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Distribution of nutritional deficiency diseases of Minority Muslim in India

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ABSTRACT: *Minority is the important issues not only for India as well as all over the world. In case of India, Muslim is the most backward minority as compare to Christianity, Buddhist and Jain. More than 12 percent are Muslim in India of the total population. They are not only socio-economically backward as well as educationally. The objectives of this study were to traces out the distribution of nutritional deficiency diseases among sample Muslim concentrated villages in Malda district. The paper tries to find out the disease and their related causes. According to field survey nearly 36.28 percent people are affected by different kind of chronic diseases, among them 62.56 percent patients are females including female children and about 37.44 percent are males including male children. The most prominent diseases in Malda district is anemia followed by skin diseases, goiter etc.*

Keywords– *Nutrition, chronic diseases. Pattern of distribution*

I. INTRODUCTION

Nutritional status is one of the important indicators of the overall well being of population and human resources development. India has a very recent history of providing organized child care services with the objective of providing adequate nutrition to economically disadvantaged children, to improve the health and nutritional status of children and develop their mental and physical ability, to reduce infant mortality because of mal-nutrition and disease, and to increase the enrolment in schools and to reduce dropouts. There have been significant improvements in the overall nutritional and health status of the population in India over the last two decades with a steady reduction in the percentage of underweight children and severely malnourished children, better early childhood care for survival, growth and development and better nutritional status of pregnant and lactating women.

Problems of the study

Minority is the important issues in the world but it is very unbearable in the developing world. India is the vast country facing number of problems like employment disparities, lack of infrastructure, racism, casteism, and different kind of social problems. Especially minority groups are facing lot of problem in every day life. Health is the key factors for the development. Muslim is the important minority in India. Indian Muslim suffering different kind of diseases that retard their mental development as well as impact on economic development and education. Without cure mind man can never think better for life.

II. OBJECTIVES

i. To find out distribution of deficiency diseases
ii. To find out the number of illness people
iii. To find out the share of deficiency diseases among the people
iv. To find out the socio- economic status

Administrative Setup

Malda was the Capital of Gour-Banga and now the gate way of North Bengal. It is located between latitudes 24^0 40' 20" N to 25^0 32' 8" N, and longitudes 87^0 45' 50" E to 88^0 28' 10" E, Malda District is bounded by Bangladesh and Dakshin Dinajpur district to its East and North East, by Uttar Dinajpur to the north, Bihar to the West, South-west part is bounded to Jharkhand and by Murshidabad district across the river Ganga. Malda is spreading over an area of 3733, Sq. Km and covering 4.10 per cent of the total landmass of the West Bengal and support with a large number of populations of 3997970, about 4.1 per cent of the total states population with the

density 1071 persons per. Sq. Km (census 2011). More than 50 percent of the total population is Muslim. Malda is one of themost backward district of India.

