UNIT 11 INTERVENTIONS FOR REDUCING UNDERNUTRITION IN GIRLS AND WOMEN

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11.0 INTRODUCTION

Health of an individual is directly related with the intake of nutrition he or she consumes every single day irrespective of their gender or age. Taking adequate nutrition daily is the cornerstone of any individual's health. Its significance becomes even more critical with respect to women as inadequate nutrition wreaks havoc not only on the women's own health but also on the health of their born or unborn children. Therefore, children of undernourished or malnourished women have higher chance of facing cognitive impairments, short stature, lower resistance to infections. It also naturally increases a higher risk of disease and death throughout their lives.

The overall threat perception of a woman or a child's health increases manifold when we consider the problem of malnutrition. In fact, malnutrition in women and children poses a variety of threats. It reduces women's ability to survive childbirth and makes them more susceptible to infections. For example, a malnourished HIV-infected mother is more likely to transmit the virus to her baby and further experience a more rapid transition from HIV to full-blown AIDS. Moreover, women's productivity, capacity to generate income, and the ability to take care for their families are seriously undermined by malnutrition.

The significance of addressing the issue of malnutrition among women and girl child in general has a wider positive implication in developing a more healthy and prosperous society. A well-informed healthy woman in a family means donning multiple roles. She can help in generating extra income, ensuring her family's nutrition, and raising healthy children and thereby

helping in the overall development of the family. Therefore, a society free from malnourished women and children should not remain a pipe dream. We all, including civil societies, NGOs should work in tandem with the government on a war footing to make it into reality at the earliest

11.1 OBJECTIVES

After reading this unit, you should be able to:

- Explain the causes and impact of undernutrition in girls and women
- Recognise the importance of interventions to combat undernutrition
- Elaborate Global and National initiatives for addressing undernutrition in girls and women in India.

11.2 UNDERNUTRITION-STATUS OF UNDERNUTRITION IN GIRLS AND WOMEN IN WORLD AND INDIA

In order for us to understand clearly "what is undernutrition?" first, let us try to know briefly about "malnutrition "which we have come across in the introduction part. In fact, in most literature, undernutrition is used synonymously with malnutrition. However, in the strictest sense, malnutrition denotes both undernutrition and overnutrition. By malnutrition we simply refer to excesses, deficiencies, or imbalances in a person's intake of energy and/or nutrients.

Scientifically, it has been broadly classified into 3 major conditions which are mentioned below:

- **Under nutrition**, which includes stunting (low height-for-age), wasting (low weight-for-height), and underweight (low weight-for-age)
- **Micronutrient-** related malnutrition, which includes micronutrient deficiencies (a lack of important vitamins and minerals) or micronutrient excess; and
- **Overweight,** obesity and diet-related noncommunicable diseases (such as heart disease, stroke, diabetes, and some cancers).

Therefore, malnutrition encompasses all the major health issues which mankind faces today.

Globally, about one-third of the human people suffer from at least one form of malnutrition. In fact, from approximately 7.5 billion human population worldwide, around 1.9 billion population including adults and children are overweight or obese while approximately 462 million are underweight. Moreover, as per the most recent estimates of FAO, approximately 8.9 percent of the world population, or 690 million (2019), go to bed without food or suffer undernourishment in terms of energy intake. It means just over one in ten people are without food or not enough food to maintain an active life. In India, as per the State of Food security and Nutrition in the World 2022 report, around 224 million people are still undernourished[4].These

alarming figures highlight the critical nature of malnutrition as an emergency health problem in our present and future generations.

In this unit, we shall be learning in detail about one serious condition of malnutrition i.e., undernutrition with regards to women and girl child.

According to WHO, "undernutrition" is defined as insufficient intake of energy and nutrients to meet an individual's needs to maintain good health. Generally, undernutrition is categorized into 4 broad sub-forms which are as follows.

1. **Stunting-** individuals having low height in comparison with their age. (Low height for age)
2. **Wasting-** individuals having low weight in comparison with their height. (Low weight for height)
3. **Underweight-** individuals having low weight in comparison with their age. (Low weight for age)
4. **Deficiencies** in vitamins and minerals.

