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# **Acharya Academy, Bharat**

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☛	<b>Different Factors Which Affects Invigorating Status of Infant in Urban Slum of Kurukshetra District of Haryana</b>	
	Dr. Sarojini Jamadagni	104-112
☛	<b>On <math>(N, P_n)</math> Summability Factors of Infinite Series</b>	
	Neeta Sharma	113-122
☛	<b>Spatial Pattern of Sex Ratio in Haryana (2011) : A District wise Analyses</b>	
	Sandeep Dahiya, Dr Samsher Singh Dhull	123-126
☛	<b>Pradhan Mantri Fasal Bima Yojana(PMFBY): A Critical Review</b>	
	Rudar Kumar	127-138
☛	<b>ई-गवर्नेस : सूचना प्रौद्योगिकी और डिजिटल इंडिया</b>	
	डॉ. शांति कुमारी मीना, डॉ पंकज कुमार मंडावत	139-143
☛	<b>बून्दी जिले में लिंगानुपात: एक भौगोलिक अध्ययन</b>	
	<b>Sex Ratio in Bundi District :A Geographical study</b>	
	डॉ.मोहम्मद उस्मान	144-150
☛	<b>हिन्दी साहित्य में महिला रचनाकारों द्वारा व्यक्त सांस्कृतिक विमर्श</b>	
	डॉ. राजेश कुमार, मोनिका	151-157
☛	<b>लोक कविता के युवा स्वर</b>	
	दिनेश	158-164
☛	<b>रामायण में शास्त्रविज्ञान</b>	
	डॉ. चरण सिंह	165-171
☛	<b>Evaluation of Marketing of Information Product and Services of Libraries in Maharshi Dayanand University</b>	
	Dr. Dharam Pal, Anju Bala	172-182
☛	<b>US's CAATSA Act and Its Implications for India</b>	
	Lovepreet Singh	192-195
☛	<b>निर्मला में अनमेल विवाह के प्रश्न</b>	
	डॉ. राम फल मोण	196-199



**Different Factors Which Affects Invigorating Status of Infants  
in Urban Slum of Kurukshetra District of Haryana**

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**Abstract**

The purpose of this article is to provide an overview of highly prevalent factors influencing the nutritional status of the infants in urban slums. Children's development is essentially cumulative in nature and hence, the early years of the life are the foundation for later development. Multistage sampling technique was used for the selection of the sample. As the study was conducted on 286 infants of urban slums of Kurukshetra District. In the present study there are some factors which significantly affect the health of infants like Birth order of the child and number of siblings. Whereas there were many factors which were not significantly affecting the nutritional status of infants like type of family, caste, occupation, income, & age of mother.

**Key-Words : Nutritional Status, Health, Caste, Occupation, Birth Order.**

**Introduction**

Infants will shape the future of our country and strengthen the nation. Therefore we all must strive to ensure for optimal growth and development of the infants and children so that they can effectively contribute towards progress of the nation. Many factors affect the health and development of an infant. Optimal growth and development depend upon loving parenting, responsive care-giving, appropriate medical care, good nutrition, health, sleep, habits and a safe nurturing environment. Parents, caregivers, family members and health care professionals all contribute in some way to the development of a healthy infant.

In 2018, infant mortality rate for Haryana was 30 deaths per 1000 live births. Infant mortality rate of Haryana fell gradually from 68 deaths per 1000 live birth in 1999 to 30 deaths per 1000 live births in 2018 (NHFS2020).

The integrated nature of growth and maturation is largely maintained by a constant interaction of genes, hormones, nutrients and other factors. These factors also influence physical performance. Some are hereditary in origin. Others, such as season, dietary restriction, severe psychological stress, originate in the environment and simply affect the rate of growth at the time they are acting.



