

RELATIONSHIP BETWEEN MATERNAL KNOWLEDGE AND BELIEFS REGARDING NUTRITION AND CHILDHOOD NUTRITIONAL STATUS

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By

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Declaration by Student

I hereby declare that this dissertation titled ***Relationship between Maternal Knowledge and Beliefs regarding Nutrition and Childhood Nutritional Status*** is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

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TO WHOM SO EVER IT MAY CONCERN

This is to certify that Ms. Keerti Bhagat, d/o Mr. Rajeshwar Ram Bhagat a student of Master's in Business Administration – Hospital and Health Management, Batch 2020-2022 of Indian Institute of Health Management Research, Jaipur, Rajasthan has successfully completed her internship from 21/03/2022 to 17/06/2022 at Anugrah Welfare Foundation, Indore.

During the period of her dissertation programme with the organisation, we found her sincere hard working, enthusiastic. She worked well as a part of a team during her tenure.

We take this opportunity to thank her and wish her all the best for her future endeavours.

Signature

Dr. Kunal Singh Parmar

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Abstract

Introduction: Nutrition plays a vital role in the human body. Especially at the time of childhood and mothers are the primary care providers of the baby. A proper nutrition can balance the growth of children. Breastfeeding is the initial source of nutrition for the new-born child. After consumption of milk, a child needs proper contained nutrient food for the immunity and growth of the body. Although maternal knowledge is the essential requirement of a child because the childhood nutrition is totally dependent for the well nourishment of the child.

Methodology: It was an open and close-ended questionnaire for the 110 mothers, whom 55 children were well-nourished and 55 were malnourished. The data was analysed using percentage. The questionnaire was made in Hindi, to reduce the gap in communication and consent.

Objective: To assess the maternal knowledge and belief regarding child feeding practices and childhood nutritional status.

Result: Out of 110 mothers, 55 were well-nourished children's mother and 55 were malnourished children's mother. Whereas mothers of well-nourished children had good and right knowledge about the childhood nutrition and from malnourished children 35% had wrong knowledge about nutrition due to myths and beliefs.

Conclusion: Majority of the mothers of well-nourished children have more knowledge about nutrition and childhood nutritional status more than the mothers of malnourished children.

Key Words: Well nourished, Malnourished, maternal knowledge, childhood nutritional status, NFHS, Anaemia, Iron Deficiency, Malnutrition

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INTRODUCTION

Background:

“Nutrition is a critical part of health and development. Better nutrition is related to improved infant, child and maternal health, stronger immune systems, safer pregnancy and childbirth, lower risk of non-communicable diseases.”⁽¹⁾

Nutrition is important in every age. A growing child needs every nutrient which helps them to grow healthy and strong. Children need the right nutrition at the right period. The most important time of giving good nutrients to children is up to 2 years from the pregnancy. In the two years, mother’s breastfeeding is the best way to give nutrients to the child as it shields the children from the diseases, boosts brain development. Malnourished Children refers to the children who consumes unbalanced diet or have deficiency of nutrients. Well-nourished children refers to the children who consumes balanced diet and does not have lack of nutrition’s. A child should be breast feed up to minimum 6 months, after that they need to begin their food and they should be fed frequently in proper quantity. “Poor diets in early childhood can lead to deficiencies in essential vitamins and nutrients – such as vitamin A deficiency, which weakens children’s immunity, increases their risk of blindness and can lead to death from common childhood diseases like diarrhoea.”⁽²⁾

According to the NFHS-5, the rates of all types of malnutrition among children in the age group of 5 years have come down in the Madhya Pradesh.⁽³⁾

Aim: The aim of the study is to assess the maternal knowledge and beliefs regarding child feeding practices and child nutritional status.

Research Question - How is maternal knowledge and belief regarding nutrition is important for childhood nutrition?

Objectives:

- To assess the maternal knowledge and belief regarding child feeding practice.
- To find out the association between maternal knowledge and belief regarding child feeding practices and child nutritional status.

The main purpose of the study is to assess the relationship between maternal knowledge and beliefs regarding child feeding practices and child nutritional status at AWCs in district Dewas, Madhya Pradesh. To learn how maternal knowledge impacts the childhood nutritional status, as mothers are the caretakers of their child. The objective is also to find out the cases of stunting, wasting and underweight/overweight in the demographic area. And the needed suggestions could be given for the improvement for the child health and nutrition.

