

Short Communication

Compliance to Intake of Prenatal Supplements among Rural Pregnant Women - an Observational Study in Two Sub-districts in Rural Bangladesh

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ABSTRACT

A cross-sectional observational study was undertaken to determine the compliance to intake of food and micronutrient supplements among 48 rural pregnant women in two sub-districts under two Divisions of Bangladesh. All pregnant women were observed from 8am to 2pm everyday for three consecutive days. Results shows that only 27.1% of the pregnant women consumed the full packet of food supplements, 43.1% shared it with other members of their family and 29.2% did not go to collect the supplement. A total of 93.8 % women did not consume the micronutrients, iron or folate supplements during the time of observation. Necessary steps should be taken to improve delivery strategies of supplements among rural pregnant women in Bangladesh, which should include training of the service providers and health education to the pregnant women.

Keywords: Compliance, pregnant women, rural Bangladesh, supplements

INTRODUCTION

Malnutrition is a continuum of nutrient related disorders and deficiencies and is a major public health problem worldwide. Maternal nutrition focuses attention on the nutritional status of women as mothers, as it relates to the bearing and development of children. So maternal nutritional status is very important for her own health and standard of her life and the survival of her new born (Winkvist *et al.*, 2002).

Pregnancy is considered as one of the most nutritionally demanding periods of a woman's life as it involves rapid cell division and organ development. To support this tremendous fetal growth, an adequate

supply of nutrients is essential as nutrition has a significant role in optimising the health of women and the growth of babies. So additional dietary energy is required during pregnancy as it improves maternal health during pregnancy and after childbirth (Ceesay *et al.*, 1997; Forsum, 2004). Maternal malnutrition is one of the major causes of high prevalence of low birth weight (Yekta *et al.*, 2006) and may also have influence on low post partum weight retention. Increased morbidity and mortality, reduced physical activity and working capability are also due to maternal malnutrition (Hosegood & Campbell, 2003).

Malnutrition among Bangladeshi women is one of the major public health

problems. During the sixth National Surveillance Project in 2005, it was found that 36.1% of the rural mothers and 28.1% of urban slums mothers were under-nourished (HKI & IPHN, 2005). Thus it is widely recognised in Bangladesh that the scope of malnutrition requires a large-scale, programme-based approach.

The government of Bangladesh provides a nutrition programme that provides malnourished pregnant women with a body mass index less than 18.5kg/m² with food supplements. This supplement consists of roasted rice powder (80 gm), roasted pulse powder (40 gm), molasses (20 gm) and soybean oil (12 ml), providing a total of 608 kilocalories for 6 days per week. Iron and folate supplements are also provided to all pregnant women with the aim of improving the nutritional status of Bangladeshi women, so that by the year 2010, malnutrition will cease to be a public health problem (Report No.20333-BD., World Bank 2000).

The aim of our study was to find out what percentages of rural pregnant women are consuming this food supplement daily, and what proportions of the food supplements are consumed.

METHODOLOGY

This study was conducted from 19 September to 19 October 2001 in two sub-districts (unions) in rural Bangladesh. These two sub-districts were randomly selected, one each in Dhaka and Chittagong Divisions. Local non-government organisations were responsible for providing the food supplements to pregnant women starting with their first antenatal visit in the Community Nutrition Centres. All the study women were in their second or early third trimester of pregnancy.

A total of 48 women were randomly selected from the list of Community Nutrition Centres for the study. The pregnant women were observed by our female field workers from 8am to 2pm (as the Community

Nutrition Centres remained open from 9am -1pm) everyday for three consecutive days. An observation guide was prepared for the field workers and all of them were trained before the survey. The key points to observe were: woman's food preparation, food consumption, intake of iron folate supplement, visits to the Community Nutrition Centres, consumption of food supplement (sharing or eating alone) and her household members.

The field workers usually asked pregnant women whether she will be available for next three days after getting their consent. If the women agreed to the presence of the field worker in her house for the next three days, then the field workers would start observing the women. This is a sub-study of an effectiveness trial of prenatal supplementation. Ethical approval was obtained from the International Centre for Diarrhoeal Diseases (ICDDR) Bangladesh ethical review committee.

RESULTS

Among the 48 women in the study, 16% women consumed the food supplement alone at the Community Nutrition Centres, 24.3% shared their food among the women at the Centre, 17.3% consumed the food supplement alone at home, 9% shared with family members at home, 16% brought it home but did not consume the food supplement during the observation time, while 17.4% did not go to the Centres to take the food supplement.

DISCUSSION

The aim of the Bangladesh Government in providing food and micronutrient supplements to pregnant malnourished women is to add more calories to the normal calorie intake of pregnant women. We did not collect any information on the women's socio-economic and reproductive health as

our aim was not to stratify women and explain our findings in sub groups.

The study found that about the majority (90%) of the women took breakfast every day, and so it appears that they did not skip their first meal for taking the food supplement. Thus, the idea of adding additional calorie formula is not compromised by breakfast skipping. However, we found that the food supplement was not consumed in full. Sharing the food supplement was a common practice at the Centres and at home. Around 20% of the women took the supplement from the Centres but did not consume it during the observation period. There may be two possibilities that is, she might have taken it during dinner, or she might have distributed it to other family members especially her children. It is a very common cultural practice in Bangladesh that a woman shares her food with members of her household (Novak, 2006).

As about one-third of the women did not go to the Centres for the food supplement, it is important to understand the reasons behind this finding. It may be due to a lack of cooperation by the Centre staff or lack of knowledge by both the mothers and the staff regarding supplements.

As the majority of the women were not observed to take the iron folate supplement during the observation period, we deduce that a low percentage of pregnant women are taking these supplements.

While the study was limited to a small sample size, we believe that our findings of food supplement sharing and a low level of compliance to intake of iron folate supplement is typical of pregnant women in rural Bangladesh. We recommend that Community Nutrition Centres staff and pregnant mothers be provided with adequate knowledge on the importance of the food and fe-folate supplements.

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