



COVID-19 - AFFECTING MALNUTRITION IN INDIA

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Abstract

Covid-19 has posed bizarre challenges for all over the world including India. Though the number of patients suffering with Covid-19 is small compared to many other countries, still the Covid-19 has smacked the already going on scuffle with unemployment and malnutrition in India. The human race slept in a different world and woke up in a world affected and feared with Covid-19. No one was prepared for such a pandemic. The hasty multiplication of corona virus affected patients changed the world massively. By the time its horrific effect is realized, it has already spread world over. Though, the effect of Covid -19 is not time bound or geographically limited but its impact on mankind, livelihoods, health and mindsets is going to be everlasting.

Keywords: COVID-19, India, Malnutrition

INTRODUCTION

COVID-19 has smacked the already going on scuffle with unemployment and malnutrition in India. No one was prepared for such a pandemic. By the time, its horrific effect is realized; it has already spread the world over. Though, the effect of COVID -19 is not time bound or geographically limited but its impact on mankind, livelihoods, health and mindsets is going to be everlasting. India combating an already prevalent complex burden of poverty, malnutrition, hunger, lifestyle and infectious diseases has to face multiple challenges in taking care of its people. India is a highly populated country. Presently, India stands 2nd worldwide with 17.71% share of world population. Malnutrition is a major concern globally. As reported in the 2011 census among the 472 million children, 97 million are anaemic and undernourished in India. Anaemia is

prevalent among 51.4% of women of reproductive age (UNICEF, 2019). Imbalanced diets, meal patterns, faulty food choices and habits, poor sanitation not only affect the immunity adversely but also make a person susceptible to infections and other diseases. The long term effects of COVID-19 may result in complex problems affecting all the age groups. The effects may not be limited to employment, economy, mindsets, decision making, purchasing power, decision making, globalization, urbanization and way of life but also on the nutrition status of all the age groups. As the situation due to COVID -19 may last longer, nutritional care is important.

India combating with already prevalent complex burden of poverty, malnutrition, hunger, lifestyle and infectious diseases has to face multiple challenges in taking care of its people. India is a highly populated country. Presently, India stands 2nd worldwide with 17.71% share of world population. The 2019 population density in India is 460 people per Km². Today, the 26.16 % population in India is in the age group of 0-14 years and 10.12% in the age group of more than 60 years. The major share of active population in India is 15-

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59 years is 63.72 %. To handle the Covid-19 situation with a colossal and dense population most effectively, the Government of India has taken extraordinary courageous, meticulously planned steps. A historical decision to lockdown the entire country of the 2nd largest population, with a huge number of below poverty line people resulted in a lesser number of COVID-19 affected people and deaths so far.

Malnutrition is a major concern globally. The situation of malnutrition in India is also grim. Malnutrition, according to the World Health Organization (WHO), refers to deficiencies, excesses, or imbalances in a person's intake of energy and/or nutrients. Food security, as defined by the United Nations' Committee on World Food Security, means that all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life. The data from National and International organizations like WHO, National Health & Family Survey, United Nations International Children's Emergency Fund, all draw attention towards the tremendous burden of malnutrition in India among children, adolescent girls, pregnant and lactating women. Malnutrition vexes the lives of millions of children every year. As reported in the 2011 census among the 472 million children, 97 million are anemic and undernourished. The adequate diet intake is only by 9.6% children in the age group of 6-23 months (NFHS 4, 2015-16). 21% of the children in the country suffer from wasting i.e one in five children (NFHS 4, 2015-16). The enormous burden of anemia is prevalent in India among 58% of children between the age of 6 months to 5 years (NFHS 4, 2015-16). Majority of the already malnourished children, pregnant mothers and lactating mothers from the vulnerable sector may be deprived of benefitting from ongoing supplementary nutrition programmes due to closure of all the activities during lockdown which may increase the number of severely malnourished.

LITERATURE REVIEW

UNICEF informed in its report that due to reduction in routine health services coverage and increased in child wasting, a staggering, 1.2 million additional children under five could die in just six months in low and middle-income countries (Daya, 2020). Anemia is prevalent among 51.4% of women of reproductive age (UNICEF, 2019). India's adult population also contributes towards the malnutrition burden. Factors responsible for malnutrition in the country among children and women include mother's nutritional status, lactation behavior, women's education, and sanitation. The factors affecting malnutrition among the adult population include lifestyle diseases, obesity, stress, erratic work hours, poor diets, lack of awareness and switching our Indian *thali* (plate) with processed foods. The lockdown as a preventive measure to combat with transmission of coronavirus has been successful to reduce the infection transmission but it has many after affects. The problem of malnutrition may aggravate multifold with the suspension of outreach activities under various health programmes including closure of anaganwadi centres and mid-day meal program. Reyes, 2010 reported that during influenza pandemic in the year 2009 chronic malnutrition contributed to the high morbidity and mortality in Guatemalan children. In the twenty first century, under nutrition is one of the major a problem for viral pandemic. Malnutrition is associated with mortality in younger population and high disease severity. Under nutrition and over nutrition may pose a "double burden" of malnutrition and increase the severity of disease (Short et.al. 2018).

