

Socio-Economic Determinants of Malnutrition among Female Children in Rural Baramulla District of Jammu and Kashmir State (India) - A Geo-Medical Analysis

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ABSTRACT: The main objective of the study was to examine the effect of socio-economic factors that determine the nutritional status among female children (0-12 yrs) in the rural Baramulla district of Jammu and Kashmir State, India. 36 rural villages were selected by stratified sampling method and altogether 375 female children were assessed for anthropometric measurements using schedule and multi-structured questionnaires prepared and pre-tested. Only those households which had at least one female child (0-12Yrs) were included in the study. The study revealed effects of socio-economic factors like family income ($p=0.000$), mothers education ($p=0.000$), fathers education ($p=0.002$) and number of children in the family ($p=0.043$) depict high level of significant association with the prevalence of malnutrition among female children of the study area. However, age of the girl child ($p=0.125$) inferred insignificant association in this case. The lower socioeconomic groups of the study area had a credulous thinking and were restricted to the beliefs which they were following from very beginning. Girls were still being considered as a suppressed and unsophisticated creation and were often neglected in their access to nutrition, health care and education. It was concluded that the improvement in this scenario can be brought by creating general awareness through mass media about the positive aspects of the girl child in the study area and this will play a pivotal role in preventing and reducing the malnutrition disease burden in the study area.

Keywords: Rural Baramulla, Girl Child, Malnutrition, Socio-Economic Determinants.

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I. INTRODUCTION

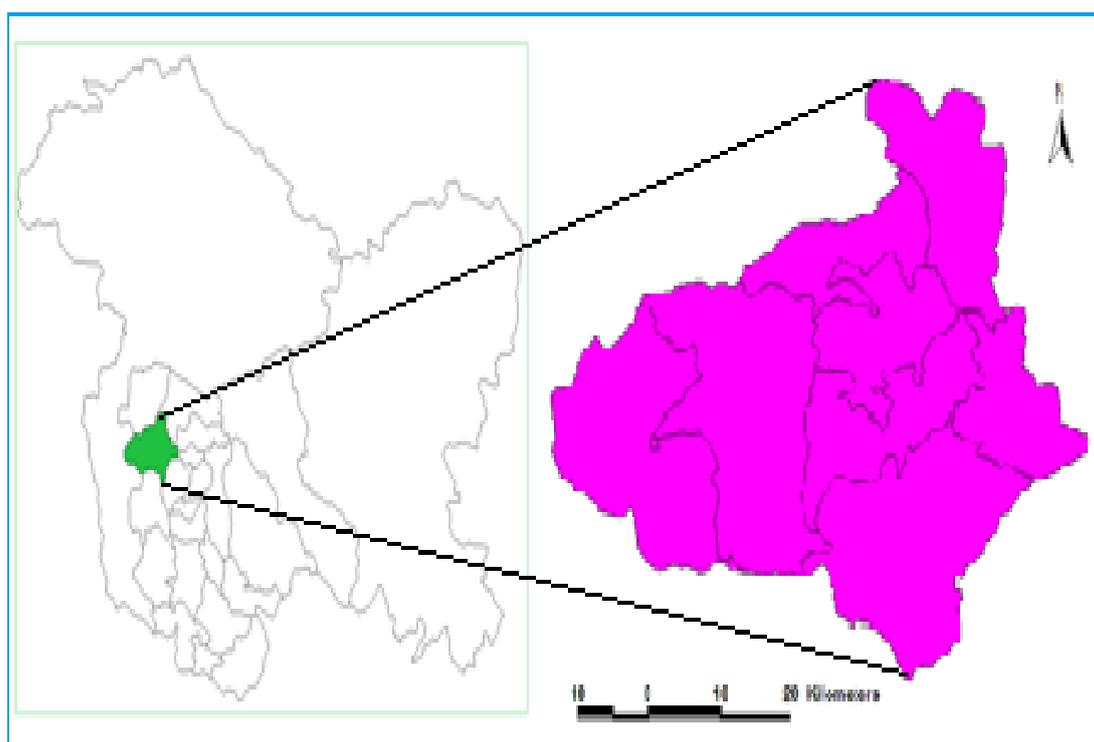
Balanced diet and qualitative nutrition is an indispensable component of healthy and productive life and is considered a benchmark for the well-being of humans. According to Macintosh et al. (2000), nutritional well-being is a fundamental component of health and quality of life in humans. Availability of nutrition is universally accepted as a basic human right. It is estimated that globally more than 800 million people suffer from malnutrition and in developing countries more than 20 per cent of the total population are hungry (Hester et al., 1997). Good nutrition means stronger immune systems, less illness and better health. Thus, the health status of the people is the reflection of nutrition consumed by them and is one of the most important pre-requisites for maintaining a productive health. Nutritional status in children is considered a good indicator for measuring the overall well-being of a society. It reflects the existing socio-economic and environmental conditions, healthcare system, and food security status (Bhutta, 2000). The nutritional status of an individual is the outcome of multifaceted and interrelated determinants, such as land use/land cover analysis, food availability, food consumption pattern, health care services, purchasing power of the people, distribution of income, intra-household food distribution, level of nutritional knowledge, literacy, availability of government schemes and awareness and others. In the developing and underdeveloped countries, the girl child is often ill fed and undernourished (Chen, L. C. et al. 1981). Quite often the root cause of malnutrition among the girls is not so much the lack of food as the lack of access to food due to gender discrimination. Thus, undernourished girls grow into undernourished women and perpetuate the intergenerational undernourishment cycle (Inamdar et al., 2011). Girls born in India are forty times more susceptible to illness as compared to boys and are less likely to receive health care and immunization services because their illness are given less serious attention by their parents (Ganatra and Hirve, 1994). Factors related to social, cultural, familial, behavioral and other discriminatory behavior of household communities against girls and women can be some of the reasons for the higher than expected female malnutrition and mortality in India (Pandey et al., 2002). This discriminated

