

A descriptive study to assess child nutrition and health information related knowledge among mothers of under six years children in selected areas of Dadra & Nagar Haveli

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Abstract

Background: The Health of a country depends on healthy citizens. Healthy children grow up to be healthy adults. Young children, especially those under the age of six are in a vulnerable stage of physical development. Malnutrition during this time can have long-term and irreversible consequences. Mothers have to be made more aware about feeding practices and health-care practices only then it can go a long away in reducing the severity of malnutrition. As per ICDS guidelines on convergence initiatives for improved nutrition, Knowledge of mothers regarding child Nutrition and Health information can be assessed based on five key Nutrition and Health information as follows: (i) importance of colostrum; (ii) continued breastfeeding; (iii) diarrhea prevention and treatment using oral rehydration solution (ORS); (iv) child immunization and (v) family planning.

Aim: To assess knowledge regarding child nutrition and health information among mothers of under sixyear children in selected areas of Dadra and Nagar Haveli.

Methodology: A descriptive survey design was used to collect data with structured interview method from 200 mothers which were selected from non-probability convenient sampling technique.

Result: Out of 200 mothers whosever taken part in study, 24.50 % had inadequate knowledge, 64.50 % had moderate knowledge and 11.0 % had adequate knowledge. Age, education of mothers and family monthly income were having significant association with knowledge score at 0.05 level of significance.

Conclusion: This study concluded that mothers were having moderate knowledge which is affected by mainly age and education of mothers, hence improving knowledge level of mothers can positively impact growth and development of children.



Keywords: Levels of Stunting, wasting and anemia, Knowledge, Child nutrition and Health information, Mothers of under six year children.

1. Introduction

1.1 Background of the study

Young children, especially those under the age of two, are in a vulnerable stage of physical development.^[1] Malnutrition during this time can have long-term and irreversible consequences.^[2]

Knowledge of mothers has an important role in the maintenance of nutritional status of the children and protection of their nutritional needs to ensure sound foundation and secure future of any healthy society. ^[3] For this mother has to be made more aware about feeding practices of infant and other health-care practices and this will go a long away in reducing the severity of malnutrition. ^[4]

Nutrition and Health information is a multi-faceted concept with multiple determinants. As per ICDS guidelines on convergence initiatives for improved nutrition, mother's knowledge regarding child Nutrition and Health information can be assessed based on five key Nutrition and Health information as follows: (i) Knowledge of the importance of colostrum; (ii) Knowledge of continued breastfeeding; (iii) Knowledge of Diarrhea prevention and treatment using Oral Rehydration Solution (ORS); (iv) Knowledge of child immunization and (v) Knowledge of family planning.^[5]

Colostrum and Continue Breastfeeding

With a focus on nutrition, an infant's first primary food is breast milk, which is the most effective way to provide an infant with a supportive and nutritionally complete environment. It meets the nutritional as well as emotional and psychological needs of infants. The World Health Organization (WHO) and UNICEF recommend that infants be breastfed only for about the first six months of life and continue to breastfeed with complementary foods for the second year of life or longer. ^[6]

WHO is focused on optimal breastfeeding practices which include exclusive breastfeeding for the first six months of life, early initiation of breastfeeding within one hour of life, and continued breastfeeding for up to and beyond two years of age.^[7]

Diarrhea

Diarrhea is the second leading cause of child morbidity and mortality, especially in the developing countries. Health information regarding diarrhea is necessary as it affects normal growth and development of the child. ^[8] Diarrhea is the passage of loose or watery stools occurring three or more times in a 24-hour period which means an increased frequency or decreased consistency of bowel movements, and it affects people of all ages. It is usually a symptom of an infection in the intestinal tract, which can be caused by a variety of bacterial, viral, and parasitic organisms. ^[9]

Diarrhea is a major cause of malnutrition. As with other infectious diseases, diarrhea increases the need for nutrients, but intake and absorption of nutrients is usually decreased. Each episode of diarrhea can lead to weight loss and failure to thrive.^[10]

