

**Assessment of knowledge on immunization among child health nursing in Gautam Budh Nagar, Uttar Pradesh**

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**ABSTRACT:**

**Background:**In order to determine the paediatric nurses' knowledge and attitudes on vaccinations in Gautam Budh Nagar, Uttar Pradesh, a descriptive survey was carried out. As a result, a non-experimental descriptive technique was adopted in this study. The study was conducted in the Uttar Pradesh city of Gautam Budh Nagar.

**Methods** Purposive sampling was the sample method that was employed. 50 paediatric nurses were chosen as the study's sample size. The instrument was a self-reporting questionnaire that the researcher had created. The tool included three components. Demographic information in Part 1. Part 2 of the questionnaire measures vaccine knowledge, and Part 3 measures attitudes toward immunisation. Statistics that were both descriptive and inferential were used to analyse the data. Analysis of the demographic factors using frequency and percentage A square test was used to link demographic characteristics with immunisation knowledge and attitudes in order to assess the association between the two.

**Results** 92% of pediatric nurses were educated, 98% of pediatric nurses possessed immunization card, 50% came from middle class, 92% of pediatric nurses had earlier heard about immunization. The mean knowledge value on immunization of pediatric nurses of under five years children was 58.1 and attitude score was 41.4. This indicates that the pediatric nurses of under five years children have moderately adequate knowledge on immunization and positive attitude towards immunization. The correlation between knowledge on immunization and attitude of pediatric nurses showed that there is a positive correlation between knowledge on immunization and attitude ( $r=0.483$ ). This suggests that the pediatric nurses of under five children had positive attitude though they possess moderately adequate knowledge.

**CONCLUSION:** The paediatric nurses showed a somewhat good attitude toward immunisation and moderately competent knowledge of vaccination. According to these data, community health nurses need to educate paediatric nurses a little more in order to reach 100% immunisation.

**KEYWORDS:** Immunization, Knowledge, Attitude, educating, the pediatric nurses.

## **INTRODUCTION:**

Another component of the nursing profession is paediatric nursing, which focuses on caring for infants, young children, and adolescent patients. The Greek terms "paedia" (child) and "iatrike" (physician) are where the term "paediatrics" originates (physician). The word is spelled differently in America, Britain, and Australia: paediatrics (Kasthuri , 2004). Depending on each person's training, employment history, and professional goals, nurses' responsibilities vary regionally. Implementing treatments and drugs in accordance with defined nursing care plans is one of the duties. These nurses practise speaking with patients, their families, and other medical professionals while monitoring vital signs. Helping children and their families is a part of direct nursing care. Other frequent responsibilities include being conscious of parents' concerns, being physically present during uncomfortable situations, and advising youngsters and family members on coping techniques. (Kamalan,2005). Neonatal nurses are nurses that specialise in providing care for very young patients. The primary goal of neonatal nursing is to care for and assist neonates who were born prematurely or who have health problems such birth deformities, infections, or heart conditions. Numerous neonatal nurses provide specialised medical care to infants in need in a Neonatal Intensive Care Unit (NICU). If a baby is dysmature, they are less developed when they are born (Elizabeth et al.,2000). Due to their medical issues, many newborns require specialised care, including:

Immunization is the process of building a person's defences against an infectious agent or organism through immunisation (Lankester,2004). Expanded Program of Immunization (EPI), which was formally introduced by the WHO in May 1974, aims to protect all children worldwide against six diseases that can be prevented by vaccination. On November 19, 1985, Universal Child Immunization, formerly known as EPI, was introduced in India. Immunization has been a significant contribution of microbiology to medicine. By doing this, many vaccine-preventable diseases have essentially vanished(Swanson,2007) A vaccine is an immune agent created to offer precise defence against a specific disease. It prompts the immune system to produce targeted defence against an infectious pathogen (humoral or cell-mediated).

Compared to other racial and ethnic groups, white people have greater childhood immunisation rates. However, preschool vaccination rates in racial and ethnic groups with lower immunisation rates have been rising more quickly, dramatically closing the gap (TNAI, 2003).