attitude towards the girl child is one of the major issues that need to be addressed. To maintain balance in the society and to protect the rights of the girl child, it is essential to study the attitude of society, what are the factors of gender bias and what could be the right answer to the problem (Rao, 2007). Therefore, it is imperative to understand the pattern of discrimination which the girl child faces and its repercussions are visible in their adolescence and married life. It is very important to understand the various parameters which affect the growth and development of people in general and girl child in particular including their nutrition from early stages in order to understand the plight of females in general (Mayer, I.A.2007). It is in the backdrop of these facts; the present study analyzed the trend and pattern of malnutrition among female children in rural Baramulla district of Jammu and Kashmir State in India. The aim of the study was to assess the interrelationship between socio-economic factors and the nutritional status of the female child, thereby ascertaining the ways for improving the nutritional status and to minimize the consequences of inadequate nutrition and poor feeding practices among female children in the study area.

II. STUDY AREA

Baramulla district is one of the twenty two districts of Jammu and Kashmir State in India and is still the largest district in the Kashmir valley both with reference to population and area. The district lies between 32°58' to 35°50' north latitude and 73°45' to 75°20' east longitude. The district is situated at an average height of 1581 meters and covers an area of 4191 sq.kms with total population 1008039 (JK Census, 2011) among which males were 534733 and females were 473306. It is bound by district Kupwara in the north, Pooch and Budgam in the south, parts of Srinagar and Ladakh in the east and has frontier like line of control (LOC) in the west which separates it from Pakistan occupied Kashmir. The study area presents a composite culture of Pahari, Gojri, and Kashmiri speaking people. The entire area is undulating and exhibits varied geomorphic patterns. The area has a sub-Mediterranean type of climate with warm summers from June to August and cold winters from December to February.

Figure 1.1 Location Map of Study Area



Source: Generated from SOI Topo-Sheets, 1971

III. OBJECTIVES

The present study analyzed the trend and pattern of malnutrition among female children in rural Baramulla district of Jammu and Kashmir State, India. The aim of the study had been to assess the interrelationship between socio-economic factors and the nutritional status of the female child, thereby ascertaining the ways for improving the nutritional status and to minimize the consequences of inadequate nutrition and poor feeding practices among female children in the study area.

III. MATERIALS AND METHODS

The present study was conducted in 36 stratified random selected villages of rural Baramulla district of Jammu and Kashmir state in India. 375 girl children under 12 years of age were chosen by a stratified random sampling technique from these sample villages. Door to door household survey was conducted in order to collect data regarding different socio-economic, demographic and anthropometric variables which were influencing the nutritional status of the girl children in the study area. The data was collected by interviewing the mothers of these children using schedule and multi-structured questionnaires prepared and pre-tested. Only those households were included in the sample study which has at least one girl child (0-12 yrs) in the house. The stratified random sampling method with village as primary unit and household as the ultimate unit of selection had been followed in the study. The selection of sampled villages had been made purposively after taking socio-cultural and economic parameters of the society into consideration so that the sampling becomes the true representative of the study area. To find out the nutritional status of the girl child, anthropometric measurements up to the age of 12 years were taken out into consideration. Weight of them was measured with the help of digital weighing machine as per the standard method prescribed by Jellifle, 1966 and ICMR (1986) and the age of the theirs was recorded from the birth certificates either issued by school registration system or from the health department. The measured weigh of theirs was then compared with ICMR standards of weight for age and sex. After that the girl children were classified according to the degree of malnutrition using Gomez Standard of classification (Weight-for-Age) as follows:

Gomez Classification of Nutritional Status

Weight -For -Age	Nutritional Grade
≥ 90%	Normal
75 - 89.9%	Grade I (Mild Malnutrition)
60 - 74.9%	Grade II (Moderate Malnutrition)
≤ 60%	Grade III (Severe Malnutrition)

Source: After author

Since the causes of malnutrition in children are complex, ranging from biological and social to environmental factors. The complex hierarchical inter-relationships between these variables which are risk factors of ill health in children particularly in less developed countries (Victoria *et al.* 1997) had been analyzed for the study. In order to working out the determinants affecting the nutritional status of the female children in the study area, the present study rested up on the following socioeconomic indicators:

1. Number of Children in the Family
2. Household Income
3. Fathers Education
4. Mothers Education
5. Age of Female Child

The statistical method employed is logistic regression since this method is appropriate when outcomes are dichotomous and no observations are censored. Just like in linear regression, it was assumed that some set of X variables is useful for predicting the Y values, but we are claiming that this set predicts the probability that Y=1 (assuming we had coded the dependent variable as [0,1]). The basic formula for estimating Y=1 consists of transforming the regression equation to look like equation - 1.

