

Acceptability and nutrient composition of supplementary foods developed for vulnerable groups

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ABSTRACT

Malnutrition is wide spread in most of the developing countries. It is regarded as a spectrum of disease arising from an inadequate diet, especially in childhood. Malnutrition is a disease of complex interactions. Twelve supplementary foods were developed utilizing food stuffs which are locally available, low cost, rich in protein, calorie, iron, calcium and vitamin C and suitable for preschool children, school going children, and for lactating and pregnant women. These developed supplementary foods were analyzed for Proximate composition *i.e.* moisture, fat, fibre, protein, ash, calcium, iron and vitamin C by using standard procedures (AOAC, 1975). Among developed supplementary food two from each group were selected for field acceptability depending on the simple and easy method of preparation. The Supplementary foods which can be stored for longer duration were selected for storage study. The effect of storage duration on organoleptic characteristic of developed was carried out at 0, 15, 30, 45, 60 days. Effect of storage duration on different parameters of selected supplementary foods *i.e.* free fatty acid, peroxide value, reducing and non reducing sugar, total sugar content of recipe was also determined at 0, 15, 30, 45, 60 days.

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Malnutrition is wide spread in most of the developing countries. It is regarded as a spectrum of disease arising from an inadequate diet, especially in childhood. Malnutrition is a disease of complex interactions. Its course and severity are determined by the cumulative effects of a negative balance of various biological, social, cultural, economic and environmental factors (Anonymous, 1996). There is increasing evidence that malnutrition during early childhood can lead not only to the stunting of the physical growth but also the impairment of vital function such as resistance to infection, work capacity as well as learning ability. World Health Organization (1989) defines malnutrition as the cellular imbalance between supply of nutrients and energy and the body's demand for them to ensure growth, maintenance and specific functions during the first few years of life. The body grows at a very fast rate and required good nutrition for foundation growth of children.

Growing children requires large amounts of body building and energy giving foods rich in proteins and calories, apart from this other nutrients such as calcium, iron, vitamin A, Vitamin B complex, Vitamin C and other trace elements. Majority of the children in developing countries consume inadequate diets and suffer from malnutrition (ICMR, 1986).

The nutritious supplementary foods are the dependable sources to overcome the nutrition gap and to protect the child from revenges of malnutrition. The supplement provided, must be enough to bridge the gap

between actual nutrient intake and recommended levels. The supplementary foods supplied to children should be rich in protein and energy. It should have a longer shelf-life and must be easy to store at room temperature. Supplement should provide 1/3 of day's requirement and should be given in addition to daily diet. Appropriate use of all type foods in preparation of the supplementary foods will be helpful in providing the required nutritional needs. The preparation of supplementary foods must be based on locally available, low cost nutritious food and easy to prepare. By considering these facts the present study was undertaken to develop the nutritious supplementary foods for different vulnerable groups and acceptability, nutritional composition and storage effect on organoleptic characters and selected parameters were studied.

METHODOLOGY

Twelve supplementary foods were developed utilizing food stuffs which are locally available, low cost, rich in protein, calorie, iron, calcium and vitamin C and suitable for preschool children, school going children and for lactating and pregnant women. Supplementary foods developed for preschool children were *Ragi poori*, *Ragi biscuit*, *Soya poha laddu*, for school going children *Sago biscuit*, *Bajra mathri*, *Sandwich* and for pregnant women *Soya Burfi*, *Drumstick chutney*, *Cauliflower greens dhapata*. However, supplementary foods developed for lactating women were *Poori mix*, *Paratha mix*, *Dal chiwada*. The developed products were evaluated