The first polio vaccine was discovered by (Basavanthappa 2008). Kerala still has a large population of physically disabled persons. 57628 cases of polio were documented in America in 1952 alone. In 1953, he conducted his first experiment on himself before giving the vaccine to 1830000 pupils. In 1955, the vaccination was made available to the general population. Another American, Albert Sabin, created the now-famous medicinal drops six years later, in 1961. Numerous researchers concluded that administering vaccinations to paediatric nurses who have children under the age of five will be very advantageous. Community-based nurses play a crucial role in the immunisation programme and in helping mothers acquire knowledge and attitudes that will benefit their children's development as paediatric nurses. These nurses can effectively plan and organise programmes and have more opportunities to evaluate the knowledge and attitudes of paediatric nurses and to prevent many communicable diseases. Therefore, in the modern world, it is more important to evaluate paediatric nurses' knowledge of and attitudes toward immunisation.

.The main objective of this study to assess the association between the knowledge and attitude on immunization among the pediatric nurses of under five years children.

In a rural part of the Jammu region, Seshu B. (2006) conducted a study on knowledge, attitude, and beliefs on measles and vaccine coverage. Pediatric nurses' attitudes, convictions, and practises about the measles outbreak among young children in rural Jammu region areas were the subject of the data collection. In addition, two and a half years following the introduction of the measles vaccine into the universal immunisation programme, an effort was undertaken to assess the vaccination coverage of the measles vaccine in the study region (UIP). This study highlights the importance of health education in the long-term effort to eradicate measles in the nation.

In order to evaluate paediatric nurses' attitudes and practises toward immunizations and the outpatient clinic of the hospital in Santo Domingo, Gupta and Mahajan (2003) conducted a study. Prospective interviews were conducted with 200 paediatric nurses. 7.5% of kids were wholly unvaccinated, and 57% of kids had only received some of their recommended vaccines. Pediatric nurses expressed their conviction that vaccinations protect children in 98.5 percent of cases. One hundred and twenty-five of the paediatric nurses said they had access to vaccine orientation.

In order to evaluate the immunisation coverage and the paediatric nurses' expertise and practises with reference to immunisation in rural areas, Gupta and Mahajan (2003) conducted a study. By using the cluster sampling method, 142 kids between the ages of 12 and 59 months and 130 paediatric nurses (15–44 years old) were chosen from nine villages in the Wardha area. 122 children who were able to contact one of these 100 paediatric nurses about immunisation were 52.5 percent fully immunised and 45.1 percent partially immunised. BCG and OPV/DPT vaccination coverage were 95.7 and 85.1 percent, respectively. Pediatric nurses exhibited average knowledge of the need for immunizations but had little understanding of diseases averted and vaccine dosages. .

Pediatric nurses in Italy participated in a descriptive study done by (Park 2004) to evaluate their attitudes, knowledge, and behaviour about vaccination. There have been 841 samples chosen and tested. Overall, 57.8% of paediatric nurses knew about all vaccines, according to the results, and older and more educated paediatric nurses had much more knowledge. Education programmes encouraging child immunisation and a highly positive attitude were present.

## **MATERIALS & METHODS**

This study used a descriptive methodology and a non-experimental design. The goal of descriptive research is to accurately depict the traits of an individual, setting, or group as well as the frequency with which specific phenomena occur. The descriptive technique was employed in this study to examine paediatric nurses' attitudes toward immunisation of children under the age of five and their knowledge of specific immunisation protocols. In Gautam Budh Nagar, Uttar Pradesh, the study was done among paediatric nurses who cared for children under the age of five. Pediatric nurses in Gautam Budh Nagar who worked with children under the age of five made up the study's target population.

### **SAMPLE SIZE:**

The study's entire sample size consisted of 50- paediatric nurses.

### **SAMPLING TECHNIQUE:**

Sampling is the process of choosing a representative sample of a population. In this investigation, an easy and targeted sampling method was employed.

