

## Revised National Immunization Programme among Mothers of Under Five Children in Selected Rural Areas

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### Abstract

The aim of the study is assess the knowledge regarding revised national immunization programme among mothers of under five children in selected rural areas. The objective of the study is to assess the knowledge regarding revised national immunization programme among mothers of under-five children in selected rural areas of the city and to find out the association between knowledge score with selected demo graphic variables. The conceptual framework of the study was developed on the basis of Pender's health promotion model. Methodology non experimental descriptive approach was used. The study was carried out at selected rural areas of Nagpur. The sample comprised of 100 mothers of under five children in selected rural areas of Nagpur selected by convenient sampling. Pilot study was conducted on 10 samples and the tools were found to be reliable. Data collection was done from 4/12/2017 to 6/12/2017. Data was collected by administering a structure knowledge questionnaire. The result of this study showed that majority of frequency of mothers of under-five children found in that 6% mothers of under five children had poor level of knowledge score, 50% had average, 37% had good and only 7% had very good level of knowledge score. The association of knowledge scores with religion of mothers of under-five children. The finding of this supports the need of the health education for mothers of under five children in selected rural areas of Nagpur.

**Keywords:** Assess; Knowledge; Mothers of Under Five Children; Revised National Immunization Programme.

### Introduction

Childhood is very precious period in human life cycle. It requires more care and protection from the diseases. The childhood period is also high risk for communicable diseases. In India 72 babies are dying every 1000 babies born in a year. Disease of early childhood preventable by vaccination remains a serious problem in developing countries [1].

Immunization is a proven tool for controlling and eliminating life- threatening infectious diseases and is estimated to avert between 2 and 3 million

deaths each year. It is one of the most cost-effective health investments, with proven strategies that make it accessible to even the most hard-to-reach and vulnerable populations. It has clearly defined target groups; it can be delivered effectively through outreach activities; and vaccination does not require any major lifestyle change. Immunization is vital; it protects nearly 3/4th of children against major childhood illness. There are several diseases, which can be easily prevented by timely vaccination as a part of routine immunization. Every child has the right to benefit from the appropriate traditional and new life saving vaccinations [2].

It has been that 5 million children were dying each year and another 5 million were disabled by infectious diseases. The growth and development of children is a long term contribution of country as a whole. The key to attain the goal of health for all primary health care emphasizes on the preventive principles one of the most cost effective health intervention is vaccine for all infectious disease [3].

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Addition of Newer vaccines will provide wide range of immunity against various infectious diseases, hence its awareness is needed was 30 mothers, sampling technique was convenient sampling methods. Result of the study shows that Knowledge Score categorized in 3 categories (good, average and poor). Good knowledge score is 10%. Average knowledge score is 23.34%. Poor knowledge score is 66.66%. Conclusions: Most of the mothers of under-five having poor knowledge score regarding Immunization [4].

Each year there is more than 150 million of childhood pneumonia and nearly 2 million children under five lose their lives to an acute bout of pneumonia. About 200,000 child death are attributed to pneumonia each year occur in neonatal period. In India, pneumonia is responsible for about 400,000 deaths in children under five and substantial proportions of these pneumonia deaths are pneumococcal [5].

Prevention is ultimately the most effective defense system in controlling infectious diseases and Immunization has found out to be the most effective intervention in prevention. Also addition of newer vaccines means protection against present infectious disease which are lethal, thus covering majority of infectious disease through Immunization by taking newer vaccines. So the knowledge regarding immunization and also newer vaccines in prevention of infectious disease among mothers of under five children is important. Keeping this point of view this study is conducted to assess the knowledge regarding revised national immunization among mothers with under five children.

#### *Problem Statement*

“Revised national immunization programme among mothers of under-five children in selected rural areas”.

#### *Objectives*

1. To assess the knowledge regarding revised national immunization programme among mothers of under-five children in selected rural areas of the city.
2. To find out the association between knowledge score with selected demographic variables.

