ABSTRACT

College girls are the nutritionally vulnerable population of the community. Food and nutrient needs are proportionally higher during this period of life. Still Indian girls are used to deprive from essential nutrients like proteins, vitamins and minerals due to lack of nutritional knowledge, poor environmental sanitation, trend of figure, consciousness and low socio economical condition of family. So they face series of nutritional challenge especially unbalanced nutrition like Iron Deficiency Anemia (IDA) which affect their growth and development as well as the quality of our future generation. IDA is more prevalent among Indian college girls due to secondary growth spurt, increased amount of blood volume as well as for menstrual loss of blood. In India, more than half of the college girls in the age group of 18 to 23 years are suffering from various types of anemia.

A comparative as well as co relational study on prevalence of anemia among urban and rural college going adolescent girls (18 to 23 years) was conducted. The main objectives of the study were to assess the nutritional status, study of prevalence of anemia, effect of dietary intervention and iron supplementation among college girls of Mehsana city and taluka (N = 1140). Study dependent variables were haemoglobin level, BMI, clinical signs and symptoms, nutritional knowledge and awareness regarding anemia, and independent variables were age, age at menarche, types of work, types of diet, socio economic status, status of menstruation, pica, dietary pattern etc. studied. The relevant information was collected with anthropometric measurements and haemoglobin estimation. Socio economic status and data of dietary habits was collected using pre tested questionnaires. The selected girls were administered iron tablets daily for three months and for dietary intervention, GCS powder was supplemented for the period of 28 days and nutritional knowledge intervention was carried out by expert’s lectures. Power point presentation and iron rich recipe demonstration. Study results identified that the prevalence of anemia in college girls was 69.39 %, Urban prevalence (mild-21.58%, moderate-9.65%, severe-
3.60% was same as compared to rural prevalence (mild-21.49%, moderate-10.79%, severe- 2.28%) of anemia. Knowledge score about anemia in both settings were at average. Dietary data indicated that frequency of intake of GLVs was remarkably less among all college girls. Intake of protein, iron, folic acid and vitamin C was significantly deficient in respect to IDA. Results also showed that there was an increment of 12.66 % of haemoglobin in the group of girls receiving iron supplement and GCS powder supplement(10.92 %) among selected girls due to high levels of compliance. Clinical findings of anemia showed decreased work performance and exercise intolerance along with reduced immune competence, quick fatigue, paleness of skin and eyes and brittle nails. The calculated coefficient of correlation showed that all variables were positively and significantly associated with age at menarche, types of diet, activities, morbidities, pica, sources of information, income, parent’s education and occupation. Blood haemoglobin was positively and significantly associated with age at menarche, heavy menstrual bleeding, frequency of iron and vitamin C rich food intake. Multiple regression analysis of urban and rural girls indicates that among all variables, that effect on nutritional status, the key variables were activities, age at menarche, types of work, pica, morbidities, parent’s education and occupation, types of diet, sources of information, heavy menstrual bleeding, frequency of iron and vitamin C rich food intake was significant.

As far as hypothesis testing, there was a significant influence of age, age at menarche, educational faculties, income and caste on haemoglobin level, nutritional knowledge, awareness regarding anemia, nutritional status and frequency of iron and vitamin C rich food intake among college girls. There was a non significant difference in area of residence and haemoglobin level, nutritional knowledge, awareness regarding anemia, nutritional status and frequency of iron and vitamin C rich food intake among college girls.

The prevalence of anemia is so widespread, control activities should be an integral part of health care services. The association of anemia with various risk
factors is also established by now. The present study highlights the need to develop pragmatic intervention programs incorporating various strategies to improve dietary intake and bio availability of dietary iron, nutrition supplementation and fortification of edible dietary item with iron. Community awareness should be increased through home based approaches to strengthen and improve the nutritional status.