



E-ISSN: 2278-4136
P-ISSN: 2349-8234
JPP 2020; 9(1): 991-992
Received: 10-11-2019
Accepted: 12-12-2019

Dr. V Anandhi
Tamil Nadu Agricultural
University, Coimbatore,
Tamil Nadu, India

Dr. P Vennila
Tamil Nadu Agricultural
University, Coimbatore,
Tamil Nadu, India

Dr. R Premavathi
Tamil Nadu Agricultural
University, Coimbatore,
Tamil Nadu, India

Dr. J Venkata Pirabu
Tamil Nadu Agricultural
University, Coimbatore,
Tamil Nadu, India

Corresponding Author:
Dr. V Anandhi
Tamil Nadu Agricultural
University, Coimbatore,
Tamil Nadu, India

Mobile app to alleviate the micronutrient deficiency (Iron) and to improve the livelihood and the nutritional status of tribal women

Dr. V Anandhi, Dr. P Vennila, Dr. R Premavathi and Dr. J Venkata Pirabu

Abstract

India is among the countries with the highest prevalence of anaemia in the world which need to be addressed in a life cycle approach. Anaemia is a major health problem affecting 53% of women (15-49 years) and 22.7% of men in India as per NFHS-4. Iron Deficiency Anaemia (IDA) is a common one across all age groups, but the highest and more vulnerable among young children and during different life cycles of women (adolescent girls, pregnant and lactating women). Iron deficiency impairs growth, cognitive development and immune function. Digital communication network play a vital role to implicate the ideas of the Moringa embedded products in a effective networking, communication and accessibility through this app, a larger chunk of populace are made aware of the significance of nutritional and food security for women and children. The technology is disseminated to the rural Women through Capacity Building on the usage of Mobile Apps on Nutri dense Moringa Products. This app would provide a wider platform for a high range of remote audiences to get the benefits in a raid and immediate way. Downloading and the usage will be worthy attempt to bring this innovative technology to the fore.

Keywords: Nutrition, anaemia, iron deficiency, mobile app, moringa

Introduction

India is among the countries with the highest prevalence of anaemia in the world which need to be addressed in a life cycle approach. Anaemia is a major health problem affecting 53% of women (15-49 years) and 22.7% of men in India as per NFHS-4^[1]. Among the women 50.3% of pregnant women were found to be anaemic, as per NFHS-4. Anaemia is found to be considerably higher in rural areas than urban, particularly for tribes and for children and women in the households with lower wealth quintiles. Iron Deficiency Anaemia (IDA) is a common one across all age groups, but the highest and more vulnerable among young children and during different life cycles of women (adolescent girls, pregnant and lactating women). The consequences of IDA in pregnant women have increased the risk of low birth weight or premature delivery, natal and neonatal mortality, inadequate iron stores for the new-born, lower physical activity, fatigue and increased risk of maternal morbidity. Iron deficiency impairs growth, cognitive development and immune function. It reduces the performance level of children in school and makes them less productive as adults.

Nutritional status of tribal women

Nutrition has been a major health issue in India for over years. Chronic hunger and under-nutrition is the worst tribulation of the poverty that still plagues millions of households in India. Adequate nutritional status of women is important for good health and increased work capacity of women themselves as well as for the health of their offspring. A significant difference in the BMI status is found between women of different age groups^[2]. Adequate nutrition, a fundamental cornerstone of any individual's health, is especially critical for women because inadequate nutrition wreaks havoc not only on women's own health but also on the health of their children. Apart from these socio-cultural barriers, the religion, education and economic factor do alter the food behaviours^[3]. India, in recent past, has made a considerable progress in social and economic fronts but improvement in nutritional status especially of the women is found to be lagging behind. Women constitute substantial population in any society and their statistics reflects the type of society and cultures they live in. The socio-economic and socio-cultural dimensions of the subject "women and nutrition" have two fold significance. Firstly the cultural norms and practices and socio-economic situation determine

the extent to which women are able to contribute to the nutritional levels of their families and secondly those also determine their own nutritional status. According to the survey conducted by Indian Council of Social Science Research 48.53 percent respondents stated that women serve the family first and eat last. In poor families this results in greater malnutrition of women. A study has shown that women's education can improve the nutritional status of children^[4].