The effect of undernutrition is very profound in children and hence they are much more vulnerable to diseases and death. It is a consistent and pressing health issue among children and adult populations in India and around the world. However, in adulthood, since they have stopped attaining height, indices of thinness are more appropriate.

Indices such as Body Mass Index (BMI) is normally used as a standard norm. It is calculated as weight in kilograms divided by the square of the height in meters (kg/m^2). BMI is categorized into four groups according to the Asian-Pacific cut-off points and conventional WHO classification, i.e., underweight, normal weight, overweight and obese (Table 11.1).

As per 2019-21 National Family Health Survey (NFHS-5)

Women in the age group 15-49 years whose BMI is below normal has reduced from 22.9% in NFHS-4 to 18.7% in NFHS-5. The same NFHS-5 data shows that Jharkhand has the highest percentage of women, between 15 and 49 years, who have a below-normal Body Mass Index (BMI). With more than 26% which is way above the national average of 18.5%, Jharkhand women have the highest below-normal BMI in the country. The other big states which are higher than the national average are Bihar, Chhattisgarh, Gujarat, Madhya Pradesh, Maharashtra, and Odisha. Moreover, these sates also have high percentages of undernourished women.

Table 11.1. Obesity classification according to WHO and Asia-Pacific guidelines

	WHO (BMI)	**Asia-Pacific (BMI)**
Underweight	<18.5	<18.5
Normal	18.5–24.9	18.5–22.9
Overweight	25–29.9	23–24.9
Obese	≥30	≥25

Source: WHO, 2020

Check Your Progress 1

Note: i) Use the space given below for your answers.

ii) Check your answers with those given at the end of the unit.

1. What do you understand by the term "Undernutrition"?

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2. What is the difference between malnutrition and undernutrition?

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3. Mention the different forms of undernutrition.

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11.3 CAUSES AND DETERMINANTS OF UNDERNUTRITION

Undernutrition is one of the primary forms of malnutrition and hence synonymous to each other. Therefore, understanding the complex and multidimensional aspect about the causes of malnutrition becomes necessary. Generally, common people consider inadequate availability of food for consumption is the main cause of malnutrition. In fact, it is true to a certain degree, but other determinants such as lack of access to clean water, poor sanitation, access to safe, diverse, nutritious food, inappropriate child feeding practices; and inadequate health care are also equally responsible for the cause of malnutrition. However, the root causes of malnutrition are even more complex as it encompasses the broader economic, political, social, cultural, and physical environment of our society.

To understand the causes and determinants of malnutrition in a simpler manner, we shall discuss in three different segments viz. immediate causes, intermediate causes, and socio-cultural factors.

➢ **Immediate Causes**

- **Inadequate dietary intakes:** The diets for women are often too poor to meet their daily nutritional needs specially in India and other low-income countries. Apart from this, lack of awareness of nutritional qualities of food, irrational beliefs about food, inappropriate child nurture and feeding habits, all these factors lead to an overall undernutrition status in the family.

- **Diseases:** The impact of infectious diseases like malaria, HIV, intestinal helminths, and other chronic diseases such as tuberculosis and measles may precipitate acute malnutrition among women and children and aggravate the existing nutritional deficit.

➢ **Intermediate Causes**

- **Poor water and sanitation and health services:** The growth and nutritional status among adolescents are directly or indirectly affected by lack of water, sanitation, and hygiene (WASH).There is a significant correlation with poor nutritional status of adolescent girls and poor WASH practices like water facility outside the household premise, non-use of soap after defecation, unhygienic sanitation facility.

