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Determinants of Nutritional Status of the Children

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Abstract
Particular importance is given to nutrition in nations with high socioeconomic and sanitary standards. Public health and nutrition issues stem from issues with safe drinking water, ecological sanitation, poverty, and low literacy. Undernourishment among women is a concerning issue, especially for the destitute and impoverished. A woman's ability to make decisions may also be influenced by her role in the family, her educational background, and her job situation. A woman who is able to make her own decisions will be able to provide her child with the best food possible and realise her full potential during times of health constraints. Decisions regarding a range of issues, including personal health, child health, mobility, and daily household issues, will collectively impact her children health. The nutritional status of mothers and their offspring was shown to be highly correlated with demographic parameters such as their background, whereas the age of the children was found to be significantly correlated with nutritional status. Long-term improvements can be brought about by the use of nutritional monitoring of students as part of the school health programme, school environment enhancements, increased purchasing power, and the provision of cheap food, particularly for the less fortunate.
Keywords: Children, Underweight, Normal Weight, Overweight, Demographic Characters

Introduction

A vital component of development and health is nutrition. Longevity, stronger immune systems, safer pregnancies and deliveries, a decreased risk of non-communicable illnesses, and enhanced newborn, child, and mother health are all correlated with better nutrition. A critical indication of a child's health is their nutritional state. The process by which children pick up abilities in a variety of areas-such as memory, language and cognition, fine and gross motor skills, athletic ability, and social interaction behavior-is referred to as child development. The early years of life, particularly infancy, are a dynamic time marked by quick development and growth.

Statement of the Problem

Child development is also quite believably that an optimal level of development occurs with a stimulating environment, especially during the first two to three years of life. The most frequent causes of malnutrition include improper feeding techniques for infants, poor nutrient utilisation brought on by illnesses and parasites, insufficient food and health security, unfavourable environmental factors, and improper child care procedures. Children's dietary intake is not balanced, which hinders their growth and development and weakens their immune systems.

Lastly, youngsters are more susceptible to a variety of dietary issues and are readily and rapidly infected with infections.

Access to food, work, and education is a challenge for parents, which has an impact on family dynamics and the health of their kids. Families and other small-group members of society are impacted by the global nutrition crisis. Access to food, work, and education is a challenge for parents, which has an impact on family dynamics and the health of their kids.

Issues of the Study

Children constitute the most vulnerable segment of any community. Their nutritional status is a sensitive indicator of community health and nutrition. One of the biggest issues with public health in underdeveloped nations is under nutrition. In underdeveloped nations, efforts to lower child mortality via targeted primary health care have mostly concentrated on the prevention and management of certain infectious diseases, with little emphasis on enhancing the nutritional status of the underlying conditions of the children. A youngster who falls comfortably within the usual normal distribution of weights and heights of healthy children of the same age and sex is said to be well-nourished. A chronic malnutrition condition known as stunting is brought on by prolonged periods of inadequate nutrition from food that is not suited to a person's needs. Stunting so results in the motor system's development, which is a crucial component as a child's motor development is the foundation for their intellect and emotional behaviour. The aim of this study was to ascertain the association between emotional behavioural disorders and stunting in children under the age of 14 in the study region. The researcher's study topic, "Development and nutritional status of children in Mayiladuthurai District, Tamilnadu," was chosen in this particular setting.

The Role of Nutrition in Child Development

The world has shown that investing in people's health is essential to raising economic growth, enhancing overall welfare, and decreasing poverty. Programs aimed at enhancing women's health could spare millions of women from needless suffering or early death and allow them to live fully productive lives. Disparities in health condition across socioeconomic groups, as well as between families and individuals with different socioeconomic features, are typically the outcome of these drawbacks stemming from an unequal distribution of resource availability. Due to their poor socioeconomic level and reproductive function, women today experience a disproportionate amount of available disabilities in many nations. Therefore, the same variables that render some members of the population more susceptible to illness by denying them access to necessities also make it more difficult for them to successfully manage illness. Early life nutrition deficits can result from poor diets. For example, a vitamin A deficiency can impair a child's immune, increase their chance of blindness, and even cause them to die from common childhood ailments like diarrhoea.

Review of Literature

Our idea to adopt a multidimensional approach to child growth is based on Nobel laureate Amartya Sen's suggestion to gauge societal development not just on economic growth but also on other factors like life expectancy and education (Sen, 1999; Sen, 2003). In a similar spirit, we propose that the concept of child growth be broadened to include parental, social, and other aspects rather than being limited to physical growth.

Ferrer and Palmer (2004), reveal to us that comprehension of these connections between the individual and the environment and the ecology of social causation will enhance our knowledge of social epidemiology within the deterministic, social structuring of health.