#### *Operational Definition*

- *Assess:* In this study, it refers to evaluate (or) estimate the knowledge regarding revised national immunization programme.
- *Knowledge:* In this study, it refers to the level

of understanding of the mother of under-five children about the importance of revised national immunization programme.

- *Revised National Immunization programme:* In this study, the revised national Immunization programme contains previous and some newer vaccines like pentavalent vaccine, Hep. B vaccine, Japanese encephalitis vaccine, Hib vaccine, and RV vaccine, which can be taken to provide immunity against various infectious diseases.
- *Mother of Under Five Children:* In this study, it refers to those mothers who have under-five (0-5years ) children.

- *Definition of immunization:* Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines stimulate the body's own immune system to protect the person against subsequent infection or disease.

#### *Assumptions*

1. Mothers of under -five children may have inadequate know ledge regard in g revised national immunization programme.
2. Mother's knowledge may vary according to their demographic variable regarding revised national immunization programme.

#### **Conceptual framework**

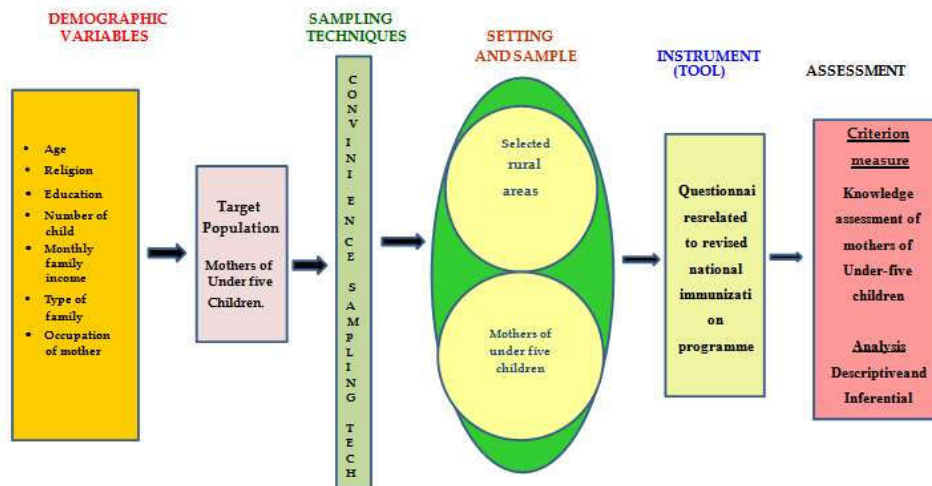
Conceptual framework used for the present study is “Pender's health promotion model” (Pender's 1996). This model focuses on following three areas:-

- Demographic characteristics of mothers of under-five children.
- Assessment of revised national immunization programme
- The assessment outcomes.

#### *Review of Literature*

In the present study the literature reviewed has been organized into the following categories:-

- I. Review of literature related to Immunization.
- II. Review of literature related to incidence of vaccine preventable diseases
- III. Review of literature related to knowledge regarding immunization among mother of under-five child.
- IV. Review of literature related to newer vaccines.



**Methodology**

*Research approach*

In the present study, the research approach is non-experimental descriptive approach.

*Research design*

In this study A ‘descriptive research design’ is used to identify, describe and explore the existing phenomenon and its related factors

*Variables*

*Research variable:* Research variables in the study is knowledge regarding revised national immunization programme.

*Demographic variables:* The demographic variable in the study is age, religion, number of child, monthly family income, type of family, occupation of mother, education.

*Setting of the study:* The present study was conducted in selected rural areas of city.

*Population:* The population in this study was mothers of under-five children in selected rural areas of city.

*Sample:* In this study the sample is the hundred (100) mothers of under five children.

*Sampling technique:* In the present study a sample selection was done by non-probability convenient sampling technique.

*Sampling Criteria:*

*Inclusion Criteria;*

Mothers who are;

1. Having under five children (0-5years)
2. Who can understand, read and write Hindi and Marathi.
3. Willing to participate in the study.