Child Immunization

Following breastfeeding as an aspect of nutrition, childhood immunization is an important component in preventing malnutrition, as part of an integrated package of early life interventions; the introduction of new vaccines has the potential to bring even more benefits in disease prevention and further



promote healthy development.^[11] Immunization is the cornerstone of child health interventions aimed at reducing morbidity and mortality in developing countries and the majority of research, despite the caveats above, suggests that malnourished children may develop appropriate protective responses to vaccines.^[12]

Caregivers, mainly mothers, play an important role in the complete immunization of children. Most mothers blindly bring their children to vaccination centers without knowing about vaccines and vaccination schedules. Therefore, there is a need for mandatory regulations on health education sessions for mothers with a primary focus on the importance of vaccination. Due to low awareness, many mothers do not know the date of vaccination for their children. ^{[13], [14]}

Family Planning

Health information related to family planning is also an important factor affecting both child nutrition and maternal health. World health Organization (WHO) has recognized access to safe, effective and affordable contraception as a universal human right. India's population will grow to 1.53 billion by 2050.^[15]

Family planning is a pivot point for efforts to achieve the 2030 Sustainable Development Goals (SDGs) because of its centrality to issues of gender, employment, poverty, and health. ^[16] It allows couple to determine and ascertain the desired number of children as well as spacing of their births. Family planning and correct choice of contraception is very essential as it has direct impact on health, wealth and well-being of people. ^[17]

Integrating nutrition and family planning not only makes sense from a delivery efficiency perspective, but doing so drives mutually reinforcing health outcomes as well. By integrating nutrition into family planning programs, we can achieve healthier pregnancies and birth outcomes, and reduced rates of stunting, wasting, and child, infant and maternal mortality. ^[18], ^[19]

1.2 Need of the study

Every infant and child has the right to good nutrition according to the "Convention on the Rights of the Child". Undernutrition is associated with 45% of child deaths. Globally in 2020, 149 million children under 5 were estimated to be stunted, 45 million were estimated to be wasted, and 38.9 million were overweight or obese. About 44% of infants 0–6 months old are exclusively breastfed. Few children receive nutritionally adequate and safe complementary foods; in many countries less than a fourth of infants 6–23 months of age meet the criteria of dietary diversity and feeding frequency that are appropriate for their age. ^[20]

As per National Family Health Survey (NFHS)-5 (2019-20) report, in Dadra and Nagar Haveli, under 5 years who are stunted -42.4 %, wasted -20.9%, Severely wasted 3.3 % and underweight -42.1%. ^[21]

The Ministry of Women and Child Development estimated in post pandemic period, severely acute malnourished children are 17.76 lakh and moderately acute malnourished children are 15.46 lakh as of October 2021.

Colostrum & Continues breastfeeding

Many children, especially the poor, marginalized and vulnerable children, are not getting the nutrition they need to survive and thrive. At least one in three children under 5 is affected by malnutrition in its most visible forms: stunting, wasting and overweight.



Many countries are facing a quadruple burden of malnutrition – global estimates of stunting (144 million under-fives), wasting (47 million children), micronutrient deficiencies (340 million under-fives), and overweight (38 million under-fives).

According to National Family Health Survey (NFHS)-5 (2019-21) Children age 6-8 months receiving solid or semi-solid food and breastmilk were 42.0%. Dadra Nagar Haveli & Daman & Diu; Children under age 3 years breastfed within one hour of birth were 25.9%, Children under age 6 months exclusively breastfed were 79.4%.^[21]

Diarrhea

Globally, there are nearly 1.7 billion cases of childhood diarrhea disease every year. In the Americas, diarrheal disease accounts for a total of 10% of deaths among children aged 1–59 months while in South East Asia, it accounts for 31.3% of deaths. It is estimated that around 21% of child mortalities in developing countries are due to diarrheal disease. In India, diarrhea accounts for nearly 212,000 under five deaths annually. On an average, children below 3 years of age in India, experience about 3–5 episodes of diarrhea every year. ^[22]

According to National Family Health Survey (NFHS)-5, only 60.6% children under the age of five with Diarrhea were given ORS and only 30.5% were given zinc. This means that there is lack of awareness among mothers. Children with Diarrhea who received oral rehydration salts were 66.5%. Children with Diarrhea who received zinc were 35.4%. Children with Diarrhea taken to a health facility or health provider were 69.6%.^[21]

