Malnutrition Challenges and way Forward: An overview of India

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Abstract: *Nutrition is an essential part of better health. Thus, ancient system of medicines followed the principle. Good Health and Nutrition contribute significantly to human capital and the growth and development of the country. India had poor health and nutritional indicators at the time of independence in1947. in 1950's the life expectancy in India was 32 years which has increased to 68 years in 2017. the infant mortality rate (IMR) which was nearly 200 per 1000 live births and maternal mortality ratio was around 2000 per 100000 live births. The infant mortality rate falls to 33 per 1000 live births in 2017. on the other hand maternal mortality rate (MMR) was 130 per 100000 live birth during the period of 2014-16. Over the years, through targeted interventions and schemes the proportion of population living below poverty line has declined and even food production availability has increased drastically, through number of initiatives in agriculture and allied sectors. However, the nutritional status of population has not witnessed the commensurate decline. India has high rate of under nourished population with marginal improvement in situation in last 25 years. The prevalence of underweight, stunted and wasted is higher in rural areas than urban. On the other parameters of nutritional status such as level of anemia in population groups and birth weight of new born is also slow. Recogonising the challenges, the Government of India had a series of initiatives and programme since independence which emphasis on improving the nutritional status of the population.*

Keyword: Malnutrition, Food, Health, Challenges

Introduction:-

It is worth mentioning that better health and nutrition not merely have a positive impact on individual's development but also constitute significantly to the overall progress of the country. So it is right to call them the wheels of the country's progress. Health and nutrition not merely play a vital role in making human life dynamic, capable and prosperous, but it too has the potential to empower, develop and strengthen the nation. Proper nutrition level pre requisite to secure a progressive improvement in the health of an individual. Good nutritional status ensures that individual can fight disease causing agents, stays healthy, be productive to the society and contribute to the power or development.

Article 21 of the constitution of India guarantees every citizen of the country the right to live in the dignity and the protection of personal liberty. The Supreme Court of India also held that the right to live with human dignity as described in Article 21 of the Indian Constitution is derived from the directive principles of State policy and includes in the protection of health. Article 25 of the United Nations Universal Decoration of Human Rights envisages that everyone has the right to the standard of living adequate for health and well being of himself and of his and her family. This encompasses food, clothing, housing, medical care and necessary social services. The inter-leakage between health and nutrition has been recognized since ages. Health and nutrition contribute to human capital formation, growth and development of a Nation.

Under-Nutrition means, when the individual lack a lot of attributes of balanced diet in his/her need. Under-Nutrition in children, especially in foetus during pregnancy and up to two years of age can take away up to 15 IQ prints. A study conducted by the World Bank has estimated that the annual cost of malnutrition in India is at least US$ 10 Billion and is driven by the loss of productivity, illness and premature death.

Alongside, illness in an otherwise normal weight person can lead to under-nutrition which can spiral into vaccine cycle. Apparently, the challenge of malnutrition is multi-layered. It is merely not the under-nutrition, the over-nutrition, (Obesity, protein hunger and hidden hunger or micro nutrients deficiencies) in otherwise normal weight person is the other dimensions. The terminology of malnutrition is commonly used to capture the under and over nutrition and the related challenges. However, in a particular setting, burden was predominantly of one type of malnutrition.

It is being recognised that in many setting and countries, both under and over nutrition are increasing as an emerging challenge depicted as 'Double Burden of Malnutrition' (BDM). The BDM co-exist in many settings and affects the health outcomes and survival of population. While, under nutrition continues to be a major and emerging challenge in India on the other hand, the problem of over nutrition is also real. There is a consistent rise in the problems of under-nutrition, micro-nutrition deficiencies, obesity and diet related chronic diseases across the globe. Energy/Nutrition unbalanced may result in poor physical and cognitive development, mobility and mortality as well as multi-division loss of human potential which is from affecting socio-economic development. Many developing countries of the world including India are presently facing several health problems at both ends of nutrition spectrum bearing dual problem of malnutrition. Malnutrition, according to (WHO) refers to deficiencies, access or unbalances in persons intake of energy and /or nutrients. Therefore, hundreds of millions suffer from chronic degenerative diseases caused by excessive or unbalanced diet. Many countries are still struggling to feed the population on the other hand also facing the cost of preventing obesity and treating diet related non-communicable diseases (NCBS)

Article 47 of India Constitution states that, it is the duty of state to raise the level of nutrition and standard of living and improved public health.