$$P(Y=1) = 1/1+\exp [-(\alpha + \beta_1X_1 + \beta_2X_2 + \dots + \beta_kX_k)] \text{ ----- (1)}$$

The whole function, called the logistic distribution function and it is estimated by maximum

Likelihood (ML) techniques. Another name for the logit is log-odds so we can also write logistic function as:

$$\text{Logit } [p(y=1)] = \alpha + \beta_1X_1 + \beta_2X_2 + \dots + \beta_kX_k \text{----- (2)}$$

$$\text{Where the logit } [p(y=1)] = \log_e | p(y=1)/1-p(y=1) | \text{ i.e. log-odds----- (3)}$$

This fits the model

$$\text{Ln } [(p)/ (1-P)] = a + \sum b_i x_i \text{----- (4)}$$

Where p is the probability of a girl child having the chances of malnutrition status, a and bi are estimated regression coefficients, and xi are the background characteristics.

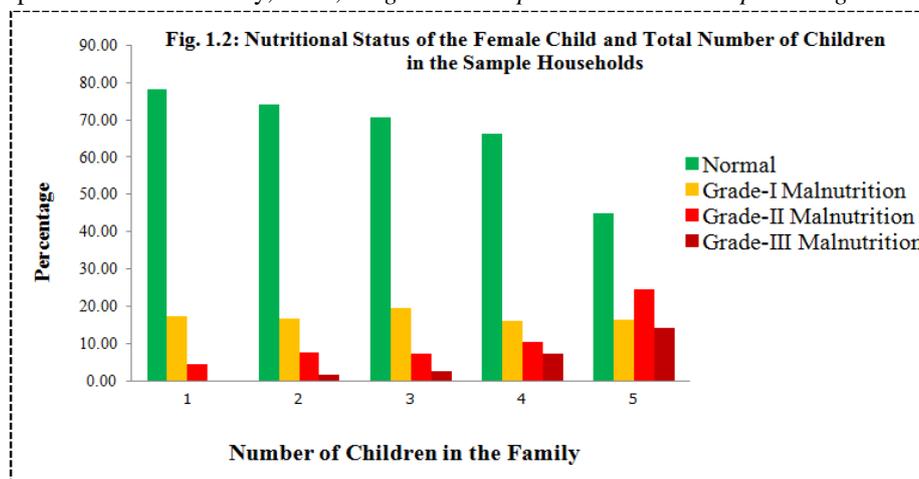
IV. RESULTS AND DISCUSSION

Table 1.1 revealed the interrelationship between female child’s nutritional status and total number of children in the family expressed in terms of Gomez classification (Weight-for-Age).The analysis depicted that families with single child had the highest percentage of normal growth of female children (78.26 %) and with an increase in the number of children in the family, a significant decrease in the percentage growth of normal female children with lowest being 40.90 % in a family with five and above children was observed. The prevalence of moderate underweight (Grade-II malnutrition) among female children of single child families was 4.35 % and increases from 7.58 % in two child families to 24.49 % in families having five and above children. Same trend was also observed in case of the prevalence of severe underweight (Grade-III malnutrition) among the female children of the study area. The researcher found that in families with more number of children, less attention was paid for the fulfillment of nutritional requirement of the female children as gender discrimination in the distribution of food was most prominent in those kinds of families. The food was first served to the boys and the left out was given to the girls and thus the females were observing discrimination on the ground of food allocation both quantitatively as well as qualitatively. On the other hand in families with less number of children, female children were not considered inferior to their counter parts in respect of allocation of food and nutrition and thus these were enjoying good nutritional status. The households with a less number of children had more chance to consume adequate calorie and nutrition. Intra-household gender discrimination in food distribution does not favors the food intake of young children, especially female children (Garrett and Ruel, 1999). Abidoye and Randle (1991) reinforced the fact that large sized families had more malnourished female children as compared to the female children living in smaller families (Fig. 1.2).

Table 1.1: Nutritional Status of the Female Child and Total Number of Children in the Sample Households

No. of children in the Family	Nutritional Status of the Female Children				Total
	Normal	Grade-I Malnutrition	Grade-II Malnutrition	Grade-III Malnutrition	
1	18 (78.26)	4 (17.30)	1 (4.35)	0 (0.00)	23 (6.13)
2	49 (74.24)	11 (16.67)	5 (7.58)	1 (1.52)	66 (17.60)
3	79 (70.54)	22 (19.64)	8 (7.14)	3 (2.68)	112 (29.87)
4	83 (66.40)	20 (16.00)	13 (10.40)	9 (7.20)	125 (33.33)
5 & Above	22 (44.90)	8 (16.33)	12 (24.49)	7 (14.29)	49 (13.07)
Total	251 (66.93)	65 (17.33)	39 (10.40)	20 (5.33)	375 (100.00)

Source: Computed from Field Study, 2016; *Figures in the parenthesis indicate percentage



