

Health and nutritional status of pregnant women: An assessment of rural anganwadi centre and primary health centre

MANOJ KUMAR, KUSUM BHARTI AND PRAMILA PRASAD

The maternal mortality in India is the 56th highest in the world. 42 per cent of births in the country are supervised in Medical Institution. In rural areas, most of women deliver with the help of women in the family, contradictory to the fact that the unprofessional or unskilled deliverer lacks the knowledge about pregnancy. According to the WHO, complications during pregnancy and childbirth are responsible for maternal deaths. In India, the ratio for Maternal Mortality Rate to live births has fallen and by 2015, India plans to reduce its MMR to 109. The objective of the study is, to assess the health and nutritional status of pregnant women of rural anganwadi centre. To assess the nutritional status, Anthropometry Measurement, Maternal and Child health Protection Card, Clinical sign, Haemoglobin, ANC, method and Questionnaire were used. 53 per cent women do not get adequate diet whereas only 8 per cent women are getting balance diet. 59 per cent women are not getting supplement diet. Quality and quantity of THR are poor 42 per cent women are not getting IFA and calcium supplementation on their pregnancy period. Only 31 per cent women are benefited with 4 ANC of pregnancy period, 58 per cent women are found severely anaemic, whereas only 20 per cent women are in normal range. 72 per cent women are underweight and 82 per cent are with low BMI. 52 per cent suffering from pregnancy complication. All the above results indicate that most of the pregnant women deprived from proper service of NRHM, ICDS, which are provide in a mission mode for the improvement of health and nutritional status of pregnant women.

Key Words : Antenatal Checkup, Nutrition, Pregnant women, Anaemia, Undernutrition

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INTRODUCTION

The health of women is linked to their status in the society. The demographic consequence of the women has formed expression in various forms, such as female

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infanticide, higher death rate, lower sex ratio, low literacy level and lower level of employment of women in the non-agricultural sector as compared to men. Generally, at household level, cultural norms and practices and socio-economic factors determine the extent of nutritional status among women. India is a vast country of 3 million square kilometres, ranking as the second most populous country in the world. It also has the distinction of contributing 20 per cent of the global births. This means that every year approximately 30 million women in this country are pregnant and 27 million among them go for live births. Out of this staggering number, 136,000

mothers die along with 1 million newborn making in the worst case of Maternal Mortality Rate (MMR) and Neonatal Mortality Rate (NMR). India continues to contribute about a quarter of all global maternal deaths. WHO defines maternal mortality as the death of a woman during pregnancy or in the first 42 days after the birth of the child due to causes directly or indirectly linked with pregnancy. NFHS-3 survey has also revealed that every third women in India is undernourished (33.0 % have low BMI) and every second women is anaemic (56.2% women are anaemic in the age group of 15-49). The average female life expectancy today in India is low compared to many countries, but it has shown gradual improvement over the years. In many families, especially rural ones, girls and women face nutritional discrimination within the family, and are anaemic and malnourished. Nutritional problems have serious public health significance impacting psychological, physical, developmental, behavioural and work performance of pregnant women. Iron deficiency is by far the commonest nutritional cause of anemia. It may be associated with folate deficiency, especially during pregnancy. Pregnant women form a large high-risk group requiring special care.

Anaemia is the most common nutritional deficiency disorder in the world. It is a condition that occurs when the red blood cells do not carry enough oxygen to the tissues of the body. WHO defines anaemia as a condition in which the Haemoglobin (Hb) content of blood is lower than normal as a result of deficiency of one or more essential nutrients, regardless of the cause of such deficiencies. Most of the anaemia are due to inadequate supply of nutrients like iron, folic acid and vitamin B12, proteins, amino acids, vitamins A, C, and other vitamins of B-complex group *i.e.*, niacin and pantothenic acid are also involved in the maintenance of haemoglobin level.

The maternal mortality in India is the 56th highest in the world. 42 per cent of births in the country are supervised in Medical Institution. In rural areas, most of women deliver with the help of women in the family, contradictory to the fact that the unprofessional or unskilled deliverer lacks the knowledge about pregnancy. According to the WHO, complications during pregnancy and childbirth are responsible for maternal deaths. In India, the ratio for Maternal Mortality Rate to live births has fallen and by 2015, India plans to reduce its MMR to 109.