Child mortality rate in the country has come down from 45 per 1000 live births in 2014 to 35 per 1000 live births in 2019. But even today, diseases related to Diarrhea continue to be a major cause of death in children under the age of five. (SRS 2019)

Child Immunization

While immunization is one of the most successful public health interventions, coverage has plateaued over the last decade. The COVID-19 pandemic and associated disruptions have strained health systems, with 25 million children missing out on vaccination in 2021, 5.9 million more than in 2019.^[23]

This year world immunization week 24 to 30 April, 2022 theme was "Long Life for All".⁴⁴ India annually targets approximately 2.9 crore pregnant women and 2.7 crore children for vaccination through universal immunization programme which was updated into Intensifies Mission Indradhanush 4.0.^[24]

National Family Health Survey (NFHS)-5 (2019-21) – Dadra & Nagar Haveli & Daman & Diu - Children age 12-23 months fully vaccinated are 93.4%, Children age 12-23 months who have received BCG are 98.1%, 3 doses of polio vaccine are 96.1%, 3 doses of pentavalent or DPT vaccine are 97.2%, 3 doses of rotavirus vaccine are 3.7%, 3 doses of pentavalent or hepatitis B vaccine are 93.1% and one vitamin A dose in the last 6 months are 86.2%.^[21]

Despite clear evidence around the power of vaccines to save lives and control disease, millions of young children around the world are missing out and caregivers are responsible for putting them and communities at risk of disease and deadly outbreaks.



Family Planning

To be able to plan a family represents a huge expansion of human freedom. Access to family planning measures allow for equal benefits to resources, services and opportunities, leading to gender empowerment.

As per 2011 census India's total population is 1.21 billion (121 crore). India has 623.7 million males (62.37 crore men) and 586.5 million females (58.6 crore women). The Indian population has increased to 1.21 billion with a decade growth of 17.64%. India with 2.4% of the world's surface area accounts for 17.64 % of its population.^[25]

As per National Family Health Survey-5 (NFHS) (2019-2021) –India's current use of family planning data is as follows; Female sterilization were 35.9%, IUD/PPIUD insertions were 3.1%, Oral contraceptive pill consumed were 2.3%, Condom used 11.4% and Injectable taken by only 0.1% of population. [21]

According to National Family Health Survey-5 – DNH current use of family planning data is as following; Female sterilization 41.6%, IUD/PPIUD 2.2%, Oral Pill 3.1 %, Condom 11.7% and Injectable 0.9%.^[21]

Less educated women find themselves facing deep economic, cultural, and institutional barriers to birth control, and turn to risky forms of pregnancy prevention.

1.3 OBJECTIVES

The Objectives of study were:

- 1. To assess knowledge of mothers regarding child nutrition and health information.
- 2. To find out association between knowledge score of mothers regarding child nutrition and health information and selected demographic variables.

1.4 HYPOTHESES

At 0.05 level of significance;

 H_{o1} : There will be no significant association between knowledge score of mothers regarding child nutrition and health information and selected demographic variables.

 H_{a1} : There will be significant association between knowledge score of mothers regarding child nutrition and health information and selected demographic variables.

1.5 ASSUMPTION

The study assumes that,

- Mothers may not have adequate knowledge regarding child nutrition and health information.

1.6 OPERATIONAL DEFINITION

• Assess:

In this study it refers to the organized systematic and continuous process of collecting data from mothers of under six year children.

• Knowledge:

In this study it refers to understanding and ability of participants to answer questions towards child nutrition and health information which was measured by structured knowledge questionnaire



• Child nutrition and health information:

In this study child nutrition and health information refers to knowledge of the colostrum importance, continue breastfeeding, diarrhea prevention and treatment, child immunization and family planning

- continue breastreeding, diarrhea prevention and treatment, child immunization and family plannin
- Mothers:

In this study they refer to the mothers of under six year children who are residing in selected areas of Dadra and Nagar Haveli.

• Under six year children:

In this study under six year children are those who are between 0-6 years age group.

