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**Sushma Gupta**  
Research Scholar, Home Sc  
Faculty KNIPSS Sultanpur, Uttar  
Pradesh, India

**Kiran Agraphari**  
Advisor & Assistant Professor,  
Home Sc Faculty KNIPSS  
Sultanpur, Uttar Pradesh, India

**Mamta Jaiswal**  
Co Advisor & Assistant  
Professor, Home Sc Faculty  
KNIPSS Sultanpur, Uttar  
Pradesh, India

**Archana Singh**  
Co Advisor & Assistant  
Professor, Home Sc Faculty  
KNIPSS Sultanpur, Uttar  
Pradesh, India

## A study on the incidence of malnutrition in children (1-5 years) of low income groups of Ambedkar Nagar

**Sushma Gupta, Kiran Agraphari, Mamta Jaiswal and Archana Singh**

### Abstract

Malnutrition among under-five year children is a major public health problem in India. This is reflected by the fact that the prevalence of under-weight children in India is among the highest in the world, and is nearly double that of Sub-Saharan Africa. It is also observed that the malnutrition problem in India is a concentrated phenomenon that is, a relatively small number of states, districts, and villages account for a large share of the malnutrition burden — only 5 states and 50% of villages account for about 80% of the malnutrition burden. Each year approximately 2.3 million deaths among 6-60 months aged children in developing countries are associated with malnutrition, which is about 41% of the total deaths in this age group. This study was performed to determine the Study on the incidence of malnutrition in children (1-5years) of low income groups of Ambedkar Nagar. For the research survey method was used for the collection of data. The sample sizes of 100 respondent's 1-5years were randomly selected. The survey schedule consisted of question on general profile anthropometric measurement in which height (cm) weight (kg) were taken. The result was compared with "weight for height given by National Institute of Health. The result indicated that minimum 29% of preschoolers were suffered from malnutrition due to the unhealthy dietary habits of their family.

**Keywords:** Malnutrition, anthropometric, hypertension

### Introduction

Malnutrition among under-five year children is a major public health problem in India. This is reflected by the fact that the prevalence of underweight children in India is among the highest in the world, and is nearly double that of Sub-Saharan Africa. It is also observed that the malnutrition problem in India is a concentrated phenomenon that is, a relatively small number of state, districts, and village account for a large share of the malnutrition burden- only 5 states and 50% of villages account for about 80% of the malnutrition burden. Each year approximately 2.3 million deaths among 6-60 months aged children in developing countries are associated with malnutrition, which is about 41% of the total deaths in this age group. The proportion of people who suffer from hunger as measured by the prevalence of under-weight among under-5 year children. The burden of under-nutrition among under-five children has not changed much even though various intervention programs are in operation in India. Current changing dietary patterns are also affecting the nutrition status of under-five children resulting in increased prevalence of adult no communicable diseases such as obesity, diabetes, hypertension and coronary heart disease. The need of the hour is to examine the burden of under-nutrition and obesity, study it's determining factors and assess the effectiveness of the various approaches to and strategies for strengthening services delivery to fewer than five children in India.

### Under-nutrition

It was found that there was a significant rural-urban as well as gender difference in growth and nutritional status of Indian preschool children. Poor feeding practices was common during infancy with 46.4% of under- six month's aged children receiving exclusive breastfeeding and 56.7% of those aged 6-9 months receiving complementary food items. The rates of exclusive breast feeding and complementary feeding were higher for mothers who had more antenatal visits and watched television hence, the factors related to nutrition and growth monitoring affects the malnutrition status of children.

**Correspondence**  
**Sushma Gupta**  
Research Scholar, Home Sc  
Faculty KNIPSS Sultanpur, Uttar  
Pradesh, India

### **Over-nutrition**

There is a paucity of data related to the prevalence and determinants of overweight and obesity among under-five children in India. The highest prevalence of overweight among preschool children was found in Eastern Europe and the Middle East, whereas the same in India and Sri Lanka was the lowest. Although the prevalence is lower in Asia than in Africa. The number of children (18 million) affected is higher in Asia.