Causes of maternal death: Haemorrhaging is the number one cause of maternal deaths, Infection or sepsis, Anaemia, Obstructed labour: when the size of the foetal head is disproportionate to the mother's pelvis, Complications during an abortion, Hypertensive disorders including high blood pressure, protein in the urine, edema, kidney failure an sudden weight gain, AIDS/HIV, Heart diseases, Hepatitis. Besides maternal deaths, women can also experience maternal morbidity, which is obstetric fistula (or vaginal fistula). This is a medical condition in which a fistula (hole) develops between either the rectum and vagina or between the bladder and the vagina. But, this can be easily treated and does not lead to death.

Diet in pregnancy and lactation:

From conception to exclusive breast feeding (first 6 months) the baby completely depends on mother's nutritional status. If the mother is underweight or not gaining optimal weight during pregnancy the nutrients that are transferred to the baby will be of poor quality and quantity. On the other hand, if the mother is overweight, it will hamper the blood circulation to the uterus and restricts the quantity of nutrients transferred to the placenta and to the baby. There is a considerable increase in the nutritional needs of the mother. On an average the pregnant women gains about 10 kg in pregnancy. Either low or excessive weight gain are harmful to the pregnant women and as well as the developing foetus (baby). A pregnant women need to consume about 350 extra calories per day, which translates to one additional meal. The growth and development of the baby is determined by the food taken by the mother. All the nutrients provided to the baby are derived from her food. In the first seven days, baby nourishes with the nutrients from the just fertilized ovum, then the amniotic fluid and later on through out the pregnancy the baby receives nutrients via the placenta. Even after birth the baby receives all the nutrients for the first 6 months exclusively from mother's milk. This is followed by gradual introduction of complementary foods after 6 months along with the mother's milk. Eating healthily during pregnancy will help the baby to develop and grow normally, and will keep the mother fit as well. A healthy diet during pregnancy should contain the right balance and combination of nutrients. If the mother is consuming a balanced diet comprising of various food

groups, she gets the benefit of various nutrients that are necessary and increased during the pregnancy.

Objectives:

The objectives of the study are as follows:

- To assess the health and nutritional status of pregnant women of rural anganwadi centre,
- To assess the ICDS service of pregnant women which is provided at AWCs *i.e.* THR, Immunization, Antenatal Care, and Nutrition Health education,
- To know the anaemic status and complications of rural pregnant women,
- To assess the dietary intake and dietary pattern during pregnancy period and
- To assess the antenatal care and services of clinical investigation of Primary health centres and other health facilities under the NRHM of govt. of India.

METHODOLOGY

For this research study, to assess nutritional status of pregnant mothers 300 pregnant women of the 50 rural Anganwadi centres and 5 Primary health centres of the Bhagalpur District were selected. The age group was 15-45 years and study time period was June 2014 to May-2015. 24 hour diet recall method and the quantity and quality of THR, were calculated and compared to RDA and norms of ICDS. To assess the nutritional status, Anthropometry Measurement, Maternal and Child health Protection Card, Clinical sign, Haemoglobin, ANC, method and Questionnaire were used. The data of antenatal check ups *i.e.* weight, blood pressure, pulse, haemoglobin level, clinical sign of complication of during pregnancy were collected from ANC clinic of PHC/FRU and AWCs. All the pregnant women belonged to low socio economic status or below the poverty line. All data of this study were compiled and analysed through statistical method and scientifically.

OBSERVATIONS AND ASSESSMENT

The data of this study are being represented by different charts and figures (1 to 8) and discussed systematically.

Dietary intake :

The data of dietary intake shows that, out of 300 pregnant women only 47 per cent were getting adequate diet compared to recommended diet during pregnancy

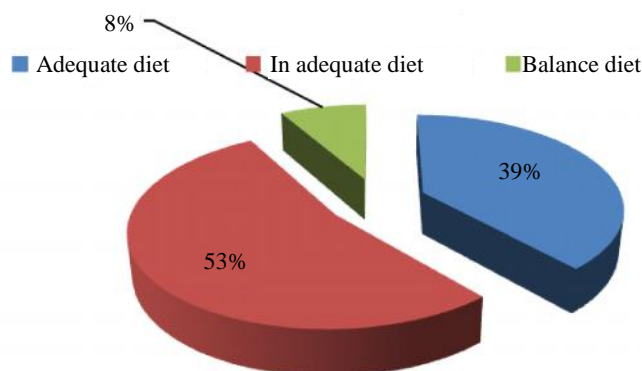


Fig. 1 : Dietary intake

stage whereas 53 per cent women were getting inadequate diet. It was found that only 8 per cent women were getting balance diet *i.e.* Milk, Dal, Green Leafy Vegetables, Iron rich foods and extra diet. During the maternal period, 300-600 extra Kcal with Iron calcium rich foods is required but unfortunately the 53 per cent women were not getting recommended diet.