Others again, such as socio-economic class, reflect a complicated mixture of hereditary and environmental influences and probably act throughout the whole period of growth. There are different factors in the family which affect the infant feeding practices like, family type, Birth order, number of siblings etc has been considered as important factors in influencing perceptions which determines infant's health. The term infant is typically applied to young children the ages starting from birth upto 24 months. This time is highly vulnerable to malnutrition due to characteristic rapid growth rate, high nutritional requirements, immature immunological system which increase susceptibility to infections and sole dependence on their caretakers. It is also said that the eventual nutritional status of a child depends not only on household resources and food availability but also on the actions of the family members, primarily of the parents and especially of the mothers which determine the health and nutritional status of the children in developing countries

### Methodology

Multistage sampling technique was used for the selection of the sample. Out of 21 districts in Haryana, one district namely Kurukshetra, 1,530 Area (in Km<sup>2</sup>) established in 23<sup>rd</sup> January 1973. with the population of 964231 persons was selected at first stage. As the study was conducted on infants of urban slums of Kurukshetra District. Five urban slum areas in the district were selected on random basis in the second stage. A total 286 mothers who had infants between the age 0-24 months were interviewed in a house to house survey. Chi square test and regression analysis were used to analyse the data

An interview schedule specially prepared with critical discussion has always proved useful. In the present study the interview schedule was developed in consultation with subject matter specialists and pediatricians. Subsequently necessary changes were made in the light of objectives. Individually the respondents were contacted at their residences. Personal interviews were held with the respondents. Questions in the interview schedule were asked in Hindi, Preferably in the local dialect and the responses were recorded. Sometime the questions were repeated .

### Grade of malnutrition

Malnutrition in children was measured according to ICDS growth chart.

Per centage of reference weight for age	Interpretation
90-110%	Normal
75-89%	Grade I: mild malnutrition
60-74%	Grade II: moderate malnutrition
60%- 50%	Grade III: sever malnutrition
Below 50%	Grade IV: more severely malnutrition