### **Objectives**

- To assess the dietary habits and nutritional status of children.

### **Materials and method**

Scientific methodology is necessary for a successful study as it directly indicates words the authenticity of the research and attempt has been made to provide to detail of methods and techniques devices and procedure applied for conducting the research. A present study entitled "A study on the incidence of malnutrition in children (1-5years) of low income groups of Ambedkar Nagar."

### **Research design**

- **Selection of location**

The location of the study was Ambedkar Nagar district.

- **Sample Size**

Sample size consisted of 100 children aged between 1-5 years were randomly selected from urban and rural area.

- **Questionnaire prepare**

A self-prepared questionnaire was used for collecting the relevant information regarding the study and random sampling will be used.

- **Statistical Analysis**

The collected data were analyzed with the help of the following way-

$$\text{Percentage \%} = \frac{n}{N} \times 100$$

N = number of respondents

N = Total Number of Observation

### **Methods of enquiry and collection of data**

Survey methods was adopted in order to collect the data from the selected respondents with the help of developed questionnaire schedule. The schedule included aspects which led to the fulfillment of the objective of this study.

The schedule included the following information:

1. General information
2. Nutrition status through anthropometric measurement
3. Dietary information

### **General profile**

Data regarding general profile of respondents were collected using the first part of the schedule. This section covered the aspects including respondents name, age, and sex, religion, status, type of family, income, educational status and all these are important for knowing the respondents socio-economic status. The age of each respondents was ascertained with the help of their date of birth.

### **Dietary survey**

A dietary survey was conducted as described by Srilakshmi (2005). The food consumption frequency was recorded in

terms of cereals, pulses, milk and milk products, green leafy vegetables, roots and tubers, fruits meats and poultry, fats oils and sugar, Diet surveys constitute and essential part of any complete study of nutritional status of individuals or groups, providing essential information on nutrient intake levels, sources of nutrients, food habits and attitudes. The nutrient intake of the subjects was calculated on the basis of 24 hour dietary recall method. The diet was calculated for calories, protein fat, fiber, calcium, iron, vitamin A, Vitamin C and thiamine. The nutrient intake was calculated using the food composition tables by and compared with the ICMR standard values. Eating habits and dietary pattern of the respondents were recorded.

### **Anthropometric measurement**

Anthropometric Measurement of variations of physical dimensions. Hence, anthropometric measurements are useful criteria for assessing nutritional status. The anthropometric measurement included height (cm) and weight (kg) which were recorded using the procedure prescribed by.

### **Height Measurement**

Height (cm) of the subjects was taken with the help of a measuring tape by sticking it on the wall. The subjects were made to stand erect, looking straight, buttocks, shoulders and head touching the wall, heels together, toes apart and hand hanging loosely by the sides, height (cm) was recorded in centimeters.

### **Weight**

The personal weighing machine of maximum capacity of 120 kg and the minimum division of 0.5 kg was used to weight all the subjects and scale was set to zero. The respondents were made to stand erect on the weighting scale without foot wear, not leaning against or holding anything and the weight was recorded in kg. The scale was adjusted to zero after each measurement.

### **Clinical signs and symptoms**

The general appearance, body appearance, growth, skin, hair, nail, eyes and appetite of each subject were examined, In order to find out sign of nutritional deficiencies were present. Observations were recorded on the schedule as given in appendix-A.

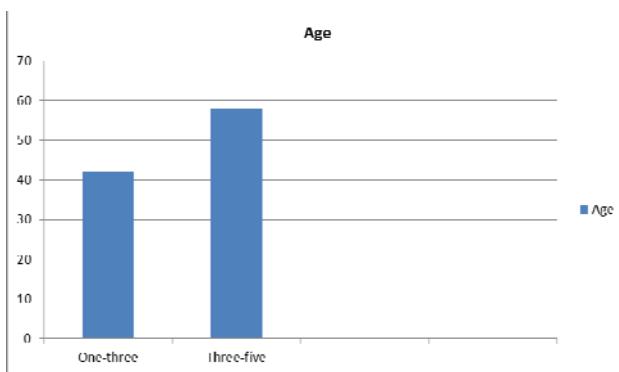
### **Result and discussion**

The data collection of the different aspect per plan was tabulated and analyzed statistically. The result from the analysis are presented and discussed in the following sequence.

