nutritional health status of pregnant women. Table 2 shows the nutritional health status and educational level of the sample pregnant women respondent s in the study area.

TABLE 2

Educational level and Nutritional Status

Educational level	Nutritional health status (No. of Respondents)			
	Low	Medium	High	Total
Illiterate	12	0	0	12
Primary	14	31	4	49
High school	0	36	3	39
Higher secondary	0	10	1	11
Degree and above	0	2	12	14
Total	**26**	**84**	**15**	**125**

Source: Primary Data

It is observed that 12 sample respondents are illiterate and their nutritional status is low. 49 sample respondents are studied up to primary level, among them 14 have low level of nutritional status, and 31 have medium level of nutritional status and 4 have high level of nutritional status. 39 sample respondents are studied up to high school level; among them 36 have medium level of nutritional status and 3 have high level of nutritional status. 11 sample respondents are studied up to higher secondary level; among them 10 have medium level of nutritional status and only one have high level of nutritional status. 14 sample respondents are studied up to degree and above, among them 2 have medium level of nutritional status and 12 have high level of nutritional status.

Hypothesis 1: There is no association between educational level and nutritional status of pregnant women in the study area. In order to study the association between educational level and nutritional status of the sample pregnant women respondents, the chi-square test was used.

TABLE 3

Estimated results: Educational Level and Nutritional Status

	Value	Df	Asymp .sig.(2 sided)
Pearson chi-square	135.043	10	.000*
Likely hood ratio	106.805	10	.000
N of valid cases	125		

*significance at 5% level

The estimated results show that the value of chi-square is 135.043, which is significant at 5 per cent level. Therefore the null hypothesis is rejected i.e.; there is an association between educational level and nutritional status of pregnant women in the study area.

c. Nutritional health status and total family income

The pregnant women's nutritional health status depends upon the total family income, because income indicates the purchasing power of goods and services. Thus it is very important to study the influence of total family income on nutritional health status of pregnant women. The following table shows the nutritional health status and total family income of the sample pregnant women respondents in the study area.

TABLE 4

Total Family Income and Nutritional Health Status

Total family income (in Rs)	Nutritional health status			
	Low level	Medium level	High level	Total
Below 1,00,000	7	4	1	12
1,00,000 -1,50,000	9	4	0	13
1,50,000- 2,00,000	0	38	1	39
2,00,000-2,50,000	0	37	2	39
Above 2,50,000	2	11	9	22
Total	**26**	**87**	**12**	**125**

Source: Primary Data

It is observed that 12 sample respondents having Rs below 1, 00,000, among them7 have low level of nutritional status and 4 have medium level of nutritional status and only one have high level of nutritional staus. 13 sample respondents having income Rs 1, 00,000 to 1, 50,000, among them 9 have low level of nutritional status, and 4 have medium level of nutritional status. 39 sample respondents having income Rs 1, 50,000 to 2, 00,000, among them 38 have medium level of nutritional status and only one have high level of nutritional status. 39 sample respondents having income Rs 2, 00,000 to 2, 50,000, among them 37 have medium level of nutritional status and 2 have high level of nutritional status. 22 sample respondents having income Rs above 2, 50,000, among them 2 have low level of nutritional status, 11 have medium level of nutritional status and 9 have high level of nutritional status.

Hypothesis 2: There is no association between total family income and nutritional status of pregnant women in the study area. In order to study the association between total family income and nutritional status of the sample pregnant women respondents the chi-square test was used.

TABLE 5

Estimated Results: Total Family Income and Nutritional Health Status

	Value	Df	Asymp .sig.(2 sided)
Pearson chi-square	138.154	8	.000*
Likely hood ratio	127.893	8	.000
N of valid cases	125		

*significance at 5% level

The estimated results show that the value of chi-square is 138.154, which is significant at 5 per cent level. Therefore the null hypothesis is rejected i.e.; there is association between total family income and nutritional status of pregnant women in the study area.

6. Conclusion

The finding of the present study shows that there is a significances association between, nutritional status and level of education and income. It was found that the nutrient intake of the respondent was significantly less in the study area. This emphasizes that the family income and level of education ensures the adequate food intake and there by good nutritional status of the pregnant women. But still there are so many pregnant women were not attaining the recommended level of nutrition. To achieve this food availability has to be improved by increasing their family income, and also suggest Government has to provide more supplementary foods to the pregnant women through health care services, nutrition awareness has to be given to women from their adolescent age, and need and importance of nutrition during pregnant has to be taught at school and college level.

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