- **Food insecurity:** It means lack of regular access to enough safe and nutritious food for normal growth and development by an individual or a group of individuals for having an active and healthy life. Therefore, food insecurity increases the risk of malnutrition in all its forms whether it is of relative change or absolute severity. It mainly affects certain groups of population such as pregnant mothers, families with children, elderly people, and people of low-income groups. These groups become more susceptible to dietary inadequacies due to food insecurity.[8]

➢ **Socio-cultural factors**

- **Gender inequality:** Gender bias against girl children is a major issue in India and other low-income world countries as it reduces their access to nutrition considerably and thereby leading to higher mortality rates. In most of the poor households, women, and preschool children especially girls receive less food than the economically active male members. In context to India, the parents' preference for male children has been linked with an increased likelihood of stunting in their girl children**.** This concerning gender bias against girl child led to about one-half month shorter breastfeeding duration of girl child than boys on an average. Moreover, as per *National Family and Health Survey* (NFHS), over 30% of Indian women have experienced domestic abuse physically, sexually, or emotionally by their

husbands or family members at some points in their lives. Therefore, such type of experience by any women has a very significant negative impact on her nutritional status.

- **General poverty and illiteracy:** It is a commonly considered notion that poverty acts as an amplifier of malnutrition. Below poverty and lower income families have low purchasing power, and hence they cannot afford to buy the desired amount and desired quality of food for their family. This led to a vicious cycle of poverty, undernutrition, diminished work capacity, illiteracy, low earning, and poverty. Therefore, poor families are more likely to be affected by different forms of malnutrition as they are trapped under the vicious cycle of poverty. Furthermore, due to illiteracy, women and children tend to ignore nutritional qualities of food and practice irrational food habits because of social taboos about foods. Hence, uneducated women and girls have been shown to have a higher probability of being undernourished.

- **Large families**: The main reason for having large families is due to rapid succession of pregnancies and birth. It may be due to family tradition or lack of family planning. Ultimately, it adversely affects the nutritional status of the mother, and all the children as per capita availability of food becomes very less if the family is from a low-income family.

11.4 IMPACT OF UNDERNUTRITION IN GIRLS AND WOMEN

As we all know that nutritional deficiencies are more serious in women than men for various reasons such as low social status, poverty, and lack of education. Globally, about 50 % of all pregnant women are anemic, and around 120 million women in less developed countries are underweight. However, in regions like South Asia and Africa, an estimated 60 % of women are underweight. Due to undernutrition, women's productivity is seriously impacted and subsequently lead to increased rates of illness and mortality.

Since India is known for its young population, the impact of undernutrition to its young adolescent population of about 243 million in the age group 10-19 years is very consequential. Therefore, the nutritional status of adolescents, especially girls,is an important health issue as it is the period of growth and hormonal changes. During this critical period of growth, providing adequate nutrition for them is of prime importance for the overall development of the body and also for healthy reproductive and adulthood phase.

According to research reports, it is an established fact that undernourished adolescent girls have a greater possibility of becoming undernourished mothers. Then, these undernourished mothers have a higher chance of giving

birth to undernourished babies, perpetuating an inter-generational cycle. This cycle can be compounded further in young mothers, especially adolescent girls who begin childbearing before they have grown and developed enough. Moreover, shorter intervals between pregnancies and having many children can exacerbate the nutrition deficits, which are then passed on to their children."Foetal stunting" is one of the major reasons for stagnant levels of undernutrition among babies and children in India. It mainly occurs due to poor nutrition of women before conception and in the first trimester of pregnancy**.** Therefore, addressing the issue of malnutrition among adolescent girls, especially among the early adolescents should be given major attention as it will break the inter-generational cycle of undernutrition which will ultimately improve the overall condition of malnutrition in India and the world.

Check Your Progress 2

Note: i) Use the space given below for your answers.

ii) Check your answers with those given at the end of the unit.

1. What is inter-generational cycle in undernutrition?

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2. Name each two immediate and intermediate causes of undernutrition.

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11.5 INTERVENTIONS FOR REDUCING UNDERNUTRITION IN GIRLS AND WOMEN

The global problem of undernutrition among women and girls is a well-established health and social issue even in the 21st century. They are the most crucial segment of the population, on which socio-economic development of not just the generation of today but the generation of tomorrow depends. In fact, young women are "the mothers of today" and the young girls are 'mothers of tomorrow" but they still represent the most neglected segment of the population.

