ABSTRACT

Food security, at individual, household, national, regional and global levels is defined by WHO as “access to food that is adequate in terms of quality, quantity, safety and cultural acceptability for all individual members. In addition, the most critical point is the need to ensure that each individual has physical, social, and economic access to enough food to meet its needs. This definition is further extended to include that each household must have the knowledge and the ability to produce, or have resources to procure the food that it needs on a sustainable basis. The data base has enormous application at every level of its assessment; however, the ultimate implication is the national development. Literature about the Household food security is relatively meagre; therefore the present study was conceptualised to assess the family food security and to examine the gender disparity in family food security in coastal region of Karnataka.

The study was a prospective study and included cross sectional followed by semi longitudinal investigation. 700 families from two taluks (Karkala and Moodbidri) from S Canara district formed the study population; cluster sampling was adopted for the purpose. General characteristics of the population, Food related activities of the family, Eating behaviour; FFQ, family Food security status, nutrient intake of families and Quality of Life were studied. In the in-depth/ semi longitudinal study, seven days nutrient intake, biochemical assessment (Hb), anthropometric assessment and physical activity were assessed among male and female subjects aged 35-60 years was obtained. Other aspects of the study included analysing Family food distribution pattern, Gender disparity in food, nutrition and health status of adult men and women, demographic and family seminal characteristics influencing family food security and the gender disparity and family food security was explored.

Existing pattern of family types in the two regions was different, nuclear families predominated (90%) in Karkala taluk. There was a high level of literacy in the study regions. Women were predominantly home makers; men were involved in agriculture and agricultural labourers, business, professional, teachers and officials. Men were head of families in higher percentage of families, while female headed families also existed.

Adult women are the major decision makers for all meal related activities, like food purchase, meal planning, preparation and distribution. Family income bore a close association to pattern of purchase. The most potent influencing factor for meal
preparation and food allocation was likes/dislikes and were scored ‘1’ (49% and 52% in Karkala; 52 and 32% in Moodbidri respectively) while custom was ranked 5th.

Par boiled rice was the popular cereal, coconut and coconut oil was most in use for daily cooking. ‘Kashaya’, (herbal drink) was most popular. Being a coastal region use of sea foods was most frequent. An overall consumption can be considered an essentially similar in the two regions. A variety of factors was found to associate with family food security such as education status of the family head and the male and female couples. The phenomenal influence was seen when both man and woman were educated. Socio economic status is a corollary to education; hence a marked effect of SES was noted on family food security and there was an extremely significant association between income and food security. Family size was also found to influence family food security.

In general the health status of the adult male and females was satisfactory, majority of the females and males in two regions had BMI within the normal range, except for males from Moodbidri, who were overweight. WHR exhibited a typical occurrence of central obesity. Degenerative diseases like DM and hypertension were prevalent in the population studied, 8-12% of males and females in the two regions were diabetics while 4-8% were hypertensive.

QOL was a measure of health of the family members, both males (49-63%) and females (51-66%) claimed to have ‘Good’ QOL. SES, diet type, family size and education status were found to effect the QOL, never the less, markedly higher percentage of males experienced sickness. Females have a relatively higher number of days of suffering from all the symptoms investigated.

Nutrient intake of the family was studied using 7 days diary technique, consumption units were used to derive the nutrient adequacy. Per caput energy intake by the family members was considerably less and met on an average 63% of their requirements. Certain nutrients such as protein, calcium and fat intakes were considerably higher than their respective requirements. CV were calculated to indicate the vastness in the inter family intakes, it was found that energy, protein and fat had small CVs suggesting similarities in eating pattern and low inter family differences. Micronutrients on the other hand exhibited large CVs (59-79%). Differences due to diet type were very small and statistically not significant except for protein. Non vegetarian were found to consume higher quantities of protein which was statistically extremely significant.
Individual food intakes of adult men and women from selected families indicated energy intake to be low and met 64 and 70% among all irrespective of diet type. Protein intake was relatively high among females as compared to the men counter parts. Coefficient of Variation (CV) for macro nutrients among both males and females was essentially similar except for fat intake. Our results showed that females from vegetarian and non vegetarian group consumed more or less similarly quantity of nutrients.

Energy intakes were found to have a positive association to protein, calcium and iron intakes among both vegetarians and non vegetarians. The energy balance studies suggested that male members were in total energy balance while women were in negative balance. Both men and women who participated in haemoglobin assessment were found to have normal Hb levels, none had anaemia. The total number of families with food insecurity was 33%, among these 73% were food insecured without hunger while the severe food insecurity which included the experience of hunger occurred in 27% only. Education of both adult man and woman affected family food security.

Based on our finding it is evident those, the selected region for study were more urbanized, traditional pattern for food distribution and gender discrimination is declining. Regardless of economic differences food purchasing pattern was essentially similar. Women have higher family responsibilities related to food and family feeding care. Men also share these responsibilities. Education of men and women of the families essentially influence family food security. Prevalence of non communicable disease prevail in both men and women at 4-12%, major occurrence was diabetes and hypertension. Majority of adults had body weight nearing to normal, they were active and in energy balance. 27% of the study population had severe food insecurity. This figure appears to be glaringly high. The local authorities need to be sensitized about the high prevalence of risk for nutritional diseases so that resources can be mobilized in a better way to reduce hunger.