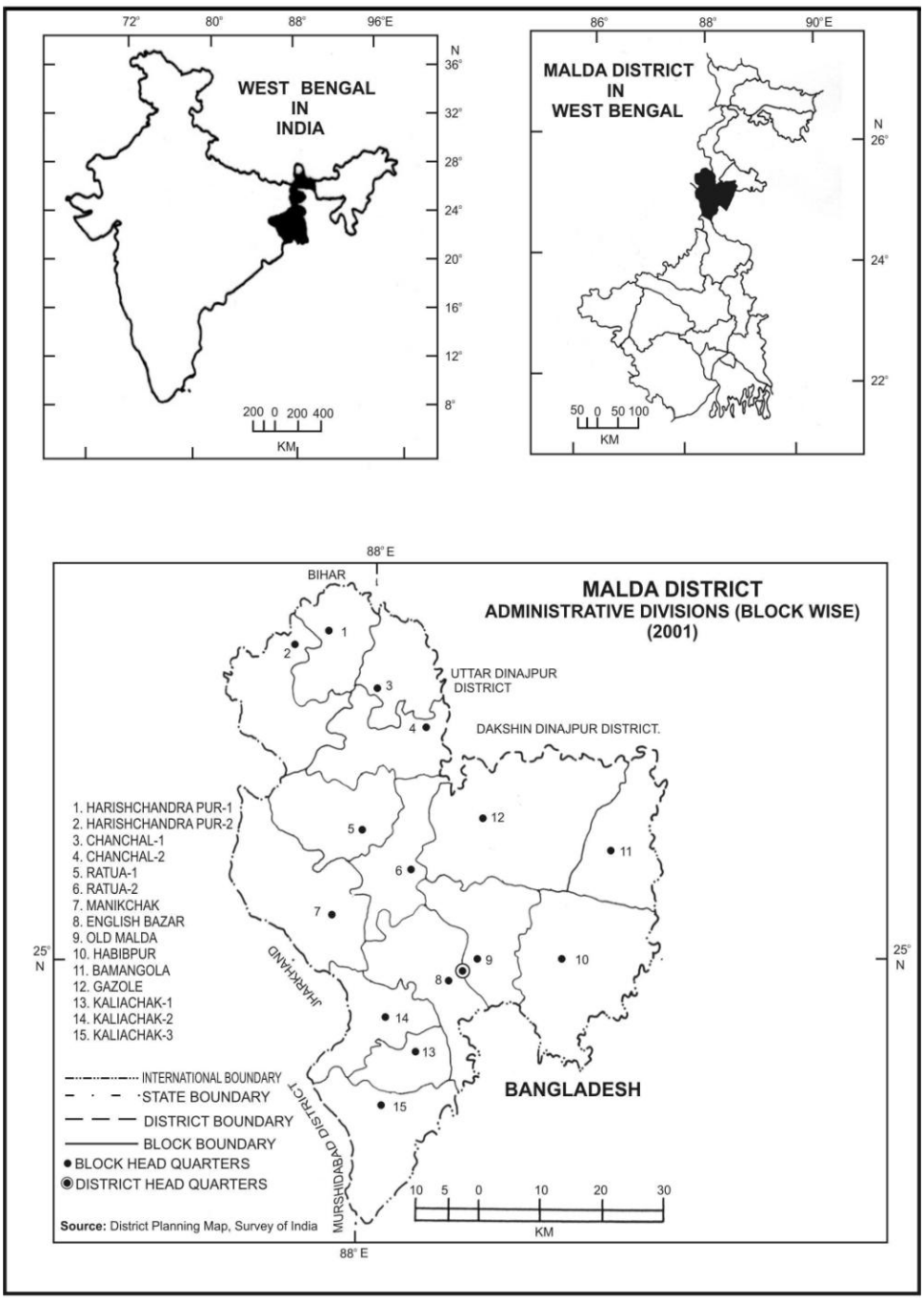
III. DATA AND METHODOLOGY

The present study is based on a sample of 506 households drawn from the 15th blocks of Malda district. The relevant data were collected through a primary survey, by visiting the households with a detailed questionnaire. The opportunities given by meeting the households in person provides a great scope for an in depth investigation.

The Map showing the sample Mouza

The village were selected on the following criteria (1) they had more than 100 households since a minimum of 10 per cent household per village was surveyed for the research (2) keeping these considerations in mind, It has planned to select villages some of which are nearer to the road while others are farther from the road. Similarly some villages are inhabited by single community while others are inhabited by multiple communities. Some are connected by a good road while other is only linked by Katchha road. Similarly some are developed, semi-developed and other is remote villages selected. The villages were basically rural communities' because the focus in this study was on distribution of nutritional deficiency diseases in Malda district.

Size of Sample



Total 2900 samples have been taken from 15th blocks of the Malda district. Out of them 1533 are males and 1367 are females. Out of the males 548 are the male children upto to age of 15 year and 104 are old whose age more than 60 year. Among the 1367 females 513 are the female children their age below 15 year and 87 females whose age above 60 years. All the data were converted into relative number such as percentage and ratio used for observed the overall situation of the blocks.

