

# Effectiveness of a Planned Teaching Program on Maternal Knowledge Regarding the Universal Immunization Program: A Pre-Experimental Study in Mandi District, Himachal Pradesh

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**Abstract:** Introduction: Immunization is a tool for controlling and eliminating life threatening six infectious and vaccine preventable diseases like tuberculosis, tetanus, diphtheria, whooping cough and polio mellitus and is estimated to avert between 2 and 3 million deaths per year. Since mothers are the important health decision makers of their children, their Knowledge & Practices regarding immunization in general have a great impact on immunization status of their child. The study aims to assess the knowledge level of mothers of under five years children regarding immunization. To find the association between knowledge score regarding universal immunization programme among mothers of under 5 years children and with their selected socio demographic variables. Methodology: Pre experimental research design is used to check effectiveness of planned teaching programme on knowledge regarding universal immunization programme among mothers of under 5 years children. Total 60 mothers were enrolled into the study by using purposive sampling technique. Self - structured knowledge questionnaire was used to assess the knowledge regarding universal immunization programme among the mothers of under 5 years children. Result: The result of the study depicts that that about of 60 mothers, 45 (75%) mothers of under 5 years children had moderate knowledge whereas 15 (25%) mothers of under 5 years children had inadequate knowledge and none of them had adequate knowledge regarding universal immunization programme. The association of knowledge of study participants regarding universal immunization programme was not found to be statistically significant any of the demographical factor's studies except the educational qualification and source of information. Conclusion: The result from this study revealed that knowledge regarding universal immunization programme among mothers was moderate. Also, the educational programme significantly improved the knowledge of mothers regarding immunization so other teaching strategies can be used increase mothers' knowledge regarding immunization programme.

**Keywords:** Assess, Effectiveness, Knowledge, Immunization, Mothers of under 5 years children.

## 1. Introduction

Immunization is a tool for controlling and eliminating life threatening six infectious and vaccine preventable diseases like tuberculosis, tetanus, diphtheria, whooping cough and polio mellitus and is estimated to avert between 2 and 3 million deaths per year.<sup>1</sup>

There are several reasons to aim for universal coverage of immunization. The Indian culture promotes safe nurturing of children. Hardly do we find parents who risk their children to life threatening diseases, unless they being unaware or misinformed. All vaccine under the routine immunization (RI) are lagging. The current level of coverage of 'fully - immunized' children under the national immunization programme is quite low, as pointed out by several studies.<sup>2</sup>

The American Academy of paediatrics (AAP) and the Advisory Committee on immunization Practices (ACIP) have made recommendation for immunization schedules. Immunization is very important part of the childhood.<sup>3</sup>

Immunization is considered as the most cost effective and safest public health intervention to reduce childhood morbidity and mortality although its full potential is not yet.

The burden of infectious diseases has been reduced primary due to immunization.<sup>4</sup>

India has one of the highest under 10 mortality rates in the world with an estimate of 64/1000 live births in 2010, the under 10 mortality rate in the Maharashtra state was 56/1000 live births in 2010. One of the factors contributing to under 10 mortality is the ignorance of child care. Global immunization coverage has greatly increased since WHO's expanded programme on immunization began in 1974. In India expanded programme on immunization was launched in January 1978. UNICEF renamed the expanded programme on immunization as Universal Immunization Programme (UIP) and it was launched in India in November, 1985.<sup>5</sup>

Each child has basic human needs like adults to fulfil the essentials of life and to promote growth and development. Immunization is one of the needs of the children. The responsibilities of the nursing personnel is to help the parents to emphasize on promotion of health, prevention of illness, maintenance of health and restoration of health.<sup>6</sup>

Prevention of disease is always better than cure. Vaccine is a substance that is introduced into the body to prevent infection or to control disease due to a certain pathogen - a disease - causing organism, such as a virus, bacteria or parasite. The

vaccine “teaches” the body how to defend itself against the pathogen by creating an immune response.<sup>7</sup>

Childhood immunization almost guarantees protection from many major diseases. It prevents 2 million deaths per year worldwide and is widely considered to be ‘overwhelmingly good’ by the scientific community.<sup>8</sup>

Immunization of infants and young children against serious infectious diseases is among the most successful and cost-effective interventions in preventative health care. The success of these programs relies on sufficiently high coverage to maintain herd immunity.<sup>9</sup>