Nafi'a et al., (2021), based on the research results, Children under five had normal nutritional status based on weight/age, weight/height, and height/age. These issues may be brought on by ineffective parenting, a diet deficient in nutrient-dense foods, low educational attainment, and parents' inability to afford specialised and comprehensive schooling. All parents of children under five years old, regardless of their background, must be educated, communicated to, and made to understand the importance of certain treatments, such feeding underweight children meals high in nutrients.

Xiao et al., (2022) found that the health of families (p = 0.001, t = 9.093, simple slope = 1.742). Targeted strategies for decreasing poverty should be devised in order to support rural families' viability in response to the basic demands of rural regions in the study region.

Research Questions

This research addresses the following questions

1. What is the nutritional status of (0.1 to 14 years) children in the study area?

Objectives of the Study

1. To study the nutritional status indicators of the sample respondents.

Hypothesis of the Study

1. There is a significant relationship between the age of children and nutritional status of children in the study area.

Methodology

Sample

The sample size is 89 sample children (0.1 month to 14 years), demographic characteristics of age, education, occupation, type of family, family size, of the households, sampling method is adopted simple random sample in Kuttalam taluk, Mayiladuthurai district, during 2023-24.

Materials used/ tools of the study

Data were collected through the direct infield enquiries using pre-tested interview schedule with a view to securing information from the respondent's parents, as General Information of the children and parents and also collected nutritional status of the children and mother. The tools used frequency distribution, percentages, and correlation was used.

Procedure

During the data collection questions asked to mother's or who is available in households of the sample respondents in the study area.

Body Mass Index: Anthropometric indicators like BMI are derived from the weight-to-height ratio. It is used to categories malnutrition in adults who are neither postpartum or pregnant. BMI is not a reliable measure of nutritional status in edematous individuals or pregnant women. For these groupings, use MUAC. By dividing a person's weight in kilograms by their height in meters squared, one may get their BMI. You will have to convert measurements in cm to m (100 cm = 1 m). BMI = Weight (kg) / Height^2 (m) x 100. Here classify based on the best indicator our health, Underweight – Below 18.5, Normal weight – 18.5 to 24.9 and Overweight – 25.0 – 29.9.

Results and Discussion

This section discussed about the children's demographic characteristics includes age, gender, community, religion, family size, mother's education, nutritional status of the children.

The below Table -1 shows that the socio-demographic data of the sample respondent's data with regards of age, majority of the sample respondents age range of 5 to 9 years. 52.4 per cent of the sample respondents from male, 31 sample respondents were other community, more than half of them were Hindus (60%), 62.2 per cent of the sample respondents with medium size family (4 – 5 members), 44 (53.7%) mother's age below 35 years and majority of the respondents mothers had higher secondary education as their highest level of education with 72.0 per cent.

Table 1 Demographic Characteristics of Nutritional Status of Sample Children

Category	Nutritional Status			Total
	Underweight	Normal Weight	Over Weight	
Age (years)	3	82	4	89
Below 5 years	-	20	-	10
5 to 9 years	2	37	-	39
Above 9 years	1	25	4	30
Gender	3	82	-	42
Male	-	43	4	47
Female	3	39	-	42

Community	3	82	4	89
OC	1	31	2	34
BC/MBC	-	26	2	28
SC/ST	2	25	-	27
Religion	3	82	4	89
Hindus	1	50	2	53
Christians	-	23	2	25
Muslims	2	9	-	11
Family Size	3	82	4	89
Small	-	16	2	18
Medium	-	51	2	53
High	3	15	-	53
Mother's Age	3	82	4	89
< 35 years	2	44	2	48
> 35 years	1	38	2	41
Mother's Education	3	82	4	89
Primary Education	1	10	-	10
Higher Secondary	2	59	3	65
Higher Education	-	13	1	14

Source: Computed

Table 2 Nutritional Status of the Children

Category	Frequency	Percentage	Cumulative %
Anthropometric Measures	89	100	
Underweight	3	3.4	3.4
Normal Weight	82	92.1	95.5
Overweight	4	4.5	100
Breast Feeding Practices	89	100	
Practical Exclusive breastfeeding	84	94.4	94.4
Never practiced exclusive breastfeeding	5	5.6	100
How Child is Breastfed	89	100	
Directly from breast	79	88.8	88.8
Express breast milk using spoon	7	7.9	96.7
Expressed breast milk using feeding bottle	3	3.3	100
Child's Age at commencement of Complementary Feeding	89	100	
Below 5 months	4	4.5	4.5
6 to 10 months	77	86.5	91.0
Above 10 months	8	9.0	100

