



A COMPARATIVE STUDY TO ASSESS THE NUTRITIONAL PROBLEM OF PRESCHOOLER CHILDREN AMONG WORKING AND NON-WORKING MOTHERS IN SELECTED AREAS

Health Science (Nursing)

Ms. Dolly Bhivaji Dharmik

M.Sc. Nursing, Department of Child Health Nursing Pooja nursing college, Bhandara

Mrs. Archana Suraskar*

Associate Professor, (Research Guide) Department of Child Health Nursing Pooja nursing college, Bhandara*Corresponding Author

ABSTRACT

Background: Nutritional problems among preschool children remain a major public health concern, particularly in developing countries. Maternal employment may influence children's nutritional status through differences in childcare practices, dietary habits, and health supervision. Assessing the nutritional problems among preschool children of working and non-working mothers is essential for planning appropriate health interventions. **Aim:** To compare the nutritional problems among preschool children of working and non-working mothers in selected areas. **Methods:** A quantitative comparative survey design was adopted. A total of 100 mothers (50 working and 50 non-working) having preschool children were selected from the study area. Data were collected using a structured assessment tool to identify nutritional problems among preschool children. Descriptive and inferential statistics were used for data analysis. **Results:** Among preschool children of working mothers, dietary issues (50%), iron deficiency anaemia (38%), growth problems (42%), obesity (34%), and dental caries (24%) were observed. Among preschool children of non-working mothers, dietary issues (42%), iron deficiency anaemia (28%), growth problems (42%), obesity (22%), and dental caries (18%) were reported. The comparative analysis showed a statistically significant difference in nutritional problems between the two groups ($t = 25.66$, $p = 0.001$). Significant associations were observed between nutritional problems and selected demographic variables, including age, educational status, and maternal employment. **Conclusion:** The study concluded that there was a statistically significant difference in nutritional problems among preschool children of working and non-working mothers. The findings emphasize the importance of regular nutritional assessment, parental education, and community-based nutrition programmes for improving the nutritional status of preschool children.

KEYWORDS

Nutritional Problems, Preschool Children, Working Mothers, Non-working Mothers, Child Nutrition.

INTRODUCTION

Investing in early childhood nutrition is a surefire strategy. The returns are incredibly high."

—Anne M. Mulcahy

Nutritional problem is a state of retarded physical development or clinical disorder caused by deficiency, excess, or imbalance of nutrients. Preschool children are particularly vulnerable to malnutrition, with protein-energy malnutrition, vitamin A deficiency, iodine deficiency disorders, and iron deficiency anaemia being the most common nutritional problems. Poor dietary practices, poverty, food insecurity, lack of education, and inadequate health facilities contribute significantly to malnutrition.¹

According to the World Health Organization (WHO), one in twelve people worldwide is malnourished, and every 3.6 seconds a person dies due to hunger. Approximately 42.5% of children in India suffer from malnutrition, and a substantial proportion of the world's underweight, stunted, and wasted children reside in India.² Nutritional problems during childhood adversely affect physical growth, cognitive development, educational performance, and future productivity.³⁻⁸

Maternal employment influences child nutrition and health through its impact on childcare practices and family resources. Previous studies have reported a higher risk of malnutrition and related health problems among children of working mothers, particularly in low-income families.⁹ Changing family structures and increasing maternal employment have further highlighted the need for adequate childcare support and nutritional services.¹⁰⁻¹³ Therefore, the present study was undertaken to compare the nutritional problems among preschool children of working and non-working mothers in selected areas.

BACKGROUND OF THE STUDY

Preschool children constitute an important segment of the Indian population and represent the foundation of future human development. However, malnutrition remains a major public health problem among children under five years of age. Studies have reported that a large proportion of preschool children are underweight and stunted, while awareness regarding malnutrition among mothers remains inadequate.¹⁴⁻¹⁵ Appropriate nutritional interventions such as feeding

colostrum, exclusive breastfeeding for the first six months, timely supplementary feeding, and adequate intake of vitamin A and iron are essential for preventing malnutrition.¹⁶ Despite the implementation of several national nutrition programmes, including the Integrated Child Development Services (ICDS), childhood malnutrition continues because of poor childcare practices, low literacy, poverty, and poor socioeconomic conditions.¹⁷ The World Health Organization has introduced child growth standards to improve the assessment of child growth and nutritional status.¹⁸ Good nutrition is fundamental for healthy growth, immunity, cognitive development, and overall well-being, whereas malnutrition increases susceptibility to illness, growth retardation, and reduced productivity.¹⁹ Socioeconomic, cultural, and environmental factors continue to play a significant role in the occurrence of malnutrition among preschool children.²⁰

