



A COMPARATIVE STUDY OF CHILD HEALTH, NUTRITION AND IMPLEMENTATION OF NUTRITIONAL PRACTICES

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ABSTRACT

Nutrition has a significant impact on human health, not just physically, but also mentally and cognitively. Early infancy sees a significant development in gross motor skills. Early childhood also sees a significant improvement in fine motor skills. Fine motor skills development in preschool permits young children to become aspiring artists. A child's health may suffer as a result of insufficient nutritional consumption. Excess food intake is undesirable, particularly excessive energy consumption, which leads to overweight and obesity, as well as undernutrition, which can lead to stunting and has a negative impact on the development of all organs and systems in the body of a child. This is particularly true of the central nervous system, but it also applies to other systems, such as the immune system, which responds by lowering immunity. When thinking about the importance of nutrition during childhood, it's important to remember that it has an impact on health later in life. Even in adulthood, the repercussions of a child's nutrition can be seen. Hypertension, coronary heart disease, obesity, osteoporosis, and diabetes are all linked to a qualitative and quantitative imbalance in childhood eating. Adequate nutrition in childhood has a psychological component as well. Dietary habits formed in childhood have an impact on attitudes toward nutrition that lasts a lifetime.

KEY WORDS: *Nutrition, human, progress, knowledge, health, livelihood and Anganwadi.*

1.1 INTRODUCTION

The primary goal of any development initiative is to improve people's health. The three pillars of human progress are knowledge, health, and livelihood. People's health has long been recognized as an important national resource, and the government has worked to improve it so that they can contribute to the country's productivity growth. The World Health Organization (WHO) defines health as a condition of complete physical, mental, and social well-being, not merely the absence of sickness. The term "physical health" refers to the body's ability to function properly (WHO, 1948). It defines health as a state in which every cell or organ is operating at peak performance and in perfect harmony with the rest of the body. Mental health entails not only the absence of illness, but also a state of equilibrium between the individual and the environment, as well as a state of harmony between oneself and others, and coexistence between oneself and others, as well as between one's own reality and that of others and the environment. The quality and quantity of interpersonal links, as well as the level of involvement inside the individual, between each individual and other member of society, and between each individual and the world in which he lives, are

all indicators of social well-being. As a result, health is a multifaceted and holistic notion that encompasses the well-being of the entire community.

Following independence, the government of India placed a high focus on human resource development, and plans were made to build a national programme for the entire development of the country's most precious resource: its children. The Indian constitution contains special provisions for the protection of women and children in Article 15(3). Unfortunately, India is experiencing a trained professional deficit. As a result, the country is attempting to achieve its goal of improved health facilities that are both affordable and accessible by utilising the local community through the Anganawadi system. In many ways, an Anganawadi worker is better qualified to reach out to the rural populace than a professional doctor. For starters, because the worker lives with the people, she is in a better position to determine the source of various health issues and, as a result, to address them. As a result, she has a very strong understanding of the health situation in her area. Second, while Anganawadi workers lack the knowledge and qualifications of professionals, they possess superior social skills, making it simpler to communicate with people. Furthermore, because these personnel are from the community, they are easily trusted, making it easier for them to assist the locals. Last but not least, Anganawadi personnel are well-versed in the ways of the people, are fluent in the language, and are personally acquainted with the rural populace, all of which make it very easy for them to identify and solve the difficulties that the people confront.

1.1.1 NUTRITION

Nutrition is the study of foods, nutrients, and other substances included inside them, as well as their action, interaction, and balance in connection to health and disease. It is the process through which an organism consumes, digests, absorbs, transports, and utilises nutrients, as well as disposes of their waste. Food at work in the body is another definition of nutrition. Food and eating have to be considered from a social, economic, cultural, and psychological standpoint. The terms good, adequate, and optimum are used to describe the quality of nutrition in which the essential nutrients are used in the proper amounts and balance to support the best possible physical and mental health throughout one's life. (Moorthy, 1993)

Stronger immune systems, fewer illnesses, and improved health are all benefits of better eating. Children who are in good health learn more effectively. People who are healthy are stronger, more productive, and better equipped to create possibilities to break the cycles of poverty and hunger in a long-term approach. Better nutrition is a critical first step toward eradicating poverty and achieving a higher quality of life. Hunger and malnutrition are crucial prerequisites for personal and national development, and their eradication is a basic human right.