Distribution of Deficiency Diseases (Results)

Distribution of deficiency diseases unequally distributed from village to village. More then 36.28 percent people suffer different types of diseases among the sample sizes**.** The diseases are closely related to socio- economic conditions of the families. More than 62.56 percent patients are females and facing number of diseases due to the lack of health facilities. Number of food related diseases are given below and table showing the percentages of Diseases from the total numbers of patients.

Table1: Different Diseases Distribution among Total Number of Patients in Malda District-2009

Name of the disease	Male patient (%)	Female patient (%)	Children patient (%)
Anemia	**10.29**	**38.74**	**18.79**
Goiter	**3.68**	**5.41**	**2.01**
Night Blind	**8.09**	**6.31**	**9.40**
Skin	**15.44**	**21.62**	**18.79**
T.B	**6.62**	**5.41**	**2.01**
Respitory	**19.85**	**11.71**	**21.48**
Scurvy	**3.68**	**4.50**	**12.75**
Rickets	**2.21**	**0**	**8.05**
Other	**30.15**	**6.31**	**6.71**
Total	**100.00**	**100.00**	**100.00**

Source: Field Survey-2009

Anaemia

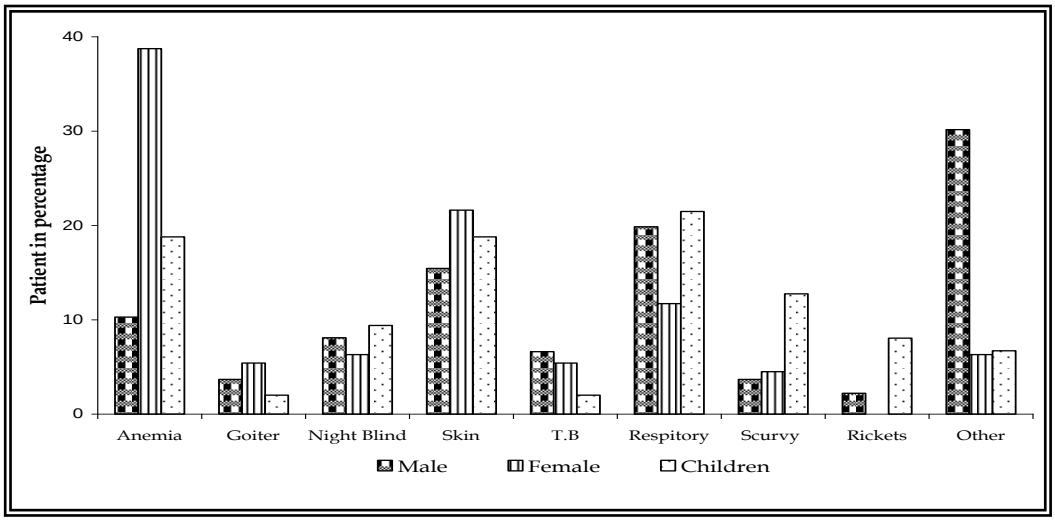
An anemia is a problem of serious public health significance, given its impact on physical work capacity, mental performance, maternal morbidity and mortality. The most vulnerable groups are pregnant women and preschool children. The world Health organization recommends that anemia should be considered to exist in adults with hemoglobin levels lower than 13 grams per deciliter (G/d1) (Males) or 12 g/d1 (females). Children aged 6 months to years are considered to be anemic if their hemoglobin levels are below 11g/d1, and those 6-14 years, below 12g/d1.

It is estimated that it affects 47 per cent of all women, 59 per cent of pregnant women and 26per cent of men in the developing world. In the developed countries, it affects about 10 per cent of women and 3 per cent of men at some time during their lives. A numbers of sample surveys conducted during 1960s (Ramachandran 1989) showed that more than 50 per cent of the pregnant women have hemoglobin levels below 11gm/d1 and are thus classified as anemic. More recent surveys indicated that anaemia is common even in other segments of the population. In rural areas around Hyderabad and Delhi, the prevalence of anaemia ranged from 40-70 per cent, while in village near Calcutta where hookworm infestation was common, more than 90 per cent of the population were anemic (AJCN 1982) According to field survey, it affects about 38.74 per cent of all women, 10.29 per cent of men and 18.79 per cent of children in *Malda* district. The reasons for poor coverage included inadequate supplies of iron folate tablets, poor supervision, and poor compliance ignorance.

