

Maternal Nutrition

An Essential Element of Primary Health Care

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THE twentieth century has witnessed tremendous technical progress culminating in man's conquest of space and his landing on the moon. However, despite these achievements, some of the worst forms of malnutrition are haunting mankind even today. Poor nourished mother give birth to small infants whose neonatal and infant mortality rates are alarming. While there is scientific evidence of favourable effects of birth spacing and reduced family size on child health and survival, there is no knowledge regarding the role of nutrition on the reproductive capacity, gestational age, delivery, duration of labour, birth spacing and previous pregnancies. The present study was conducted at Sri Avinashalingam Home Science College for Women, Coimbatore (1984), aimed at gathering information regarding these aspects. The study revealed that the mothers who had a better food and nutrient intake appeared to have a better obstetric performance, fuller gestational period, less failures in previous pregnancies, better birth spacing and lower maternal deaths.

These results bring out the urgent need to give high priority to programmes aimed at improving the nutritional status of population groups with special reference to expectant mothers.

In view of this, I would like to bring the following aspects in relation to maternal nutrition:

1. Pregnancy and nutrition;
2. Inter-relation between nutrition, fertility and mortality;
3. Impact of nutritional anaemia on pregnancy and lactation;
4. Role of nurses in maternal nutrition programmes with reference to primary health care;
5. Problems experienced in general and by nurses in the community;
6. Recommendations.

1. Pregnancy and nutrition

Pregnancy is a crucial period in a woman's life. A mother's future health as well as the baby's health depend to a large extent on the type of diet the mother takes during and after pregnancy. The body undergoes a series of changes to create a suitable environment for the growth of foetus. It is not until the third trimester that foetal growth reaches a stage where nutrients are required in appreciable quality.

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But it is important that throughout pregnancy, the mother pays special attention to the kind and quality of food she eats.

If the mothers have suffered ill-health or nutritional deprivation in childhood, it also has a definite bearing on the offspring. Chronic undernutrition and improper diet in childhood with or without recurrent illness is largely responsible for stunting of adult stature.

It has been observed that within a society birth weights tend to be higher in upper socio-economic groups than in the lower. There are other factors too, which influence the weight at birth, like serious illness, complications of pregnancy, nutritional deprivation, emotional and psychological stress.

Studies indicate that most of the growth in the size of foetus occurs in the latter part of the pregnancy. The foetus at the 12th week is about 15 gms. and grows upto 3200 gms. around the 40th week. Such a rapid growth needs ready made nutrients. These nutrients, the foetus derives solely from the mother's body. Therefore, it is imperative that the mother takes care of her diet. Lack of proper supply of various nutrients severely affects the development of the foetus as well as the health of the mother.

In India, the death rate of women during the child bearing years is very high because of the inability of the ill-nourished mother to withstand the rigours of pregnancy and lactation. Lack of knowledge and access to information is also responsible to a large extent. Equally revealing is the analysis of the cause of infant deaths in our country. An astonishing number of infant deaths is directly related to the under-nourished condition of the mother.

The diet in pregnancy should contain large amount of "tissue building" and "protective foods" without any significant increase in the "energy yielding foods". The need for "body building" and "protective foods" particularly during the latter part of pregnancy is increased to nearly double that of the usual requirements of a woman. Nutrients such as iron, folic acid, vitamin B₁₂, proteins and vitamin C are necessary for blood formation, formation of bone, building of muscles, brain and other tissues. The "balanced diet" of pregnant woman should contain adequate amount of all the essential nutrients.

Effects of a deficient diet: Nutritional deficiency can have profound effects on the physiological adjustments in the mother as well as on the growth and development of the foetus.

Many women in the lower socio-economic groups enter pregnancy after a childhood in which under

nutrition and recurrent illnesses are common, so that they do not obtain the optimum physiological development.

Babies born basically weak are prone to infectious diseases which further undermine health and sick babies grow up to be sick men and women. Weak women give birth to weak babies again. So it is a vicious circle which must be stopped. Unless and until we all make an effort, men as well as women, take good care of a potential mother, we will not be able to hand over the world to a healthy and better generation—a generation which will be able to give its best to mankind.