**Table 1:** Distribution of respondents on the basis of their Age.

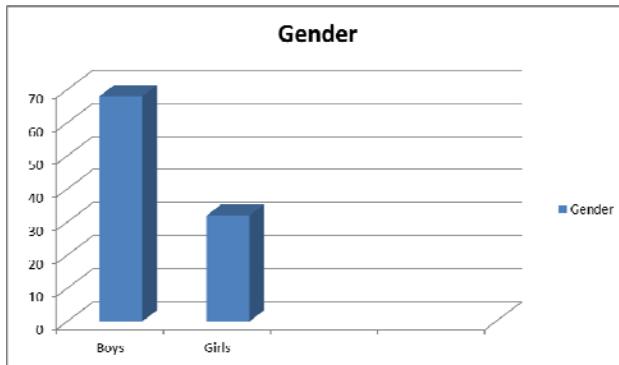
Age (Years)	Frequency (N=100)	Percentage (%)
1-3	42	42
3-5	58	58
Total	100	100

Above table shows that maximum 58% of respondents were belong form the age of 1-3years while minimum 42% of respondents were 3-5 years age group.

**Fig 1:** Distribution of respondents on the basis of their Age.**Table 2:** Distribution of respondents on the basis of their Gender.

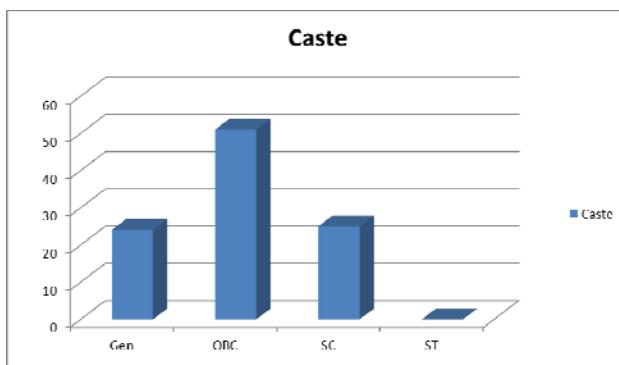
Gender	Frequency (N=100)	Percentage (%)
Boys	68	68
Girls	32	32
Total	100	100

Above table shows that maximum 68 % of respondents were boys while minimum 32 % of respondent were girls.

**Fig 2:** Distribution of respondents on the basis of their Gender.**Table 3:** Distribution of respondents on the basis of their Caste.

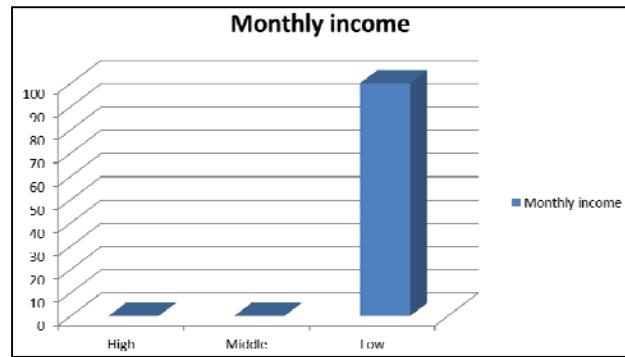
Caste	Frequency (N=100)	Percentage (%)
Gen	24	24
OBC	51	51
Sc	25	25
ST	0	0
Total	100	100

Above table shows that maximum 51% of respondents were OBC and 25% of respondent were SC while minimum 24% of respondents were Gen, and 0% of respondents were ST.

**Fig 3:** Distribution of respondents on the basis of their Caste.**Table 4:** Distribution of respondents on the basis of their Monthly income.