*Exclusion Criteria*

Mothers who are;

1. Health care professionals.
2. Not available at the time of data collection.

**Table 1:** Schematic representation of the study design

Sample	Tool	Sample Technique	Assessment
Mothers of under five children	Self-structured questionnaire	Non-probability convenient sampling	Knowledge regarding revised immunization programme.

*The Tool/ Instrument*

The tool used in current study is structure knowledge questionnaire.

*Description of the tool:* In this study the tool consists of structure knowledge questionnaire which contain two sections.

*Section A:* It consist structured questionnaire to collect the demographic data. In that Age, Religion, Type of family, Number of child, Education of mother, Family income per month, Occupation of mother.

*Section B:* it consists of questionnaire based on revised national immunization programme. It was further subdivided into introduction regarding Immunization. Questions related to hepatitis B vaccine, Questions related to Hib vaccine, Questions related to

**Table 1:** Showing percentage wise distribution of mothers of under-five children according to their demographic variables

Demographic Variables	Frequency(n)	Percentage (%)
<i>Age(yrs.)</i>		
20-24 yrs.	27	27
25-29 yrs.	53	53
30-34 yrs.	17	17
35 yrs. & above	3	3
<i>Religion</i>		
Hindu	90	90
Christian	0	0
Muslim	0	0
Buddhist	10	10
Others	0	0
<i>Educational Status</i>		
Primary	9	9
Secondary	50	50
Higher Secondary	28	28
Diploma	3	3
Graduation & above	10	10
<i>No. of children</i>		
One	36	36
Two	56	56
Three	5	5
Four and above	3	3
<i>Monthly family income(Rs)</i>		
5000-10,000 Rs	66	66
10,001-15000 Rs	23	23
15,001-20,000 Rs	7	7
20,001 & above	4	4
<i>Type of family</i>		
Nuclear	34	34
Joint	65	65
Extended	1	1
<i>Occupational Status</i>		
Govt. Service	0	0
Private Service	1	1
Homemaker	65	65
Self Employed	1	1
Labour	33	33

rotavirus vaccine, Questions related to Vitamin A and Questions related to Pentavalent vaccine.

*Reliability of the tTool*

In this study, Karl Pearson correlation coefficient formula was used for the reliability. The questionnaire will be found reliable if the correlation coefficient correlation was more than 0.8 that is 0.9.

*Data Collection Method*

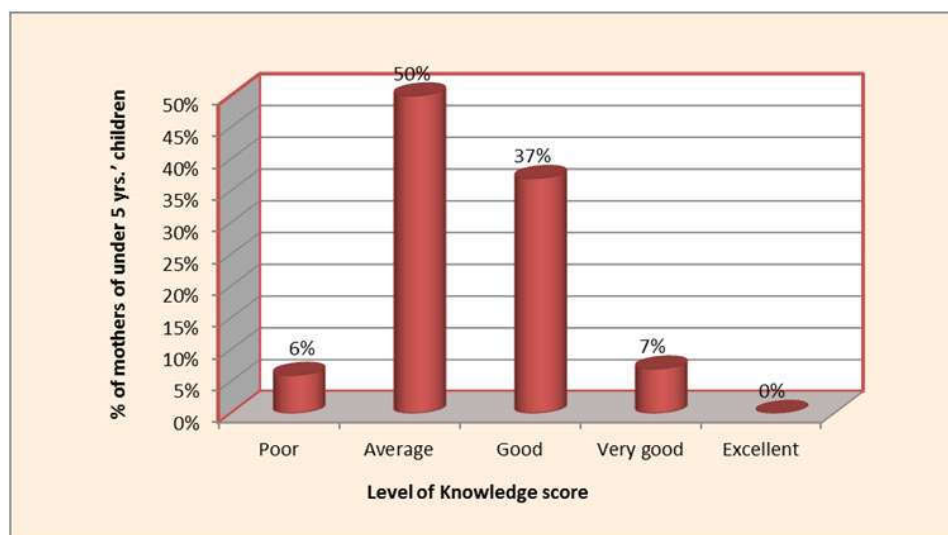
The data was collected from 15/1/2018 to 13/2/2018 in selected rural areas of the city.