India's Universal Immunization Programme (U. I. P.), launched by the Government of India in 1985, is one of the largest in the world in terms of quantities of vaccine used, the number of beneficiaries, the number of Immunization sessions organized, the geographical spread and diversity of areas covered. With the UIP, significant achievements have been made in preventing and controlling 7 vaccine-preventable diseases (VPDs) such as Diphtheria, Pertussis, Tetanus, Polio, Measles, and Hepatitis B and Tuberculosis.<sup>10</sup>

According to National Sample Surveys, a migrant is defined as if he or she place (village/town) other than the village where he or she was enumerated. In the Census, if the place of birth or place of last residence is different from the place of enumeration, a person is defined as migrant.<sup>11</sup>

Prevention of disease is always better than cure. Vaccine is a substance that is introduced into the body to prevent infection or to control disease due to a certain pathogen - a disease-causing organism, such as a virus, bacteria or parasite. The vaccine “teaches” the body how to defend itself against the pathogen by creating an immune response.<sup>12</sup>

It is undeniable that vaccines are integral part of health system, which has been proved on the basis of their success in controlling vaccine preventable diseases in several countries in the world. Protection from infectious diseases is one of the greatest benefits that any country can offer to its population.<sup>13</sup>

Since mothers are the important health decision makers of their children, their Knowledge, Attitude and Practices regarding immunization in general have a great impact on immunization status of their child.<sup>14</sup>

According to World Health Organization (WHO), vaccination annually averts 2 to 3 million infant deaths globally from diseases such as diphtheria, hepatitis B, measles, mumps, Pertussis, polio and tetanus. And yet, one in five children, or an estimated 21.8 million infants worldwide miss out on basic vaccines.<sup>15</sup>

Several studies on immunization status of children conducted in various countries have revealed that increasing parents' knowledge regarding vaccination improves immunization status and affects success of immunization programme. Education status and other socioeconomic status of parents have a great impact on their decision regarding vaccination. Therefore, our aim of this study was to assess parent's

knowledge, attitude and practice towards vaccination and to correlate these factors with vaccination status of their child in order to improve and increase vaccination coverage and completeness.<sup>16</sup>

### Need of the study

The physical health of a child is important because it is associated with the mental and social development of a children. Mothers are the first care providers of their children, is needed to reduce the under 5 mortality rates. One of the ways to achieve reduction of under-five mortality is to educate the mothers on matters pertaining to child care.

A strategy for 21st century focuses on certain emerging infectious diseases and people at risk historically. Childhood vaccination rates have been higher in white population than racial and ethnic population. Vaccination rates for preschool children in racial and ethnic groups with lower vaccination rates however have been increasing at more rapid rate, significantly narrowing the gap.

During 2023, about 84% of infants worldwide (108 million) received 3 doses of diphtheria-tetanus-pertussis (DTP3) vaccine, protecting them against infectious diseases that can cause serious illness and disability or be fatal. However, these global figures hide significant disparity among countries of different income strata, with low income countries lagging behind. In 2023, global coverage of the third dose of diphtheria-tetanus-pertussis (DTP3) vaccine – often used as a marker of how well countries are providing routine immunization services to children – stagnated at 84 per cent. Although there has been some progress, DTP3 coverage has still not yet reached the pre-pandemic level of 86 per cent, as per the latest WHO and UNICEF estimates of national immunization coverage (WUENIC).

The 2024 World Immunization Week was held from April 24–30. The week was marked by a joint campaign called “Humanly Possible” by the WHO, UNICEF, Gavi, and BMGF. The campaign called on world leaders to support, advocate for, and fund immunization programs and vaccines.

The Expanded Programme on Immunization (EPI) will expand to cover vaccines for 13 vaccine preventable diseases across the life course. These diseases include tuberculosis, COVID-19, diphtheria, hepatitis B, and more. The WHO produced IPV2 coverage estimates for countries using both IPV and OPV in their immunization program. These estimates began in 2021. The second round of polio vaccination in the Gaza Strip is scheduled for October 11, 2024. The goal of this round is to vaccinate over half a million children.

The National Full Immunization coverage for the Financial Year 2023-24 is 93.5%. Mission Indradhanush and Intensified Mission Indradhanush are special catch-up campaigns conducted at regular intervals to ensure vaccination of the left out and dropped-out children and pregnant women in areas of low immunization coverage.

Under the Universal immunization program, all eligible children up to the age of 2 years are administered vaccination doses as per the immunization schedule. Mission

Indradhanush (MI) and Intensified Mission Indradhanush (IMI), are special catch - up campaigns conducted at regular intervals to ensure vaccination of the left out and dropped - out children and pregnant women in the areas of low immunization coverage.