Furthermore, it is even more significant to address the issue of undernutrition among women and girls to break the inter-generational cycle which we have discussed earlier. Unless we break this cycle, the problem of undernutrition

will always remain cyclical in nature. Therefore, since the last few decades different multiprong approaches have been in practice through different programs to mitigate the issue. In fact, significant progress has been made till date, but we still have a long way to go to completely address all forms of malnutrition including undernutrition.

Before we discuss the current global and national interventions in mitigating the problem of undernutrition in women and girls, let us briefly recollect some of the historical groundbreaking decisions undertaken to overcome the overall challenges of malnutrition including undernutrition. The 1948 Universal Declaration of Human Rights (UDHR)was the first official global documents addressing food security and global malnutrition. In this document, access to food was part of an adequate right to a standard living was explicitly written. The world leaders during this era realized that without having food security it was impossible to fight hunger which is the root cause for all forms of malnutrition including undernutrition.

In 1974, the first ever World Food Conference was held in Rome, Italy,it culminated the Universal Declaration on the Eradication of Hunger and Malnutrition adopted by a United Nation's resolution on 16th November 1974 with signatories by all the participating 135 countries at the World Food Conference. Even though it was not a legally binding document, it ultimately outlined and provided guidance as to how the international community should work towards fighting and solving the growing global issue of malnutrition and hunger.

In the early 1990's, the world leaders, and international organizations like **UN, WHO, FAO,** UNICEF realized that there was no significant progress in their fight against hunger and malnutrition. Hence, a more concerted collaborative effort was needed to fight the persistent problem of hunger and malnutrition due to rapid increase of population in developing and low-income groups in Asia and Africa. With a new vision and approach, the most significant decision the world leaders took was at the United Nations Millennium Summit, September 2000.They agreed to 8 specific and measurable development goals and 18 targets which later came to be known as the Millennium Development Goals (MDGs). Out of the 8 **MDGs**, the below 3 **MDGs** (Table 11.2) primarily addressed in mitigating the global problem of all forms of malnutrition.

Table 11.2: Millennium Development Goals (MDGs) in improving malnutrition in women and adolescent girls

Millennium Development Goals	**How improving women and adolescent girls' nutrition helps?**
Goal 1: Eradicate extreme poverty and hunger	
Halve, between 1990 and 2015, the proportion of people who suffer from hunger.	• Well-nourished women and adolescent girls means better health status for themselves, their children, and families as well.

	• Well-nourished mothers and adolescent girls means giving birth to healthy babies, and hence they are less likely to ever suffer from any form of malnutrition.
Goal 4: Reduce child mortality	
Reduce, by two-thirds, between 1990 and 2015, the under-5 mortality rate.	• Well-nourished mothers are less likely to bear low birth-weight babies, who are more likely to die in infancy.
Goal 5: Improve maternal health	
Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio.	• Well-nourished adolescent mothers are less likely to experience obstructed labour than their undernourished peers.

Source: Elder, L., & Ransom, E. (2003)

In fact, the above highlighted MDGs could reduce significantly the burden of hunger and extreme poverty from approximately 1.9 billion in 1990 to 836 million in 2015. However, there were some 795 million people around the world who still go hungry and around 800 million people who live in extreme poverty. Therefore, as a replacement to MDGs, the United Nations adopted the Sustainable Development Goals (SDGs) in September 2015. SDGs are a set of 17 global goals with specific targets by 2030[11]. Out of these, the following 3 SDGs are directly or indirectly associated in combating the problem of all forms of malnutrition including undernutrition (Table 11.3).

Table 11.3: **Sustainable Development Goals to combat all forms of malnutrition and hunger**

Goals	Target
SDG 2: Zero Hunger	
End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	• This goal acknowledges the significant advancement made from 2000-2015 in combating global hunger and malnutrition. However, it also acknowledged that ending hunger, food insecurity and malnutrition for all will require continued and focused efforts, especially in Asia and Africa. • One of the major targets is to end all forms of malnutrition and achieving by 2030 on stunting and wasting (by 50 %), addressing the nutritional requirements and needs of adolescent girls, pregnant, lactating women.