2. Methodology

<u>Research Approach</u>: Quantitative research approach

Research Design: Descriptive Research Design

Target Population: Mothers of under six year children

Accessible Population: Mothers of under six year children who are fitting in sample

Sampling Technique: Non probability convenient sampling technique

Sample Size: 200

Research Setting: Selected areas of Dadra & Nagar Haveli

<u>Research variable</u>: Knowledge regarding Nutrition & Health Information Of Under Six Children <u>Demographic variable</u>:

- Age, Educational Status, Occupation, Income Of The Family Per Month, Socio-economic Status Of Family, Place Of Delivery, Number Of Children, Whether Undergone Permanent Method Of Sterilization? If No, Which Family Planning Method Using?, How Long After Delivery Breastfeeding Initiated? Place Of Residence.

Inclusion criteria:

- Mothers who are present at time of data collection
- Mothers who can understand Hindi and Gujarati.

Exclusion criteria:

- Mothers who are not willing to participate in the study.
- Mothers who have hearing and speech disability.

Ethical consideration

- Ethical clearance was obtained from the Institution Ethical Committee of Shri Vinoba Bhave Civil Hospital, Silvassa.
- Administrative permission was obtained from Health Centers, to conduct the study in selected areas.
- Informed consent was obtained from each study participants.

Description of Tool:

Section I – Demographic variables

Section II – Knowledge questionnaire

Section III – Attitude scale

Data Collection:

The main study was conducted from 16/08/2022 to 16/09/2022 on 200 mothers at selected areas (Samarvarni, Umerkui, Vasona, Kilvani, Galonda, Silli, Rakholi, Athal and Naroli) of Dadra and Nagar



Haveli. The data was analyzed in the light of the objectives and hypothesis using descriptive statistics and inferential statistics.

3. Data Analysis & Interpretation:

Table 1 : Description of Demographic variables

N=200

Demographic variables	Frequency	Percentage (%)	
Age (in years):			
≤ 20 years	13	6.50	
21-25 years	88	44.0	
26-30 years	73	36.50	
\geq 30 years	26	13.0	
Religion:	100	04.50	
Hindu	189	94.50	
Muslim	5	2.50	
Christian	6	3.0	
Others	0	0.0	
Place of residence:			
Urban	64	32	
Semi urban	65	32.5	
Rural	71	35.5	
Education of mother:			
Illiterate	21	10.5	
School education	115	57.5	
High school education	46	23	
Graduation	15	7.5	
Above graduation	3	1.5	
Monthly family income in			
Rs. :	66	33.0	
≤10000	119	59.50	
10001-30000	14	7.0	
30001-50000	1	0.5	
>50000			
Employment status:			
Employed	47	23.5	
Unemployed	153	76.5	
Place of delivery:			
Hospital	192	96	
Home	8	4.0	



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Number of children:		
1	61	30.5
2	92	46.0
>2	47	23.5
How long after delivery		
breastfeeding initiated	67	33.5
within :	73	36.5
1⁄2 hour	42	21.0
1 hour	18	9.0
1 day		
3 day		
Vaccination of child done at:		
Government health sector	174	87.0
Private clinics/Hospital	26	13.0
Permanent method of family		
planning Adopted?	34	17.0
Yes	166	83.0
No		
If no, which temporary family		
planning method using:	24	14 47
Condom	24	14.47
Mala N	2	1.2
Chhaya	2	1.2
Antara injection	6	5.01
Copper T	9	5.42
None	123	/4.10

The above table 1 indicates that out of 200 subjects, majority of 44% were in age group of 21-25 years, 94.50% were Hindu, 35.5% resides in rural area, 57.5% completed primary school education, 59.50% families were having income of \leq Rs. 10,000 per month, 76.5% were unemployed, 96% had delivery in Hospital, 46% were having 2 children, 36.5% initiated breastfeeding within 1 hour of delivery and 87% vaccinated their child at government health facilities. Only 17% of subjects had adopted permanent family planning method while subjects using various family planning met87% hods like; condom, mala N, chhaya, antara injection and copper T were 14.46%, 1.2%, 1.2%, 3.61% and 5.42% respectively; but 74.10% were not using any temporary family planning method.