Source: Based on Table 1.1

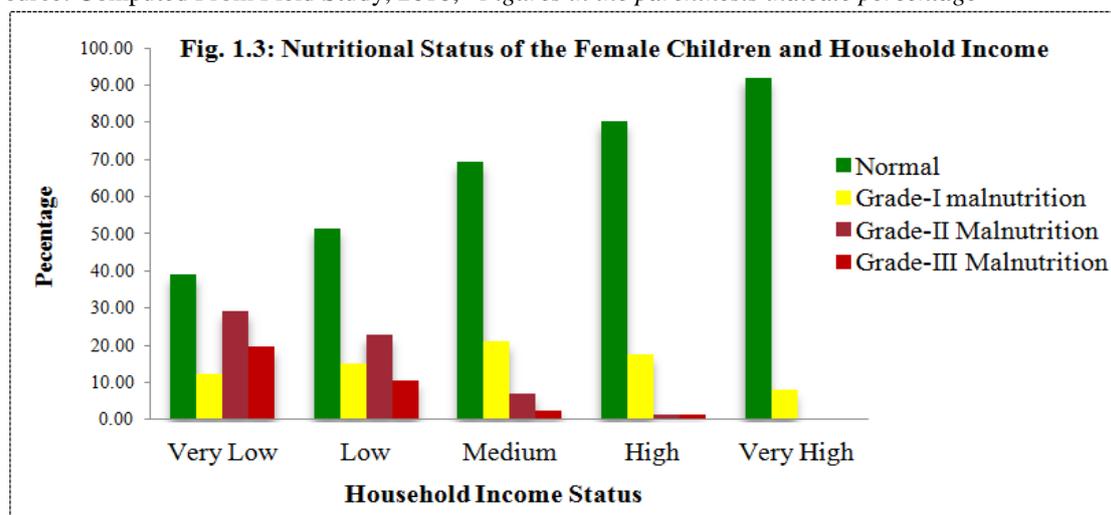
The table 1.2 revealed the interrelationship between female child’s nutritional status and family income expressed in terms of Gomez Classification. It is clear from the table that there exists a great variation in the nutritional status of the female children belonging to different income families. The maximum percentage of normal female children has been observed in case of very high and high income families about 92 % and 80.23 % respectively; whereas on the other hand, the lowest being observed among very low (39.02 %) and low income families(51.52 %).However, the maximum value of severe (Grade III malnutrition) malnourished children has been found among very low income families (19.51%) as compared to the very high income families where Grade III malnutrition has been found almost negligible. It has to be noted here that the Grade - III malnutrition in middle income group female children was 2.55 per cent whereas it was about10.61% and 1.16 % in case of the low income group and high income group families respectively.

The researcher found that the high income families were enjoying the high purchasing power capacity of different food items and thus they were providing adequate food supply to their children irrespective of gender bias. On the other hand on account of deficit purchasing power capacity of the low income families, the researcher found that limited food stock was available which in turn had resulted in gender bias in these kinds of families in the allocation of food. Food diversity was also found as a regular practice in the high income families relative to low income groups where this practice was almost absent. As a result of these practices, malnutrition problem among girls of low income group families were found significantly high as compared to high income groups. Measures should include government action to support the vulnerable sections, and to bring about a rapid economic growth at the national level and grass root level. Similar results have been reported by Rao, H.D.et al. 1994; Akhtar, R. and Khan, A.Q. 2004 (Fig. 1.3).

Table 1.2: Nutritional Status of the Female Children and Household Income

Household income/month	Nutritional Status of the Female Children				Total
	Normal	Grade-I Malnutrition	Grade-II Malnutrition	Grade-III Malnutrition	
Very Low (Up to 2000)	16 (39.02)	5 (12.20)	12 (29.27)	8 (19.51)	41 (10.93)
Low (2001-3000)	34 (51.52)	10 (15.15)	15 (22.73)	7 (10.61)	66 (17.60)
Medium (3001-5000)	109 (69.43)	33 (21.02)	11 (7.01)	4 (2.55)	157 (41.87)
High (5001-8000)	69 (80.23)	15 (17.44)	1 (1.16)	1 (1.16)	86 (22.93)
Very High (>8000)	23 (92.00)	2 (8.00)	0 (0.00)	0 (0.00)	25 (6.67)
Total	251 (66.93)	65 (17.33)	39 (10.4)	20 (5.33)	375 (100.00)

Source: Computed From Field Study, 2016; *Figures in the parenthesis indicate percentage



