



## **POVERTY TO WELLNESS – AN INNOVATIVE JOURNEY THROUGH EDUCATION**

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### **ABSTRACT**

Malnutrition refers to the situation where there is an unbalanced diet in which some nutrients are in excess, lacking or wrong proportion. The 2017 Global Hunger Index (GHI) Report ranked India 97th out of 118 countries with a serious hunger situation. Deficiencies in nutrition inflict long-term damage to both individuals and society. About 107 kms from Maharashtra's capital city Mumbai lies the Palghar district, where over 600 children so far this year have died due to malnutrition. The aim was to impart nutrition education in an innovative way to the tribal ladies of Kosbad, a taluka in Palghar district. Three strategies were planned after studying the food availability, resources available. All the activities were planned in Marathi which was the local language. Low cost recipe demonstration, poems regarding importance of safe water, hygiene and sanitation, weaning foods and nutritional games were developed. Nutrition education is an evidence-based, cost effective way to improve health outcomes and foster healthy eating habits for a lifetime. All the activities planned under the nutrition education program extended beyond the classroom and involved multiple channels of communications. The program received overwhelming response and the feedback received was also encouraging. Key words: Health, Malnutrition, Nutrition Education

### **INTRODUCTION**

One of the World's greatest challenges is to secure sufficient and healthy food for all, and to do so in an environmentally sustainable manner. Many factors are important in developing lifetime health, wellness, and fitness, and some are

more in ones control than others. While nutrition is a vital element of a healthy lifestyle, nutritious food is not equally available to all. The significance of this inequality is that, the risk of diseases and medical conditions is greatly reduced by consuming a



healthy diet, which otherwise can shorten and lower the quality of life. When differences in diet can be attributed to socioeconomic factors, it can be reasonably assumed that differences in lifespan and instances of disease can also be attributed to socioeconomic status **[R White]**. Food is not just a marketable commodity like any other commodity. Food is different from other commodities on the market in that it is explicitly and intrinsically linked to our human existence. While possessing another commodity allows for social benefits, food ensures survival **[JacquineauAzétsop et al]**.

Many low and middle-income countries are now facing a “double burden” of disease, as they continue to struggle with the problem of infectious diseases and under-nutrition they are also experiencing a rapid increase in the risk factors of Non-Communicable Diseases such as obesity and overweight, particularly in the urban setting. It is not uncommon to find under-

nutrition and obesity existing side by side within the same country. This double burden is caused by inadequate pre-natal, infant and child nutrition which is then followed by exposure to high fat, energy dense, micronutrient poor foods and a lack of physical activity as the child grows older **(WHO)**.

Malnutrition is caused by complex mechanisms traversing the social, political and economic arenas. Food security, feeding and health seeking practices, the status of women, and availability of health care are only some of the factors that determine the nutritional status. Besides malnutrition spans generations, a low weight baby girl grows into a malnourished mother who delivers a low birth weight baby.

#### **The Maharashtra State scenario:**

In 2011, Maharashtra was the second most populous state in India, its 112.4 million people comprising 9.3% of India's total population. Maharashtra's urban population was 45.2% in 2012, 14



percentage points above the national average.

According to the National Family Healthy Survey 2005-2006, the nutrition situation in Maharashtra compared with urban areas, under-nutrition is higher in rural areas. Similar to the national picture, there is a strong correlation between child malnutrition and the level of maternal education showing a two-fold difference between non-educated and well-educated mothers. The stunting and underweight prevalence for children with illiterate mothers is 52.9% and 53.1% respectively contrasted with 22.9% and 25.9% for children with well educated mothers. The stark difference between illiterate and educated mothers may be linked to access to nutritious diet and complementary feeding at 6-9 months.

**Palghar District** is a district in the state of Maharashtra in Konkan Division. On 1 August 2014, the Maharashtra State government announced the formation of the

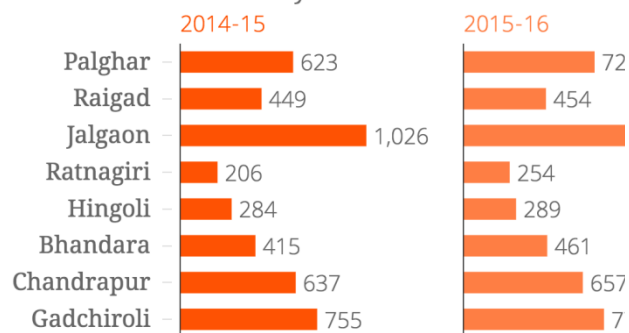
36th district of Maharashtra, when a new Palghar District was carved out of the old Thane district.