NEED FOR THE STUDY:

Nutritional deficiency disorders remain a major public health problem in India and other developing countries, contributing to nearly 55% of childhood deaths.²¹ Worldwide, millions of children suffer from malnutrition, with a large proportion of Indian children affected by chronic malnutrition, hunger, and inadequate nutrition.²² Undernutrition among infants and young children is associated with inadequate feeding practices, frequent infections, and poor parental literacy, while exclusive breastfeeding and appropriate complementary feeding are essential preventive measures.²³ Previous studies have reported differences in the nutritional status of preschool children among working and non-working mothers and highlighted the influence of maternal employment, childcare practices, and utilization of Anganwadi services on child nutrition.²⁴ Malnutrition is a multifactorial problem influenced by poverty, inadequate healthcare, poor sanitation, gender discrimination, and lack of awareness regarding maternal and child care.²⁵ Despite various national nutrition programmes, childhood malnutrition continues to be a major concern in India, particularly among children from low socioeconomic families.²⁶ Therefore, the present study was undertaken to compare the nutritional problems among preschool children of working and non-working mothers in selected areas.

A descriptive cross-sectional study was conducted in private and public schools of Itahari Sub-metropolitan City, Sunsari, to assess the nutritional status of school children. A total of 182 students (91 from each school) were selected randomly, and anthropometric

measurements were recorded. Based on WHO classification, the prevalence of stunting, underweight, and thinness was 18.68%, 13.19%, and 5.50% in private schools, and 29.66%, 30.76%, and 13.28% in public schools, respectively. Significant associations were observed between stunting and family occupation ($P=0.027$), underweight and father's education ($P=0.048$), and between stunting, age group, and type of tiffin snacks among public school children ($P=0.049$ and $P=0.008$, respectively).²⁷

OBJECTIVES OF THE STUDY
PRIMARY OBJECTIVE

1. To assess the nutritional problems among preschool children of working and non-working mothers in selected areas.

SECONDARY OBJECTIVES

1. To assess the nutritional problem of preschooler children among working Mothers.
2. To assess the nutritional problem of preschooler children among non-working mothers.
3. To compare the nutritional problem of preschooler children among working and non-working mothers.
4. To find out the association between nutritional problem of preschooler children among working and non-working mothers with selected demographic variables.

METHODOLOGY
Research Approach

A quantitative research approach was adopted for the present study, as it was considered appropriate to assess and compare the nutritional problems among preschool children of working and non-working mothers in selected areas.

RESEARCH DESIGN

A descriptive comparative research design was adopted to assess and compare the nutritional problems among preschool children of working and non-working mothers in selected areas.

SETTING OF THE STUDY

The study was conducted in selected areas. The setting was chosen because an adequate number of eligible participants were available, and the authorities and participants were cooperative and granted permission to conduct the study.

POPULATION

The study population comprised 100 preschool children of working and non-working mothers, including 50 preschool children of working mothers and 50 preschool children of non-working mothers. The target population consisted of preschool children of working and non-working mothers, while the accessible population included eligible preschool children from the selected areas who fulfilled the inclusion criteria.

SAMPLE AND SAMPLING TECHNIQUE

The sample consisted of 100 preschool children selected using a non-probability convenience sampling technique. The sample size was calculated using the Cochran formula with a 95% confidence level and a 10% margin of error. An additional 5% was included to account for non-response, resulting in a final sample size of 100, equally distributed between working and non-working mothers' children.

INCLUSION AND EXCLUSION CRITERIA

Inclusion Criteria

- Preschool children of working and non-working mothers residing in the selected area.
- Participants who were willing to participate in the study.
- Participants available during the period of data collection.

Exclusion Criteria

- Preschool children whose mothers were not willing to participate.
- Participants who were absent during data collection.

TOOL FOR DATA COLLECTION

Data were collected using a self-structured Likert scale developed by the investigator to assess the nutritional problems among preschool children of working and non-working mothers.

The tool consisted of two sections:

- **Section A:** Demographic data comprising 5 items, including age,

religion, educational status of the mother, monthly family income, and working status.

- **Section B:** A structured 5-point Likert scale consisting of 25 items to assess nutritional problems among preschool children of working and non-working mothers. Responses were graded on a five-point scale ranging from Strongly Disagree (1) to Strongly Agree (5).