Growth is often slower between the ages of 1-6 years than it is in the first year of life, although it continues gradually. During the second year of life, the child's activity level rises dramatically as he or she becomes more mobile. By the time a child reaches the age of two, he or she has developed a full dentition, which expands the spectrum of foods that can be eaten safely. All nutrients are under higher demand, although the pattern of increase differs according on the role of each nutrient in the growth of certain tissues. (Srilakshmi, 2000)

1.1.2 THE IMPORTANCE OF NUTRITION IN PRESCHOOL AGE

Preschool is a unique stage in human development. Although physical growth and development in young children is slower than in infancy, their lives are the most active of any age in the human lifespan (Santrock, 1997). Body size and proportions change more slowly, although all organs and systems, particularly the digestive, respiratory, and motor systems, develop and increase their functions. A child should be school-ready at the end of this period, not just physically, but also mentally and emotionally. Nutrition is one of the most essential variables impacting a preschool child's growth. Nutrition has been shown to have a positive impact on the survival, growth, and development of young children in previous

research. (Gittelsohn et al., 1998); Milla, 1991). During early life, the average child grows 2 12 inches in height and acquires between 5 and 7 pounds per year. Individual growth patterns, however, vary. The brain is an important element of development. The brain has grown to nine tenths of its adult size by the age of five. Some of its growth is owing to an increase in the number and size of nerve terminals, while others are related to myelination. Improved cognitive abilities are linked to increased brain maturation. Early infancy sees an increase in visual maturity.

1.1.3 THE EFFECT OF UNDER NUTRITION ON SCHOOLING

Malnutrition impacts a child's schooling and, as a result, his or her lifetime earning potential (Alderman, 2005) Malnutrition obstructs motor, sensory, cognitive, and social development (Village health education, mother and child nutrition programme), therefore malnourished children are less likely to benefit from schooling and, as a result, will earn less as adults. Reduced learning capacity (as a result of early cognitive deficits or lowered current attention spans) and fewer total years of schooling (because caregivers may invest less in malnourished children or schools may use child size as an indicator of school readiness) are two pathways through which malnutrition affects educational outcomes (Alderman, 2005). Malnutrition, for example, has been found to reduce the likelihood of ever attending school in rural Pakistan, particularly for girls (Alderman et al., 2001). In the Philippines, children with better pre-school nutrition start primary school earlier, repeat fewer grades, and have higher high school graduation rates (Daniels and Adair, 2004) than other children. Stunting has been linked to a 7-month delay in school completion and a 0.7 loss in grade attainment in Zimbabwe, resulting in a 7-12 percent reduction in lifetime income (Alderman et al., 2003).

1.1.4 MALNUTRITION – AN UNSOLVED MYSTERY

For optimal growth and development, each individual requires an adequate amount of nutrients in appropriate proportions. Malnutrition refers to a disordered diet, which can be caused by either too much food (overeating) or not enough food (malnutrition) (under nutrition). Even the most basic calorie requirements are not met in India, especially among the poor. Protein consumption is observed to be minimal. Vitamins and minerals aren't being consumed at the recommended levels. As a result, there is a high prevalence of nutritional insufficiency problems in the poorest sectors, particularly among infants and mothers, who are particularly vulnerable.

