

Improving Maternal Nutrition Through Food Security in Pakistan



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Abstract

Malnutrition casts a significant shadow over Pakistan's future, prosperity, and the well-being of its people. Compared to other developing nations, Pakistan stands out with one of the highest rates of malnutrition, affecting both children and women. Malnutrition in Pakistan is primarily due to food insecurity, compounded by low dietary intake among women, particularly pregnant and lactating women. This low dietary intake is linked to food insecurity, poor livelihood, and cultural barriers. Global guidelines emphasize the importance of meeting women's nutritional requirements through promoting a balanced and nourishing diet. The government of Pakistan, in collaboration with national and international organizations and funding agencies, has initiated various measures to alleviate prevalent nutritional concerns. Collaborative actions have been implemented to run various programs and interventions aimed at improving nutrition among children and women. Many effective approaches have been included in the Nutrition Strategy 2022-27. The Enough Food Model is one such tested approach designed to enhance food security and improve nutrition and livelihood by making families resilient. This model is being applied by national organizations in low-indexed areas with financial support from international organizations on a pilot basis and has achieved remarkable results. Like many other tested multi-sectoral nutrition approaches, the self-sufficiency or Enough Food Model is poised to be an effective approach for broader replication.

Keywords: Maternal Health; nutrition; food security

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Introduction

Malnutrition's severe and widespread effects are well recognized globally. In Pakistan, 44% of children under 5 are stunted, hindering their full development. Nutrient deficiencies and rising obesity further harm health and progress. The issue's complexity is worsened by factors like limited access to nutritious food, population growth (especially in cities), poverty, security concerns, and vulnerability to shocks. To address this, Pakistan must adopt a lifecycle approach, prioritizing children under 2, adolescent girls, and pregnant/lactating women. Targeted, context-specific interventions involving various sectors at national and provincial levels are crucial for sustainable change(1).

Malnutrition is influenced by factors like poverty, gender inequality, limited education, and restricted decision-making for women regarding their health, marriage, and childbearing. Women with lower societal status face difficulties accessing information and resources, making it hard for them to prioritize their well-being, resulting in adverse health and nutritional outcomes (2).

Maternal Nutrition

Maternal nutrition means the food and nutrients that women need before, during, and after pregnancy. This also includes teenage years if girls become mothers early. Taking care of maternal nutrition is important for women's ability to have babies, but it's also important for their overall health throughout life. In Pakistan, the health indicators related to maternal nutrition are not good. Women who can have babies (we call them Women of Reproductive Age) face three nutrition problems – they are either too thin, too heavy, or they lack important vitamins and minerals. A study in 2018 found that 14.4% of these women were too thin, 24% were too heavy, and 13.8% were very heavy. Many also had a type of low blood called anemia. About 41.7% of them had this low blood condition (2,3). These high rates of problems related to nutrition among women who can have babies show that there is a big problem of malnutrition in the country, and it seems to keep happening from one generation to the next.

A large part of households in Pakistan, specifically 37%, experience not having enough food,

and this issue is even worse in rural areas (4). Many women in the country deal with problems related to nutrition like being too thin, too heavy, or not getting enough vitamins and minerals (5). Shockingly, about 177,000 deaths happen each year in Pakistan because of mothers and children not having enough good nutrition. Adding to these problems, many households don't have enough food, and women don't get the right care before and after having a baby (6). Not having proper cleanliness and toilets makes the nutrition issues for women even worse and puts them at risk of diseases. There are also other things that contribute to these nutrition problems, like being poor, unequal treatment of women, more people living in cities, conflicts, and not having much education (7).

Poor food intake and allied factors rusted into malnutrition among the females. As per the National Nutrition Survey 2018, over half (56.6%) of teenage girls in Pakistan have a condition called anemia, which means they don't have enough healthy blood. But only a very small number (0.9%) have severe anemia, which is more serious. Girls who live in the countryside are more likely (58.1%) to have anemia than girls in the cities (54.2%). When we look at different parts of the country, places like Sindh, Balochistan, and AJK have more girls who don't get enough good food. On the other hand, in ICT, KP, and KP-NMD, there are more girls who have the problem of being too heavy or overweight (8-10).