Goiter

It is estimated that today, more than 54 million people in India are suffering from endemic goitor and 8.8 million from different grades of mental/ motor handicaps (Khatri 1990).The Survey between 1945-53 in Sub-Himalayan belt, ranging from Kashmir in the north-west to Nagaland in the east indicated a prevalence of goiter ranging from 26-90 per cent (ICMR 1981). ICMR conducted a survey covering 14 districts of 9 states with diverse geological, Metrological and geochemical characteristics (ICMR 1989). The study found a high concentration of goitor in all the states, (like Dibrugarh 66%). In Malda, about 3.68 per cent male patient is suffering from goitor, followed by 5.41 per cent female suffering from goiter and 2.01 per cent are children.

Figure 1: Sex-Wise and Age-Wise Diseases Distribution in Malda District-2009



Vitamin A Deficiency

About 21 per cent of children have vitamin a deficiency and suffer increased rates of death from diarrhea, Measles and malaria. The ICMR surveys between 1965-69 showed that 7 per cent of pre-school children had signs of vitamin A deficiency (ICMR 1977). The NNMB surveys between 1975-79 (NNMB 1991), Showed that the prevalence of Bitot sports in pre-school children was around 2 per cent more recent surveys (1988-90), repeated in the same areas showed a decline in the prevalence (to 0.7%). There is a wide variation in the prevalence rate, ranging from 0.5 per cent in kerala to 1.0 per cent in Andhra Pradesh (1985) .In the more recent survey, 0.04 per cent of the total blindness have been attributed to vitamin A deficiency. On the basis of field report more than 8.09 per cent male patient are night blind followed by 6.31 per cent female patient are night blind in *Malda* due to poor economic conditions and inadequate supplies of vitamin A.

Scurvy

Scurvy is a condition caused by a lack of vitamin C in the diet. Signs of scurvy include tiredness, muscle weakness joint and Muscle aches, a rash on the legs, and bleeding gums. According to primary survey, about 3.68 per cent male patient are scurvy affected followed by female (4.50%) and children (12.75%) in *Malda* District.

Survey is very rare in those households where fresh fruits and vegetables are readily available and where processed foods have vitamin C added. It is found in fruits, especially citrus fruits like oranges, lemons, and grape fruit, and in green leafy vegetables like broccoli and spinach. Currently, the recommended daily allowance (RDA) for vitamin C is 50-60 mg/day for adults; 35 mg/day for infants; 40-45 mg/day for children 1-14; 70 mg/day during pregnancy; and 90-95 mg/day during lactation. The body's need for vitamin C increases when a person is under stress, smoking, or larking certain medications.

Rickets

Rickets is caused by a deficiency in vitamin D. Vitamin D is the only vitamin that can be both acquired through food and made by the body itself. Although vitamin D can be absorbed through foods rich in animal fat, such as milk, Cheese, fish and meat this absorption constitutes only about 10 per cent of what the body needs in a single day. The remaining 90 per cent is erected by the body. In Malda, more than 8.05 per cent children patient are affected by Rickets followed by men's (2.21%).

Respitory

Respiration is the process by which nutrients reactions take place, energy is produced and stored, and carbon monoxide and wastes are given off. This process is absolutely central to basic cell functioning and thus the functioning of the body as a whole. They are unable to retain any air. About 19.85 per cent male patient are suffering by Respitory followed by female (11.71%) and more than 21.48 per cent children are suffering by Respitory in Malda. Respitory is the most prominent disease which affects maximum number of children's and males.