Malnutrition is a pathological condition caused by a relative or absolute shortage or excess of one or more important nutrients, which can present as over- or under-nutrition or imbalance. The most damaging effects of malnutrition occur in the womb, when the foetus can fail to develop properly, and during the first years of a child's life, when it can impede physical and mental development. Malnutrition has many forms, and a kid might be harmed in multiple ways at the same time. Millions of children are malnourished due to a shortage of key minerals like iodine, iron, and zinc, as well as vitamins like vitamin A and folate. Micronutrients are necessary in minute amounts by the body to make enzymes, hormones, and other compounds that govern growth, development, and the immunological and reproductive systems. Iodine deficiency can cause severe mental or physical impairment, iron deficiency can cause life-threatening anaemia or decreased productivity, vitamin A deficiency can cause blindness or a weakened immune system, and folate deficiency can cause low birth weight or birth defects like spina bifida (a fault in the spinal column in which one or more vertebrae fail to form properly, leaving a gap or split, causing damage to the central nervous system). Breastfeeding is the first source of essential micronutrients, as well as a good source of overall nutrition and wellness. Mother's milk contains immunological components, growth factors, and other protective substances that aren't found anyplace else in nature. Lack of breastfeeding puts infants at a higher risk of death and disease later in life, as well as chronic disorders like diabetes and childhood cancer. An adequate diet, which includes immediate and exclusive breastfeeding for the first six months, and continued breastfeeding with age-appropriate complementary foods, micronutrients, disease prevention and treatment, and proper care and feeding practises are all

important tools in the fight against malnutrition. Poverty is both a result and a cause of malnutrition. A healthy, productive society is built on the foundation of children's nutrition and well-being.

1.2 REVIEW OF LITERATURE

Patel and Udani (1980) In April 1977, the Integrated Child Development Services Scheme of Bombay's urban slums was inaugurated. In February–March 1979, and again in February–March 1980, an evaluation of the knowledge and competence of anganwadi staff was conducted. A study was conducted to determine the influence of their knowledge on the community in terms of health and nutrition. Despite the fact that the connected anganwadi workers performed well in the examination, the study demonstrates a lack of awareness in the community. It is recommended that the community be encouraged to participate actively in the programme, and that the anganwadi workers be monitored more closely and frequently.

Kant et al (1984) conducted a study to analyse the profile of 96 AWW from the Inder Puri project sites in Delhi, using a questionnaire to measure their understanding of ICDS. Only 92.71 percent of AWW were trained 17.71 percent of the population lived and worked in the tiny town. Only 3.12 percent of people knew how many children under the age of two they would expect in an awc. The majority of people, 92.71 percent, couldn't tell the complete form of ICDS. 90% of them couldn't name all of the services they supplied, and none of them could list their job responsibilities. It is suggested that AWW's current training be examined and that their ongoing education be strengthened

Gujral et al. (1992) conducted a study in which forty-three anganwadi workers (community health workers) in Gujarat state, India, were interviewed to record their educational level, evaluate their nutrition knowledge, and collect data on the number of visits made by the auxiliary nurse midwife (ANM) in the previous three months and the activities she performed for the anganwadi. By interviewing the mothers of 3,987 children aged 0 to 6, the coverage of five services supplied or helped by the anganwadi worker was estimated: supplementary feeding, growth tracking, vitamin A prophylaxis, health check-ups, and immunisation. A high school education, a nutrition knowledge score of more than 4 out of 7, more than one ANM visit in three months, and an ANM activity score of more than 2 out of 9 were all important drivers of the anganwadi worker's performance, either separately or in combination. Nutrition knowledge was the most powerful factor of success, followed by instruction from the ANM and education level, according to multiple regression analysis. As a result, anganwadi workers should get nutrition and health instruction from ANMs on a regular basis, and their education level should be at least high school.

An assessment of anganwadi workers' training needs in connection to newborn feeding was undertaken by **Singh and Vashist (1993)**. The purpose of this study was to determine the training requirements for AWWs in regard to newborn feeding. Anganwadi Workers (n = 82) from the Department of Preventive and Social Medicine, LHMC, New Delhi, were included in the study. They were given a pre-tested semi-structured questionnaire that covered various elements of breast feeding and weaning.