LITERATURE REVIEW

“Mothers limited knowledge about food choices, feeding and healthcare seeking practices contributes significantly to negative nutrition outcomes for children in most developing countries”. In Madhya Pradesh, under the observation of government the nutritional status of children was not satisfying. They have organised the ICDS Programme, stands for Integrated Child Development Service Programme. In this programme, the mission was to provide nutrition and health services for children under 6 years of age as well as the pregnant women and breastfeeding women. The services were also available for the children of 3-5 years as preschool activities through community based Anganwadi Centres. Breastfeeding is very common in districts of Madhya Pradesh. According to WHO in National Family Health Survey – 5, only 74% of children are exclusively breastfed. Whereas 90% are suggested to breastfed within 24 hours and 41% within one hour. 83% of mothers of children receives counselling from Anganwadi worker or ANM. It is recommended that from birth to 2 years, children should get breastfed. When a child’s age comes to 6 months, mother’s milk is not enough nutrient for the infants, so they need to start intake nutritious food.

Nutrients are of two types – micronutrients and macronutrients, both make the balance diet which enables the growth of the body. Morbidity and Mortality are the serious issues in the State due to the deficiency of micronutrients i.e., vitamins and minerals. Accordingly, Vitamin A is the essential component for the immunity. The Government of India started recommending Vitamin A for children under 5 years in every six months. In Madhya Pradesh, more than 78% of children were given Vitamin A supplements, and 47% of children intake mother’s consumed Vitamin A. The child needs iron rich foods to get prevented from Anaemia.

According NFHS-4, 42% children were stunted, 26% were wasted, 43% were underweight. Undernutrition leads to diseases and child mortality in India. After this result, the government recommended Vitamin A supplements in every six months for under five years of age and intake of iron rich foods. Mothers were counselled for the nutritional status of their child. Then, in NFHS- 5 the number of percent declined as 36% were stunted, 19% wasted and 33% underweight. (4)

The poor feeding practices mainly results in malnutrition. It is also a major threat to social and economic development of the child. Mother's care is essential care provider for the child up to five years of age. Maternal Knowledge plays an important role in the children's nutrition in 0-5 years. The type of care she provides to the child totally depends on the knowledge and beliefs of a mother and understanding of nutrition and healthcare. The key ingredient of a child's health is mother's educational level and nutritional status. Maintenance of nutritional status of the children is directly proportional to the knowledge of their mother. (5)

“A report based on the National Family Health Survey (1998-99) in India has concluded that the prevalence of malnutrition can be reduced by improving educational level of mothers. Madhya Pradesh is one of the socio-economically and demographically backward states in India, where 40% of the population of the female population is illiterate (Census 2011), poverty rate is 32.4% as estimated by National Sample Survey 2004-05 and infant mortality rate is 70%.” (6)

“India has the highest number of child deaths in the world and accounts for 20% of the 5.9 million global child deaths. India under five mortality and infant mortality rate are 48 and 38 per 1000 live births, respectively and almost 50% of it is attributable to malnutrition [8]. Exclusive breastfeeding for six months of age is 65% and early initiation of breastfeeding within one hour is 45%. Both falls far below the recommended practice. Optimal breastfeeding practices are potentially one of the top interventions for reducing under-five mortality and is essential for the achievement of many of the newly launched Sustainable Development Goals by 2030, as it can help to improve child and maternal health, nutrition, economy, intelligence, and human capital, while reducing inequalities.” (7)

METHODOLOGY

Study Design:

- The Study design is Observational Case Control Study, this type of study is used to look at the factors associated with diseases and outcomes. In this study, we are identifying the association between maternal knowledge their beliefs regarding nutrition and childhood nutritional status.

Study Setting:

- The study will be conducted in the Anganwadi of District-Dewas, Madhya Pradesh. The responses will be taken from child's mother with the help of Anganwadi Workers or ANM.

Study Population:

- All the malnourished and well-nourished children (Age- 10 to 36 months) and their mothers who were enrolled at the selected AWC.