Instances of malnutrition and the resultant deaths from it are not new in Palghar, which is predominantly a tribal district. In the year 2016-17, until August, 254 children and 195 foetal deaths due to malnutrition had been recorded. Figure for the year 2015-16 was 721 and 623 in 2014-15.

EXAMPLE OF MAHARASHTRA		
Indicators	Situation in Maharashtra	Tribal Situation
Infant mortality rate	59	110
Crude death rate	7.9	13
Maternal mortality rate	2	Not available
LBW babies	28%	40%
Family Size	3.8	4.2
Delivery by TBA	86%	12%



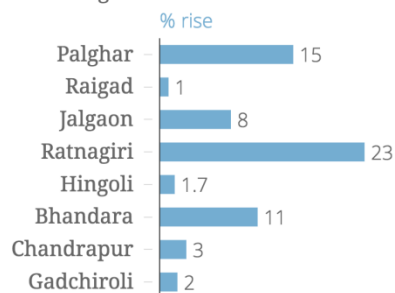
### Infant and child deaths by district



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Data: Maharashtra Health &amp; Family

### Percentage rise in infant and child deaths between 2014 and 2015



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Data: Maharashtra Health &amp; Family Welfare Dep.

### Aim and Objectives of the project

- To develop nutrition education programme for the tribal population of Kosbad.
- To participate and coordinate in community nutrition programmes with the co-operation of people working in other disciplines like village health workers and anganwadi ladies.

- Development of Nutrition education material in local languages and local prevalent problems.
- To improve the nutritional levels of the community by the available means.

### METHODOLOGY

Kosbad is one of the talukas of Palghar district, where malnutrition is rampant. Under the auspices of Gokhale Education Society a project of nutrition education was undertaken for the adivasi ladies of Kosbad. The staff of agricultural college of Gokhale Education Society, Kosbad, brought 60 ladies from the surrounding padas for a two day nutrition education program. (a four hour session per day was taken).

These tribal ladies were illiterate, hence any form of literature was ruled out. Basic information regarding type of food grown and available, infant feeding practices, type of fuel, availability of government aids was obtained prior to the visit. All the activities were



planned keeping in mind the above information.

## RESULT AND DISCUSSION

Nutrition Education can be defined as, the process of acquainting people with the value of resources already available to them and persuading them to change existing practice. In other words educating for better nutrition and thus bringing the desirable positive changes in knowledge, attitude and practice in order to enhance the nutritional status of the individual and community as a whole. The fundamental objective of education in nutrition is to help individuals to establish food habits and practice that are consistent with the nutritional needs of the body and adapted to the cultural pattern and food resources of the area in which they live.

Although poor economic condition does stand in the way of improved nutrition, but, ignorance regarding nutrients needed by the body and cheap foods which can

provide them and better utilisation of the resources, are also partly responsible. It has been realised that the poverty of knowledge is one of the major cause for poor nutrition among many people in our country.

Nutrition education is an evidence-based, cost effective way to improve health outcomes and foster healthy eating habits for a lifetime. Nutrition education should extend beyond the classroom and needs to involve multiple channels of communications.

Traditionally, nutrition education is imparted by are: Lectures and demonstrations, Workshops, Film and slide shows, Posters, charts and exhibition, Books, pamphlets, bulletins and newspaper and Radio and television.

To impart nutrition education in an innovative way three strategies were planned.

1. Low cost recipe demonstration.
2. Poems in Marathi on importance of clean drinking water, hygiene, balanced diet, infant feeding were written.



3. Nutritional games were developed, so that, the sessions would be interesting, interactive and motivating.

From the information obtained it was clear that ragi, rice and black gram dal were grown in the region. Other grains were available but they were not frequently utilized by the population due to poverty and ignorance. The region had many drumstick and tamarind trees. So recipes were planned keeping these available foods in focus.

Few innovative recipes planned were – Cauliflower greens bhaji, Soyabeanshepubhaji, Rice with black gram dal and vegetables cutlet, Ragi sticks, Ragi with black gram dal wada, drumstick leaves soup, paratha, dal with tamarind leaves, tamarind leaves rice. A premix was also prepared by using sprouted grains, soya powder, groundnut powder.