### Results and Discussion

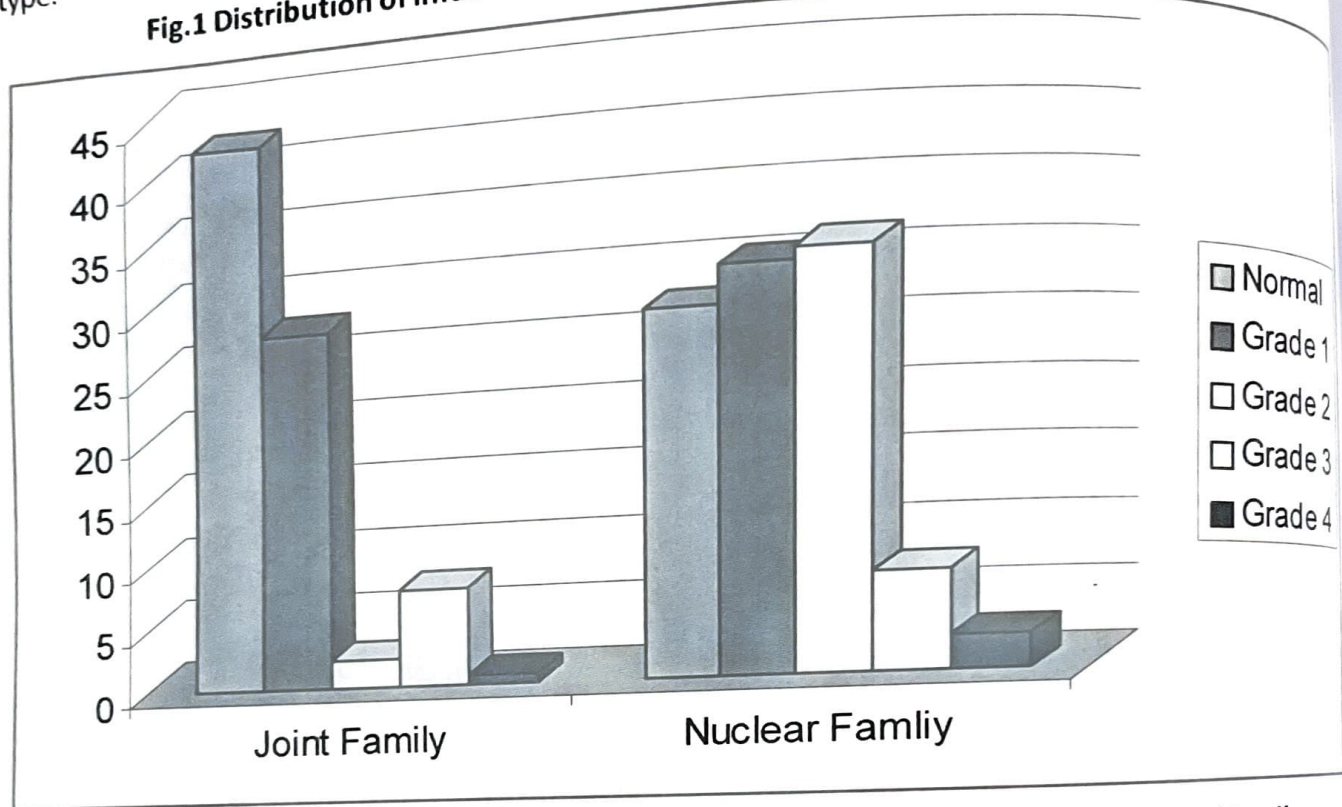
#### Family Type

Joint family is one of the underlying characteristics of the Indian society. Most of the families in rural and urban areas are still joint families. Joint families are the custodians of culture and tradition. The way of living rearing, caring and feeding of infants is significantly affected by the presence of grand parents in the family. The educated parents cannot implement their novel techniques of feeding children in joint families.

The analysis of data in table 1 & fig. 1 shows that 42.5 per cent infants of joint family were normal, whereas 27.2 per cent had Grade I, 21.7 per cent had Grade II, 7.4 per cent had Grade III and 0.7 per cent had Grade IV malnutrition. In the nuclear family, 27.6 per cent infants were normal, whereas 30.6 per cent had Grade I, 31.6 per cent had Grade II, 7.4 per cent had Grade III and 2.6 per cent had Grade IV malnutrition.

After the statistical analysis the table value of  $\chi^2$  8.62 at 4 degree of freedom and 0.0711 level of significance, in this case we can conclude that there are not significant difference of family type.

**Fig.1 Distribution of infants according to Nutritional Status and type of family**



**TABLE 1 Distribution of infants according to their nutritional status and type of family**

Type of Family	Normal		Grade 1		Grade 2		Grade 3		Grade 4		Total	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Joint Family	68	42.5	44	27.7	35	21.7	12	7.4	1	0.7	160	55.9
Nuclear Family	35	27.6	39	30.6	40	31.6	9	7.4	3	2.6	126	44.1
Total	103	36	83	29	75	26.2	21	7.3	4	1.3	286	100

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.626047	4	0.071157



## Birth Order

Keeping in view the impact of Birth Order of child in the family on the health status of infants. The data in this regard is shown in table 2 & fig. 2.

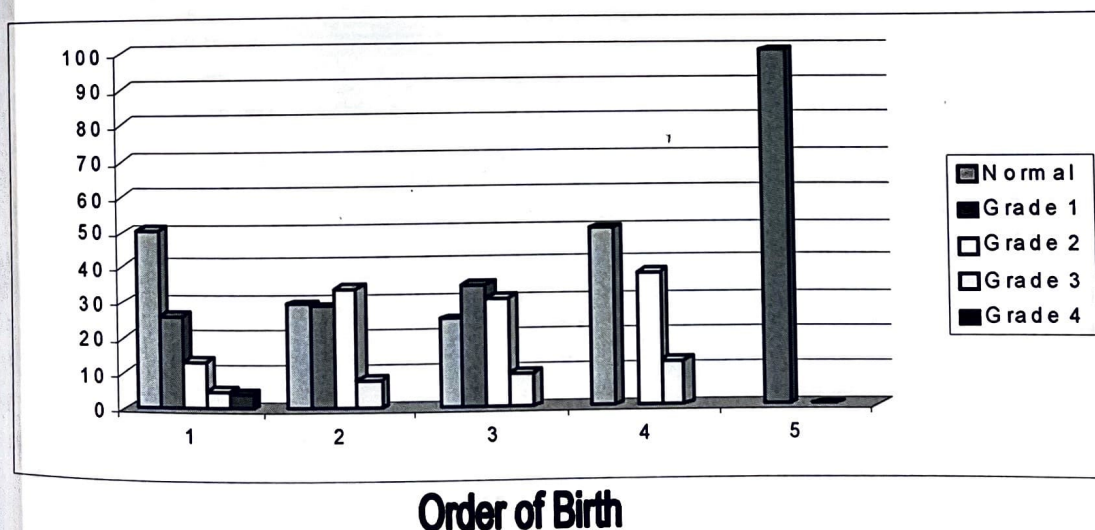
In the total sample we found that 1<sup>st</sup> child in the family was more healthy than 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> birth order of the child in the family. Around fifty per cent of infants were normal, per cent had Grade I 13.6 per cent had Grade II, 5.3 per cent had Grade III and 4.2 per cent had Grade IV malnutrition in 1<sup>st</sup> birth ordered infants.