Source: Based on Table 1.2

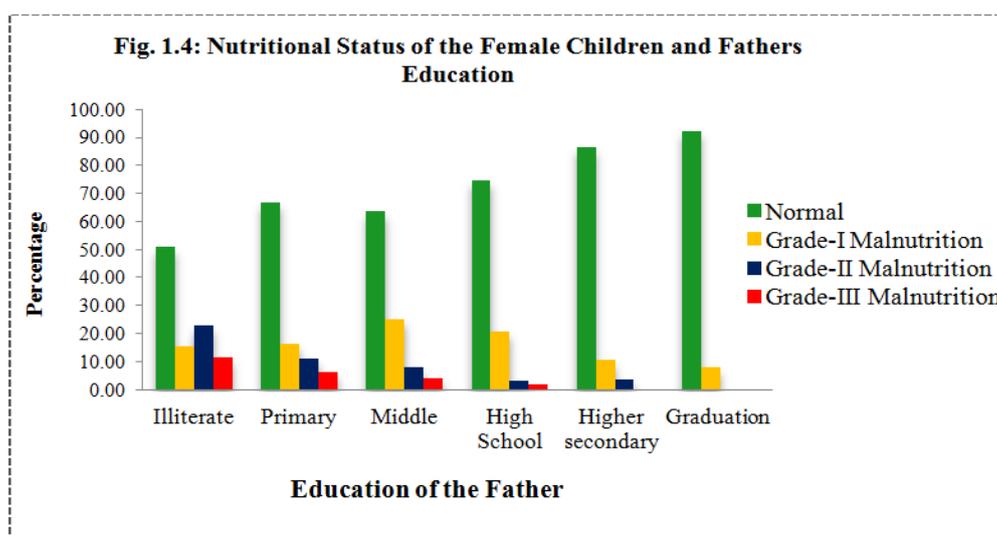
The table 1.3 showed that as the father’s education of the female children gets increased, the proportion of under nutrition decreased consistently and vice versa. The analysis of the study revealed that the prevalence of moderate underweight (Grade-II malnutrition) was more with 22.54 % and 10.88 % among the female children of illiterate and primary educated fathers whereas on the other hand, it was negligible among the female children who belong to graduated fathers and 3.45 percent among the female children whose fathers were educated up to the higher secondary level. Prevalence of severe underweight (Grade- III malnutrition) was 11.27 % and 6.12 % among the female children of illiterate and primary educated fathers, while as it was found negligible in case of the fathers educated up to higher secondary and graduation level, (Fig. 1.4).

The researcher observed that father’s education was an important determinant and had a positive impact on child health and nutritional status. Usually father is the main earner and decision maker of a family and so their higher level of education plays an important role to ensure better nutritional status of the children. Good education of father means chances of better economic conditions and adequate availability of food to the children irrespective of gender discrimination. The researcher finds its results complimentary with the results which had been reported by Bairagi (1980), Ganguli et al. (1989), Sen et al. (1983) and Gopalan (1989).

Table 1.3: Nutritional Status of the Female Children and level of Education - Father

Education of Father	Nutritional Status of the Female Children				Total
	Normal	Grade-I Malnutrition	Grade-II Malnutrition	Grade-III Malnutrition	
Illiterate	36 (50.70)	11 (15.49)	16 (22.54)	8 (11.27)	71 (18.93)
Primary	98 (66.67)	24 (16.33)	16 (10.88)	9 (6.12)	147 (39.20)
Middle	33 (63.46)	13 (25.00)	4 (7.69)	2 (3.85)	52 (13.87)
High School	47 (74.60)	13 (20.63)	2 (3.17)	1 (1.59)	63 (16.80)
Higher Secondary	25 (86.21)	3 (10.34)	1 (3.45)	0 (0.00)	29 (7.73)
Graduation	12 (92.31)	1 (7.69)	0 (0.00)	0 (0.00)	13 (3.47)
Total	251 (66.93)	65 (17.33)	39 (10.40)	20 (5.33)	375 (100.00)

Source: Computed from Field Study, 2016; *Figures in the parenthesis indicate percentage



Source: Based on Table 1.3

The table 1.4 shows the association between nutritional status of the female child and mother’s education. The study revealed that mother’s education could bring about a note worthy reduction in the incidence of underweight among female children in the study area. On the whole, the results supported the fact

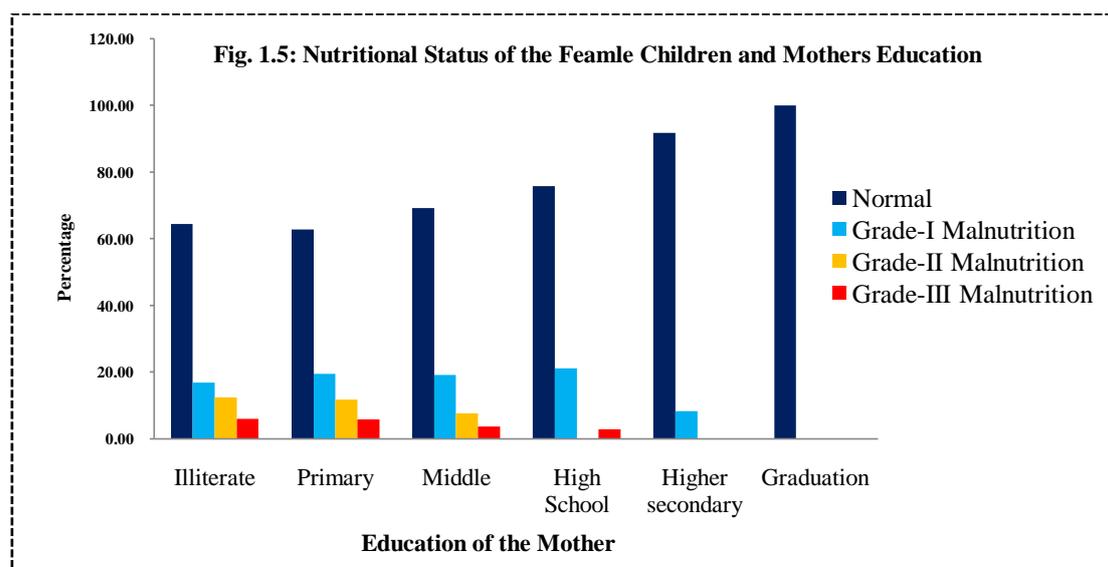
that educated mothers look after their children better. This can be seen in case of mothers who were educated up to the graduation level and data shows that the maximum percentage (100 %) of normal female children was found in this category. Female Children of illiterate, primary educated or eight standard educated mothers suffered more from severe malnutrition (Grade- II and Grade- III category). On the contrary, the percentage of Grade- II and Grad- III undernourished female children were nil in case of graduated and under graduated mothers (Fig. 1.5).