**Data Analysis**

*Organization of Findings*

The analysis and interpretation of the observations are given in the following section:

1. Section A: Distribution of mothers of under five children with regards to demographic variables.
2. Section B: Assessment of knowledge of mothers of under five children regarding revised national immunization programme.
3. Section C: Association of knowledge score of mothers of under five children with selected demographic variables.



**Fig. 1:** Cylindrical bar diagram showing distribution of mothers of under five children according to their knowledge related to revised national immunization programme

**Table 2:** Showing distribution of mothers of under-five children with regards to knowledge regarding revised national immunization among mothers of under-five children in selected rural areas.

Level of knowledge score	Percentage Score	Knowledge Score	
		Frequency	Percentage
Poor	1-6(0-20%)	6	6
Average	7-12(21-40%)	50	50
Good	13-18(41-60%)	37	37
Very good	19-24(61-80%)	7	7
Excellent	25-30(>80)	00	00

## Discussion

A Cross sectional study was done among mothers of under five children attending the OPD of paediatrics in a tertiary care hospital in Kollam, Kerala from 1st to 30th May, 2014. The sample size was 210 and simple random sampling was used. 93.8% of mothers knew that vaccines are beneficial for their child. 58% were aware about the side effects of few vaccines. 50% of mothers believed that as polio is eradicated from India, there is no need to give polio vaccine. 35% of mothers acquired knowledge regarding immunization through health workers. All of them had knowledge about polio vaccine but only half of them knew about rotavirus vaccine. 60% mothers believed that multiple vaccines are beneficial although 26% hold their view that it has no benefit at all. 39.5% of mothers had adequate knowledge about immunization. It was positively associated with education, working class and high socio-economic status of mothers. Conclusion: There are several loopholes in the mother's knowledge regarding immunization. Many of them had no knowledge about optional vaccines. There is a need to improve knowledge regarding immunization among general population. Adequate information about completing the schedule and correct knowledge about optional vaccines should be given to mothers [6].

The analysis included 108,057 children; the estimated proportions of fully, under-, and non-vaccinated children were 57%, 31%, and 12%, respectively. After adjusting for state of residence, age, gender, household wealth, and maternal education, additional significant predictors of children's vaccination status were religion, caste, place of delivery, number of antenatal care visits, and maternal tetanus vaccination, all of which demonstrated large effect sizes.

Analysis reveals that there is association between knowledge score with religion and there is no association between age in year, educational status,

Number of child, Monthly family income, and type of family and occupation of mothers.

## Conclusion

After the detailed analysis, this study leads to the following conclusion:

In this study, among the subject majority of the finding 53(53%) were belonging to the age group 25-29 years, followed by 27 (27%) were in the age group of 20-24 years, and 17 (17%) were in the age group of 30-34 years and minority of the subjects found 3 (3%) in the age group 35 years and above. Majority of the subject according to their religion shows that 90% of the mothers of under-five children were Hindus and only 10% were belonging to Buddhist. Majority of the finding 50 (50%) were belonging to the secondary education followed by 28 (28%) were in the higher education and minority of the subject 9 (9%) were in the primary education and 3% were diploma and 10% were graduates and above.

Majority of the finding 56 (56%) of them had two children, 36% of them had only one child, 5% had three children and only 3% had four and more children. Majority of the finding 66 (66%) of them had income 5001-10000 Rs, 23 (23%) had between 10001-15000 Rs, 7 (7%) had between 15001-20000Rs and minority of the finding 4 (4%) of them had income more than 20,001 and above respectively. Most of the 34 (34%) of them were belonging to nuclear families, followed by 65 (65%) were in joint and minority of the 1 (1%) were belonging to extended family. According to their occupational status shows that 1% of them were private worker and 1% was self-employed, 65% were homemakers and 33% were self-labourer.