Cauliflower leaves are a very rich source of calcium (626 mg/100 gms), iron (40 mg/100 gms),

tamarind leaves are good source of calcium (101 mg/100 gms), Drumstick leaves are also a very good source of calcium (440 mg/100gms), carotene 6780 mcg /100 gms, vitamin c 22 mg/100 gms. It has been realised that the poverty of knowledge is one of the major cause for poor nutrition among many people in our country. These greens are free of cost, easily available, if they realise that consuming only 50 to 100 gms of these daily, it can make a difference between blindness and normal vision.

Ragi is a good source of calcium (344 mg/100 gms), folic acid along with calories. Black gram dal is a good source of proteins, folic acid (132 mcg/100 gms), soluble fibre. The method of preparation of premix was also shown to the ladies, so that they can provide better nutrition to their babies.



**Fig.1 Introduction to the program with the co-ordinator**

The warm up session of the program was conducted with the help of the co-ordinator. The purpose of the visit, activities to be conducted were discussed.



**Fig.2 Demonstration of recipes**

In the above figure ragi and black gram dal dosa was prepared, cauliflower leaves paratha preparation is being shown. The students were giving a running commentary in Marathi regarding

the method of preparation and the nutritional content of the dish.



**Fig.3 Distribution of recipes**

All the dishes which were prepared were distributed amongst the participants. They tasted each and every dish prepared. While distributing the food students reinforced the method of preparation and nutritive value of the food.



**Fig. 4 Dried drumstick leaves being shown**

The tribal women were also shown the sun dried tamarind, drumstick and cauliflower leaves.



Again the information regarding these foods was hammered. An important part of the nutrition gap is the information gap. The objective of such education is not to impart knowledge only, but, to reinforce or change behaviour and practices related to maternal and child care.

**The second strategy planned** were the poems prepared on various issues like safe drinking water, importance of hygiene and sanitation, weaning of the baby.



**Fig 5 Recitation of poem**

To make the nutrition education program practical and easily understood by the tribal ladies, poems were recited in a humorous way.

**The third planned strategy** were the nutritional games. Two games

were planned namely – Bombing the city and running cum hurdle race.

**Bombing the city:** In the original game the room is divided into four corners and each identified as a city with chart papers marking each of them. The four cities are written down separately on small pieces of paper, which are carefully folded, shuffled and placed in a bowl. As the music plays, the participants have to walk in a circle covering all the four cities. The moment the music stops, they have to make up their mind and choose a city to rest in. When all the participants are settled in their respectable cities, a non-playing member has to randomly pick up a piece of paper from the bowl. The city thus picked up, is declared bombed. The participants of the bombed city are eliminated and the game continues with the remaining participants. The player, who manages to survive till the end, emerges the winner.

The above traditional game was modified and instead of names





of cities, names of food groups were used. So the innovative game had five cities - cereals millets, pulses and legumes, Milk and meat, fruits and vegetables and fats and oils respectively.

In the running cum hurdle race, the ladies were asked to run a distance of about 100 meters, where baskets containing pictures of food groups were kept together. They were instructed to pick up one food picture from each food group and come back running with them, show it to the supervisors. This way the concept of balanced diet was reinforced.



**Fig 6 Bombing the city (food group)**



**Fig 7 City of cereal group**



**Fig 8 City of fruits and vegetables**



**Fig 9 In search of abalanced diet**



**Fig 10 Ladies getting their “findings” checked**



**Fig 11 The Prize winners**

The ladies who won the games were felicitated with Rajgeera laddu, dates with groundnuts stuffed in them. All the ladies who had participated in the two day workshop were given 100 gms of assorted puffed cereals and roasted Bengal gram.

## CONCLUSION

Nutrition education has to be relevant to the social, economic and

cultural conditions of the people, their needs and perceptions and also the opportunities available to them. Nutrition education is of crucial importance as the problem of ignorance, ill-health and malnutrition go in hand. The messages for nutrition education should be simple and straight forward, based on the felt needs of the community. The study achieved its objectives. Small simple tips for using these cheap yet nutritious vegetables were given. The feedback from the participants was very encouraging and after six months from the visit to Kosbad, it was heartening to know from the coordinator that the ladies were using the greens of drumsticks, cauliflower and tamarind.

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