Supplement diet :

The supplement diet during pregnancy helps to proper growth and development of foetus, so the supplement diet is needed in this period. The graph of supplement diet shows 59 per cent women were not getting supplement diet whereas only one per cent women were getting fruits in their diet. Milk is also essential for the protein requirement in this period but the milk is also not available to more than 70 per cent women. Green leafy vegetable which is very essential for iron folic acid, calcium and mineral requirement were also very less in the diet of pregnant women *i.e.* only 23 per cent were getting GLV. The result shows that most of the pregnant women were not getting supplement diet *i.e.* milk, pulse, green leafy vegetable in their daily diet.

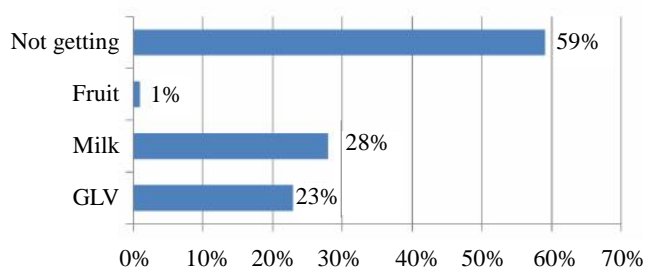


Fig. 2 : Supplement diet

Enrolments status :

The enrolments of pregnant women in AWCs or

PHCs are very poor. The enrolment process of pregnant women in ICDS is not proper *i.e.*, the enrolment of only 8 pregnant women in one AWC is allowed for the health and nutrition services, whereas at least 16-20 pregnant women are found in one AWC area. Thus most of the pregnant women are deprived from the ICDS services *i.e.* Take Home Ration, Immunization, Health Check-up, ANC and IFA supplementation. The data indicates that approx half of the eligible beneficiaries are deprived from the health and nutritional services *i.e.* 51 per cent women in one AWC nutritional area were not benefited whereas 49 per cent women were benefited from the ICDS services which are provided under the AWC or PHC platform.

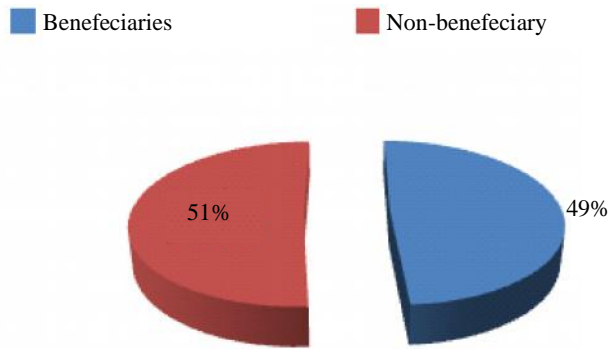


Fig. 3 : Enrolments status

Quality and quality of take home rashaan :

According to the norms of ICDS nutrition supplementation in the form of take home rashaan *i.e.* 3 kg rice, 2kg pulses and soybean bari, have to be provided at AWCs in a month. The data of quantity of quality of THR shows that, most of the AWCs did not maintain the

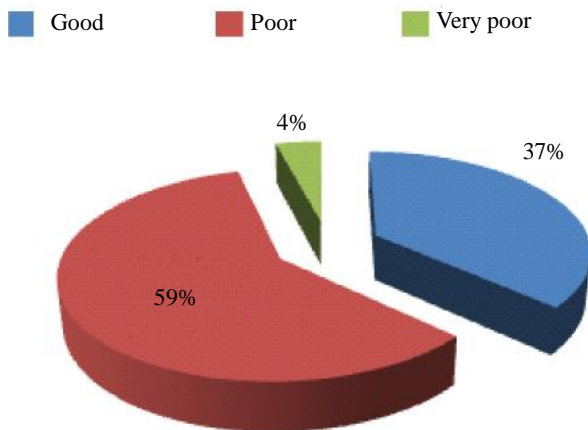


Fig. 4 : Quality and quantity of THR

quality and quantity of THR. 63 per cent AWCs were providing poor quality of THR to pregnant women, in which 4 per cent of AWCs were found giving very poor quality and quantity of THR. Only 37 per cent of AWCs were maintaining the quality and quantity of THR *i.e.* were providing good quality and quantity of Rice, pulses and soybean bari and other nutrition supplement. The THR were services provided only to those women who were enrolled in AWCs *i.e.* only 8 pregnant women in one AWC.