SDG 3: Good Health and Well-being	
Ensure healthy lives and promote well-being for all at all ages	• The major target is reduction of 1/3rd premature mortality, prevention, and treatment from non-communicable diseases, promote mental health and well-being, universal health coverage including financial risk protection, access to quality essential health care services and access to safe, effective, quality, and affordable essential medicines and vaccines for all.
SDG 5: Gender Equality	
Achieve gender equality and empower all women and girls	• To end all forms of discrimination against all women and girls everywhere it would take another 40 years for women and men to be represented equally in National political leadership. About more than 1 in 4 women (+15 years) are subjected to intimate partner violence (641 million) at least one in their lifetime. As per the data, only 57 % women (15 to 49 years) are making their own informed decisions on sex and reproductive health care.

Source: United Nations(2015)

In order to achieve the above 3 SDGs by 2030, different international organizations have been working relentlessly in collaboration with countries which are greatly affected by all forms of malnutrition. One such targeted major intervention which have been undertaken by major international organization to specifically address the problem undernutrition among women is the UNICEF's five programmatic priorities.

The United Nations International Children's Emergency Fund (UNICEF) has set out global goals and targets associated with women's nutrition in commensurate with SDG-2 and SDG-3 and as well as World Health Assembly nutrition goals and 2030 targets. They have strategically outlined five interventional priority program that will support in achieving the goal and objectives for prevention of all forms of malnutrition in women (**Table 4**).

Table 11.4: UNICEF's five programmatic priorities for maternal nutrition

Programme Priority	**Action plan**
1. Women's nutrition before pregnancy	• To improve the nutritional status of women before pregnancy.

	• To strengthen food environments for women and their communities; create opportunities to reach women before pregnancy with nutrition counselling, micronutrient supplementation and social and behaviour change communication (SBCC) • Scale-up large-scale food fortification, including fortification of salt, wheat flour, rice, and cooking oils.
2. Women's nutrition during pregnancy	• To reflect global recommendations on healthy eating, micronutrient supplementation (either IFA or MMS; and calcium), screening for micronutrient deficiencies (including anemia), deworming prophylaxis, weight gain monitoring, and counselling on physical activity and rest for pregnant women.
3. Women's nutrition during the breastfeeding period	• To improve the nutritional status of breastfeeding mothers (e.g., family-friendly policies) • To reflect global recommendations on healthy eating, micronutrient supplementation, deworming prophylaxis, physical activity, and rest during breastfeeding periods. • To strengthen the quality of nutrition counselling and support for breastfeeding mothers during postnatal care visits.
4. Nutrition of adolescent mothers and other nutritionally at-risk women	• To provide nutrition care and support to pregnant adolescent girls, breastfeeding adolescent mothers and other nutritionally at-risk pregnant and breastfeeding women. • Supporting counselling and nutrition services for adolescent mothers and other nutritionally at-risk women, including adherence to recommended micronutrient supplementation protocols and the use of BEP supplementation where appropriate. • In settings where adolescent pregnancies are prevalent, **UNICEF** will engage with child protection systems and key community stakeholders, including religious leaders, to identify opportunities to prevent adolescent girls and women from becoming

	malnourished before and early in pregnancy and while breastfeeding. UNICEF will also create links with social protection systems to provide targeted support to nutritionally vulnerable adolescent girls and women.
5. Innovations for maternal nutrition	• Advocate and create an enabling environment to support actions that prevent overweight and obesity in women, in line with UNICEF's program guidance on preventing overweight and obesity in children and adolescents. • Such actions include support for policies, including fiscal measures and marketing regulations, that not only create disincentives to promote unhealthy foods and beverages but provide incentives for healthier options. • UNICEF recommends that, among countries with a prevalence of overweight in women greater than 30 per cent, significant focus be placed on the prevention and management of overweight and obesity in maternal nutrition programming. • UNICEF will also undertake the necessary analysis to design programs that address the drivers of overweight and obesity in women. Core interventions supported by UNICEF will emphasize overall dietary quality, appropriate weight gain prior to and during pregnancy, and physical activity.