Study Tool:

- A close and open-ended questionnaire will be used to collect data from the children's mothers. It is designed to collect information on maternal attitudes, beliefs to be associated to child nutritional status as well as data on demographic and socio-economic characteristics of the mother.

Duration of the Study:

- 90 days (3 months).

Sample Size:

- Participants in the present study will be Malnourished (n=55) and well nourished (n=55) children (age- 10 – 36 months) and their mothers who were enrolled at AWC.

Sampling Technique:

- Purposive Sampling Technique

Data Collection Procedure:

- Data will be collected by Anganwadi workers and ASHAs from mothers of children enrolled in the AWC.

Data Analysis Plan:

- Frequency table and Cross Tabulation will be used to analyse the data using MS Excel.

Ethical Consideration:

- The informed consent will be taken from Women and Child Development to study the research in respected area. The consent will also be asked from the mothers before the survey.

RESULTS

The objective of the study to identify the knowledge and belief of mothers regarding nutrition and childhood nutrition status. To assess the maternal knowledge about and belief towards child feeding practice among the children of age 10 to 36 months.

Table. 1. Background Characteristics of the Respondents (n=110)		
Characteristics	Percentage	
Age of Respondents	Well-nourished Child (n=55)	Malnourished Child (n=55)
15-19	(5) 9.1	(4) 7.3
20-24	(35) 63.6	(43) 78.2
25-29	(12) 21.8	(7) 12.7
30 & above	(3) 5.5	(1) 1.8
Religion		
Hindu	(32) 58.2	(18) 32.7
Muslim	(15) 27.3	(30) 54.5
Others	(8) 14.5	(7) 12.7
Caste		
Scheduled Caste	(23) 41.8	(25) 45.5
Scheduled Tribe	(19) 34.5	(12) 21.8
OBC	(8) 14.5	(13) 23.6
General	(5) 9.1	(5) 9.1
Education of Respondents		
Illiterate	(4) 7.3	(6) 10.9
Primary	(2) 3.6	(2) 3.6
Middle	(1) 1.8	(3) 5.5
Secondary	(2) 3.6	(3) 5.5
Higher Secondary	(11) 20	(37) 67.3
Graduation & above	(35) 63.6	(4) 7.3
Age of Child		
10 months-12 months	(7) 12.7	(6) 10.9
1 year - 2 year (13 - 24 months)	(30) 54.5	(32) 58.2
2 year - 3 year (25 - 36 months)	(18) 32.7	(17) 30.9

Table 1 indicates that characteristics of socio-demographic profile of respondent mothers. Out of 55 mothers of well-nourished children, the majority 63.6% of the mothers are from the age group 20-24 years of age followed by 21.8% of mothers in the age group 25-29. The group of respondents did consist of 9.1% mothers belonging to teen age i.e., less than 20 years, remaining 5.5% mothers belongs to the age group of more than 30 years. Out of 55 mothers of malnourished children, the majority 78.2 of the mothers are from the age group 20-24 followed by 12.7% of mothers in the age group 25-29. The group of respondents did consist of 7.3%

mothers belonging to teen age i.e., less than 20 years, remaining 1.8% mothers belongs to the age group of more than 30 years. Majority of the mothers from well-nourished children (58.2%) belongs to Hindu Religion, followed by 27.3% of the mothers are Muslim and 14.5% of the mothers belongs to other religion. Whereas mothers from malnourished children, the majority 54.5% of the mothers are Muslim, followed by 32.7% of mothers are Hindu and 12.7% of mothers belongs to other religion. Out of 55 mothers of well-nourished mothers, majority of mothers have completed their graduation (63.6%), followed by 3.6% of mothers had attended primary education, 1.8% of mothers attended middle level education, 3.6% of mothers attended secondary education and 20% of mothers have completed their higher secondary education. Majority of the mothers of the malnourished children, 67.3% mothers have completed their higher secondary education followed by 3.6% of mothers had attended primary education, 5.5% of mothers have attended middle education and 5.5% of mothers have attended secondary education and 7.3% of mothers have completed their graduation. Majority of the children belongs to age group of 1year-2year of both well-nourished (54.5%) and malnourished (58.2) followed by 12.7% of well-nourished children of age group 10 to 12 months, 32.7% of well-nourished children of age group 2year to 3 years, 10.9% of malnourished children of age group 10 to 12 months, 30.9% of malnourished children of age group 2 year – 3 years.