Nutrition for the lactating mother: The growth of the baby is a rapid one after the birth. The nutrients required to sustain such a rapid growth are all supplied by breast milk alone in the first 3-4 months of life. Therefore, breast feeding imposes a greater strain on the mother than pregnancy, because the woman nourishes a rapidly growing baby.

The developing infant needs sufficient amounts of "body building" and "protective" nutrients for rapid growth of the tissues. Mothers' milk is the only means by which the infant gets these nutrients. So the diet of the nursing mother should contain plenty of elements which the baby is drawing upon through the milk. A balanced diet suitable for a nursing mother should contain food in slightly increased quantities. They should eat larger amounts of cereal food, green leafy vegetables, fruits, milk, egg or pulses, dried beans and nuts.

As we all know, women have various beliefs, practices regarding food during lactation. Hence the lactating women avoid green leafy vegetables, pulses etc. in some community and some regions of the country. Therefore, it indicates again, the need for education of mothers.

2. Inter-relationship between nutrition, fertility and mortality

Undernourished women have been observed to have higher incidence of miscarriages and abortions. Nutritional requirements of women of child bearing age during pregnancy and lactation are hardly met.

Studies carried out by the National Institute of Nutrition showed that mortality rates among malnourished vulnerable segments were high and increased with severity of malnutrition and degree of poverty. High prevalence rate of severe forms of undernutrition and mortality due to infection and undernutrition in infants, toddlers, women of child bearing age are seen in all developing countries. On the other hand, in developed countries, more people tend to be overweight or obese and mortality rates are lower.

All the indicators reflective of nutrition, fertility and mortality are well correlated. Mortality rates are found higher in communities where there is high fertility and poor nutritional status. Poor nutritional status is found in communities where there are high fertility rates and poor disposable income.

The observations suggest that the need for close integration of family planning, nutrition programmes and general development of health, sanitation and educational facilities. Composite package of programmes which will include, nutrition, health, sex education, family planning, immunisation, drinking water, hospital and trained health personnel availability, if operated carefully, will improve the situation.

3. Impact of nutritional anaemia on pregnancy and lactation

Incidence of nutritional anaemia is worldwide. In India, the incidence is alarmingly high. According to the Director-General, ICMR (1977), it is prevalent amongst 50% of the women in the reproductive age group. The outcome of pregnancy in anaemia: In severely anaemic mothers, the mean birth weight of full term infants has been found to be round 2.0 kg. resulting in increased perinatal mortality. Still births and premature births are more often seen in anaemic pregnant women. Anaemia is particularly severe in women. According to recent WHO publication, 61% of the women are anaemic. Maternal mortality in India is the highest in the world and anaemia is implicated in the majority of these deaths.

Most of our women become anaemic during the third trimester of pregnancy and according to the latest medical research, iron deficiency during pregnancy affects brain formation of the baby. It is also associated with low birth weights of the new born and in turn leads to high incidence of deaths or retarded development of infants and young children.

Our priority today is to increase the nation's social, and economic prosperity and improve the welfare of the people. Much has already been achieved. Yet more awareness needs to be created to generate greater participation. Through an effective anaemia control campaign led by our Government, industry, media and other sections of our society, anaemia can be controlled. We have the resources. We only need the vision.

Anaemia can be treated and prevented by consuming iron rich foods, taking iron tablets and by treating hook-worm infection when necessary. Meat, fish, liver are the best sources of dietary iron but they are also quite costly and usually beyond the reach of our masses. Mother's milk is nature's own way of helping infants absorb iron. Yet another reason for encouraging breast feeding.

Dark green leafy vegetables which are low cost sources of dietary iron as well as vitamin A and C, increase the absorption of iron.

An effective food education programme for schools, public and concerned members of the society can do much to prevent anaemia. In response to anaemia problem, the Government of India has initiated measures to distribute iron tablets to 120 million of our people. In view of this, the iron supplements are distributed to mothers in all MCH Centres, but this is not enough, unless continuous nutrition education is planned for mothers by all

health professional, this major problem cannot be solved.