## 2. Materials and Methods

**Research Design:** In this study pre - experimental research design (one group pre test and post test design) is used to check effectiveness of planned teaching programme on knowledge regarding universal immunization programme among mothers of under 5 years children in selected areas of district Mandi (H. P).

### Research Variables

**Independent variable** - planned teaching programme regarding universal immunization programme.

**Dependent variable** - Knowledge of mothers regarding universal immunization programme among mothers of under 5 years children.

**Socio - demographic variable** - age, religion, educational qualification, mothers' occupation, type of family, area of residence, previous knowledge, regarding universal immunization programme.

**Target Population:** Target population is the entire population in which the researcher is interested and would like to generalize the result of the study. The target population for the present study includes mothers of under 5 children in selected areas of district Mandi (H. P).

**Sample and Sampling technique:** Sample refers to unit of population selected to participate in a research study who met the inclusion criteria. In this present study the sample were Mothers who were having children below 5 years of age under selected settings. The choice of sampling technique depends on the nature of the problems. In this study sampling technique used was non - probability Purposive sampling technique. Sample size of this study consist of 60 mothers of under 5 years children living in selected areas of district Mandi (H. P).

**Developmental And Descriptive Tools:** Socio - demographic variables and Self Structured knowledge Questionnaire.

## 3. Findings

Findings related to socio - demographic variables:

- Out of 60 mothers, most of mothers age group was 25 - 31 years. Majority i. e. 31 (51.7%) are graduated or post graduated mothers. 60 (100%) belongs to Hindu religion. 60 (100%) are belong to rural area. 47 (78.3%) are homemaker mothers.
- The frequency and percentage of socio - demographic variables of mothers, regarding age in years out of 60 mothers most 25 - 31 year (71.7%), 18 - 24 year (10.0%) and 32 - 38 year (18.3%) were in age group, regarding level of education.

- More than half of the respondents (51.7%, or 31 individuals) have completed graduation or post - graduation. Senior secondary education is the highest level of education for 36.7% (22 individuals), and 11.7% (7 individuals) have completed primary education.
- All respondents (100.0%) identify as Hindu, regarding residence. All respondents (100.0%) reside in rural areas, with no representation from urban areas, regarding occupation a significant majority of respondents (78.3%, or 47 individuals) have mothers who are homemakers.
- Self - employed mothers account for 10.0% (6 individuals), mothers in private jobs make up another 10.0% (6 individuals), and only 1.7% (1 individual) have mothers in government jobs.
- Regarding family type most respondents live in nuclear families (51.7%, or 31 individuals). Joint families account for 43.3% (26 individuals), while single - parent families make up 5.0% (3 individuals). No respondents belong to extended families.
- Regarding previous knowledge a large majority of respondents (83.3%, or 50 individuals) indicated that they have previous knowledge on the topic in question, while 16.7% (10 individuals) do not.

## 4. Discussion

### Objective 1: To assess the pretest knowledge score regarding universal immunization programme among mothers of under 5 years children

In assessing the pre - test knowledge on universal immunization programme among mothers of under 5 years children. It showed that about of 60 mothers, 45 (75%) mothers of under 5 years children had moderate knowledge regarding universal immunization programme whereas 15 (25%) mothers of under 5 years children had inadequate knowledge and none of them had adequate knowledge.

### Objective 2: To assess the effectiveness of planned teaching programme on knowledge regarding the universal immunization programme among mothers of under 5 years children.

In present study, it shows that there is significant improvement in the level of knowledge after planned teaching programme. The post test knowledge level of mothers reveals that 41 (68.3%) mothers of under 5 years children had adequate knowledge regarding universal immunization programme 19 (31.7%) mothers of under 5 children had moderate knowledge and none of them had inadequate knowledge.

### Objective 3: To find the association between pre test knowledge score regarding universal immunization programme among mothers of under 5 years children and with their selected socio demographic variables.

The association of knowledge of study participants regarding universal immunization programme was not found to be statistically significant any of the demographical factors studies except the educational qualification and source of information. Hence, it can be concluded that study

participants with higher education have more knowledge regarding universal immunization programme.

## 5. Conclusion

The result from this study revealed that knowledge regarding universal immunization programme among mothers was moderate. Also, the educational programme significantly improved the knowledge of mothers regarding immunization so other teaching strategies can be used increase mothers' knowledge regarding immunization programme.

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