The most educated women come from high socioeconomic strata of the society. They tend to have better work opportunities and high incomes compared to non-educated women. Educated women are also more likely to marry husbands with high education level and belonging to high socio-economic class of the society. Educated mothers also pay more attention towards their children in terms of food, nutrition, education and health care irrespective of gender discrimination. As a result of this, children from well qualified mothers are well fed; less exposed to infectious diseases, and had access to health services (preventive and curative cares). Therefore, there is an inverse relationship between the mother’s education and child under-nutrition (Frost *et al*; 2005; Mukuria *et. al*; 2005).

Table 1.4: Nutritional Status of the Female Children and Level of Education - Mother

Education of Mother	Nutritional Status of the Female Children				Total
	Normal	Grade-I Malnutrition	Grade-II Malnutrition	Grade-III Malnutrition	
Illiterate	160 (64.52)	42 (16.94)	31 (12.50)	15 (6.05)	248 (66.13)
Primary	32 (62.75)	10 (19.61)	6 (11.76)	3 (5.88)	51 (13.60)
Middle	18 (69.23)	5 (19.23)	2 (7.69)	1 (3.85)	26 (6.93)
High School	25 (75.76)	7 (21.21)	0 (0.00)	1 (3.03)	33 (8.80)
Higher Secondary	11 (91.67)	1 (8.33)	0 (0.00)	0 (0.00)	12 (3.20)
Graduation	5 (100.00)	0 (0.00)	0 (0.00)	0 (0.00)	5 (1.33)
Total	251 (66.93)	65 (17.33)	39 (10.40)	20 (5.33)	375 (100.00)

Source: Computed from Field Study, 2016; *Figures in the parenthesis indicate percentage



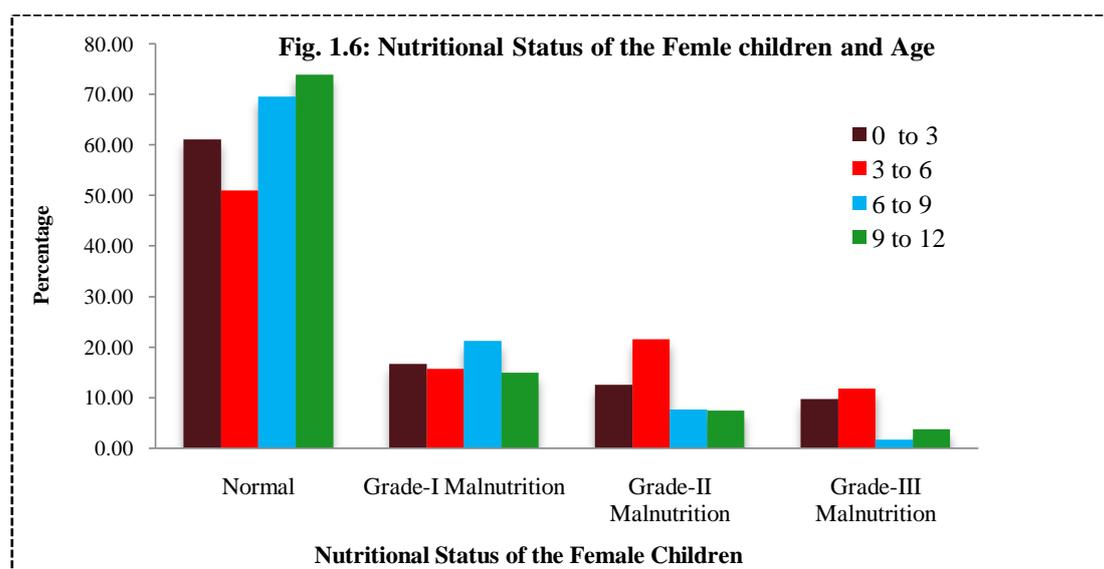
Source: Based on Table 1.4

The table 1.5 showed the nutritional status of female children with respect to the age. The analysis of the study revealed that malnutrition among female children showed no much variation by age. According to Weight for Age classification, the Prevalence of moderate underweight (Grade-II malnutrition) and severe underweight (Grade-III malnutrition) among the female children was highest about 21.57 % and 11.76 % in the age group between 3-6 years and was followed by 12.50 % and 9.72 % in the age group between 0 - 3 years. Whereas on the other hand, the prevalence of moderate underweight (Grade-II malnutrition) among female children was lowest (7.46 %) reported in the age group between 9-12 years, followed by 7.63 % in the age group between 6-9 years. Severe underweight (Grade-III malnutrition) among the female children was found minimum (1.69 %) in the age group between 6-9 years, followed by 3.73 % in the age group between 9-12 years. For mild underweight (Grade-I malnutrition), the highest percentage (21.19 %) was found in the age category of 6-9 years, followed by 16.67 % and 15.69 % in the age category of 0-3 years and 3-6 years, where as it was least (14.93 percent) in the age category of 9-12 years (Fig. 1.6). The researcher observed that the least normal female children were found in 3-6 age categories. This was due to the fact that in this age group, these children had received least attention from the parents because of the onset of the new births. With the coming of new births, the parents shift their attention and care from previous birth to successive birth and as a result, the children of the previous birth are caught in the cycle of malnutrition. The higher incidence of under nutrition among this age group is also reported in the studies of Ballweg (1972), Ghosh (1989) and Hota et al. (1995).

