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# Relation Between Socioeconomic Status and Nutritional Status

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**ABSTRACT**

A study, to assess the relation between socioeconomic status and nutritional status of Gramasiri families in Guntur district was carried out in eight villages (4 Gramasiri and 4 Non-gramasiri). A sample of 240 families (30 from each of Gramasiri as well as Non-gramasiri villages) was selected for the study. Anthropometric measurements of the children were measured to determine nutritional status. Family size, income levels, land possessions, housing conditions etc., were recorded to know the socioeconomic status of the families. There was positive relation between socioeconomic status and nutritional status.

**Key words :** Gramasiri, Nutritional Status, Socioeconomic Status

Pre-school children, pregnant and lactating mothers are the vulnerable segments of the population from the nutritional stand point .Nutritional disorders are the chief killers in pre-school age group. All Indian statistics show that malnutrition is the underlying cause of death in 7% of deaths in age group 0-5 years and an associated cause in about 50%. Malnutrition is mainly responsible for child deaths and it has been estimated that approximately 6000-7000 of 0-5 years children die every day of malnutrition in India. In order to achieve the long term goal of raising the level of nutrition of vulnerable segments and quality of life of community, there is obviously a need for an integrated input from different schemes or agencies. Gramasiri is also one of the integrated developmental programme being implemented in Guntur district of Andhra Pradesh since 1981. It is with nutrition, health, economic and educational inputs. To examine its impact on socio- economic status and nutritional status as well as to see the relation between these two, the present study was undertaken.

**Activities of Gramasiri with regard to socio-economic status**

**Education**

Providing education to children through balwadies and schools.

**Economic**

- Provision of loans to small and marginal farmers for agriculture and animal husbandry.
- Provision of rickshaws to rickshaw pullers through nationalized banks.

**Social**

- ❖ Organization of mahila mandals.
- ❖ Organization of youth associations
- ❖ Organization of gramasabhas.

**Rural Water and Sanitation**

Construction of low cost latrines and drinking water wells.

**Housing**

Construction of houses to beneficiaries.

## MATERIAL AND METHODS

Maternal and child health programme is in operation in 8 villages of Bapatla mandal. From these four villages were selected randomly and four non-gramasiri villages that are adjacent to these were selected as control. Thus Nandirajuthota, Vengalvihar, Prabhavathi Nagar, Sivaram Nagar were the four selected Gramasiri villages and K.B.Palem, Gulam Hussainthota, Kothapalem and Mulapalem were the control villages. From the selected villages 30 families were selected from each village and from each family one child was selected. Thus 120 children from Gramasiri families and 120 children from Non-gramasiri families were selected. Care was taken to see that the sample selected consisted of 40 children of 0-1 years, 40 children of 1-2 years, 40 children of 2-3 years from both Gramasiri as well as non-gramasiri families. Care was also taken to see that equal number of male and female children were included both from each age group in the sample.

Table 1. Distribution of respondents according to their family details.

N = 120 + 120

| Variable | Gramasiri | | Non-gramasiri | |
|---|---|---|---|---|
| | Number | % | Number | % |
| **Type of family** | | | | |
| Nuclear | 105 | 87.5 | 99 | 82.5 |
| Joint | 15 | 12.5 | 21 | 17.5 |
| **Family Size** | | | | |
| < 4 members | 77 | 64.2 | 73 | 60.8 |
| 5-8 members | 43 | 35.8 | 43 | 35.8 |
| 9-12members | 0 | 0 | 4 | 3.3 |
| **Number of Children** | | | | |
| 1-2 | 78 | 65.0 | 78 | 65.0 |
| 3-4 | 39 | 32.5 | 34 | 28.3 |
| 5-9 | 3 | 2.5 | 8 | 6.7 |

Table 2. Distribution of respondents according to their education level.

N = 120 + 120

| Variable | Gramasiri | | Non-gramasiri | |
|---|---|---|---|---|
| | Number | % | Number | % |
| **Educational level of the father** | | | | |
| Illiterate | 91 | 75.8 | 62 | 51.7 |
| Primary School (1-5 classes) | 11 | 9.2 | 22 | 18.3 |
| High School (6-10classes) | 14 | 11.7 | 34 | 28.3 |
| College | 4 | 3.3 | 2 | 1.7 |
| **Educational level of the mother** | | | | |
| Illiterate | 98 | 81.7 | 72 | 60.0 |
| Primary School (1-5 classes) | 14 | 11.7 | 21 | 17.5 |
| High School (6-10classes) | 8 | 6.7 | 27 | 22.5 |
| **Presence of school going children in the family** | | | | |
| Not going to school | 60 | 50.0 | 86 | 71.7 |
| Going to school | 60 | 50.0 | 34 | 28.3 |

**Assessment of Socio-economic status**

Standardized schedule developed by Thimmayamma (1987) was used to collect information on socioeconomic status of families. Information pertaining to age, sex, educational level, occupation, sources of income, housing conditions, sanitary conditions and other facilities available to families were collected by using the schedule.