Analysis reveals that there is association between knowledge score with religion and there is no association between age in year, educational status, Number of child, Monthly family income, and type of family and occupation of mothers.

### *Nursing Implication*

The findings of this study have implications for nursing practice, nursing education, nursing administration, & nursing research.

### *Nursing Practice*

❖ Health education program can be used to reinforce learning needs of the mothers on Immunization. Students can be motivated to teach the mothers about the control and prevention of vaccine preventive disease with the help of

immunization in the wards and community settings.

❖ Healthcare services are an essential component of community healthcare nursing, the role of personnel is to conduct the project & participate in revised national immunization programmes in relation to prevention of child mortality & morbidity.

❖ It will help the nurses to keep up date knowledge regarding revised national immunization programme.

❖ When the professional liability is recognized, it defines the parameter of the profession & the standards of professional conduct. Nurses should therefore enhance their professional knowledge.

❖ This study will help the nurses for conducting healthcare services to health care professionals.

#### *Nursing education*

❖ Nurse who are upto date with the knowledge about the revised national immunization programme are the better person to impact the knowledge to the nursing student about the revised national immunization programme which will ultimate prevent the child mortality & morbidity & thus will promote healthy life span of the child.

❖ Nowadays, much emphasis is given on comprehensive care in the nursing curriculum. So this study can be used by nursing teacher as an informative illustration for nursing students.

❖ For the student nurses more stress can be given to the importance of early recognition, prompt treatment.

❖ Students must be given clinical field assignment, in which they must be given opportunity to assess the immunization status of under-five children & plan for imparting knowledge & participating in various project & national programme in relation under-five children.

❖ Teacher training programme must also include the topic of revised national immunization programme of under-five children.

#### *Nursing administration*

❖ Nurse as an administrator can plan and organize educational program. Nurse administrator can organize education camp & health teaching program for the ANC, PNC and mother of under-five children to abreast their knowledge on Immunization

❖ Findings of the study can be used by the Nursing Administration in creating policies & plan for providing education to the staff nurses & mothers.

❖ It would help the nursing administrators to be planned & organised in giving continuing education to the nurses & to others for applying & updating the knowledge of immunization status of under-five children.

❖ The result of the study contributes to the body of knowledge of nursing.

❖ In-service education must be conducted for the nurses to create awareness regarding revised immunization programme status of under-five children.

#### *Nursing research*

❖ Based on the study results the mothers can be educated based on their learning needs. Present research knowledge helps to prevent the vaccine prevented disease and improve general health status of the children thereby reduces mortality and morbidity among the under five children

❖ The findings of the study have added to the existing body of the knowledge in relation to the revised national immunization programme status of the under- five children which will enhance the knowledge & would help to assess the revised immunization status.

❖ Other researcher may utilize the suggestions, & recommendations for conducting further study.

❖ The tool & technique used has added to the body of knowledge & can be used for further references.

#### *Limitations*

• The study was conducted only on mothers of under-five children.

• The sample size was small to generalize the findings of the study.

• Only selected self-structure questionnaires assessment criteria were selected for the study.

• The study was limited to assess the revised national immunization status of the mothers of under-five children.

#### *Recommendation*

1. A similar study can be replicated on a larger population for a generalization of findings.

2. Study can be conducted for the auxiliary midwifery nurse as they are responsible for the teaching the mothers of under-five children.
3. Mass media and health education should be arranged to educate mothers of under-five regarding revised national immunization programme.
4. A video assisted study can be carried out to assess effectiveness of knowledge of mothers of under-five children regarding revised national immunization programme.
5. A similar study can be conducted by using a SIM (self-instructional module) or a pamphlet or booklet.
6. A similar study can be conducted by using a structured teaching programme.

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