IFA and calcium supplementation :

The norms of Indian Council of Medical Research (ICMR) of ministry of health and family welfare ,govt. of India is that 100 pills of IFA must be provided during pregnancy period in a normal haemoglobin level *i.e.* above 11mg/dl. If the Haemoglobin level is less than 11mg/dl then 200 pills should be provided to pregnant women in a 3 trimester of pregnancy, whereas the calcium supplementation norms is 100 pills in 9 month of pregnancy period under the NRHM programme at AWCs or PHCs. When the data of IFA and Calcium supplementation distribution status was collect by the Mother and Child Protection Card of pregnant women we found that only 16 per cent women were getting complete course of IFA and Calcium supplementation according to the their haemoglobin level whereas 42 per cent of women were not getting complete course of IFA and Calcium supplementation or were not taken regularly. 42 per cent women were not getting IFA and Calcium supplementation. Thus these are deprived to this service because of the lack of awareness or they were not reaching to AWC or PHC during this period for the ANC checkups.

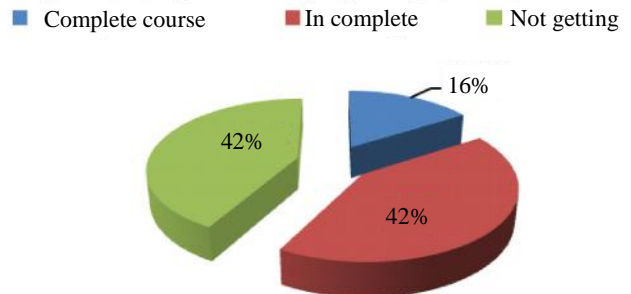


Fig. 5 : IFA and calcium

Antenatal check-up :

Antenatal Checkup (ANC) a complete package of

health checkup of a Pregnant Women during 3 trimesters of pregnancy is have to be provided. During the pregnancy period 4 ANC are must for the safe and proper care of women and children. Under the NRHM, ANC facility is provided to pregnant women at AWCs and PHC, CHC, FRU, and other higher govt. hospital institution free of cost. The ANC checkup provided by the service provider or health worker include complete checkup *i.e.* Serum test, HIV, Hepatitis, Hb, urine albumin, VDRL, Blood Group, RH factor, Blood Sugar and Weight, and Blood pressure. This includes IFA and Calcium supplementation also. The data of Antenatal Checkup status shows that only 31 per cent women completed 4 ANC, whereas 43 per cent women completed 3 ANC during pregnancy period. 12 per cent women completed 2 ANC whereas 6 per cent completed only one ANC completed, *i.e.* these women were not sincere or did not reach to the facilities due to family problems, ignorance. 8 per cent women were found completely deprived from this antenatal service.

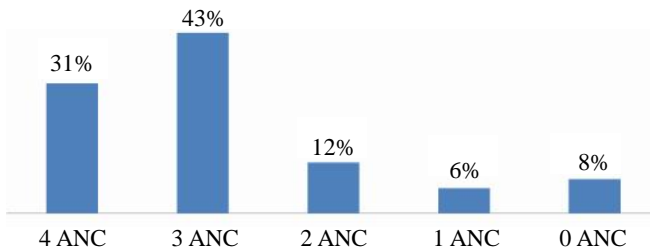


Fig. 6 : Antenatal check-up

Nutritional anaemia :

When the data of Haemoglobin Level collected to assess the anaemic status of pregnant women by the MCPC card of AWCs and PHC, was analysed, it was found that 78 per cent women are severely anaemic *i.e.* Hb level is 10-12 mg/dl, in which 58 per cent women were found severely anaemic *i.e.* 8-10mg/dl. Only 22 per cent women were found with normal level haemoglobin *i.e.* 12-14mg/dl. According to the data most of the pregnant women were anaemic due to inadequate dietary intake and iron rich food supplementation. Most of the pregnant women which belong to the poor family were not getting proper antenatal care, IFA and Calcium supplementation. Lack of awareness of low cost iron rich food material is one of the main problems of anaemia in illiterate or poor pregnant women. Overall nutrition deficiency in their diet in pregnancy period is the main problem of anaemia.