The majority of them were correct about (a) breast-feeding initiation (98 percent), (b) colostrum feeding (98 percent), (c) breast milk superiority over commercial milk preparations (98 percent), (d) age of introduction of semisolids (98 percent), and (e) unhygienic bottle feeding as a major cause of diarrhoea (98 percent) (95 percent). Correct responses included (a) top milk should be diluted (43%), (b) bottle feeding should not be avoided (52%), and (c) moist (surrogate)! Breast-feeding is damaging to the mother's health (60%) and is not advantageous to the mother's health (d) (41 percent). In light of these findings, AWWs' training in regard to infant feeding should be adjusted. Sixty-six percent, 41 percent, and 24 percent of AWWs mistakenly stated that breast feeding should be stopped if the mother has tuberculosis, malaria, or diarrhoea, respectively. A continuing education programme for AWWs is required to keep their expertise up to date.

Interviews were done with 100 anganwadi workers, to determine their knowledge on growth monitoring and to identify gaps in that knowledge. Each anganwadi worker is responsible for 1000 people. The relevance of the lines on the growth charts that represent different classes of nutritional status was understood by 99 percent of the participants. Only 43% of parents were aware that any child under the age

of six can begin growth tracking. 37 percent were unaware that determining the exact age is not required for growth tracking. At the age of one and three years, 90-91 percent of the participants knew the proper weight of a child. Only 17-30% knew the correct mid-upper arm circumference (MUAC) for a well-nourished child between the ages of 2 and 4. These data imply that growth monitoring inputs have been prioritised in training programmes and meetings, but not the age at which growth monitoring can begin, the correct age for successfully conducting growth monitoring, or the MUAC cut-off readings. Anganwadi workers require ongoing training in many elements of growth monitoring.

Datta (2001) looked at many variables in order to better understand the challenges affecting AWW job performance. Six blocks from Maharashtra's Nagpur, Nasik, and Amravati districts were covered. There were a total of 615 AWWs and 72 Supervisors chosen. The training centres were discovered to be quite old, with no additional classes or laboratories for rigorous work or practical work. There was no input from the training facilities. The CDPO does not go to the AWCs to observe how the AWWs interact with beneficiaries. Graduates or postgraduates made approximately 70% of supervisors.

1.3 RESEARCH METHODOLOGY

STUDY AREA

The present study will be conducted in Meerut District. The study area is confined to Two areas namely Shastri Nagar and Jagriti Vihar. All the selected AWCs are belonging to urban areas and the selection of AWCs are purposive.

1.1.3 SAMPLE DESCRIPTION

The study's sample consisted of two groups.

GROUP1: Anganwadi workers: The Integrated Child Development Service (ICDS) scheme, which runs at the state level to address the health challenges of small children across India, was launched by the Indian government in 1975. It is one of the world's largest child-care programmes, focusing on child health, hunger, malnutrition, and other challenges.

GROUP 2: Pre-school children: Early childhood is a critical developmental stage in which malnourished children's growth can be influenced significantly through growth monitoring, which should be done regularly, as well as encouraging good child-care and eating practises.

SAMPLING

GROUP 1: 100 anganwadi workers will be selected with in Shastri Nagar and Jagriti Vihar region through 208 anganwadi centers, which are from urban areas.

GROUP 2: 200 children will be selected which are registered in Anganwadi centre.

1.1.4 SAMPLE TECHNIQUE

GROUP 1: ANGANWADI WORKERS

The sample selection of anganwadi employees was done using a multi-stage sampling technique. 208 anganwadi centers, which are from urban areas were chosen at random from various blocks in Shastrinagar and Jagritivihar region. One hundred anganwadi staff, one from each of the 100 anganwadi facilities, was chosen to assess nutritional awareness and implementation of nutritional services.

GROUP 2: PRE- SCHOOL CHILDREN

During the pre-testing phase, it was discovered that the availability of children aged 3-6 years was more possible than that of children of younger ages. The study's goal was to analyse the nutritional health of 3-6-year-old children who attended an anganwadi centre. Three pre-scholars were chosen at random from each of the 100 anganwadi sites to measure nutritional status, bringing the total number of responses to 300.

1.4 RESULTS AND DISCUSSION

TO ASSESS THE IMPLEMENTATION OF NUTRITIONAL SERVICES PROVIDED TO PRE-SCHOOLERS

This section shows the distribution of anganwadi staff based on the implementation of nutritional services at anganwadi centres. Supplementary nutrition, growth monitoring, and nutrition and health education (NHED) components have all been mentioned in this area under several subheadings.

