Malnutrition is a global health problem. Malnutrition is not merely due to the inability of agricultural production to cope with the demand of increasing world population but also due to other factors viz. ignorance, false beliefs, traditions, customs etc. In a developing country like India, where poverty prevails, where deep rooted traditions, taboos and false beliefs have imprisoned the people, the problem of nutritional disorders is more acute and its impact is more profound on children. Nutritional surveys carried out in various states by the I.C.M.R. revealed that the diet of the vulnerable group is far from adequate in calories and protective foods. Various practices and prejudices in infant feeding have resulted in malnutrition and ill health of the children in this country.

In Uttar Pradesh, there are very few surveys of nutritional disorders in children of the 0-5-years-age group. Therefore, an attempt has been made to find out the prevalence of nutritional disorders amongst children below five years in a rural community and study the various factors associated with nutritional disorders.

Material and Methods

Children below five years belonging to four intensive service villages of the Rural Field Training Centre, Kalyanpur, of the Medical College, Kanpur, were studied. 355 (73.6 per cent) families had children in this age group. By random sampling 50 per cent of these families were selected. There were 235 children below 5 years in these families but only 202 could be studied; the rest were not available in spite of repeated visits.

A detailed history was taken and clinical examination was carried out on these children and recorded on a predrawn tested schedule. When necessary, stool examination and haemoglobin estimation were carried out.

Results

Age-wise distribution revealed that 60.2 per cent of the children were 1-3 years and 15.9 per cent cases were infants. 61.3 per cent were males. The mean ages for males and females were 2.15 and 2.11 years respectively. 30.2 per cent children had nutritional disorders, such as, anaemia (18.3%), vitamin deficiency (9.9%) and protein calorie malnutrition (1.9%). 80.3 per cent of nutritional disorders were in children of 6 months to 4 years of age. Infants up to 3 months of age were free from nutritional disorders. Anaemia and vitamin B deficiencies were
observed more in the age group of 6 months to 3 years while other deficiencies were seen more in the 2-5 years-age group (Table 1).

Religion and caste distribution revealed that 87.1 per cent were Hindus of mostly the Kurmis and Brahmin (24.4%) castes. The remaining 12.8 per cent were Muslims. 50.0 per cent of the fathers of the children were labourers and another 32.6 per cent were agriculturists. The remaining 17.3 per cent were in service or business, while the mothers of these children were either housewives (82.6%) or agricultural labourers (17.3%).

The literacy status of the parents showed that 90.5 per cent had education up to the primary or high school.

The morbidity pattern in the children included gastrointestinal disorders (59.4%), respiratory disease (29.2%), eruptive fevers (9.9%) and nutritional disorders (1.4%).

Height and weight

69.3 per cent children weighed 15-30 lb. (Table 2). There was highly significant (P < 0.001) positive correlation between height and weight of these children (r = 0.68).

It was also observed that the mean height and weight of males were 28.98 inches and 21.93 lb., while for females it was 27.31 inches and 20.71 lb. respectively. The males were taller than the females which was highly significant (t = 5.6; p < .01). Further the males were heavier than the females which was also significant. (t = 3.2; p < .01).

Nutritional deficiency signs

The common nutritional deficiency signs observed were pale conjunctiva (18.3%), Bitot's spot (4.9%), angular stomatitis (2.9%), retarded growth and skin changes (1.9%) bleeding spongy gums (0.9%) and pigeon chest (0.9%).

Social class

Nutritional disorder by social classification (Prasad 1970) revealed that 86.1 per cent were of social classes IV and V and none were in social class I (Table 3). 30.6 and 24.7 per cent children of social class V and IV had nutritional disorders. It was observed that the lower the social class the higher was the incidence of nutritional disorders.

Birth order

10.8 and 6.4 per cent children of III and IV birth orders had a higher incidence of nutritional disorders. It was also observed that children of birth order III showed every type of nutritional disorder. (Table 4).

Dietetic habits

83.1 per cent cases were from vegetarian families. 67.2 per cent of the nutritional disorders were seen in children of these vegetarian families. Protein calorie malnutrition was exclusively observed in vegetarian families. During infancy 50.9 per cent cases were fed on mother's milk with some top feeds and another 41.4 per cent were fed on mother's milk alone (Table 5). The duration of breast feeding was up to 3 years. Among anaemic children, the haemoglobin was from 6-11 G.%. 45.9 per cent of anaemic cases had a haemoglobin value between 10-11 G.%. The mean haemoglobin of male and female anaemic children were 8.5 and 8.2 G.% respectively. 26.8 per cent of cases had delayed milestones; of those with nutri-