Factors for poor nutrition among some mothers and children were studied in a study in 2022. They studied how well kids were growing by considering factors like being too short, thin, or light. They also checked how healthy mothers were by using BMI measurements. They found that certain things could make both mothers and kids less healthy. These things included the mother's age, education level, where they lived (city or rural areas), and how much money their family had. The study revealed that more mothers in rural areas were underweight compared to those in the city. However, more city mothers were struggling with being overweight compared to those in rural areas. Based on their findings, they suggested that families with fewer resources should receive extra support to ensure that both mothers and children have access to good food and stay healthy (10). There are several studies in the similar settings, which support such results, and mostly the low middle income settings not only have a higher risk of malnutrition but the rural, urban, urban rural settings at the subnational levels question the principles and practices of equity (11-14).

Malnutrition is a huge issue in Pakistan, and it's ruining the health, growth, and future of our people. We've made progress in some areas, but malnutrition is still very common. We need to focus on the root causes of malnutrition and take action now to tackle it. Investing in solutions that are sustainable, raising awareness, and working together is the best way to make sure everyone has

a healthy future. The economic costs of malnutrition are huge - it's estimated that we could lose around \$3 billion a year due to malnutrition alone, and that's only a small part of the country's GDP. We need to tackle malnutrition in all its forms, from health to agriculture, education, and social protection (15,16). It's important to provide essential nutrients, encourage breastfeeding, and make sure babies and young children are fed properly (16-19).

Poverty adversely affects maternal health through multiple factors, including poor nutrition, poor physical and mental health, leading to poor maternal outcomes (11-13). This problem must be solved and health care should be provided equally to all women at the lowest possible cost. The results showed that 54.5% of the subjects suffered from health problems due to poverty or low socio-economic status. 61.8% of the population believe that poor nutrition is the main cause of miscarriages/abortions/premature births. 57.2% of pregnant women are not satisfied with their diet plan (20).

According to Global Nutrition report (2022) Pakistan is "on track" in achieving two goals on maternal and child nutrition (MIYCN). No progress has been made towards the goal of reducing anemia among women of childbearing age. Currently, 41.3% of women aged 15-49 are affected (21). There are currently insufficient data to assess progress towards Pakistan's low birth weight goal, as well as insufficient data on low birth weight rates. Pakistan has made limited progress towards meeting its diet-related non-communicable diseases (NCD) target (22). 13.4% of her adult women (18 years and older) are obese. Obesity prevalence in Pakistan is above the regional average of 10.3% for women. At the same time, an estimated 13.9% of adult women have diabetes (10,23,24).

The nutrition related interventions implemented in Punjab and KP found that Khyber Pakhtunkhwa (KP) districts, including Kohistan and Sawat, are at risk from food insecurity affecting 34% and 15.78% of households respectively. In Muzaffargarh district, Punjab, food insecurity affected its 47% of households (25,26). The evaluated interventions were social transformation interventions for a major social paradigm shift, changing the status of women at the household and community level. Community volunteers, educational peers, social mobilizers and outreach activists played a key role in raising awareness of malnutrition and nutritional balance (14). Access to and availability of diverse and nutritious food is encouraged through gardening and planting trees with organic fertilizers.

Malnutrition is particularly prevalent in sub-Saharan Africa and Asia, slowing the growth of individual population groups and undermining development opportunities for whole countries. Hunger and malnutrition have many causes, including poverty, crisis, conflict, overpopulation, natural disasters, lack of access to health

services, nutritious food, safe drinking water and sanitation (20). There is To holistically address malnutrition and multiple causes of malnutrition, food and nutrition programs combine activities from different sectors such as agriculture, health, education, social protection and WASH (water, sanitation and hygiene)(5,7,27). I'm here. Combined. The program educates women about healthy, balanced nutrition and teaches them how to grow, store and prepare food. Knowledge of good household hygiene practices and the provision of clean water promote human health as nutrients are better absorbed and utilized by healthy bodies (10).

The Government of Pakistan and Nutrition International have launched a new implementation study to improve maternal health and nutrition. The results of this study will help facilitate the nationwide expansion of multi-micronutrient supplementation (28). An increased access to MMS will help improve maternal nutrition, birth outcomes and reduced stunting. This is a key goal of Pakistan's stunting strategy and part of the National Nutrition Plan.

Approaches for Maternal improved Nutrition

The most innovative approach in MNH is to replicate existing interventions modified for previously unapplied situations. Many of them are aimed at directly organizing and providing maternal and neonatal health services, primarily for interventions for health workers. Innovative approaches also include medical technology, interventions based on community ownership and participation, and new models of funding and policymaking. Rigorously randomized trials evaluating innovative MNH approaches are rare. Most evaluations are small pilot studies. Few studies have investigated the impact of interventions on health outcomes or focused on health equity (12).

National Maternal Nutrition Strategy 2022-27 has recommended Nutrition Specific and Nutrition sensitive Intervention to improve Maternal and child Nutrition.