IMPLEMENTATION OF SUPPLEMENTARY NUTRITION SERVICE AT AWC

TABLE 1.1:

EXECUTION OF NUTRITIONAL PRACTICES AT ANGANWADI CENTRE

PARAMETERS	FREQUENCY (%)			
	<u>Shastri nagar</u> N=50	<u>Jagriti Vihar</u> N=50	<u>TOTAL</u> N=100	χ^2 value
Follow up of menu	15 (30)	20 (40)	35(35)	0
Use of standard measure for weighing of raw food	31 (6)	24 (48)	55 (55)	0.99
Use of standard measure for distribution of cooked food	04 (08)	06(12)	10 (10)	0.89

**Significant at 0.05 level, critical $\chi^2 = 4.86$, $df = 1$*

Table shows that the majority of anganwadi workers in both Shastrinagar (30%) and Jagritivihar (40%) projects used standard measures only for raw food distribution, whereas only 6% of Shastrinagar anganwadi workers and 48% of Jagritivihar anganwadi workers used standard measures for cooked food distribution. Another disappointing parameter was menu follow-up. Anganwadi workers in both cities (30%) and Jagritivihar areas (40%) followed the official menu while preparing extra nutrition. The lack of ration at the anganwadi centre was discovered to be one of the reasons for not following the menu. Anganwadi employees were also found to be lacking in discipline when it came to following criteria for the delivery of extra nourishment. Table shows that 35 percent of anganwadi workers in the overall study population followed the approved menu, 55 percent used standard measure for raw food weighing, and 10 % used standard measure for prepared food distribution. The usage of chi square found no significant differences between Shastrinagar and Jagritivihar anganwadi centres for services like as following up on the official menu and using standard measures for raw and prepared food.

TABLE-1.2:

IMPLEMENTATION OF SUPPLEMENTARY NUTRITIONAL TARGET AT AWC

IMPLEMENTATION OF STANDARD MEASURES TO ACHIEVE FIXED QUANTITY OF NUTRITION	FREQUENCY (%)		
	<u>SHASTRINAGAR</u> N=50	<u>JAGRITIVIHAR</u> N=50	<u>TOTAL</u> N=100
Raw but not for cooked	25 (50)	24 (48)	49 (49)
Cooked but not for raw	02 (04)	-	02 (02)
Both (raw + cooked)	05 (10)	04(08)	09 (09)
None	18 (36)	22 (44)	40 (40)

1.4.1 Multiple responses

An examination of table-2 reveals that there was a discrepancy among anganwadi workers' usage of standard measurements to achieve a fixed amount of nutrition. The majority (50%) of anganwadi staff in Shastrinagar projects used standard measure exclusively for raw food, according to the survey. The data also shows that a third of anganwadi staff in Shastrinagar projects (36 percent) were completely neglecting the usage of standard procedures to achieve a specific amount of nutrition. Only 8% of anganwadi staff in Shastrinagar projects used standard measures for cooked food delivery but not for raw food distribution.

The Jagritivihar project's nutritional target implementation was even more unsatisfactory, with the majority of anganwadi staff (50 percent) completely neglecting the usage of established measures to achieve a defined quantity of nutrition. Only 46% of respondents used conventional measurements for raw food. Throughout the investigation, anganwadi personnel in both Shastrinagar and Jagritivihar sites were seen delivering cooked food to children based only on their own intellect and experience. Anganwadi staff frequently followed the criteria of feeding the kid based on the child's own food intake capacity rather than the actual requirement for supplements as determined by the ICDS for children. During the trial, anganwadi employees showed little enthusiasm in putting in the effort to feed the whole fixed meal to the children. According to the data, a tiny percentage of anganwadi workers in both Shastrinagar (6%) and Jagritivihar (2%) areas were utilising standard measures of both raw and prepared food and hence were following the ICDS nutritional recommendations to meet the nutritional targets.

Overall, it was discovered that the vast majority (49%) of anganwadi employees used standard measure only for raw food, while just 1% of anganwadi workers used it only for prepared food. Only 4% of anganwadi staff used standard measures for both raw and cooked meals and so followed the ICDS nutritional guidelines to meet the nutritional target.