Reliability

The reliability of the structured Likert scale was established using the Split-half method with the KR-20 formula, yielding a reliability coefficient of $r = 0.82$, indicating that the instrument was reliable. The content validity of the tool was established by 10 nursing experts.

Pilot Study

A pilot study was conducted from 23/10/2023 to 30/10/2023 on 10 subjects selected by non-probability convenience sampling. The structured questionnaire was administered after obtaining written informed consent.

DATA COLLECTION PROCEDURE

Data were collected from 06/11/2023 to 25/11/2023 using the self-reporting method. The investigator explained the purpose of the study, obtained written informed consent, and assured confidentiality. A total of 100 participants were included in the study using the structured Likert scale. Each participant required an average of 35 minutes to complete the tool. After data collection, the investigator thanked the participants and the concerned authorities for their cooperation.

RESULT

A total of 100 participants were included in the study, comprising 50 working mothers and 50 non-working mothers. Among the participants, 32% belonged to the age groups of 26–30 years and 31–35 years, 52% were Hindus, 36% had higher secondary education, and 32% had a monthly family income of 20,001 and above.

Among preschool children of working mothers, 25 (50%) had dietary issues, 12 (24%) had dental caries, 19 (38%) had iron deficiency anaemia, 21 (42%) had growth problems, and 17 (34%) had obesity. Among preschool children of non-working mothers, 21 (42%) had dietary issues, 9 (18%) had dental caries, 14 (28%) had iron deficiency anaemia, 21 (42%) had growth problems, and 11 (22%) had obesity.

The mean nutritional problem score was 8.82 ± 1.92 among preschool children of non-working mothers and 24.00 ± 3.62 among preschool children of working mothers. The difference between the two groups was statistically significant ($t = 25.66$, $df = 39$, $p = 0.001$).

Association analysis showed that among non-working mothers, nutritional problems were significantly associated with age, educational status, and working status. Among working mothers, nutritional problems were significantly associated with educational status and working status.

Table 1: Percentage wise distribution of participant according to age of mother n=100

Category	Frequency	Percent
Age of mother		
Below 25 years	14	14.0
26-30 years	32	32.0
31-35 years	32	32.0
36 years and above	22	22.0
Religion		
Hindu	52	52.0
Muslim	16	16.0
Buddhist	29	29.0
Other	3	3.0
Education status of mother		
Illiterate	9	9.0
Primary	25	25.0
Higher secondary	36	36.0
Graduate and above	30	30.0
Monthly income of family		

Less than Rs.10000	25	25.0
Rs. 10001-15000	22	22.0
Rs. 15001-20000	21	21.0
Rs. 20001 and above	32	32.0
Are you working?		
Yes	50	50.0
No	50	50.0

Table 2: Comparison of the nutritional problem of preschooler children among working and non-working mothers in selected areas N=100

Groups	N	Mean	SD	t- Value	df	Result
Non-working mother	50	8.82	1.92	25.66	39	0.001 Significant
Working mother	50	24.00	3.62			

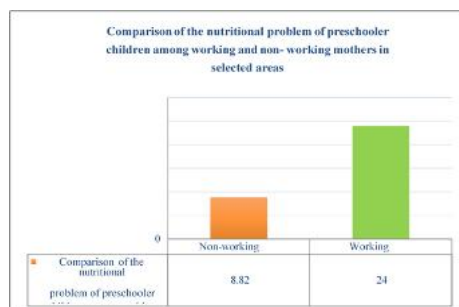


Figure 1: Comparison of the nutritional problem of preschooler children among working and non-working mothers in selected areas.

DISCUSSION

The present study found a statistically significant difference in nutritional problem scores among preschool children of working and non-working mothers. The mean score was higher among children of working mothers than children of non-working mothers, indicating greater nutritional problems in this group. These findings highlight the possible influence of maternal employment, childcare practices, dietary habits, and health supervision on preschool child nutrition. Similar findings have been reported in previous studies, which emphasized that nutritional risk and inadequate nutritional support remain important concerns requiring early identification and intervention. Regular nutritional assessment, parental education, and strengthening of community-based nutrition services are therefore essential for improving preschool child health.

CONCLUSION

The study concluded that nutritional problems were present among preschool children of both working and non-working mothers. Preschool children of working mothers had higher nutritional problem scores than those of non-working mothers, and the difference was statistically significant. The findings emphasize the need for regular nutritional assessment, parental education, and community-based nutrition interventions to improve the nutritional status of preschool children.

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