Thus for studying the intake of a society analysis of women's position in terms of their status and role becomes significant. The wheel of development and fortune of the society depends upon the progress and development of women. She contributes a lot for the welfare of the society. The discrimination against women starts right from her birth and continues till her last breath. Throughout their life cycles female receive less food and also inferior quality of foods than do male. Women are often responsible for producing and preparing food for the household, so their knowledge or lack thereof about nutrition can affect the health and nutritional status of the entire family. Malnutrition poses a variety of threats to women. It weakens women's ability to survive childbirth, makes them more susceptible to infections, and leaves them with fewer reserves to recover from illness. Malnutrition undermines women's productivity, capacity to generate income, and ability to care for their families. Addressing women's malnutrition has a range of positive effects because healthy women can fulfil their multiple roles generating income, ensuring their families' nutrition, and having healthy children more effectively and thereby help advance countries' socioeconomic development.

It is estimated that the tribal population constitute 8.6 percent of the total population of India. This population enlists under condition of severe socio-economic stress and hence more vulnerable to malnutrition and related health problems. Tribal women in India are at a great disadvantage due to illiteracy and ignorance. Although adult nutritional status can be evaluated in many ways, the body mass index (BMI) is most widely used because its use is inexpensive, non-invasive and suitable for large scale surveys.

Micronutrient deficiency (Iron)

Anaemia affects about 43 percent of women of reproductive age in less developed countries. Even though many methods are available to study the nutritional status of an individual, anthropometry is considered as a good tool, especially to study the malnutrition of individuals^[5, 6]. Women are especially susceptible to iron deficiency and anaemia during pregnancy, and about half of all pregnant women in less developed countries are anaemic, although rates vary significantly among regions. Iron deficiency and anaemia cause fatigue, reduce work capacity, and make people more susceptible to infection. Severe anaemia places women at higher risk of death during delivery and the period following childbirth. Recent research suggests that even mild anaemia puts women at greater risk of death.

Malnutrition in women leads to economic losses for families, communities, and countries because malnutrition reduces women's ability to work and can create ripple effects that stretch through generations. In order to combat iron deficiency among the women and children, moringa leaves may be incorporated as product supplements in their daily diet which is locally available and a kitchen garden plant.

Mobile App – The digital way

The technology is disseminated to the rural Women through Capacity Building on the usage of Mobile Apps on Nutri dense Moringa Products. The rural women will learn to make the value added products through capacity building training which they use for themselves and can also sell the products in the market. This also supplements the income of the rural women. Value added Nutridense Micronutrient Enriched Products from Moringa leaves such as Moringa leaves powder, Moringa Leaves Pickle, Moringa leaves incorporated Noodles/Vermicillie, Moringa leaves incorporated health mix, soup mix, laddu, roti mix, dosai mix, adai mix and Moringa leaves incorporated rice mix are disseminated which improves the nutrition and livelihood status of Women and children.

Digital communication network play a vital role to implicate the ideas of the Moringa embedded products in a effective networking, communication and accessibility through this app, a larger chunk of populace are made aware of the significance of nutritional and food security for women and children. This app would provide a wider platform for a high range of remote audiences to get the benefits in a rapid and immediate way. Downloading and the usage will be worthy attempt to bring this innovative technology to the fore.

Conclusion

The health status of the rural women in the society will be improved as they are consuming the nutritious Moringa leaf incorporated products. The nutritional status of the women and family members can be improved. Self confidence, decision making, active participation in group discussions and attitude towards Nutritional and Health status and income generation activities are developed. The knowledge gained during the training programme will be utilized to prepare nutrient rich products at their home and prevent the micro nutrient malnutrition. They also start their own enterprise and creating employment opportunities, improvement in socio economic status, change in life style, preventing wastage of raw materials grown in their area during glut season, production of nutritious convenience foods and meet the demand in the market.

References

1. National Family Health Survey (NFHS-4): [rchiips.org > nfhs > pdf > NFHS4 > India](http://rchiips.org/nfhs/pdf/NFHS4/India)
2. Lindsay H. Allen, Anaemia and Iron Deficiency: Effects on Pregnancy Outcomes, *American Journal of Clinical Nutrition* 71, no. 5 suppl. 2000, 1280S-84S
3. Nayak M MSDP *et al.* A study on nutritional status of tribal women in Visakhapatnam district, Andhra Pradesh, *Int J Community Med Public Health*. 2016; 3(8):2049-2053.
4. Mishra VK, Retherford RD. Women's education can improve child nutrition in India. *National Family Health Survey Bulletin*. 2000; 15:1-4.
5. De Onis M, Habicht JP. Anthropometric reference data for international use: recommendations from a World Health Organization Expert Committee. *The American Journal of Clinical Nutrition*. 1996; 64:650-658.
6. Abudayya A, Thoresen M, Abed Y, Holmboe- Ottesen G. Overweight, stunting, and anemia are public health problems among low socioeconomic groups in school adolescents (12-15 years) in the North Gaza Strip. *Nutrition Research*. 2007; 27:762-771. doi:10.1016/j.nutres.2007.09.017