4. Role of nurses in maternal nutritional programmes with reference to primary health care

The primary health care forms an integral part both of the country's health system, of which it is the central function and main focus and of the overall social and economic development of the community. It is the first level of contact of individual, the family and the community with the National Health System bringing health care as close as possible to where people live and work and constitutes the first element of a continuing health care process. Health activities should be concurrently undertaken with measures for improvement of nutrition particularly of mothers and children, increase in production and employment and a more equitable distribution of personal income, anti-poverty measures and protection and improvement of the environment. Full emphasis on community participation and ultimate self-reliance of mothers, families and community should be there to assume more responsibility for their own health.

Speaking in broad terms, the nutrition component of primary health care should be geared towards the following services;

- Providing the basic services of the minimum required medical care, immunisation and allied services;
- Teaching mothers, families and individuals on methods of better nutrition to improve dietary practices;
- Involving mothers in nutrition programmes;
- Time to time evaluation of nutrition education; and
- Nutritional programmes carried out by nurses and recognizing them.

The immediate responsibility of combating serious trends in the nutrition situation becomes the prime responsibility of every professional health workers.

Above all, we need the political will and commitment to reduce deprivation, illiteracy and poverty in our country, because, after all, ill-health and nutrition are the by products of poverty. No real success in efforts towards improvement of nutrition/health can be achieved through health providers alone. We must bring about a qualitative transformation in the recipients as well.

Finally, nurses should realise that nutritional behaviour of mothers cannot be changed with mere knowledge alone, but should interact and understand their practices closely, then provide meaningful interventions.

5. Problems faced in general

1. Nutritional instruction in schools is grossly inadequate.
2. The new ways of food processing reduces its nutritional value. eg. Using polished rice causes Vitamin B deficiency.

3. There is widespread adulteration in such items like milk, ghee, edible oils, dals etc. which results in deficiencies such as protein/calories etc.
4. The increasing attraction for tonics and baby foods seriously depletes the capacity of the people to buy sufficient food.
5. Even when there are facilities, kitchen garden is not developed.

Problems experienced by nurses in the community

1. Illiteracy of the women.
2. Cultural practices, beliefs and food customs of people particularly the older women.
3. Poverty—economically some cannot afford even the basic foods.
4. Not using the available nutritive foods.
5. Not utilizing the available nutritional programme, iron supplements, etc.

6. Recommendations

1. Health professionals particularly nurses should understand and learn the nutritional life style of people.
2. They should focus health education according to the mothers' nutritional needs and their cultural beliefs and practices.
3. Nurses should be aware of the locally available foods and their cost so as to integrate it in planning pre-natal and lactation diet.
4. They should provide people oriented health technology in carrying out nutritional education.

Therefore maternal nutrition is an important function of all nurses in bringing health to mothers particularly and maintaining the target of Health for All.

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(Continued on page 76)

information, on the basis of which sound decisions can be taken.

Understanding grief, mourning and loss

The nurse working with HIV-infected people and their families will frequently encounter mourning and loss. She or he must have a good working knowledge of culturally expected and accepted ways of expressing grief.

The nurse must be able to help HIV-infected persons and their friends face the fact of impending death. The sick should be supported for as long as possible in their own decision-making and their own self-care. The nurse should respect and support the patient's spiritual beliefs and facilitate the observance of traditional rituals related to terminal illness, death and bereavement by the patient, family and friends,

if desired. Death causes distress and disruption to the family and the nurse may need to provide counselling to ease the pain of loss or grief.

The nurse must have support in dealing with her or his own grief, particularly the nurse who is caring for people with AIDS and therefore dealing with large numbers of dying people and their relatives.

Behaviour and attitudes are shaped by tradition and background. The nurse must respect the cultural variations that exist within a locality, a group, a country or a region.

(To be continued)

Maternal Nutrition
(Continued from page 71)

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