Means and standard deviations were determined for each parameter and statistically analyzed.

## RESULTS AND DISCUSSION

For a better understanding of the economical, social and cultural background of the community studied, socioeconomic status of the families was assessed.

Socioeconomic status is a very significant factor in the etiology of malnutrition. There were marked differences among the two groups especially in educational level of parents, number of children going to school from each house, occupation, income, housing conditions and sanitary conditions which might have led to better nutritional status of Gramasiri

Table 3. Distribution of respondents according to their occupation and annual income

N = 120 + 120

| Variable | Gramasiri | | Non-gramasiri | |
|---|---|---|---|---|
| | Number | % | Number | % |
| **Father's occupation** | | | | |
| Agricultural cultivators | 23 | 19.2 | 24 | 20.0 |
| Agricultural labourers | 63 | 52.5 | 81 | 67.5 |
| Non- Agricultural labourers | 34 | 28.3 | 15 | 12.5 |
| Toddy tappers | 3 | 2.5 | 0 | 0.0 |
| Rickshaw pullers | 19 | 15.8 | 7 | 5.8 |
| Others | 12 | 10.0 | 8 | 6.7 |
| **Mother's occupation** | | | | |
| House wife | 35 | 29.2 | 54 | 45.0 |
| Agricultural labourers | 68 | 56.7 | 51 | 42.5 |
| Non Agricultural labourers | 17 | 14.2 | 15 | 12.6 |
| Maid servant | 2 | 1.7 | 0 | 0.0 |
| Flower seller | 3 | 2.5 | 2 | 1.7 |
| Dhobi | 1 | 0.8 | 5 | 4.2 |
| Vegetable vendor | 11 | 9.2 | 8 | 6.7 |
| **Total annual income (Rs)** | | | | |
| <5000 | 0 | 0.0 | 3 | 2.5 |
| 5001-7500 | 23 | 19.2 | 50 | 41.7 |
| 7501-10,000 | 97 | 80.8 | 67 | 55.8 |

Table 4.Distribution of respondents according to their land holding, cattle and poultry wealth.

N = 120 + 120

| Variable | Gramasiri | | Non-gramasiri | |
|---|---|---|---|---|
| | Number | % | Number | % |
| **1.No. of acres owned** | | | | |
| > 1 ½ acre | 1 | 0.8 | 3 | 2.5 |
| 1-1 ½ acre | 2 | 1.7 | 0 | 0.0 |
| ½ - 1 acre | 8 | 6.7 | 14 | 11.7 |
| < ½ acre | 12 | 10.0 | 7 | 5.8 |
| Landless | 97 | 80.8 | 96 | 80.0 |
| **Crops grown- First crop** | | | | |
| Paddy | 9 | 39.1 | 14 | 58.3 |
| Paddy Nurseries, Tobacco Nurseries, Vegetables | 11 | 47.8 | 8 | 33.3 |
| Flowers | 3 | 13.0 | 2 | 8.3 |
| **Second crop** | | | | |
| Moong | 6 | 26.1 | 9 | 37.5 |
| Groundnut | 3 | 13.0 | 5 | 20.8 |
| 2.Possession of animals (No.) | 118 | 98.3 | 44 | 36.6 |
| Cows | 7 | 5.8 | 4 | 3.3 |
| Buffaloes | 77 | 64.1 | 36 | 30.0 |
| Sheeps | 32 | 26.7 | 0 | 0.0 |
| Bullocks | 2 | 1.7 | 4 | 3.3 |
| **3.Poultry** | | | | |
| Number of Chicken | 117 | 97.5 | 75 | 62.5 |

Table 5. Distribution of respondents according to their housing conditions.

N = 120 + 120

| Variable | Gramasiri | | Non-gramasiri | |
|---|---|---|---|---|
| | Number | % | Number | % |
| **Type of roof** | | | | |
| Thatched | 93 | 77.5 | 116 | 96.7 |
| Tiles | 27 | 22.5 | 4 | 3.3 |
| **Type of walls** | | | | |
| Leaf built | 28 | 23.3 | 33 | 27.5 |
| Mud built | 59 | 49.2 | 69 | 57.5 |
| Brick built | 33 | 27.5 | 18 | 15.0 |
| **Ownership of the house** | | | | |
| Rented house | 7 | 5.8 | 2 | 1.7 |
| Own house | 113 | 94.2 | 118 | 98.3 |
| **Number of living rooms** | | | | |
| One | 107 | 89.2 | 111 | 92.5 |
| Two | 13 | 10.8 | 9 | 7.5 |
| **Availability of separate kitchen** | | | | |
| Yes | 13 | 10.8 | 9 | 7.5 |
| No | 107 | 89.2 | 111 | 92.5 |

Table 6. Distribution of respondents according to their sanitary conditions, electricity facilities and possession of radio.