Table 1.5: Nutritional Status of the Female Children and their Age Structure

Age of female Child (in years)	Nutritional Status of the Female Children				Total
	Normal	Grade-I Malnutrition	Grade-II Malnutrition	Grade-III Malnutrition	
0 to 3	44 (61.11)	12 (16.67)	9 (12.50)	7 (9.72)	72 (19.20)
3 to 6	26 (50.98)	8 (15.69)	11 (21.57)	6 (11.76)	51 (13.60)
6 to 9	82 (69.49)	25 (21.19)	9 (7.63)	2 (1.69)	118 (31.47)
9 to 12	99 (73.88)	20 (14.93)	10 (7.46)	5 (3.73)	134 (35.73)
Total	251 (66.93)	65 (17.33)	39 (10.40)	20 (5.33)	375 (100.00)

Source: Computed from Field Study, 2016; *Figures in the parenthesis indicate percentage



Source: Based on Table 1.5

The table 1.6 highlights the results of logistic regression analysis of underweight problems among female children in relation to various socioeconomic variables using Gomez classification (Weight for Age). The analysis of the table reveals that family income ($p=0.000$), Mothers education ($p=0.000$), Fathers education ($p=0.002$), and number of children in the family ($p=0.043$) depicts high level of significant association with the

prevalence of underweight problem among female children in the study area. However, age of female child ($p=0.125$) inferred insignificant association in this case. The analysis of the table also depict that household income has a negative impact on the prevalence of malnutrition (underweight) among female children in the study area. As there is increase in the level of income of the household, the chance of female children to be malnourished decreases subsequently. The prevalence of malnutrition among female children was high (60.98 %) in very low income families while as in very high income families, it was about 8.00 %. Similarly, mother's and father's education also depict negative association with the prevalence of malnutrition among female children in the study area. The prevalence of malnutrition was high (49.30 % and 35.48 %) in female children belonging to illiterate fathers and mothers while as it was almost negligible in female children whose fathers and mothers were educated up to graduation level. Similarly, the age variable also has a negative impact on the prevalence of malnutrition among female children in the study area. The table also inferred that number of children in the family shows positive correlation with the prevalence of malnutrition among female children. The female children residing in joint families increase the chances of being malnourished as compared to the female children of the nuclear families.

Table 1.6: Relationship of Socio-Economic Variables with the Malnourished Female Children in the Study Area

Socio-economic Variables	Total Respondents	Prevalence of Malnutrition	P -Value	Standard Error	Coefficient	R Square
Household Income						
Very Low (Up to 2000)	41	25(60.98)	0.000	0.376	- 0.488	0.976
Low (2001-3000)	66	32(48.48)				
Medium (3001-5000)	157	48(30.57)				
High (5001-8000)	86	17(19.77)				
Very High (>8000)	25	2(8.00)				
Total	375	124(33.07)				
Fathers Education						
Illiterate	71	35(49.30)	0.002	0.051	- 0.362	0.925
Primary	147	49(33.33)				
Middle	52	19(36.54)				
High School	63	16(25.40)				
Higher Secondary	29	4(13.79)				
Graduation	13	1(7.69)				
Total	375	124(33.07)				
Mothers Education						
Illiterate	248	88(35.48)	0.000	0.272	- 0.321	0.973
Primary	51	19(37.25)				
Middle	26	8(30.77)				
High School	33	8(24.24)				
Higher Secondary	12	1(8.33)				
Graduation	5	0(0.00)				
Total	375	124(33.07)				
Age (years)						

0 to 3	72	28(38.89)	0.125	0.134	- 0.342	0.764
3 to 6	51	25(49.02)				
6 to 9	118	36(30.51)				
9 to 12	134	35(26.12)				
Total	375	124(33.07)				
Number of children in the Family						
1	23	5(21.74)	0.043	0.149	+ 0.434	0.679
2	66	17(25.76)				
3	112	33(29.46)				
4	125	42(33.60)				
5 & Above	49	27(55.10)				
Total	375	124(33.07)				

Source: Computed from Field Study, 2016; *Figures in the parenthesis indicate percentage

V. CONCLUSION

It was observed that in families having more number of children less attention was paid for the fulfillment of nutritional requirement towards the female child. On the other hand, families with single child had the highest percentage of normal growth of female children and with an increase in the number of children in the family, a significant decrease has been witnessed in the percentage of normal growth of female children, The severity grade also increased with the increase in the total number of children in the family and vice versa. The results also showed that the higher the income status, the lower the percentage of malnourished female children and vice-versa. The maximum percentage of normal female children had been observed in case of very high and high income families. On the other hand, the lowest being observed among very low and low income families. The study also revealed the perception of educated parents towards female child in nourishing their girls by providing a standard level of nutrition where the cases of malnourishment were less. On the other hand, in case of low educated parents, the rate of prevalence of malnutrition among female children was high. The study also found no conclusive evidence of malnourishment relationship to particular age group and is found across all age structures of females.