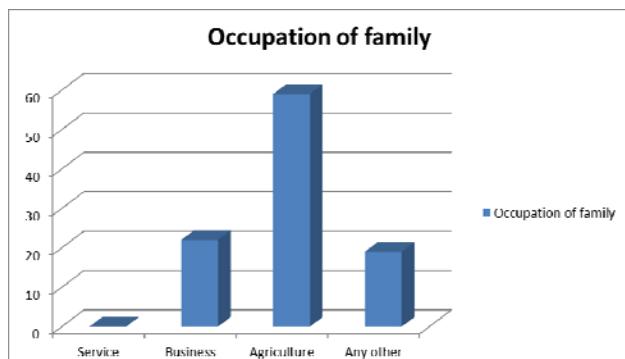
Monthly income	Frequency (N=100)	Percentage (%)
High	0	0
Middle	0	0
Low	100	100
Total	100	100

Above table shows that maximum 100% of respondent belong from low income group while non of respondents belong from high income group and middle income group.

**Fig 4:** Distribution of respondents on the basis of their Monthly income.**Table 5:** Distribution of respondents on the basis of their Occupation of family.

Occupation of family	Frequency (N=100)	Percentage (%)
Service	0	0
Business	22	22
Agriculture	59	59
Any other	19	19
Total	100	100

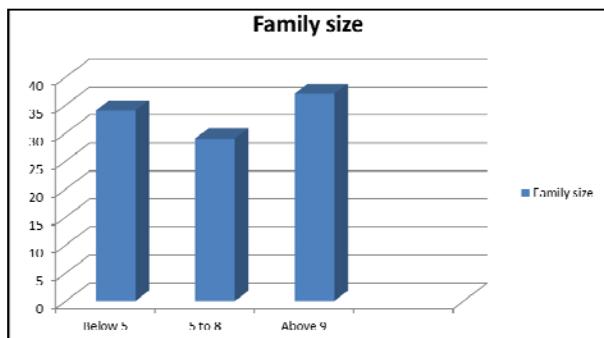
Above table shows that maximum 59% of respondents were had Agriculture, while 22% of respondents were had business, and minimum 19% of respondents were had any other occupation.

**Fig 5:** Distribution of respondents on the basis of their Occupation of family.**Table 6:** Distribution of respondents on the basis of their Family size.

Family size	Frequency (N=100)	Percentage (%)
Below 5	34	34
5 to 8	29	29
Above 9	37	37
Total	100	100

Above table shows that maximum 37% of respondents were had above 9 family members and 34% of respondent were had

below 5, while minimum 29% of respondent were had 5 to 8 family members.

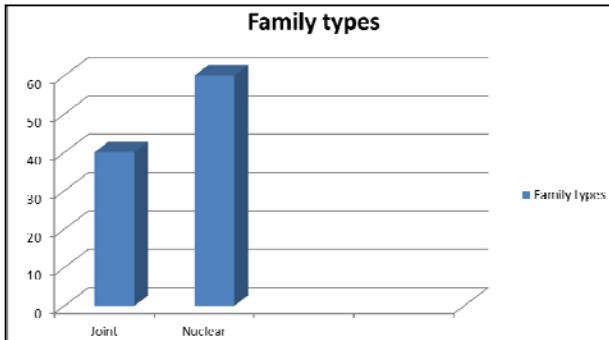


**Fig 6:** Distribution of respondents on the basis of their Family size.

**Table 7:** Distribution of respondents on the basis of their Family types.

Family types	Frequency (N=100)	Percentage (%)
Joint	40	40
Nuclear	60	60
Total	100	100

Above table shows that maximum 60% of respondents were belongs from nuclear family and minimum 40 % of respondent were belongs from the joint family.