Coronavirus induce pulmonary infection termed as neo-coronavirus pneumonia (Song, 2020). There is no effective specific drug treatment in clinical practice. Guan, 2019 in his study reported that in elderly patients suffering from coronavirus, gastrointestinal symptoms are the most common in addition to respiratory symptoms. The most common symptoms observed in elderly are diarrhea, mild abdominal pain, nausea, and vomiting, poor appetite. The involvement of the

digestive tract may accelerate the incidence of malnutrition in elderly patients with COVID-19. The main symptoms of corona virus are common cold, fever and headache. Common cold is a disease that has never had a cure nor any effective prevention or vaccine. Many studies suggest that the risk of contracting the common cold is higher among malnourished, under inadequate sleep and psychosocial or physical stress. Therefore, any condition that affect body's immunity may also contribute towards falling prey for Covid-19 (Kalantar et.al. 2020). However, numerous studies have demonstrated that a balanced diet rich in immunity boosting foods may prevent symptoms of common cold. This may be applicable for the Covid-19 symptoms also. The immunity boosting foods include fresh vegetables and fruits. Vitamin C rich foods like lemons, lime, gooseberry, oranges, tangerine, grapefruit, kiwi, broccoli, tomato, cauliflower, kale, etc. may be helpful in improving immunity (Abbasi, 2019 and Chen, 2020).

RESULTS AND DISCUSSIONS

It is a well-established fact that a malnourished person at any age and stage is more prone to any kind of infections and disease. Further, Imbalanced diets, meal patterns, faulty food choices and habits, poor sanitation not only affect the immunity adversely but also make a person susceptible to infections and other diseases. The long-term effects of Covid-19 may result in complex problems affecting all the age groups. The effects may not be limited to employment, economy, mindsets, decision making, purchasing power, decision making, globalization, urbanization, way of life but also on the nutrition status of all the age groups. The marginal and vulnerable groups may suffer from malnutrition due to inadequate food quantity and quality whereas other stratum may fall prey for the burden of over- nutrition with wrong food choices, availability and affordability. Addressing malnutrition is the prime aspect in order to keep the active population healthy and children growing. The short and long term impact of Covid-19 will

only exacerbate this situation of malnutrition. To maintain the graph of health and nutritional level during lockdown especially for the below poverty line population, the Cabinet Committee on Economic Affairs (CCEA), led by Prime Minister Narendra Modi, made another historic decision and initiated world's largest food security scheme by the expansion of India's Public Distribution System (PDS). This decision has ensured food security to nearly 80 Crore Indians (Chawla, 2020). Therefore, timely and appropriate decisions not only helped to flatten the curve of disease progression but also combat hunger.

Existing malnutrition decreased physical activity, poor diets, infectious diseases, poor sanitation combined with multiple effects of Covid-19 is taking India towards further lower levels of poverty, hunger, malnutrition, health, productivity and healthcare expenses. Malnutrition in any of its form may affect the immunity of a person making him prone to get affected. The underlying risk for the severity of the virus may tremendously increase in a malnourished person. The day to day dynamics are changed with worldwide lockdown strategy followed as preventive measures including social distancing have overshadowed our day-to-day dynamics. The unknown and uncertain effect and duration of Covid-19 is imposing forthcoming food and nutrition insecurity with reduced incomes, unemployment, poverty and hunger. These effects may alter our dietary patterns and food choices. This is quite evident from the purchase pattern of foods with the announcement of lockdown. People with purchasing power stored maximum amounts of processed and comfort foods which may worsen the situation of malnutrition further. Inadequate and imbalanced diets for longer duration may affect not only the vulnerable group's food intake adversely but also the food choices and intake of the affluent. To address the problem of hunger and malnutrition during lock down the Government of India has taken all the essential steps to address demand and supply chain and make perishable items like vegetables, fruits, milk, eggs, bread etc. accessible to one and all by keeping the

essential services open with all care and caution during the lockdown period. To make seasonal vegetables and fruits available and accessible and deal with the cost and inflation due to Covid-19, rates of fresh vegetables and fruits have been fixed on a day to day basis at local levels.

The approach to Covid-19 patient's treatment and prevention must include nutrition intervention as a main component. Majority of the malnourished people may be from the lower socio-economic groups and hence need more care and caution to fight against Covid-19. As the situation due to Covid-19 may last longer, nutritional care is important. All these tireless efforts made by the Government of India may double in its impact if people get aware about how to take best nutrition out of available food items and plan their daily food intake. The efforts to inculcate healthy diets and immunity boosting foods in daily diets are important. Addition of fresh vegetables, fruits and herbs to diet boost immunity. A balanced diet, with enough water intake, sleep and changes in lifestyle by addition of physical activity regularly in any form, avoiding stress, practicing hygiene and sanitation for self and surroundings, meditation, good and positive thinking, avoiding alcohol and smoking may garner entire India against vicious cycle of malnutrition just like Indians clapped together for our front liners and lit a candle to show unity.

CONCLUSIONS

Strategies to fight global change, shooting situation of malnutrition due to increased poverty and hunger as a result of Covid-19 needs to be effective and long term. The Covid-19 has taught us that we need to build more rational food systems. Therefore, strategies may focus on: 1) Introduce a self-sustained model of essential nutrition garden in each house (terrace/pots/farm) for the availability and accessibility of all or any of the vegetables, fruits and herbs, 2) Publicizing, promoting and awakening people of all age groups to prefer India's nutritional and balanced meal made at

home (*Thali*: Pulse, vegetable, rice/chapati, curd/chach, salad, mint chutney, and pickle), 3) The processed foods must be made under suitable recommendations to retain maximum nutrition, 4) Using simple technologies like drying, fermenting, juicing, freezing, canning, preserving etc. may be taught to each one for maximum adaption to reduce the wastage of vegetable and horticultural crops, space taken for storage and transport cost, 5) Awareness and training from grass root level to entire population for retaining maximum nutrition from our food and immunity boosting foods their use and intake. (sprouts, steamed foods, fermented foods, common herbs etc.), 6) The ongoing schemes addressing the nutritional status of populations may have better outcomes by synergising and linking various schemes for a common goal but at different steps for combating malnutrition, 7) A holistic approach to address malnutrition with a careful planning by achieving nutritional goals through entrepreneurship development and women empowerment, and 8) Boost up economies by providing markets to small and marginalized.

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