VI. SUGGESTIONS

In the first place, efforts need to be made to change the mind set of people about girl being a liability for society. This type of general awareness can be created through mass media about the positive aspects of the girl child among the parents. Media can play a very vital role in this direction. The health and nutritional status of the female child should be improved. Sex discrimination with regard to nutritional support should be removed. The Aanganwadi workers, multipurpose health workers, ASHA workers, Mid Day Meal schemes and school teachers can assist in this task. Income generation incentives should be provided at local level especially in the rural areas of the study area. Maximum households of the study area should be brought under the coverage of AAY and BPL schemes so that they can avail the adequate availability of food stuffs to their children especially female children without any gender bias. Parents of the study area should change their mindset from multiple family norms to single family norm so that they will feed their children in a better way. Parents of the study area should share household responsibilities jointly and veto power should be given to women in household decision making.

REFERENCES

- [1] Abidoye R. O. and Randle O. (1991), Comparative Nutritional Assessment of Children in Military and Private Schools in Nigeria, *Nutritional Research*, Vol. 11, pp. 989-999.
- [2] Bairagi R. (1980), is income the only constraint on child nutrition in Bangladesh, *Pub Med journal*, Vol. 58, pp. 767-772.
- [3] Ballweg J.A. (1972), Family characteristics and Nutrition problems of preschool children in food Parisien, *Journal of Tropical Pediatrics and Environment Health*, Vol. 230. Pp. 22-35
- [4] Bhutta Z.A. (2000), Why has so little changed in maternal and child health in south Asia, *Biomed Medical Journal*, Vol. 321, pp. 809-812.
- [5] Chen L. C., Huq E., & D'Souza S. (1981), Sex bias in the family allocation of food and health care in rural Bangladesh, *Population and development review*, pp. 55-70.

- [6] Frost M.B., Forste R. and Haas D.W. (2005), Maternal education and child nutritional status in Bolivia, *Journal of Social Sciences and Medicine*, Vol. 60 (2), pp. 395-407.
- [7] Ganatra B. and Hirve S. (1994), Male Bias in Health Care Utilization for under five in a rural Community in Western India, *Built WHO*, Vol. 72 (1), pp.101-04.
- [8] Ganguli S.S, Achar D. P (1990), Polychromous logistic regression approach for modelling risk factors of malnutrition among preschool children, *National institute of nutrition, Hyderabad*, pp. 162-167.
- [9] Garrett J. L. and Ruel M. T. (1999), Are determinants of rural and urban food security and nutritional status different? Some insights from Mozambique, *Food Consumption and nutrition division, International Food Policy Research Institute*.
- [10] Ghosh S. (1989), Constraints to improved child feeding, 14th International congress, Seoul, Korea, 187-227.
- [11] Gopalan C. (1989), the role of women in a new health order, In: *Nutrition, health and national development*, Gopalan C. (ed), Special publication series 4. NFI; New Delhi, pp. 115-135.
- [12] Hester H. et al. (1997), *The Nutritional Status of South Africans: A Review of the Literature from 1975-1996*, Health Systems Trust, General Building cnr. Smith and Field Streets Durban 4001 South Africa, pp. 1-6.
- [13] Hota, et al. (1995), *National Family Health Survey, 1993*, Orissa, Bombay: PRC, Bhubaneswar and TIPS.
- [14] Inamdar M. et al. (2011), Health status of Rural Girls, *National Journal of Community Medicine, India*, Vol. 2, pp. 388-393
- [15] Jelliffe (1966), *The assessment of the nutrition status of the community*, WHO monograph series, No.3, pp. 64-69
- [16] Macintosh C. et al. (2000), *The Anorexia of Aging*, *Nutrition, Journal of Health, Population and Nutrition*, pp. 983-5.
- [17] Mayer, I. A. (2007), *Medical Geography*, A. P. H. Publishing Corporation, Ansari Road, New Delhi.
- [18] Mukuria A., Cushing J. and Sangha J. (2005), *Nutritional Status of Children: Results from the Demographic and Health Surveys 1994-2001*, DHS Comparative Report, 10, 135 p.
- [19] Pandey, A. et al. (2002), Gender Differences in Healthcare-Seeking during common Illnesses in a rural community of West Bengal, India. *Journal of Health, Population and Nutrition*, Vol. 20(04), pp. 306-11.
- [20] Rao H.D., Brahman G.N.U., Rao, M. K., Reddy, G. C. And Rao, P., (1994), Assessment of nutritional status of Jenu Kurubas: A primitive tribe of Karnataka, *The Indian Journal of Nutrition and Dietetics*, Vol. 30(3), pp. 66-71.
- [21] Rao R. (2007), End Inhuman Killings, *Indian Currents*, Vol. 19(31), pp. 28-09.
- [22] Sen A, Sengupta S. (1983), Malnutrition in rural children and the sex bias, *Economic and political weekly*, Vol. 18, pp. 855–864.
- [23] Victoria et al. (1997), the role of conceptual frameworks in epidemiological analysis-Hierarchical approach, *International Journal of Epidemiology*, Vol. 26, pp.224-227.

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