Review of Literature

A. Chandrasekar and D. Xaviour (1998) conducted a study of nutritional status of the Adi Karnataka community who were found to be of lower medium stature with an average body built. The study revealed higher frequency of females than males in the age groups of 0-14 years and 65+ years, whereas in the age groups of 15-44 years 17 and 45-64 years, the reverse trend was observed among the Adi Karnataka people. Consumption of fat and calcium were found to be higher.

Vidya (2003) evaluated the nutritional status of the children of Dharwad slums. Certain parameters like anthropometric measurements, clinical examination, haemoglobin estimation, dietary survey, morbidity patterns and socio-economic conditions were used to assess the nutritional status of Dharwad slum children. Malnutrition was found among the children of parents who were casual labourers. Poor environmental factors and inadequate health care facilities also contributed to the nutritional problems.

Vijayashree Mathad (2011) assessed the nutritional status of under-five years of age as a cross sectional study conducted in Kakati-A sub-centre, under the Primary Health Centre at Vantamuri in Belgaum district. The sample size was 290. The prevalence of underweight, stunting and wasting was observed to be 26.55%, 31.38% and 7.59%, while severe degree of underweight, stunting and wasting was observed in 5.86%, 27.24% and 6.51%, respectively, in terms of World Health Organization (WHO) 2006 classification. According to the Indian Academy of Paediatrics (IAP) classification, the prevalence of Grade I malnutrition was 121 (47.10%), Grade II was 29 (10.00%), and Grade III and IV were 4 (1.40%). She concluded that majority of the children's diet was not adequate for necessary calories and proteins as per Indian Council for Medical Research (ICMR) guidelines. Less than half of children were underweight, nearly one third were stunted, and one fifth of children were categorised under 'wasting'. No child was found to be overweight or obese.

Alim and Khalil (2012) conducted a cross-sectional study in six government primary schools of urban areas of Aligarh city. The mean height and weight of the children was compared with that of ICMR standard. The mean difference between 25 them was studied by't' test and it was concluded that the difference is statistically not significant (P> 0.05). The prevalence of stunting of boys and girls was 75.35% and 74.68%, respectively and wasting was observed as 86.95% for boys and 76.53% for girls.

Statistically, age was significantly associated with wasting among girls only (P<0.05). The study revealed poor nutritional status of school going children while receiving mid-day meal every day.

Objectives-

- To find the impact of malnutrition on health of Indian women and children.
- To put insight on the key government initiatives, policies and programs to tackle the malnutrition challenges.
- To suggest policy measures to curb the problems of malnutrition in India.

Database and Research Methodology:

The paper is exclusively based on the secondary source. The various sources from which the relevant data collected are India council of Medical Research (ICMR) Reports, Recent Comprehensive National Nutrition Survey (2016-18). School of planning and Architecture, Delhi, National Family Healthy Survey -1 NFHS-1(1992-93), NFHS-2(1998-99), NFHS-3 (2005-2006), NFHS-4(2015-16) WHO reports, Ministry of health are family welfare, Govt. of India and other published world. Whenever necessary it is both descriptive and analytical in nature.

General Findings:

India persistently faces high levels of maternal and child under nutrition as well as anaemia, characterized by an inter-generational cycle that is compounded by multiple deprivation caused by poverty, social exclusion and deeply entrenched gender discrimination.

Malnutrition refers to deficiency, excess or unbalanced intake of energy and/or important nutrients by an individual as compassed to his/her needs. The term malnutrition powers ‘under nutrition’ that includes under weight (low weight) for age then their reference growth standard (Median). An underweight can be stunted, wasted or both.