Source: Computed

The below Table – 2 shows the data gotten from the direct assessment of the nutritional status of 0.1 to 14 years children was measures in terms of weight and height of anthropometric measures. With regards to weight of age, majority of the respondents 107 (66.6%) are normal weight, while others; 3 (3.4%) are underweight (> 18.5) and 4 (4.5%) overweight (25.0 to 29.9). The feeding practices that mothers

involve in are discussed in terms of practices relating to breastfeeding, infant formula and complementary feed. Breastfeeding practices of respondents of which majority 84 (94.4%) had practiced exclusive breastfeeding while 79(88.8%) fed child directly from breast. With respect to the commencement of complementary feeding, majority of the respondents 77 (86.5%) introduced it between 6 to 10 months, while 4 (4%) commenced at below 5 months and 8 (9.0%) commenced at above 10 months.

Table 3 Perceived Factors Influencing Nutritional Status of Children

S. No	Factors Influencing Nutritional status	Yes		No	
		Frequency	%	Frequency	%
1	Lack knowledge of type of food to feed child	27	30.3	62	69.7
2	Lack enough money to buy adequate food for child	13	14.6	76	85.4
3	Started giving child local food < 6 months	7	7.9	82	92.1
4	Rigid work schedule		23	25.8	66
5	Child often has fever, diarrhea or cough	18	20.2	71	79.8

Source : Computed

This section discusses the factors that influence the nutritional status of children 0.1 to 14 years from mothers' perspective. Five items were presented on a table on 2 point scale of yes or no. Table - 3 results that 27 (30.3%) of the participants implicated for lack knowledge of type of food to feed child, 23 (25.8) rigid work schedule, 18 (20.2%) child often has fever, diarrhea or cough as major factors influencing their children's nutritional status.

Table 4 Food Consumption of Behaviour of the Sample Children

Food Consumption Behaviour	Nutritional Status (Measures 5 point scale)			Total
	Under weight (>18.5) (n=3)	Normal weight (19.0-24.9) (n=82)	Over weight (25-29.5) (n=4)	
Time of Consumption	4.00	4.32	4.50	4.31
Place of Consumption	3.67	3.80	4.50	3.83
Sources of Information	4.33	3.40	4.75	3.49
Availability of the Home	4.33	3.99	4.75	4.03

Source: Computed Note: Nutritional status calculated used BMI index and Food consumption behaviour applied the 5 point scale

Table – 4 reveals that food consumption behaviour of the sample children, measured the mean values, highest mean value are 4.33 and 4.75 for sources of information and availability of the home belong to underweight and overweight respectively, whereas normal weight is 4.32 for time of consumption answers from mothers in the study area. It is found that average is 4.03 among them maximum of answers of food consumption is behaviour of is time of consumption for helping the nutritional of the children. For more discussion, the chi square test is utilized. The tabular result of the chi square test is less than the calculated value, which is 10.999, and the p level significance is 0.027 at the 5% level of confidence, indicating a significant association between the sample respondents dietary habits and nutritional status.

Table 5 Associations between Age and Nutritional Status of Sample Children

Age and Nutritional Status of Children	Value	Std. Error	T value	P Level Significance
Pearson's R	.421	.077	4.354	.000*
Spearman Correlation	.447	.082	4.688	.000*
N of Valid Cases	89			

Source: Computed from the primary data

Note: **0.005 – 5 % and *0.001– 1%level of significance

The nutritional status has the interrelation with age of the children and this study confirms that the prevalence of socio-economic status of the family, which determines the long-term nutritional status of the child. The occurrence of the malnutrition is associated with increasing age of the child, low birth weight, premature and improper breast-feeding practices. Table – 4 revealed that there was significant association between the children age and children's nutritional status of 0- 14 years children and underweight (below 18.5), normal weight (18.5 to 24.9) and overweight (25.0 to 29.9) of 0 – 14 years children.

Conclusion

Given the percentage of the population that lives below the poverty line, a better parent's socioeconomic level is most likely the cause of the superior research outcomes. One of the program's biggest problems is still the selection of the kids, as well as the quantity, quality, and consistency of the meals. Short-term strategies to enhance the nutritional status include good child selection, ongoing nutrition instruction in schools to promote the wise use of locally accessible foods, monitoring of children's midday meals at school, and a steady supply of cooking supplies. Long-term measures such as introducing nutritional monitoring of students as part of the school health programme, enhancing the school environment, raising people's purchasing power, and providing food at reasonable prices, particularly for the less fortunate, can all contribute to this much-needed improvement.

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