Source: UNICEF Programming Guidance, Maternal Nutrition Prevention of malnutrition in women before and during pregnancy and while breastfeeding, 2022

The Government of India has been working relentlessly to improve the lives and livelihood of its citizens since independence. Some of the ground-breaking initiatives India has taken up in the course of her great independent journey till date with regards to food, hunger and poverty are the Green Revolution of 1960s, the White Revolution of 1970s, the Yellow Revolution and Blue Revolution of 1980s which made India a self-sufficient country in food grains and helped in alleviating hunger and poverty. However, despite the substantial progress in food production, India remained one of the poorest and the most malnourished country even by the end of the millennium. Therefore, understanding the gravity of the situation, the then government

initiated one of the first targeted nutrition policy to address the acute problem of malnutrition and hunger in the country. Thus, India's first National Nutrition Policy 1993 was formulated.

The National Nutrition Policy (NNP) 1993 could identify key nutrition intervention areas and strategies that will be undertaken during that period with the help different programmes of different government departments. In fact, the policy has expanded to meet the ever-changing landscape of hunger, malnutrition, and poverty in the country. NNP envisaged the concept of direct and indirect interventions and below are the following.

Direct Interventions- Short Term

1. Expanding the Safety Net: Maternal Care, Health, and Nutrition

According to LANCET Series on Maternal and Child Nutrition 2013, reflects the importance of adolescent girls and maternal nutrition for ensuring healthy fetal growth and development. Therefore, addressing low birth weight is critical for an improved nutrition across the life cycle- while recognizing that improvements in birth outcomes call for a longer term inter-generational perspective.

Interventions for maternal care, health, and nutrition

- To improve supplementary nutritional support during pregnancy and lactation period (ICDS).
- To improve antenatal care - including health and nutrition counselling, consumption of adequately iodized salt, IFA supplementation, and screening/management of ***severe anemia***.
- To enhance maternity protection through the effective implementation of PMMVY
- Institutional deliveries, lactation management, improved post-natal and new born care.
- Promoting marriage timely marriage, first pregnancy, inter pregnancy recoupment/ birth spacing and shared care/parenting responsibilities.

*ICDS- Integrated Child Development Services Scheme, IFA- Iron Folic Acid, PMMVY- **Pradhan Mantri Matru Vandana Yojana**

Reaching the Adolescents- Adolescent Care, Nutrition and Health

Discriminatory social practices that constrain the nutrition, health, education, and development of girls should be protected. During such perfect time, the girls should be empowered with life skills (including informed choices related to nutrition and health) for enabling them to achieve their development potential.

The interventions for Adolescent Care, Nutrition and Health

- Right to equal care for the girl child at different stages of life cycle. It could be linked to the initiative *Beti Bachao Beti Padhao.*
- To improve access to health care, counselling support, ARSH and deworming (MHFW National Deworming Initiative).
- To improve access to nutritional support through Mid-Day Meals (MDM) in schools (MHRD) and through SABLA program for out of school girls.
- Universal access to IFA supplementation for both girls in school and out of school.

*ARSH-Adolescent Reproductive Sexual Health, MHFW- Ministry of Health and Family Welfare, MHRD-Ministry of Human Resource Development, SABLA-Rajiv Gandhi Scheme for Empowerment of Adolescent Girls

2. Fortification of Essential Foods

Fortification is one of the most effective ways to reduce micronutrient deficiencies. So, essential food items should be fortified with appropriate nutrients, e.g., salt with iodine and/or iron. Fortification of other food item such as iron fortification of rice and other cereals should be intensified to combat the high percentage of anaemic women and children.

3. Popularization of Low-Cost Nutritious Food

As women and children are economically dependent on men a concerted effort should be made to produce and popularize low-cost nutritious foods from indigenous and locally available raw material for better accessibility of nutritious foods. In the whole process women should be involved for socio-economic upliftment.