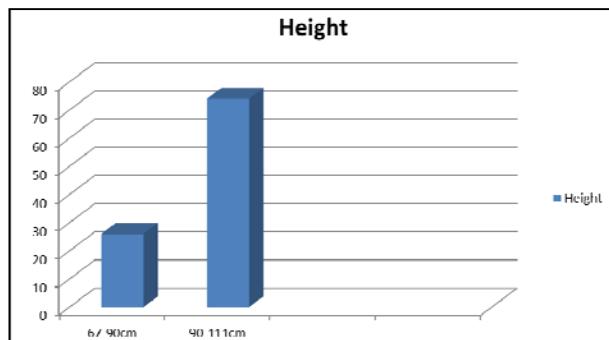


**Fig 7:** Distribution of respondents on the basis of their Family types.

**Table 8:** Distribution of respondents on the basis of their Height.

Height	Frequency (N=100)	Percentage (%)
67-90cm	26	26
90-111cm	74	74
Total	100	100

Above table shows that maximum 74% of respondents were had 90-111cm height while minimum 26 of respondent were had 67- 90cm height.

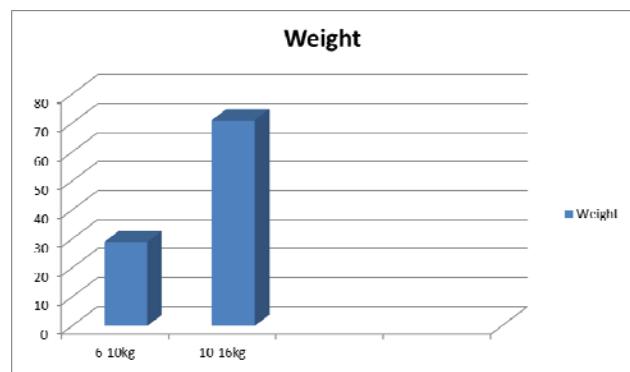


**Fig 8:** Distribution of respondents on the basis of their Height.

**Table 9:** Distribution of respondents on the basis of their Weight.

Weight	Frequency (N=100)	Percentage (%)
6-10kg	29	29
10-16kg	71	71
Total	100	100

Above table shows that maximum 71% of respondents were had 10-16kg body weight while minimum 29% of respondents were had 6-10kg body weight.

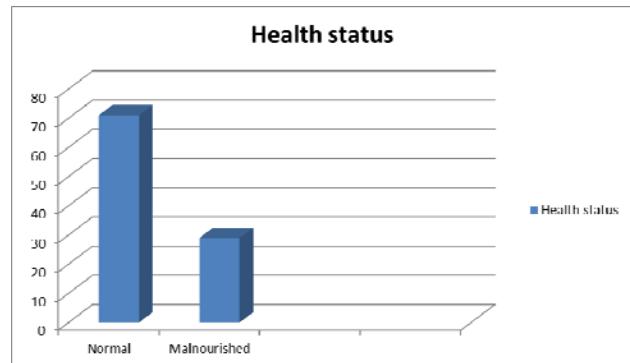


**Fig 9:** Distribution of respondents on the basis of their Weight.

**Table 10:** Distribution of respondents on the basis of their Health status.

Health status	Frequency (N=100)	Percentage (%)
Normal	71	71
Malnourished	29	29
Total	100	100

Above table shows that maximum 71% of respondents were normal while minimum 29% of respondents were malnourished. Obtained datas were compared with standard weight for height table given by National Institute of Health.

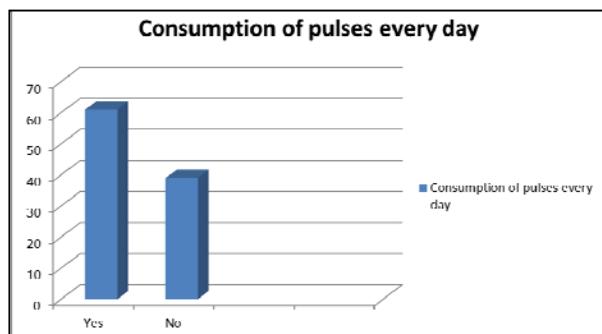


**Fig 10:** Distribution of respondents on the basis of their Health status.

**Table 4.11:** Distribution of respondents on the basis of their Consumption of pulses every day.

Consumption of pulses every day	Frequency (N=100)	Percentage (%)
Yes	61	61
No	39	39
Total	100	100

Above table shows that maximum 61% of respondents were consume pulses every day minimum 39% of respondent were not consume pulses every day.