Stunting refers to impaired growth and development of the children due to poor nutrition, repeated infections and lack of adequate physic, social stimulation. Children with height for age below minimum to standard deviations (L-25B) of the reference values are defined as stunted.

Wasting in children is an indicator of active under nutrition, usually as a result of insufficient food intake or a high incidence of infectious diseases, particularly diarrhoea on the other hand on wasting emphasis immune system of the child which not only lead to increased susceptibility to infection/diseases but the severity and duration of mobility is also enhanced and very often and evaluated risk of mortality rate too.

While over-nutrition is measured by incidence of over weighted, obesity and diet related non communicable diseases (NCDS) comprising of health disease, stroke, diabetes and cancer in blue colon under nutrition on persistent challenges. India had a poor health and nutritional standard at the time of Independence.

In 1950’s, the life expectancy in India was 32 year, which has increased now to 68 year in 2017. The infant mortality rate (IMR) was merely 200 per 1000 live birth and maternal mortality (MMR) rate was 2000 per 100,000 live births. While infant mortality rate (IMR) reduced to 33 per 1000 live birth. Whereas maternal mortality rate (MMR) reduced to 130 per 100,000 live births during the period of 2014-16 over the past few years, through targeted intervention. The proportion of population living below poverty line has declined significantly more over the food production and availability drastically increased.

With the help of green revolution and other imitation on the part of Government of India order taken in agriculture and allied sectors. However nutritional status of population has not shown commensurate decline.

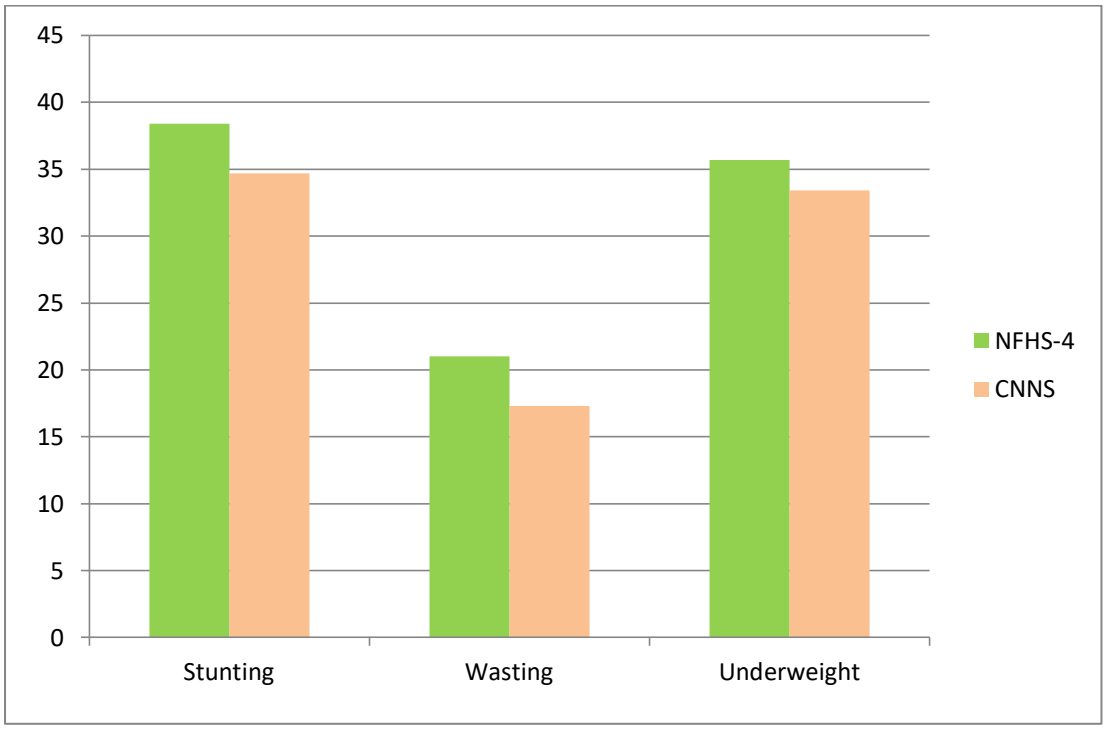
India has a high rate of under nourished population with marginal improvement in situation in last 25 years as depicted in table 1. The prevalence of underweight, stunted and wasted is higher in rural than urban population. The progress on other parameters of nutritional status such as level of anaemia in population groups and birth weight of new born is also shown.