Nutrition Specific Interventions

The National Maternal Nutrition Strategy 2022-27 and World Food Programme 2019 proposes the following Nutrition specific interventions for pregnant women: (2,13)

Nutrition education aiming to Increase knowledge, and improved dietary diversity and protein intake, Increased weight gain in pregnancy and increased weight loss postpartum (for obese women) through dieting and exercise

Micronutrient supplementation for reduction in anaemia and iron deficiency anaemia (IDA), Improved micronutrient status, Reduction of gestational hypertension and pre-eclampsia.

Food fortification for reduction in iodine deficiency, night

blindness and goitre prevalence, increased pregnancy weight gain, increased intake of nutrient-rich foods (vitamin A, vitamin B-6, thiamine, iodine, riboflavin, niacin, folate and iron)

Energy and protein supplementation for increased gestational weight gain, increased body mass index (BMI), decreased weight gain (in overweight women), Increased antenatal care (ANC) coverage, Increased food consumption, increased intake of protein and fat, and increased nutrition knowledge and better nutrition practices

Lipid-based nutrient supplements for increased serum α -linoleic acid concentration Increased gestational weight gain Increased mid-upper arm circumference (MUAC)

Nutrition sensitive Approaches

Integrated health care for decreased malaria and decreased incidence of sexually transmitted infections (STIs), increased use of family planning, increased hospital deliveries and screening services, and increased nutritional knowledge and provision of micronutrients

Water, sanitation and hygiene (WASH) interventions for increased knowledge of hygiene and sanitation, increased handwashing, water quality and women's hygiene, and reduced diarrhoeal morbidity and prevalence of intestinal parasites

Family planning and birth spacing awareness for increased use of family planning and increased inter-birth spacing, decreased anaemia, serum ferritin and maternal depletion, reduction in maternal mortality, and increased weight gain

Women's empowerment for increased household food security, household food consumption and dietary diversity, increased intake of vegetables, meat, fruits, iron-rich foods, vitamin A-rich foods and animal source foods, reduction in underweight status and anaemia (associations)

Income generation activities for increased women's income, empowerment and participation in household decision-making. increased knowledge of health and nutrition, increased food-related expenditures, improved household food security and increased household dietary diversity

Education of women and girls interventions for increased literacy, and reduced early pregnancy and fertility

Social protection interventions for increased self-confidence, participation in social networks and control over household resources, increased antenatal care coverage, increased knowledge of health and nutrition, increased household food security, expenditure on food,

food consumption, food share and dietary diversity, increased intake of fruits, vegetables and animal source food, and increased intake of fats and sweets

Enough Food Model – Self Sufficiency in food security

Welthungerhilfe a German based organization aiming to world without hunger has launched a program in Pakistan to improve resilience among communities through food and nutrition security. Under this program multi nutrition improving approaches have been included. The program has been implementing in various remote districts including Muzaffargarh through local implementation partners, Farmers Development Organization and Doaba Foundation a local national level organization is implementing a pilot program in drought and flood prone villages of district Muzaffargarh. For food security, mainly among women and adolescent girls there are different tested approaches are being implemented.. Major activities are Participatory Learning Approach (PLA) which educate communal females with improved maternal nutrition education. Kitchen gardening, Food Preservation and Enough Food Model approach are one of the most important and tested approaches for improving food security.

Under this program, small scale farmers mainly women are selected. For demonstration, the selected beneficiaries were provided agricultural inputs to grow lentils, fodder, seasonal vegetables, staple crop, oil seed crops, fruit plants, Bee keeping toolkit as well as bio fermentation for organic production. This approach help in improving the nutrition and food security of the household. This model is being demonstrated to 20 poor and small scale farmers having One acre piece of land for enough food model. This model enable the community to self reliant in agricultural produce and improving their livelihood. Similar model is now being replicated by the local community for improving the Maternal nutrition.

Conclusion

Malnutrition is serious issue of Pakistan, likewise children, women are also neglected in their nutrition. Poor livelihood and cultural barriers are major contributors for enhanced food insecurity leading to maternal malnutrition. Government of Pakistan is much concerned to reduce the food insecurity and improving maternal nutrition. Many tested approaches have been applied by government and developmental organization to overcome this issue. Nutrition sensitive and nutrition specific approaches are needed to reach the food security. Awareness, education and continuous concrete steps are needed to be taken.

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Authors' Contribution:

AA: Conceived and designed the analysis; wrote the article.

NF, IAK, SB: Contributed data and analysis

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