Conclusion

Studies of nutritional status are essential because it is clear that the nutritional status of the population is the major determinant of not only its health status but also of the process of national development itself (Gopalan, 1997). The economic and social progress of the nation depends on the health of its people. Children are the most vulnerable sections of society, especially children up to the age of 6 years. It is during this time that they require the maximum amount of care regarding their dietary intake because it is a period of rapid physical and mental growth. Public action can play a powerful role in promoting essential aspects of the quality of life (Dreze and Gazdar, 1999).

Uttar Pradesh is one of the largest states in India, and it also boasts of the largest number of politicians – 7 Prime Ministers over the past fifty years. Unfortunately, it is also the state, which lags behind most of the other states in the country in many Human Development Indicators. It has the highest under 5 mortality rate (U5MR) and according to a recent national survey on family health, the incidence of malnutrition among children below 6 years is the second highest, Bihar being the first.
According to estimates by the RBI for the years 1997-98, the population of U.P. was 164 million. The child population (0-6 years) was 20.27% of the total population. These numbers will help in gauging the magnitude of the problem of malnutrition among children. Aligarh, the locale of the present study is a small city in Uttar Pradesh. Besides being a university town, Aligarh is also an industrial center for brass works. These industries rely chiefly on piece rate labour – factory based and home based. The main reason for this is that labour, specially migrant labour, is cheap in Aligarh. There are large numbers of these workers, mainly women, who constitute most of the work force.

The nutritional status of this highly exploited but invisible labour force is the focus of this study. Surprisingly there has been almost complete neglect of this aspect in similar researches. The physical development of this large group of children is directly affected by the low incomes earned as also by the immediate environment. The general objective was to assess their nutritional status using national and internationally accepted reference standards and classifications.

Four areas of Aligarh city were selected for the study. The sample belonged to the homogeneously poor strata of society. All were living under fairly uniform socio economic conditions. 212 women constituted the sample of working women – 149 home based and 63 factory based. The reason why a lesser number of factory based women workers were
studied was that employers refused to acknowledge that they employed women at all. The number of children of these workers who fell into the age group of 1-6 years was 320. 213 of home based mothers and 107 of factory based mothers.

In order to identify the role of the socio economic and environmental factors on the health of the child, data on demographic particulars of the family, their income, type and size of the family, community facilities like the provision of potable water, toilets, utilization of health services, religion, origin – whether local or migrant, work pattern of the parents were collected. Non-participant observations during the various visits were also noted. Anthropometric measurements of the children were also taken – height, weight, head circumference, mid upper arm circumference, sitting height and calf circumference and mean values were also calculated. Case studies were conducted in 7 families to supplement the study.

A three-tier questionnaire was used for collection of data – one for the unit, one for the women workers and one for the child. Questions were formulated on the basis of standardized schedules of the Indian Council of Medical Research and the Labour Bureau, Government of India (see appendix). A pilot study was conducted after which the questions were suitably modified for use.
The weight and height measurements of children were converted into weight for age, height for age and weight for height percent of standard for each child using NCHS Standards. The ICMR standards were also referred to for some measurements. Based on the Harvard Standards, the IAP standards and the NCHS Standards the children were classified into various categories of nutritional status – normal, mild, moderate and severe malnutrition. The classifications used were Gomez’s, Jelliffe’s, Indian Academy of Pediatrics and the National Center of Health Statistics. Both age dependent and age independent anthropometry classifications were used because the sample population was largely illiterate and exact dates could not be elicited.

Quantitative data were subjected to statistical parametric tests while qualitative data were analyzed and interpreted accordingly. The findings of the study were as follows –

1. The 12-23 month age interval among both the groups studied had the maximum number of severely malnourished children.

2. The most severely malnourished children among factory based and home base women workers were girls.
3 The birth order of the malnourished girl children fell steeply after 4.

4 The heights and weights of almost all the children in both the groups were below the reference standards set by the Indian Council of Medical Research, the Indian Academy of Pediatrics and much below the internationally accepted standards set by the National Center of Health Statistics.

5 The mean Mid Upper Arm Circumference of the children of factory based women workers was better than the MUAC values of the children of the home based women workers.

6 The mean calf circumference values of the children of the factory based women workers was greater than the calf circumference values of the children of the home based women workers.