Table I: - Stunting, wasting and underweight of children less than 5 years in India in last three decades (Fig. in %).

	NFHS-1 (1992-93)	NFHS-2 (1998-99)	NFHS-3 (2005-06)	NFHS-4 (2015-16)
Underweight				
Rural	55.9	49.6	46	38.3
Urban	45.2	38.4	33	29.1
Total	53.4	47	42.5	35.8
Stunted				
Rural	54.1	48.5	51	41.2
Urban	44.8	35.6	40	31
Total	52	45.5	48	38.4
Wasted				
Rural	18	16.2	21	21.5
Urban	15.8	16.2	17	20
Total	17.5	15.5	19.8	21

From the above table, it is quite evident that the malnutrition parameters underweight, stunted, and wasted shown declining trend.

Comprehensive national nutritional survey CNNS (2016-18) Data in percentage.

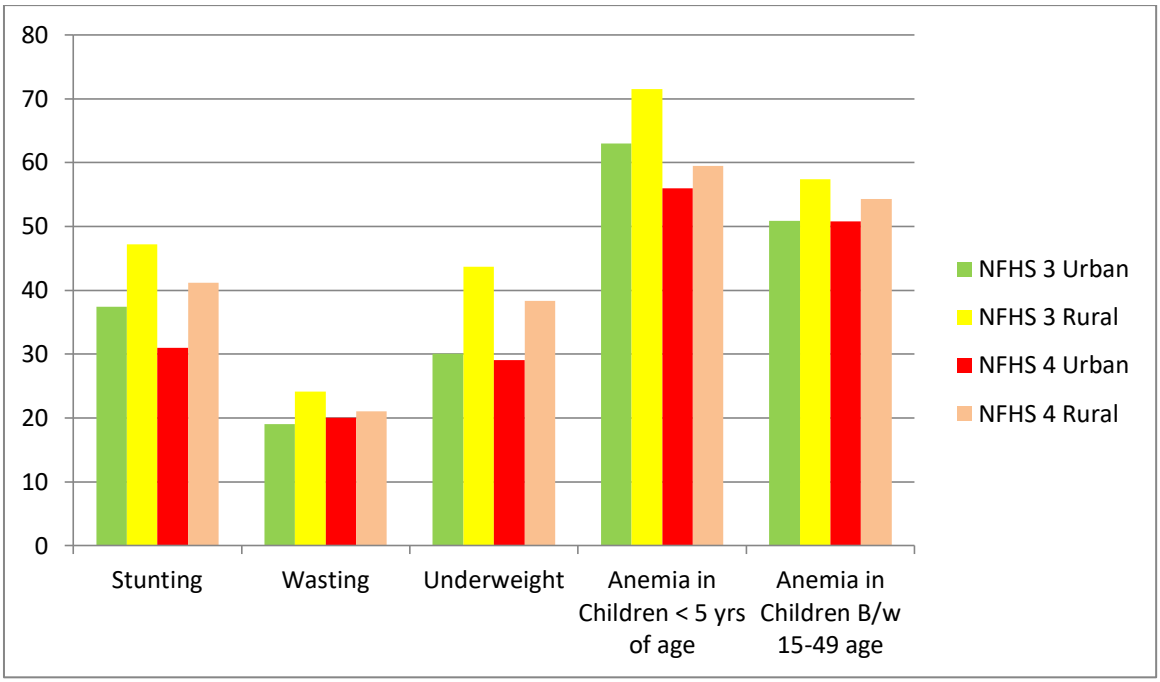


The result of the recent comprehensive national nutritional survey (2016-18) depicted the decline trend of stunting, wastage, and underweight

Let us glance at the global status of these indicators and more importantly, where does our country stand in comparison. Globally, 15.08 crore children under five years are stunted and 5.05 crore are wasted as stated by the Global nutrition report

2018. In India 4.56 crore children are stunted and 2.55 crore are wasted which means out of total stunted children globally 30.90% reside in India while out of total wasted children 50.43% belongs to India which is a serious problem.