Control of Micronutrient Deficiencies or Vitamin and Mineral Deficiencies

Micronutrients are vitamins and minerals that humans need to consume in small amounts for better health and development of the body. Its deficiencies often coexist with protein energy malnutrition **(PEM).** They also have independent and interacting effects on health, growth and immunocompetence. **IDA** (Iron Deficiency Anemia), Vitamin A Deficiency, and **IDD** (Iodine Deficiency Disorder) are some of the public health problems which must to be addressed through a comprehensive approach such as public health measures, dietary diversification, nutrient supplementation, and horticultural interventions.

Iron Deficiency

Iron Deficiency Anemia in women and adolescent girls comprises for more than 50% of anaemia. Apart from food fortification mentioned above, to combat this acute deficiency of iron, major interventions need to be applied including the promotion of dietary diversification- improving intake of iron

and folate rich dark green leafy vegetables and vegetables and also inclusion of vitamin C rich foods to improve iron absorption. IFA supplementation should be made readily available to vulnerable groups such as preschool children, adolescent girls, and pregnant women, etc.

A. Indirect Policy Interventions

1. Food Security

Food Security has many dimensions beyond production, and demand. It includes 'availability,' 'accessibility' and 'utilization' which includes 'absorption' and bioavailability of food making it inclusive of 'Nutrition Security. 'Food security can increase the risk of some forms of malnutrition e.g., stunting, micronutrient deficiencies etc.

2. Public Distribution System (PDS)

PDS is one of the most effective tools in ensuring an equitable food distribution. So, proper implementation of current PDS and its expansion is a must in order to ensure availability of essential food articles such as coarse grains, rice, wheat, pulses, Jagger sugar and oil. It must be convenient and at reasonable prices particularly for those living below the poverty line, either urban poor or rural poor. Therefore, encouragement shall be given to the consumer cooperatives and adequate number of fair price shops shall be opened in all areas.

3. Health & Family Welfare

The health and family welfare programs are an indispensable part of the strategy. Therefore, improved pre-natal and post-natal care to ensure safe motherhood should be made accessible to all women irrespective of its socio-economic conditions. Women and girls in the reproductive age group should be empowered through education about the merits of small family and hence be responsible for their own family size. This will not only help their personal wellbeing but also for their whole family as well through proper hygiene and nutrition.

4. Nutrition Surveillance

Nutrition surveillance is one aspect that requires an immediate attention. The **NNMB/NIN** (National Nutrition Monitoring Bureau/ National Institute of Nutrition) of **ICMR** (Indian Council of Medical Research) needs to be strengthened to monitor the nutritional status of children, adolescent girls, and pregnant and lactating mothers in a more effective manner. NNMB should serve as an Early Warning System for initiating prompt action apart from the regular impact assessment of the ongoing nutrition and development programs.

5. Monitoring of Nutrition Programmes

To ascertain the progress or success of any program monitoring is of very vital. Hence, monitoring of the various undergoing nutrition programs (viz ICDS) should be properly done through all its 67 centers & field units of

Nutrition Education and Demonstration by the Food & Nutrition Board. In a step forward, the transfer of Food & Nutrition Board to the Department of Women & Child Development has already been approved by the Prime Minister. It will ensure an integrated set up and help dealing the problem of nutrition more effectively with adequate technical & field level set up.

6. Education and Literacy

Education and Literacy has been shown as a key determinant to attain better nutritional status. For example, Kerala has the highest literacy level and also the best nutrition status, this clearly shows the interrelationship despite the fact that calorie intake in Kerala is not the highest among all States in the country.

India is still one of the highest undernourished countries at present with more than 224 million people, mitigating the problem of hunger, poverty, and malnutrition in line with SDG 2 is the only way out. Hence, the government had introduced an overarching scheme called ***POSHAN Abhiyaan*** or the National Nutrition Mission in commensurate with SDG 2.

In fact, ***POSHAN Abhiyaan*** was instrumental in presenting a micro-analysis of the problems pertaining to nutrition in the country. It offers a wide range of solutions to those problems and also seeks to evaluate and monitor the progress of the program from time to time.