N = 120 + 120

| Variable | Gramasiri | | Non-gramasiri | |
|---|---|---|---|---|
| | Number | % | Number | % |
| **a.Source of Drinking water** | | | | |
| Public well | 101 | 84.2 | 98 | 81.7 |
| Own well | 16 | 13.3 | 22 | 18.3 |
| Own tap | 3 | 2.5 | 0 | 0 |
| **b.Lavatory facilities** | | | | |
| Own W.C | 6 | 5.0 | 0 | 0 |
| Open field | 114 | 95.0 | 120 | 100 |
| **Electricity facilities** | | | | |
| Yes | 16 | 13.3 | 14 | 11.7 |
| No | 104 | 86.7 | 106 | 88.3 |
| **Possession of Radio** | | | | |
| Yes | 40 | 33.3 | 56 | 46.7 |
| No | 80 | 66.7 | 64 | 53.3 |

Table 7. Distribution of children according to Gomez classification

N = 120 + 120

| Category | Gramasiri | | Non-gramasiri | |
|---|---|---|---|---|
| | Number | % | Number | % |
| Normal | 102 | 85.0 | 49 | 40.8 |
| I Grade | 18 | 15.0 | 60 | 50.0 |
| II Grade | 0 | 0.0 | 11 | 9.2 |
| III Grade | 0 | 0.0 | 0 | 0.0 |

Table 8. Distribution of children according to Waterlow's classification

N = 120 + 120

| Category | Gramasiri | | Non-gramasiri | |
|---|---|---|---|---|
| | Number | % | Number | % |
| Normal | 111 | 92.5 | 68 | 56.7 |
| Stunted | 9 | 7.5 | 52 | 43.3 |
| Wasted | 0 | 0.0 | 0 | 0.0 |
| Stunted & Wasted | 0 | 0.0 | 0 | 0.0 |

preschool children. In other factors like type of family, family size, number of children, number of acres of land owned, ownership of house, number of living rooms, availability of separate kitchen, source of drinking water and electricity facilities, two groups studied were more or less similar.

In Gramasiri group, 50 per cent of houses had school going children. It was observed that, the school going children were insisting their mothers to provide them clean clothes and to get them ready in time for school. These schoolgoing children were also aware of importance of personal and environmental hygiene and hence were helping their mothers to keep their houses and surroundings clean which are determinants of nutritional status of individuals. Hence, this also could be one of the contributing factors for better nutritional status of Gramasiri preschool children.

It is inferred from theTable 7 that 85 per cent of children belonging to Gramasiri group were found to be normal and the rest 15 per cent were found to be in Grade 1 malnutrition. Where as in non-gramasiri group 40.8 per cent were found to be normal, 50 per cent were found to be in Grade 1 and 9.2 per cent in Grade II malnutrition. Grade III malnutrition was not found in both the groups.

It is evident from the Table 8 that, 92.5 per cent in Gramasiri group were normal and 7.5 per cent were stunted where as the corresponding figures in Non-gramasiri group were 56.7and 43.3 per cent respectively. None of the children in both the groups fell under wasting or wasting and stunting categories.

This reveals that the nutritional status of Gramasiri children was better than the nutritional status of non-gramasiri children. This can be attributed to the benefits of Gramasiri services like supplementary feeding, preventive and curative health facilities, ante-natal and post-natal care and nutrition education that the mothers received.

With regard to income, the income of Gramasiri families was found to be slightly higher than non-gramasiri families. Because of higher number of working mothers in Gramasiri group and the loan facilities from Gramasiri, to purchase rickshaws,cattle and inputs like seeds, fertilizers and also provision of land for lease to grow vegetables, tobacco and paddy nurseries. Several studies indicated that income is the important factor that determines the nutritional status.(Bhatt and Saroj Dahiya, 1985; Mazur and Sanders, 1988; Visweswara Rao and Balakrishna, 1990; and Krishna *et al.,* 1991.)

Better housing conditions were found in Gramasiri group compared to non-gramasiri in terms of tiled roof and brick built houses as these were constructed by Gramasiri. Better personal and environmental hygiene was also observed in Gramasiri families compared to non-gramasiri families. These better housing conditions and hygienic practices have led to the better health and better nutritional status of Gramasiri children.

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