**TABLE 2** Distribution of Infants according to their nutritional status and order of birth

Birth Order	Normal		Grade 1		Grade 2		Grade 3		Grade 4		Total	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
1	48	50.5	25	26.4	13	13.6	5	5.3	4	4.2	95	33.2
2	32	29.8	31	28.8	36	33.5	8	7.9			107	37.4
3	19	25.3	26	34.6	23	30.6	7	9.5			75	26.2
4	4	50			3	37.5	1	12.5			8	2.8
5			1	100				0			1	0.3
Total	103	36	83	29	75	26.2	21	7.3	4	1.4	286	100

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	35.048(a)	20	.020

**Fig.2** Distribution of infants according to Nutritional Status and Order of Birth



Among 2<sup>nd</sup> birth ordered infants 29.8 per cent were normal, 28.8 per cent Grade I, 33.5 per cent Grade II, 7.9 per cent grade III malnourished, Among 3<sup>rd</sup> birth ordered infants 25.3 per cent, 30.6 per cent, 34.6 per cent, 30.6 per cent and 9.5 per cent had Grade I, Grade II and Grade III malnourishment. Among the 4<sup>th</sup> birth ordered infants 50 per cent normal, 0 per cent had Grade I, 37.5 per cent Grade II and 12.5 per cent Grade III malnutrition. Among 5<sup>th</sup> Birth ordered infants 100 per cent had Grade I malnutrition. Thus it was observed that normal range of nutritional status decreases as birth order of infants increased- 1<sup>st</sup> to 5<sup>th</sup>.

We further applied chi-square test ( $\chi^2$ ) to see the observed variation in the nutritional status by Birth order of the infants. The table value of  $\chi^2$  35.048 at 20 degree of freedom and .020% level of significance. There is significant difference between Birth order of the child and nutritional status of the children.

#### Number of Siblings

Number of siblings is considered as the prime factor determining the nutritional status of children especially is low income group people. The adequacy level of health is generally better among the one or two siblings due to better opportunity to get attainment, care and food from the parents. The data in this regard is shown in table 3 & fig. 3.