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Deviation and Mean Percentage of Mothers.					
Areas of knowledge	Max. score	Mean	SD	Mean percentage (%)	
Importance of Colostrum	2	1.49	0.63	74.25	
Continue Breastfeeding	5	3.5	1.25	70	
Diarrhea prevention and treatment using ORS	4	2.43	1.20	60.75	
Child Immunization	5	3.15	0.95	63	
Family Planning	4	1.31	0.99	32.75	
Total	20	11.88	3.28	59.4	

Table 2 : Description of Components wise Knowledge score Mean, StandardDeviation and Mean Percentage of Mothers.

The above table 2 shows that Component wise; continue breastfeeding area had highest mean score (3.5 ± 1.25) and family planning area had lowest mean score (1.31 ± 0.99) . The overall knowledge mean score with standard deviation was 11.88 ± 3.28 .



Figure 1 : Distribution of subjects based on knowledge score.

 Table 3 : Association between Knowledge score of Mothers regarding Child nutrition and Health information and Selected Demographic variables.

Demographic variables	χ2- value	p-value
Age (in years):	8.396	0.038*
	(df=3)	S
Religion:	5.76	0.056
	(df=2)	NS
Place of residence:	1.743	0.418



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	(df=2)	NS
Education of mother:	12.766	0.012*
	(df=4)	S
Family income:	15.022	0.00179*
	(df=3)	S
Employment status:	0.603	0.437
	(df=1)	NS
Place of delivery:	0.334	0.589
	(df=2)	NS
Number of children:	1.535	0.46
	(df=2)	NS
How long after delivery breastfeeding initiated :	2.176	0.53
	(df=3)	NS
Vaccination of child done at:	0.323	0.569
	(df=1)	NS
Permanent method of family planning Adopted:	2.106	0.146
	(df=1)	NS
If no, which temporary family planning method	3.486	0.625
using:	(df=5)	NS
		1

5. Discussion

In this study majority of mothers were having moderate knowledge score which is similar to following studies; A descriptive study regarding management of diarrhea conducted by Ramandeep Kaur and Ms. Kajal showed 73% of mothers had average knowledge score.^[25] A descriptive survey conducted by Mr. Hazaratali Panari et.al., showed that majority of mothers had moderately adequate knowledge on child immunization with mean score of 58.1.^[26]

In this study association between knowledge score and selected demographic variables results were similar to following studies; A comparative study on breast feeding by Priyanka Kumari showed that education of mother, occupation of mother and family income were significantly associated with knowledge regarding exclusive breastfeeding.^[27] A cross sectional study on diarrhea prevention by Shivaleela P. Upashe et.al., showed that there was significant association between level of knowledge and selected demographic variables such as age, religion and education of mothers.^[28]

5.1 Limitations of the study:

- The study is limited to selected areas of Dadra and Nagar Haveli.

5.2 Summary

The present study aimed to assess knowledge regarding child nutrition and health information among mothers of under six year children in selected areas of Dadra and Nagar Haveli. With assumption that mothers may not have adequate knowledge regarding child nutrition and health information.



The non-probability- convenient sampling was adopted to obtain adequate sample size. A structured knowledge questionnaire and attitude scale was administered for data collection using interview method.

The data was analyzed and interpreted using descriptive and inferential statistics, result reveled that majority mothers were having moderate knowledge regarding child nutrition and health information while their age, education and family income are only demographic variables which are having association with knowledge score.

5.3 Conclusion

This study concluded that mothers were having moderate knowledge which is affected by mainly age and education of mothers, hence improving knowledge level of mothers can positively impact growth and development of children.