Table. 2 Maternal Knowledge of Respondents for Anaemia		
Mother of	Yes	No
Well-Nourished Child	48 (87.3%)	7(12.7%)
Malnourished Child	28(50.9%)	27(49.1%)

Table 2 indicated the maternal knowledge of respondents for Anaemia. Majority of the mothers of well-nourished children have knowledge about Anaemia (87.3%), followed by 12.7% mothers who does not have knowledge about Anaemia. Out of 55 mothers of malnourished children 50.9% of them have knowledge about Anaemia followed by 49.1% mothers does not have knowledge about Anaemia.

Table. 3 Maternal Knowledge of Respondents for Iron Deficiency		
Mother of	Yes	No
Well-Nourished Child	(45) 81.8	(10) 18.2
Malnourished Child	(26) 47.3	(29) 52.7

Table 3 indicated that maternal knowledge of respondents for Iron Deficiency. Majority of the mothers well-nourished children have knowledge about Iron Deficiency (81.3%), followed by 18.2% mothers who does not have knowledge about Iron Deficiency. Out of 55 mothers of malnourished children 4.7% of them have knowledge about Iron Deficiency followed by 52.7% mothers does not have knowledge about Iron Deficiency.

Table. 4. Maternal Knowledge of Respondents Malnutrition		
Mother of	Yes	No
Well-Nourished Child	(46) 83.6	(9) 16.4
Malnourished Child	(30) 54.5	(25) 45.5

Table 4 indicated that maternal knowledge of respondents for Malnutrition. Majority of the mothers well-nourished children have knowledge about Malnutrition (83.6%), followed by 16.4% mothers who does not have knowledge about Malnutrition. Out of 55 mothers of malnourished children 54.5% of them have knowledge about Malnutrition followed by 45.5% mothers does not have knowledge about Malnutrition.

Table 5. Child feeding practices by the mothers

Variables	Frequency n= (%)	
	Well-nourished child	Malnourished child
Do you breastfeed your child?		
Yes	10 (18.2)	15 (27.3)
No	35 (63.6)	30 (54.5)
Sometimes	10 (18.2)	10 (18.2)
When do you give them food in a day?		
Three times a day (breakfast, lunch, dinner)	35 (63.6)	15 (27.3)
Anytime	14 (25.5)	20 (36.4)
When the child is hungry	6 (10.9)	20 (36.4)

Table 5 indicates the child feeding practices by the mothers. Majority of the mothers of well-nourished children, does not breastfeed their child (63.6%) followed by 18.2% of mothers who breastfeed their child regularly and 18.2% mothers breastfeed their child sometimes. Majority of the mothers of malnourished children, does not breastfeed their child (54.5%), followed by 27.3% of mothers who feed their child regularly and 18.2% of mothers breastfeed their child sometimes. That implies mothers of malnutrition children breastfeeds more than the mothers of malnourished children. Out of 55 mothers of well-nourished children, 63.6% of mothers feed their child three times a day i.e., breakfast, lunch and dinner, 25.5% of mothers feeds their child anytime, 10.9% of mothers gives food to child when the child is hungry. Out of 55 mothers of malnourished children, 27.3% of mothers feed their child three times a day i.e., breakfast, lunch and dinner, 36.4% of mothers feed their child anytime, 36.4% of mothers gives food to child when the child is hungry.

Table 6. Myths and beliefs of mother regarding child nutrition

Variables	Frequency n= (%)	
	Well-nourished child	Malnourished child
Do you think dairy products can harm the body?		
Yes	8 (14.5)	15 (27.3)
No	26 (47.3)	20 (36.4)
Sometimes	21 (38.2)	20 (36.4)
Do you think only non-vegetarian food can fulfil the nutrition?		
Yes	30 (54.5)	33 (60)
No	15 (27.3)	17 (30.9)
Sometimes	10 (18.2)	5 (9.1)
Do you think feeding much food at a time can reduce malnutrition?		
Yes	4 (7.3)	8 (14.5)
No	40 (72.7)	25 (45.5)
Sometimes	11 (20)	22 (40)