India also among the set of countries that have more than 10 lakh overweight children. Over all of the 141 countries analyzed in the report 88 percent (124) countries experience more the one form of malnutrition.



From the above, it is quite clear that little bit of improvement been observed from NFHS 3 to NFHS 4. But the improvement is not of cause meant of all nine global nutritional targets.

An important interpretation is that more than 50% of our children and adoresent women are anaemia.

Key Government Policies, Programme to tackle Nutrition Challenges in India

Since independence, the Government of India give the utmost consideration to the problem of malnutrition. According, in the very first five year plan (1951) due emphasis was given and Since then till 12th five year plan of India (2012-17) the five year plan were key policy instrument to tackle under nutrition.

In 1952 Community Development programme (CDP) had incorporated component of improving nutritional status of population at block level and with engagement of local self Government.

In 1974, Minimum Needs Programme (MNP) was introduced in the first year of the fifth five year plan (1974-78). The MNP was aimed to provide certain basic minimum needs and improve the living standards of the people including health and nutrition Service.

Integrated Child Development Scheme (ICDS)

Integrated Child Development Scheme (ICDS) was launched on 2nd of October 1975 to improve health and nutritional status of women and children in India.

Under this Scheme ICDS, Aganwadi services were launched in 1975 as a pilot project covering 33 blocks in the country. Its objective is as under:-

- To improve nutritional and health status of Children in the age group 0-6 years.
- To lay the foundation for proper psychological, physical and social development of the child.
- To reduce the incidence of mortality, malnutrition and school dropouts.
- To achieve effective coordination of policies and implementation strategies among the various departments for promoting Child development.
- To enhance capability of the mothers to look after the normal health and

nutritional needs of their children through proper nutrition and health education.

Inter-sectoral convergence is in build and integral to the Aganwadi services. The target groups for these services are Children below 6 years of age as well as pregnant women and nursing mothers.

Package & Service under the ICDS Scheme:-

- Supplementary nutrition
- Pre-School non formal education
- Nutritional and health education
- Immunization
- Health check up
- Referral services

Out of the six services, three health pertaining services viz, Immunization, health check up and referral service are provided by National Rural Health Mission (NRHM) and public health infrastructure. This coverage is facilitated by the grass root level functionaries i.e. AWSS (Aganwadi Service Scheme) and ANMs/ASHA Workers under the ministry of health and family welfare Government of India through:-

Observance of monthly village health and Nutrition days (VHND) at AWCS – ANC/PNC etc.

Referral of sick/mal nourished children by AWWS to health facilitators and the ANMS

Bi-annual round of vitamin A Supplementation in several states.

Use of joint mother Child protection (MCP) cards by ANM and AWS.

Participation at the village health sanitization and nutrition committees (VHSNC) meetings.

Under the Aganwadi service scheme the beneficiary courage as on 31st March 2019 had a net work of 7075 fully operational projects and 13.73 Lakh Aganwadi centres across the country.

Presently, the service are being provided to 875.6 Lakh beneficiaries, out of total 703.74 Lakh are infants/children (age below six years) and 171.86 lakh pregnant women/nursing mothers. Moreover, pre-school education is being given to 301.92 lakh children (age 3-6 years) of which152.36 lakh are boys and 147.56 lakh are girls. For providing services at the door steps of the community there are 13, 20,858 AWWS in position along with 11, 82, 201 Aganwadi helpers (assistant). Now the responsibility is vested with the concerned Surpanch of the Panchayat to acquire food grains, and distributed to the beneficiaries to check the loopholes.