1.5 CONCLUSION

The Integrated Child Development Services (ICDS) programme is a nationally recognised community-based early childhood development programme that holistically meets the essential interconnected needs of young children, expecting and nursing mothers, and teenage girls throughout their lives. In India, ICDS is a response to the challenge of breaking the vicious cycle of malnutrition, impaired development, illness, and mortality among early children by collaborating with other flagship programmes such as the National Rural Health Mission, Sarva Shiksha Abhiyaan, and others. Although the ICDS is one of the more concerned programmes, travelling around the country reveals that there is a significant gap between what is expected of the programme and the reality on the ground. What's more concerning is that even the current centres are ineffective, and corruption, incompetence, and callousness appear to pervade the ICDS programme as well (Ramachandran 2005). In Delhi 240 ICDS blocks are covered by the Integrated Child Development Services Scheme. As of March 2020, the state had sanctioned a total of 18772 Anganwadi Centres (AWCs), of which 18043 (96%) were operational. In new Delhi, a total of 368060 eligible children (aged 6-72 months) and 90215 pregnant and lactating women are receiving benefits under the scheme. Despite continued direct nutrition interventions such as ICDS, India still accounts for around 21% of the worldwide burden of child mortality before reaching the age of five (UNICEF; 2007). Thus, the current study was undertaken with the goals of assessing nutritional awareness among anganwadi workers and studying the impact of their knowledge on improved performance at anganwadi, assessing the implementation of nutritional services provided to pre-schoolers (3-6 yrs), assessing the nutritional status of pre-schoolers (3-6 yrs) attending anganwadi centres, and comparing the level of nutritional awareness among anganwadi workers and the nutritional status of pre-school.

REFERENCES

- Agarwal D.K., Agarwal, K.N., Satya, K. and Agarwal, S. (1998). Weight gain during pregnancy: a key factor in prenatal and infant mortality. *Indian Pediatrics*, 35(8),733-744.
- Agarwal, S., Agarwal, A., Bansal, A.K., Agarwal, D.K., and Agarwal, K.N. (2002). Birth weight patterns in rural undernourished pregnant women. *Indian Pediatrics*, 39, 244-253.
- Alderman, H. (2005). Linkages between poverty reduction strategies and child nutrition: an Asian perspective. *Economic and Political Weekly*. Forthcoming.
- Alderman, H., Behrman, J., Lavy, V., and Menon, R. (2001). Child health and school enrollment: a longitudinal analysis. *Journal of Human Resources*, 36(1), 185- 205.
- Alderman, H., Hentschel, J., and Sabates, R. (2003). With the help of one's neighbors: externalities in the production of nutrition in Peru. *Social Science and Medicine* 56, 2019-2031.
- Allen, L.H. (1994). Nutritional influences on linear growth: a general review. *European Journal of Clinical Nutrition* 48, S75-S89.
- Anitha, C., and Begum, K. (2008). Nutritional status of beneficiaries of ICDS in Mysore district: a situational analysis. Mysore: Karnataka State Open University, Department of Studies in Foods and Nutrition, P.9.
- Ballweg, J.A. (1972). Family characteristics and Nutrition problems of preschool children in food Parisian. *Journal of Tropical pediatrics and environment health*, Vol.230.
- Barker, D.J.P., Forsèn, T., Uutela, A., Osmond, C., and Eriksson, J.G. (2001). Size at birth and resilience to effects of poor living conditions in adult life: longitudinal study. *British Medical Journal*, 323, 1-5.
- Barman, N.R. (2001). Functioning of anganwadi centre under ICDS scheme: an evaluative study: Jorhat, Assam. National Institute of Public Cooperation and Child Development. DCWC Research Bulletin, October-December 2008, XIII (4) 87.
- Bhalani, K.D. and Kotecha, P.V. (2002). Nutritional status and gender differences in the children of less than five years of age attending ICDS in Vadodara city. *Indian Journal of Community Medicine*, 27(3), 124-129.