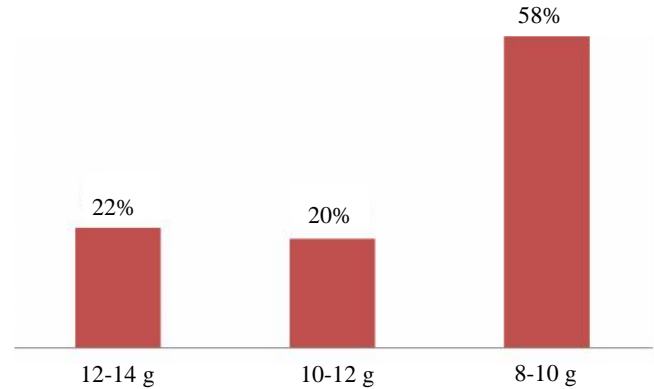


Fig. 7 (a) : Haemoglobin level

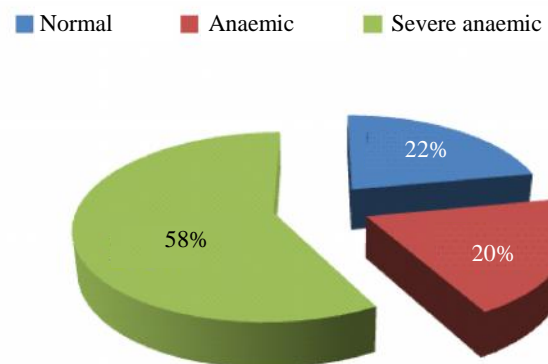


Fig. 7 (b) : Anaemia

Health status :

Out of 300 pregnant women, most of the pregnant women have some health disorder. When the data of Antenatal care Card of pregnant women was analysed, it was found that 68 per cent women had low blood pressure and 82 per cent women are low Body Mass Index, whereas 72 per cent women were underweight. 52 per cent pregnant women were suffering from different pregnancy complications *i.e.* high or low blood pressure, weakness, edema, vomiting tendency, anaemia, underweight of foetus, blood sugar, thyroid, urine albumin, eclampsia etc. The data of health status shows

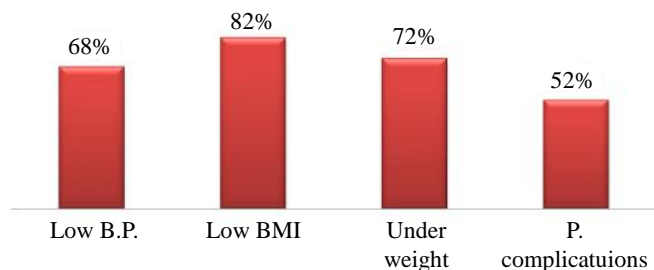


Fig. 8 : Health status

most of the pregnant women were underweight and had low BMI due to inadequate proper diet in this period.

Conclusion :

The Result of this study shows, health and nutritional status of pregnant women of rural area of Bhagalpur are poor. 53 per cent women do not get adequate diet whereas only 8 per cent women are getting balance diet. 59 per cent women are not getting supplement diet *i.e.* Milk, Pulses, Fruit, Minerals and Vitamins. Quality and Quantity of THR are poor *i.e.* only 4 per cent AWCs maintain the quality and Quantity of THR. 42 per cent women are not getting IFA and Calcium supplementation on their pregnancy period. Only 31 per cent women are benefited with 4 ANC of pregnancy period, whereas 8 per cent women not benefited with single antenatal care. 58 per cent women are found severely anaemic with Hb level below the 10mg/dl, whereas only 20 per cent women are in normal range. Out of 300 pregnant women 72 per cent women are underweight and 82 per cent are with low BMI, more than half pregnant women *i.e.* 52 per cent suffering from pregnancy complication *i.e.* high or low blood pressure, weakness, anaemia, edema, eclampsia, and other health problems. All the above results indicate that most of the pregnant women deprived from proper service of NRHM, ICDS, which are provide in a mission mode for the improvement of health and nutritional status of pregnant women. It may be concluded broadly that more than 50 per cent women do not get proper food and other health services, resulting nutritional complications which is a threat for not achieving the goals of reduced MMR and IMR in our state in particular and in our country in general.

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