Tuberculosis (TB)

Food is one of the basic factors determining our health. Malnourished individual on account of their impaired immunity are more vulnerable to contact infections disease like TB. A good socio-economic system, which provides adequate and whole some food, good housing facilities and inculcates health awareness among its people is the best answer for tackling T.B. Generally malnourished compromised patients contact TB and TB in turn, causes wasting. So malnourishment makes people vulnerable to T.B and in turn TB aggravates malnutrition and finally leads to severe wasting and death. Thus the various cycles goes on resulting in heavy morbidity and mortality.

About 6.62 per cent male of the total patient are suffering by T.B followed by female (5.41,) and children are only2.01 per cent in *Malda* district. It can be said that proper diet, improved living conditions and health awareness all play vital roles in handling the problem of T.B.

Skin

Skin abnormalities, such as pigmentation and keratoses, have long been known to be caused by chronic ingestion of inorganic arsenic. A few studies have resulted in hypotheses that the prevalence of arsenic induced skin lesions and other arsenic caused diseases might be increased with malnutrition (National research council). In south western Taiwan, in habitants were reported to have poor nutritional and low socio-economic status (Yang and Blackwell 1961). Their reported diet was adequate in caloric and high in carbohydrate but low in protein and extremely low in fat. In Malda, more than 15.44 per cent male of the total patient are affected by skin deceases followed by female (21.62%) and children (18.79%). Improvement in the standard of living, education of the general public, improvement in the environmental sanitation and good nutritious food may help us to bring down the skin disease in this area.

Other diseases

Other nutritional deficiency disease includes Beriberi, Pellagra, malaria, diarrhea, jaundice, iron deficiency, cancer, typhoid, fever etc. More than 30.15 per cent of the total patients in the sample villages are affected by other diseases followed by female (6.31%) and children (6.71%).

Beriberi is caused by a deficiency of vitamin B1 that affects many system of the body including the muscles, heart, nerves, and digestive system. In adults, there are different forms of beriberi classified according to the body systems most affected. Dry beriberi involves the nervous system; wet beriberi affects the heart and circulation. Both types usually occur in the same patient, with one set of symptoms predominating. Maximum numbers of alcoholics tribal and Hindu people are affected by beriberi.

Pellagra is a disorder brought on by a deficiency of the nutrient called niacin or nicotinic acid, one of the B-complex vitamins. Dietary requirement for niacin depend on the age, gender, size and activity level of the individual. Niacin requirement ranges from 5 mg in infants up to 20 mg in certain adults.

Socio-economic Status of Muslim

Socio-economic status is one of the most important indicators for studies of health status of any country or community. The socio -economic status on the basis of field survey is varying from block to block. Out of 15^{th} blocks, only 5^{th} blocks have minimum basic infrastructures and others 10^{th} blocks have very low economic status. The Chanchal block -1 (4.481) & kaliachak 1(5.032) have good status as compared to other blocks in the district. On the basic of development, the block have been divided into three classes high developed blocks, medium developed blocks and low developed blocks.

Table2: Block – Wise Socio-economic Status of Muslim in Malda District.

Socio-economic Development							
Block	**literacy**	**Employ**	**land**	**APL**	**income**	**15-60**	**CMZS**
	Z-score	**Z-score**	**Z-score**	**Z-score**	**Z-score**	**Z-score**	
HCP-II	**-1.791**	**-1.672**	**1.848**	**-0.787**	**-1.516**	**1.423**	**-3.681**
HCP-I	**-0.612**	**-1.428**	**2.305**	**-0.876**	**-1.359**	**0.434**	**-1.898**
CHN-I	**1.372**	**0.773**	**-0.595**	**1.958**	**1.111**	**-0.829**	**4.481**
CHN-II	**-0.617**	**0.208**	**-0.083**	**-1.551**	**-0.708**	**0.616**	**-2.648**
RTA-I	**-0.285**	**0.364**	**-0.231**	**-0.060**	**0.046**	**-0.003**	**-0.166**
RTA-II	**0.029**	**-0.619**	**-0.083**	**0.226**	**0.830**	**0.405**	**0.452**
GZL	**0.551**	**0.144**	**-0.546**	**-0.329**	**0.619**	**-1.597**	**0.172**
K-I	**0.749**	**1.421**	**0.427**	**1.200**	**1.420**	**-1.101**	**5.032**
K-II	**0.545**	**0.902**	**-0.808**	**1.087**	**0.100**	**1.052**	**2.001**
K-III	**-0.771**	**0.778**	**0.148**	**-0.857**	**-0.389**	**1.494**	**-0.842**
MNK	**-0.107**	**-1.051**	**-0.892**	**-0.085**	**1.624**	**0.265**	**-0.467**
ENB	**0.563**	**1.046**	**-0.744**	**1.240**	**-0.387**	**-0.382**	**1.656**
OMD	**2.116**	**0.829**	**0.874**	**0.344**	**-1.336**	**-1.540**	**2.569**
BMN	**-0.913**	**-0.499**	**-1.164**	**-0.588**	**0.440**	**-0.764**	**-2.850**
HBP	**-0.829**	**-1.183**	**-0.464**	**-0.917**	**-0.500**	**0.517**	**-3.808**
	0.00	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	1.00	**1.00**	**1.00**	**1.00**	**1.01**	**1.00**	**2.76**