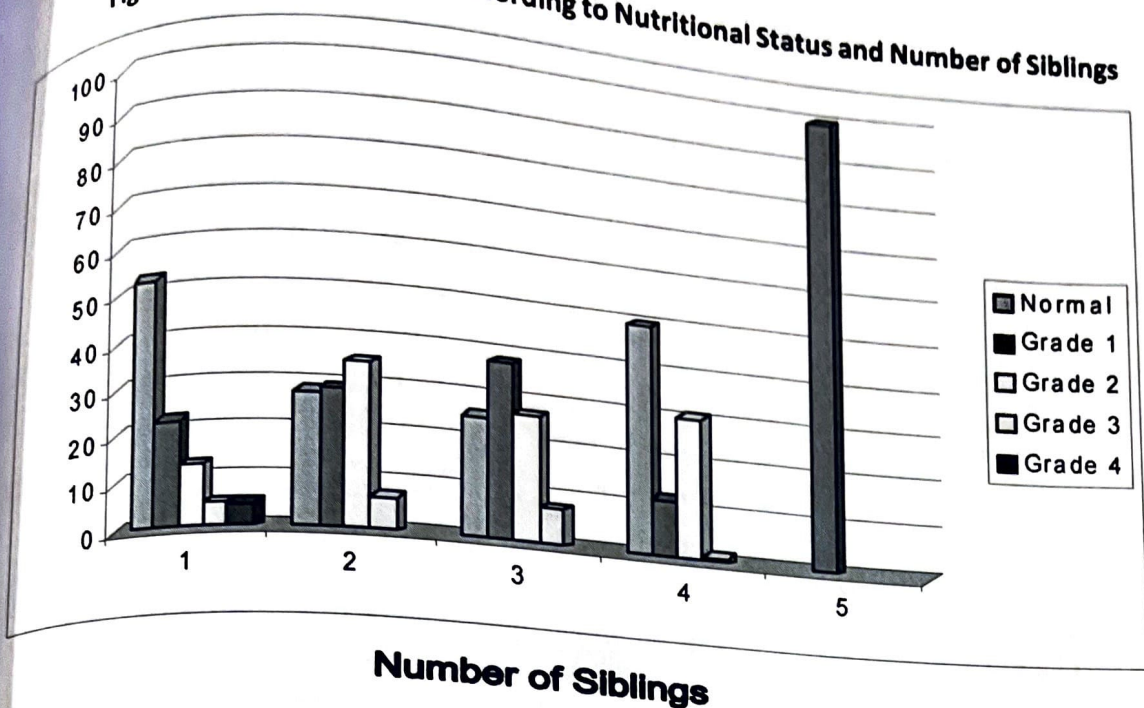
**TABLE :3 Distribution of Infant according to their nutritional status and number of siblings**

No of Siblings	Normal		Grade 1		Grade 2		Grade 3		Grade 4		Total	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
0	44	52.9	19	22.9	11	13.3	5	6	4	4.9	83	29
1	30	28.5	31	29.5	37	35.4	7	6.6	0	0	105	36.7
2	21	25.9	30	37.9	22	27.2	8	9.9	0	0	81	28.3
3	8	50	2	12.5	5	31	1	6.5	0	0	16	5.6
4	0	0	1	100	0	0	0	0	0	0	1	0.3
Total	103	36	83	29	75	26.2	21	7.3	4	1.4	286	100

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	38.768(a)	16	.001



Fig.3 Distribution of infants according to Nutritional Status and Number of Siblings



The analysis of data indicates that single child in the family had much better health condition 52.9 per cent normal, 22.9 per cent had Grade I, 13.3 per cent had Grade II, 6 per cent had Grade III and 4.9 per cent had Grade IV malnourishment. The infants among one siblings 28.5 per cent had normal, 29.5 per cent had Grade I, 35.4 per cent had Grade II, 6.6 per cent had Grade III and 9.9 per cent had Grade IV malnourishment. Among two siblings 25.9 per cent were normal, 37.9 per cent had Grade I, 27.2 per cent had Grade II and 9.9 per cent had Grade III malnutrition. Among three siblings fifty per cent were normal, 12.5 per cent Grade I, 31 per cent Grade II and 6.5 per cent Grade III malnourishment. There is significant difference

#### Caste and Degree of Malnutrition

Caste is not an Indian word. In its original form, 'Casta', belongs to the Portuguese by whom it was ordinarily used among themselves to express 'cast', 'mould', 'race', 'kind' and 'quality'. It was applied by Portuguese, whom they first arrived in the East, to designate the peculiar system of religious and social distinctions.

Caste gives sanction for recognition, acceptance, conservation and sacramental dedication and vice-versa of a human being on his appearance in the world.