7 Head circumference values of boys from both groups were greater than the head circumference values of the girls.

8 Chest circumference values of the children of the factory based women workers were higher than the corresponding values of the home based group and at
some age intervals were higher than the ICMR standards

9 The chest head ratio of the children of factory based working women was not less than 1 at any age interval. The home based sample children had values less than 1 till the age of two years.

10 The Rao Index indicated that all the children were malnourished at the 12-23 month interval after which there was a slight improvement. At the 36-47 month interval all the children showed normal values.

11 The Kanavati Index showed that children of factory based working women were less malnourished than the children of the home based group.

12 The Quetlet's Index clearly depicted the fact that most of the children of home based women workers were in a state of gross malnutrition. The children of factory based working women were marginally better nutritionally.

13 According to Gomez's Classification, most of the boys in the factory-based group were in Grade 1 and Grade 2 of malnutrition. There were no boys who were severely malnourished. 20.4% of the girls were in Grade 3 while the majority were in Grade 2 and Grade
1. Among the children of the home-based working women, the percentage of boys who were normal was slightly higher but there were 11.2% in the severely malnourished Grade 3. The majority were in Grade 2. The percentage of girls in Grade 3 was 28.8% while 45% were in Grade 2 and 22% in Grade 1.

14. Assessment of nutritional status by Jelliffe's classification showed that most of the children of both the groups were in Grade 2 of malnutrition though the findings indicated that one-fifth of the girls were in Grade 4 and no boys were present in this category. In the home based group of children there were no children in the normal category till the last age interval. The majority of boys were in Grade 3 (36.20%) while the girls were in Grade 2 (32.98%). An equally large number of girls (28.88%) were classified in Grade 4. Boys had a much lower percentage in this grade.

15. According to the classification recommended by the Indian Academy of Paediatrics, a large percentage of children fell marginally into the normal category especially after the age of 3 years in both the groups. Most of the boys in the factory based working women's group were in Grade 1 as also the girls. The only difference was that there were girls (16.32%) in Grade 4 while there were no boys in Grade 3 or Grade 4.
Among the home based group, the boys and girls were mostly in Grade 1 and 2 although the percentage of boys in Grade 4 (5.17%) was slightly lesser than the percentage of girls (6.18%)

16 In the classification of the National Center of Health Statistics it was found that most of the boys were underweight and stunted (68.96%) in the factory-based group while only 61.22% girls were underweight and stunted. There were a lower percentage of boys who were stunted and wasted as compared to the girls (24.48%) in the wasted category there were 8.62% boys and 10.2% girls. 6.89% of the boys were in the normal category IN the group of children of home based women workers 11.2% boys were underweight as compared to 12.37% girls. 43.96% boys were stunted as against 47.42% girls. 14.65% boys were wasted as compared to 12.37% girls. 23.27% boys were stunted and wasted while only 21.64% girls fell into this category.

17 The nutritional status of children of both the groups became noticeably better after 3 years of age.

18 The sample children of both groups showed that the majority had sparse dyspigmented hair and pale conjunctiva.
19. The diets of the children were mainly carbohydrate in content.

20. A higher percentage 57.11% of factory-based working women's children were immunized as compared to 30.51% of children of home-based women workers.

21. Most of the factory-based women workers were locals of Aligarh while most of the home-based workers were migrants.

22. The majority of the factory-based working women were Hindus while the majority of the home-based working women were Muslim.

23. Only 27% of the husbands in both the groups were employed on a regular basis.

24. Most of the home-based and factory-based workers lived in nuclear families.

25. The majority of women workers of both the groups earned Rs 500 or less a month.

26. The women workers of both the groups were mostly illiterate.
27 The majority of children of both groups were left in the care of older siblings.

28 A larger percentage (68.25%) of women from the factory based group had easier access to potable water as compared to 54.36% of the home based group.

29 52.3% of the factory based working women had toilets in their homes as compared to 37.59% of the home based working women.

30 The presence of the mother did not have a significant impact on the nutritional status of the child.

31 There is no significant difference in the nutritional status of the children of factory based working women and the children of home based working women after the age of 3 years.

The results suggest that the mother's work pattern influences the food availability in the family, which affects the nutritional status of the child. It has also been noticed that the gender and birth order of the child determine the food distribution within the family. This study will add to the body of information and will act as a guide to future researches in this area.