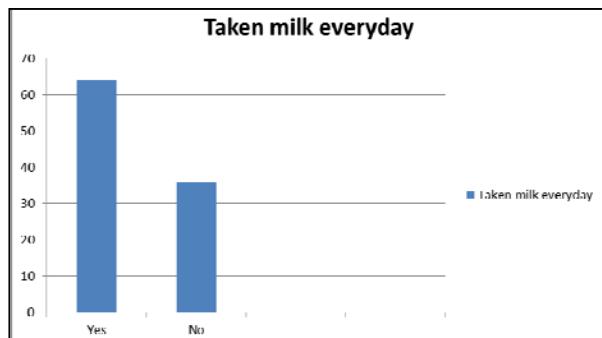


**Fig 11:** Distribution of respondents on the basis of their Consumption of pulses every day.

**Table 12:** Distribution of respondents on the basis of their Consumption of milk every day.

Consumption of milk every day	Frequency (N=100)	Percentage (%)
Yes	64	64%
No	36	36%
Total	100	100%

Above table shows that maximum 64% of respondents were taken milk every day while minimum 36% of respondents were not taken milk every day.

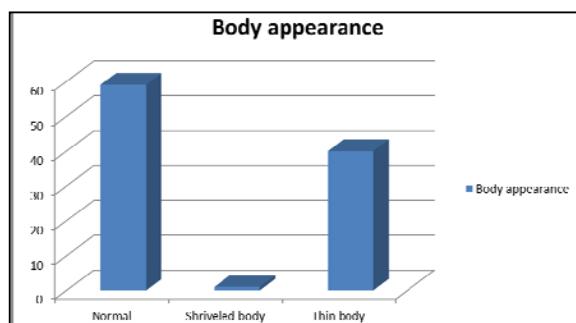


**Fig 12:** Distribution of respondents on the basis of their Consumption of milk every day.

**Table 13:** Distribution of respondents on the basis of their Body appearance.

Body appearance	Frequency (N=100)	Percentage (%)
Normal	59	59%
Shriveled body	1	1%
Thin body	40	40%
Total	100	100%

Above table shows that maximum 59% of respondents were normal and 40% of respondents were thin body while 1% of respondents were shriveled body appearance.

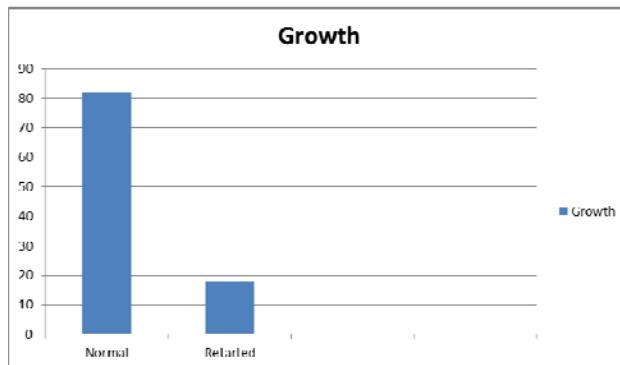


**Fig 13:** Distribution of respondents on the basis of their Body appearance.

**Table 14:** Distribution of respondents on the basis of their Growth.

Growth	Frequency (N=100)	Percentage (%)
Normal	82	82%
Retarded	18	18%
Total	100	100%

Above table shows that maximum 82% of respondents were had normal growth while minimum 18% of respondents were retarded body growth.