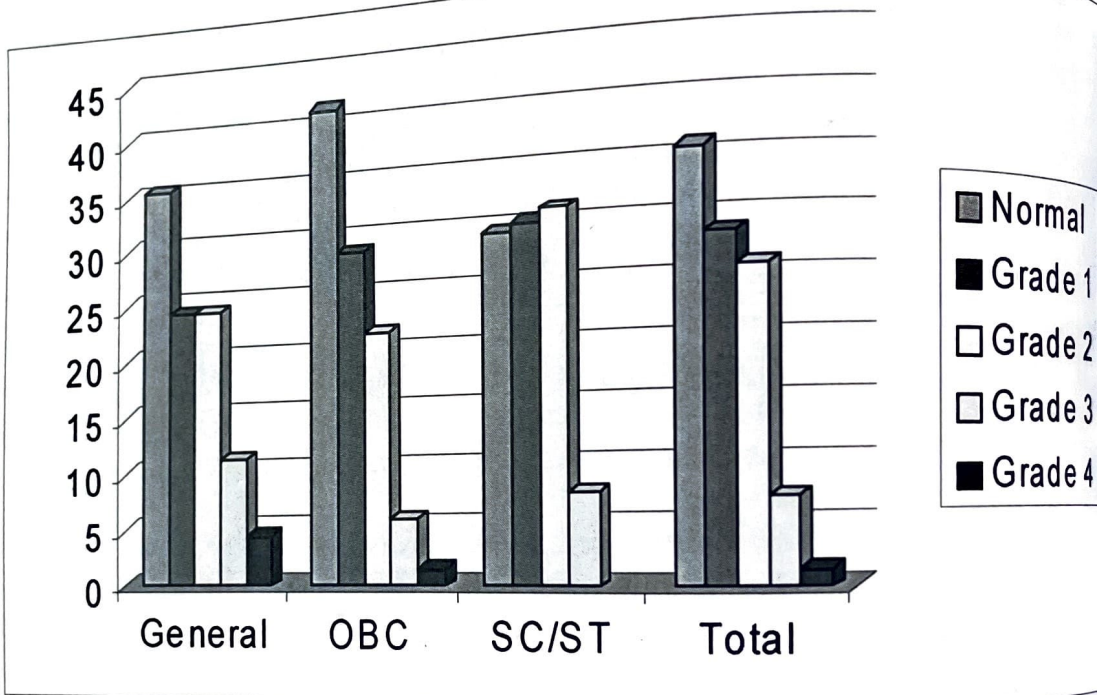
The analysis of data in table 4 & fig. 4 shows that the general caste 35.6 per cent infants were found normal, 24.4 per cent had Grade I, 24.4 per cent had Grade II, 11.2 per cent had Grade III and 4.4 per cent had Grade IV malnourishment. Among OBC 41.8 per cent normal, 29 per cent had Grade I, 22 per cent had Grade II, 5.7 per cent had Grade III and 1.5 per cent had Grade IV malnourishment. Among SC/ST 29.9 per cent normal, 30.6 per cent had Grade I, 31.6 per cent had Grade II and 7.9 per cent had Grade III malnourishment.

**TABLE 4 Distribution of Infant according to their nutritional status and caste**

Cast	Normal		Grade 1		Grade 2		Grade 3		Grade 4		Total	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
General	16	35.6	11	24.4	11	24.4	5	11.2	2	4.4	45	100
OBC	53	41.8	37	29	28	22	7	5.7	2	1.5	127	100
SC/ST	34	29.9	35	30.6	36	31.6	9	7.9	0	0	114	100
Total	103	36	83	29	75	26.2	21	7.3	4	1.4	286	100

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.073	8	.336

**Fig.4 Distribution of infants according to Nutritional Status and Caste**



### Caste

There is not any significant difference between cast and nutritional status. (As  $\chi^2$  value 9.073 at degree of freedom 8)

After the statistical analysis of different factors and nutritional status of infants, we conclude that family type, caste, income, occupation and age of mothers had no significant effect on nutritional status of infants, whereas order of birth and number of siblings significantly affected



nutritional status of infants in the present study. As the study was conducted on 286 infants of urban slums of Kurukshetra District. However more malnourished children were found in nuclear families as compared with joint families, the reason might be grandparents and other family members provide more attention toward youngest family member.

Nutritional status of the first born child in the family was much better as compared with children born at 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> birth order, the reason behind it is the first child alone gets much more attention of all the family members.

Similar result were found when the total number of siblings were compared with nutritional status of infants. The child having no other brother and sister were having better nutritional status. Nutritional status was found in decreasing order with increase number of sibling. We can explain it with an example of an apple, if one child is there in the family he/she gets whole apple, if 4 children are there he/she gets only a part of it.

Income, age, caste and occupation of mother revealed no impact on their nutritional status.

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