References

- 1. Yin S, Li N, Yan Z, Pan L, Lai J. Effects of nutritional education on improvement of nutritional knowledge of infant's mothers in rural area in China., 2009 Chinese Center for Disease Control and Prevention, Beijing, China; 43(2):103-107.
- 2. Sreevani R. Malnutrition and mental development. Nightingale Nurse Times 2000;4 (21):37-38
- 3. Ray S, Mishra R, Biswa R, Kumar R, Halden A, Chattrjee T. Nutritional status of pavement dweller children of Calcutta city. Indian Journal of Public Health 1999; 43:49-54.
- 4. International Institute for Population Sciences (IIPS). National Family Health Survey-3. Mumbai: India; 2006-07: 21-52.
- 5. Ministry of Women and Child Development. Convergence initiative for improving nutrition: Roles and Responsibilities of key grassroots stakeholder. Indian;13th January 2021: 349.
- 6. World Health Organization. Factsheet- Breastfeeding. [online]. 2022 [https://www.World Health Organization.int/health-topics/breastfeeding]
- Chris-O, Dangiwa D, Anukam N. Assessment of Knowledge, Attitudes and Practices of Mothers in Jos North Regarding Immunization. IOSR Journal of Pharmacy. 2015; 5(6):2250-3013.
- 8. Renkel L, Nielsen K. Immunization issues for the 21st century. 2003;90(63):45–52.
- 9. World Health Organization. Department of immunization and vaccines and Biologicals (IVB) Expanded Programme on Immunization (EPI). 24 May 2019.
- 10. Shinde K., Devi S. A descriptive study to assess the knowledge and attitude regarding optional vaccine among mothers in selected health care centers of Pune city. European Journal of Molecular & Clinical Medicine.2020;7 (11).
- 11. Mohamed A. Assessment of knowledge and attitude towards diarrheal disease in children under-five years in Shendi town. International Journal of Research.2016;4,(3): 80–84
- 12. World Health Organization. Diarrhoea: why children are still dying and what can be done. Geneva.2009. [https://apps.WHO.int/iris/bitstream/handle/]
- 13. World Health Organization. Selection of fluids and food for home therapy to prevent dehydration from diarrhea: Guidelines for developing a national policy.2005. [http://whqlibdoc.World Health Organization.int/hq/2005/ world health organization_cdd_93.44.]
- 14. <u>Kathryn G. Dewey C.</u> Does birth spacing affect maternal or child nutritional status. National library of medicine. [Pubmed].2007;3(3):151-173.



- 15. Babatunde O. Family planning as a critical component of sustainable global development. National library of medicine. 2015;8(10).
- 16. Nutrition International. 3 reasons why integrating nutrition and family planning is a game changer. 11 July 2017. [https://www.nutritionintl.org/news/all-blog-posts/3-reasons-integrating-nutrition-familyplanning-game-changer/]
- 17. USAID. Health policy. Impacts of family planning on Nutrition. March 2015. [https://www.healthpolicyproject.com/pubs/690_FPandnutritionFinal.pdf]
- 18. UNICEF. The convention on the rights of child: the heildren's version. [https://www.unicef.org/childrights-convention/convention-text-childrens]
- 19. IIPS. NFHS 5 Phase 1. Fact sheet Dadra and Nagar Haveli. (2019-20) [pdf].
- 20. Nandaprakash S. Assessment of knowledge and practice among mothers of under five children regarding prevention of protein energy malnutrition at selected area of Gavipuram, Banglore with a view to develop an information guide for mothers. [thesis] 2012: 2-4.
- 21. Ministry of Health and Family Welfare. RMNCH+A-Intensified Diarrhea Control Fortnight. 22 December 2022.
- 22. Outlook Poshan 2.0. How Family Planning Empowers Women and Helps Fight Malnutrition. 20 august 2022. [https://poshan.outlookindia.com/story/poshan-news-how-family-planning-empowers-women-and-helps-fight-malnutritionres.]
- 23. National Commission on Population. Population Projections For India And States for 2011 2036. [pdf] November 2019.
- 24. Polit D. and Hungler B. Nursing Research: Principles and Methods; India: Lippincott.1998:115.
- 25. Dhale P. and Mahakalkar M. A Study to assess the knowledge and attitude regarding importance of colostrum among postnatal mothers in selected hospitals. International Journal of Science and Research. 2017; 6 (8): 2239-2241
- 26. Gnansiromani H. A study to assess knowledge and attitude of temporary family planning methods among postnatal mothers admitted in inpatient ward at institute of obstetrics and gynaecology at Chennai hospital. [thesis]. October 2018.
- 27. Kumari P. et. al. A comparative study to assess the knowledge and attitude of mothers regarding exclusive breast feeding in selected rural and urban areas of district Jalandhar, Punjab. IOSR Journal of Nursing and Health Science. 2015; 4 (3): 61-66.