Table 6 indicates the myths and beliefs of mothers regarding child nutrition. Out of 55 mothers of well-nourished children, majority of the mothers believes dairy products does not harm the body (47.3%) followed by 14.5% of mothers believes it can harm the body and 38.2% believes it can sometimes harm the body. Whereas 54.5% of mothers believes non-vegetarian foods can fulfil the nutrition, 27.3% of mothers believes it does not fulfil the nutrition and 18.2% of mothers believes non-vegetarian does fulfil the nutrition of the body sometimes. Majority of the mothers thinks that eating much food at a time cannot reduce malnutrition (72.7%) followed by 7.3% of mothers who thinks eating much food at a time can reduce malnutrition and 20% of mothers who thinks eating much food at a time can sometimes reduce malnutrition. Out of 55 mothers of malnourished children, majority of the mothers believes dairy products does not harm the body (36.4%) and mothers who sometimes believes dairy products can harm the body (36.4%) followed by mothers who believes dairy products can harm the body (27.3). Whereas 60% of mothers believes non-vegetarian foods can fulfil the nutrition, 30.9% of mothers believes it does not fulfil the nutrition of the body and 9.1% of mother believes non-vegetarian food can sometimes fulfil the nutrition of the body. Majority of the mothers thinks that eating

much food at a time cannot reduce malnutrition (45.5%) followed by 14.5% of mothers who thinks eating much food at a time can reduce malnutrition and 40% of the mothers thinks that eating much at a time can sometimes reduce malnutrition.

Discussion

In the study of relationship between maternal knowledge and belief regarding nutrition and childhood nutritional status. We have taken the AWCs of District-Dewas, Madhya Pradesh. The total respondents were 110 mothers of 55 well-nourished children and 55 malnourished children. Out of the total respondents 75% of the mothers have basic knowledges about the childhood nutrition. In many studies, it is suggested that breastfeeding after 6 months is not enough for the nourishment of the child. The child needs iron rich food and Vitamin A supplements in their diet. They should be fed in a proper time, so that they will not acquire any type of malnutrition.

The 95% mothers of well-nourished children have the good knowledge of nutrition for their child. And the remaining 5% have less knowledge and experience due to their age and education. 65% mothers of malnourished children have good knowledge, and 35% mothers have less knowledge as per their age and education, as more of them were between 15-29 of age group.

“As stated earlier, the maternal nutritional knowledge includes items reflecting maternal practices as well and these practices may or may not be based on actual knowledge.”

According to NFHS-5 breastfeeding is universal in Madhya Pradesh, it was also mentioned that after 6 months breastfeeding is not enough for the growing children and they require the other nutrition's too like iron-rich foods, Vitamin A supplements and other nutritious diet.

According to the study, “maternal knowledge and child nutritional status in the Volta Region of Ghana, mothers’ nutritional knowledge is positively associated with the nutritional status of their children. Mothers who had well nourished children had higher scores on the nutritional knowledge than mothers of malnourished children.”

Conclusion

The findings of this research are knowledge and belief of a mother is directly proportional to the child nutrition. Because when she knows about the basic need of a child's body, she used to fulfil the requirements in the diet.

Before the survey, the women were taken session for anaemia and nutrition where they got to find the pyramid of nutrition. The chart contains all the nutrients need by the body. From that knowledge they give good nutrition to her child which does not cause any type of malnutrition to the child. In the selected area, the mothers where 83.63% mothers were between 24-29 age group and had proper education.

The age group of mothers of 30 & above, they had more experience from their mothers and followed the same by giving every nutrient to the child. Due to this, no child from their age group got any low nutritional status. Although mothers from 15-19 were less educated and less experienced for the child, they have less knowledge about the nutrition factors for the child and avoid breastfeeding after 6 months. After 6 months, mothers milk is not enough for the child's nutrition then too they are suggested to breastfeed the child up to 1 or 1.5 year.

Suggestions

- Malnutrition tracing should be regularly done in the AWCs and respected areas.
- Mother's counselling session should be conducted in regular interval of time.
- The mothers who do not bring their child to the AWC centre should be encouraged by different activities performed in the centre.
- Mothers should know about the benefits of the “poshan aahar” available in the AWC.

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