Author is calculated (Source- Field Survey, 2009)]

Employ= Employment rate**, land=** Land Availability**, APL=** Above Poverty Level, **income=** Per capita family income**, 15-60year =**age group population (working pop.) **CMZS=** composite z squares test.

The high developed blocks are the Kaliachak-1(5.032), Chanchal-1(4.481), Ratua-2(0.452) Old Malda (2.569), Kalichak-2(2.001) and English bazaar (1.656).The medium developed blocks are mainly Ratua-1 (-0.166), Gazole(0.172), and Manikchak (-0.467). The very low socio –economic status is found a numbers of blocks such as followed by Habibpur (-3.808), Bamungola (-2.850), Kaliachak-3(-0.842), Chanchal -2(-2.648) Harishchandrapur 1 & 2 blocks (-1.898 & -3.681).

IV. CONCLUSION AND SUGGESTION

Muslim women are facing serious chronic disease because women and girls are more likely to reduce their food intake as a coping strategy in favour of other family male members. This can led to number of diseases among women and girls. Because of social traditions men and boys may be favoured and fed better than women and girls. Women, especially those who are pregnant or lactating, may be mostly affected by Anemia, Skin, and Respitory etc diseases due to their increased physiological requirements. Teenage pregnancy can lead to poor health and nutritional status for both the baby and the mother**.** In case of low income families' children and other dependents within a household, females take on additional activities to support household food security especially in situations where male heads of households are absent. This often activities lead to disruption in infant and young child feeding practices and reduced caring capacities.

Suggestion

- Increased/improved access availability of Credit & saving facilities and increased purchasing power of the households
- To improve health programme health treatment centre within 3 km.
- To provides supplementary food among children and women.
- To create social awareness among people especially in women and teenager girls.
- Improve the living conditions of poor communities through the provision and strengthening of rural services
- To provide more treatment facilities without any cost to reduces/overcome the problems.
- To increases the per capita income.
- To organized workshop, discussion, seminar, to provides more information among the people.
- Improve the natural resource base through appropriate resource rehabilitation and conservation measures
- Enhance the production or income generation capacities of the target groups through the improvement of household food production and creation of alternative employment opportunities
- Improved skill of beneficiaries strengthens research centers.
- Promoted the minority schemes for development.
- More special attention should be given and developmental planning has been taken trough five years planning for Indian Muslim.

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Appendix -1

Block	**Full Name**
HCP-II	**Harischandrapur-1**
HCP-I	**Harischandrapur-2**
CHN-I	**Chanchal-1**
CHN-II	**Chanchal-2**
RTA-I	**Ratua-1**
RTA-II	**Ratua-2**
GZL	**Gazole**
K-I	**Kaliachak-1**
K-II	**Kaliachak-2**
K-III	**Kaliachak-3**
MNK	**Manikchak**
ENB	**English Bazar**
OMD	**Old Malda**
BMN	**Bamungola**
HBP	**Habibpur**