In 1906, A separate department of women and child development (DoWCD) has established by Ministry of Human Resource Development (HRD) under Government of India. This department was responsible for ICDS and other nutritional services for pregnant women's and children.

In 1993 National Nutritional policy was released. In 1995 the Government of India initiated the National Programme of Nutritional support to primary education (NP-NSPE) on 15, August 1995. This was based on learning and extension of mid day meal scheme launched by the Government of Tamil Nadu in early 1960s and since then adopted by number of states in phased manner in India. Under this scheme, the children upto class 8th are provided food in the school for this purpose a cook has been recruited and serve the meal to the students particularly those belongs to the BPL family.

In 2006, full fledge Ministry of Women and Children Development (MoWCD) was established exclusively to address the problem of women and children and these suggest policy measures to address.

Pardhan Mantri Matra Vandana Yojana

This was announced on 31 Dec 2016 and was officially implemented from the year 2017 onwards and provides financial support to the identified groups of pregnant women for their first pregnancy. Under this scheme the total beneficiaries have reached more than 10 million, which includes mostly pregnant women and lactating mothers. By the end of Sep. 2019 more than 4,000 crore has been distributed to the beneficiaries. Under this scheme bases on direct benefit transfer (DBT) cash benefits are provided to pregnant women directly in their bank account. The scheme aims to meet the enhanced nutritional need and partly compensate for wage during pregnancy. The pregnant and lactating mother (PW&LM) receive cash benefit of Rs. 5000 in three instalments on fulfilling the respective conditionality i.e. early registration of pregnancy, antenatal check up and registration of

the birth of the child and compensation of first cycle of vaccination for the first living child of the family. The eligible beneficiaries also receive cash incentive under Janani Suraksha Yojana (JSY) thus on an average a women gets Rs.6, 000. The government has doubled the budget provision under this scheme.

The budget provision in the year 2018-19 for nutrition campaign was Rs.23 thousand 88crore which has increased to Rs.27 thousand 584 crore in 2019-20.

INDRA DHANUSHA MISSION

This scheme was launched by the NDA government led by Narendra Modi. Under this scheme children under age of 2 have been brought under immunization program to prevent against 7 types of diseases:-

Diphtheria, Whooping, Cough, Tetanus, Tuberculosis, Polio, Hepatitis B and Measles.

Strategies for improving nutritional status

In the light of the above discussion, it is necessary to discuss some strategies required for improving the nutritional status of our people. The current research highlights the need for re examining the existing programmes, identifying their limitations, ensuring logistics and feasibility rather than proposing new programmes. Some of the important considerations are the following:

- Maternal nutrition intervention programmes need to examine the role of micronutrient rich foods. Interventions to improve preconception maternal nutritional status of rural young girls may be more beneficial than those during pregnancy.
- Most problems related to maternal and child health will need awareness in rural mothers as supplementation cannot be a permanent solution.
- Policy for free education to girls implemented in some states of India has long term health benefits, as it will automatically delay the age at marriage and conception.
- It is highly essential that children below 3 yrs are covered in the on-going nationwide intervention programme so that they can have better adolescent growth and adult size.

Conclusion

The Conclusion of the study is the health and nutrition not merely has a positive impact on individual's development but also constitute significantly to the overall progress of the country. India persistently faces high levels of maternal and child under nutrition as well as anaemia, characterized by an inter-generational cycle that is compounded by multiple deprivation caused by poverty, social exclusion and deeply entrenched gender discrimination. In 1950's, the life expectancy in India was 32 year, which has increased now to 68 year in 2017. The infant mortality rate (IMR) was merely 200 per 1000 live birth and maternal mortality (MMR) rate was 2000 per 100,000 live births. While infant mortality rate (IMR) reduced to 33 per 1000 live birth. Whereas maternal mortality rate (MMR) reduced to 130 per 100,000 live births during the period of 2014-16 over the past few years, through targeted intervention. The proportion of population living below poverty line has declined significantly more over the food production and availability drastically increased.

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