The programme has been built on the below four-pillar strategy

- Inter-sectoral convergence for better service delivery
- Use of technology for real-time growth monitoring and tracking
- Intensified health and nutrition services for the first 1000 days
- Jan Andolan (People's movement)

The main objectives of the programme are

- Reducing the level of under-nutrition
- Enhancing the nutritional status of children in the country
- Improving the nutritional outcomes of adolescents, children, pregnant women, and lactating mothers

Specific Targets

- Reduce stunting by 2% annually.
- Reduce under-nutrition by 2% annually.
- Reduce anaemia by 3% annually.
- Reduce low birth weight by 2% annually.

Further, the programme also involves various other schemes such as National Health Mission, Janani Suraksha Yojana, Pradhan Mantri Matru Vandana Yojana, Scheme for Adolescent Girls, Swachh Bharat Abhiyaan. It enables in bringing synergies among these schemes through an ICT-based real-time

monitoring system, incentivizing states, robust convergence among the various related schemesand optimizing Anganwadi centres' functioning.

Lastly, with the newly launched national programmes like POSHAN Abhiyaan along with the other various ongoing nutrition related programmes such as ICDS, NNP, MDM, PMMVY, IGMSY, etc, and through the proper intervention strategies which have been highlighted above would help India in realizing the Sustainable Development Goal 2 by 2030.

Check Your Progress 3

1. What was the first official global documents addressing food security and global malnutrition?

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2. What was the significance of the first World Food Conference, 1974?

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3. Mention the Millennium Development Goals associated with malnutrition.

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4 Mention any 3 important national intervention programmes for undernutrition.

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5 Name the five programmatic priorities of UNICEF?

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11.6 LET US SUM UP

- The main causes and determinants of undernutrition in women and girls are inadequate dietary intake, diseases, food insecurity, gender inequality, etc.
- The impact of undernutrition in women and girls is reflected in terms of economic growth and overall well-being of society.
- Various global and national intervention strategies have been taken across the world in order to mitigate the problem of undernutrition in women and girls.

11.7 KEY WORDS

Food fortification : The process of adding micronutrients such as iodine, iron, Vitamin A etc to food

Food adulteration : Addition of another substance to a food item in order to increase the quantity of the food item in raw form or prepared form, which results in the loss of actual quality of food item.

Anemia : Condition in which you lack enough healthy red blood cells to carry adequate oxygen to your body's tissues

Food security : Measure of the availability of food and individuals' ability to access.

11.8 REFERENCES AND SUGGESTED FURTHER READINGS

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11.9 KEYS TO CHECK YOUR PROGRESS

1 Check your Progress 1

1. According to WHO, “undernutrition” is defined as insufficient intake of energy and nutrients to meet an individual’s needs to maintain good health.
2. Malnutrition denotes both undernutrition and overnutrition which includes excesses, deficiencies, or imbalances in a person’s intake of energy and/or nutrients. Whereas, undernutrition, includes stunting, wasting, and underweight.
3. Different forms of undernutrition are**:**
   a) Stunting (low height-for-age),
   b) Wasting (low weight-for-height), and
   c) Underweight (low weight-for-age)

2 Check your Progress 2

1. Undernourished adolescent girls have a greater possibility of becoming undernourished mothers then; they have a higher chance of giving birth to undernourished babies, perpetuating an inter-generational cycle.
2. Immediate causes: Inadequate dietary intakes and Diseases

Intermediate causes: Poor water and sanitation and health services and Food insecurity

3 Check your Progress 3

1. Universal Declaration of Human Rights (UDHR)
2. It culminated the Universal Declaration on the Eradication of Hunger and Malnutrition, adopted by a United Nation's resolution on 16th November 1974 with signatories by all the participating 135 countries at the World Food Conference.
3. SDG 2. Zero Hunger: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture
4. A. Expanding the Safety Net: Maternal Care, Health and Nutrition, B. Reaching the Adolescents- Adolescent Care, Nutrition and Health, C. Fortification of Essential Foods**.**
5. 1. Women's nutrition before pregnancy, 2. Women's nutrition during pregnancy, 3. Women's nutrition during the breastfeeding period, 4. Nutrition of adolescent mothers and other nutritionally at-risk women and 5. Innovations for maternal nutrition.

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