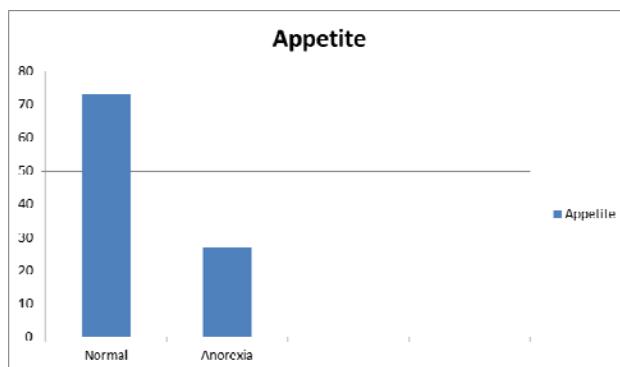


**Fig 14:** Distribution of respondents on the basis of their Growth.

**Table 15:** Distribution of respondents on the basis of their Appetite.

Appetite	Frequency (N=100)	Percentage (%)
Normal	73	73%
Anorexia	27	27%
Total	100	100%

Above table shows that maximum 73% of respondents were had normal appetite while minimum 27% of respondents were anorexic appetite.



**Fig 15:** Distribution of respondents on the basis of their Appetite.

#### Summary and conclusion

In recent years, mostly people were affected malnutrition because dietary habits and nutrition status of children were bad. Prevalence of malnutrition shows that their poor dietary habit.

The present study entitled "Study on the incidence of malnutrition in children (1-5years) of low income groups of Ambedkar Nagar." Total 100 respondents of 1-5years were selected for study purpose. Area simple random sampling was taken for sampling. Primary and secondary data was collected through questionnaire method. In the study that maximum 58% of respondents were belong form the age of 1-3years while minimum 42% of respondents were 3-5 years age group. Maximum 68 % of respondents were boys while minimum 32

% of respondent were girls. Maximum 51% of respondents were OBC and 25% of respondent were SC while minimum 24% of respondents were Gen, and 0% of respondents were ST. Maximum 100% of respondent belong from low income group while non of respondents belong from high income group and middle income group. Maximum 59% of respondents were had Agriculture, while 22% of respondents were had business, and minimum 19% of respondents were any other occupation. Maximum 37% of respondents were had above 9 family members and 34% of respondent were had below 5, while minimum 29% of respondent were 5 to 8 family members. Maximum 60% of respondents were belongs from nuclear family and minimum 40 % of respondent were belongs from the joint family.

Maximum 74% of respondents were had 90-111cm height while minimum 26 of respondent were had 67- 90cm height. Maximum 71% of respondents were had 10-16kg body weight while minimum 29% of respondents were 6-10kg body weight. Maximum 71% of respondents were normal while minimum 29% of respondents were malnourished.

### **Limitations of study**

- The study is carried out for short period, so that time and other resources are limited to an extent.
- It was questionnaire schedule method which has its own limitation of respondent dependent information without any alternative.

### **Acknowledgement**

All glory to the almighty, whose blessing in the success behind this project praise pride and perfection belong to almighty. So first of all I would like to express my deepest sense of gratitude to the omniscient power of the universe, the almighty God.

This project would not have been possible without the support of many people. Word fails to express my sense of independence and profound gratitude toward my honorable Advisor Miss. Kiran Agrahari, Head Dr. Mamta Jaiswal, and Co-advisor Miss. Archana Singh Faculty of Home Science, Kamla Nehru Institute of Physical and Social Sciences, Sultanpur (U.P.), for their noble advise constructive criticism and valuable suggestion unending inspiration enduring patience during my study. Her continued encouragement positive attitude towards my ability made the achievements of this goal easy to tackle and complete my work in time.

Idem it is rare opportunity and the proud privilege of my life to express my best regards sense of homage and gratitude to my reverent parents Mrs. Usha Agrahari & Mr. Devi Prasad Agrahari and my beloved brothers Mr. Pradeep Agrahari and Mr. Mahesh Agrahari and my affectionate sister Miss Mamta Agrahari. My family's constant inspiration, everlasting affection, their blessing sacrifices emotion, financial and moral support are the prime fact which made me capable of doing this all.

From the very special corner of my heart I wish to record my indebtedness to my advisor for their kind help and express my manifold thanks to Miss. Kiran Agrahari. I am also thankful to all respondents for giving me proper co-operation during the data collection.

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