### DEVELOPMENT AND DESCRIPTION OF TOOL:

The technique for data collection was devised independently by the researcher. This self-reporting questionnaire is divided into three sections. The following are:

- **Demographic data:** Comprised of ten elements of demographic information.
- **Structured knowledge assessment questionnaire on immunization:** The vaccine knowledge assessment questionnaire contained 15 questions with multiple-choice answers. 15 was the total score for questions. The score for the correct response is one.
- **Structured attitude scale on immunization.** Structured scale of vaccination attitudes. Ten statements were used to test the paediatric nurses' opinions or beliefs towards immunizations of children under the age of five. The tool received a total score of 20. There were both positive and negative statements on the five point scale. Every right answer received a score of 2 and 1. The following methods of scoring were used:.

Type of Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Positive Statement	2	1	0	0	0
Negative Statement	0	0	0	1	2

### DATA COLLECTION PROCEDURE:

After receiving the necessary approval from the medical officer at the rural PHC in Yellur, the researcher prepared a self-reported questionnaire that was distributed to gather data. The sample consisted of paediatric nurses who cared for children under the age of five. They were given 25 minutes to complete the questionnaire, which asked them questions about their demographics, after a brief introduction to research and vaccination. The data collection period were between 2017-2020.

### DATA ANALYSIS:

The data gathered were examined using descriptive and inferential statistics. The demographic information of paediatric nurses who work with children under the age of five was analysed

using frequency and percentage distribution. Mean and standard deviation are used to gauge paediatric nurses' attitudes and knowledge towards immunizations of children under the age of five. The distribution of knowledge scores on immunisation can be understood by grouping the scores into three categories: inadequate, somewhat adequate, and adequate. The attitude scores can be divided into three categories: low positive, positive, and high positive. To determine the relationship between knowledge and attitude, use the intra correlation approach. The chi-square test is used to determine whether knowledge and attitude are related to demographic factors.

## **RESULTS**

The study evaluated paediatric nurses' demographic characteristics as well as the immunisation of children under the age of five. Demographic information about vaccinations was distributed often and by percentage among paediatric nurses (n=50). Additionally, according to the samples' demographic information, 64% of the population was Hindu, and 72% of them were between the ages of 21 and 25. The average family income in the sample was below \$2,000, 42% of paediatric nurses had two children, 76% of people live in joint families, and 92% of people were illiterate. 92% of the samples had heard about vaccinations before, 50% of the samples belonged to the middle class, and 98% of the samples had an immunisation card..

**Table 1: Distribution of knowledge on immunization among pediatric nurses of under five years children. n= 50**

<b>Knowledge</b>	<b>Number</b>	<b>Percentage</b>
Inadequate (1-49)	12	24
Moderately	29	58
Adequate (50-74)	9	18
Adequate (>75)		

Table 1 describes that 58% of pediatric nurses had moderately adequate knowledge on immunization, 24% had inadequate knowledge and 18% had adequate knowledge

**Table 2: Mean and standard deviation of knowledge on immunization among pediatric nurses of under five children. n = 50**

Statistics	Knowledge Score
Mean	58.1
Standard deviation	12.10

The above table explains that the pediatric nurses have a mean knowledge on immunization of 58.1 with a standard deviation of 12.10.

**Table 3: Distribution of Attitude on immunization among pediatric nurses of under five children. n = 50**

Attitude	Number	Percentage
Low Positive Attitude (1-49)	25	50
Moderate Positive Attitude (50-74)	25	50
High Positive Attitude (>75)	-	-

Table 3 explains that 50% of pediatric nurses, have low attitude on immunization and 50% have moderate attitude and nobody has more attitude.

**Table 4: Mean and Standard Deviation of Attitude on immunization among pediatric nurses of under five children. n = 50**

Statistics	Attitude Score
Mean	41.4
Standard Deviation	16.1

Table 4 shows that the pediatric nurses have mean attitude of 41.4 on immunization with the standard deviation of 16.1. The above 'r' value shows that there is a positive correlation  $r=0.483$  between knowledge and attitude of pediatric nurses on immunization.

Thus this study denotes that there is no significant association between knowledge on immunization and demographic variables such as religion, family income, type of family, education, and socioeconomic status. There is association between knowledge on immunization and age, number of children, immunization card and information on

immunization. Immunization and demographic variables such as age, religion, family income, number of children, education, immunization card and information on immunization. There is significant association between attitude on immunization and demographic variables such as type of family and socioeconomic status.

### **DISCUSSION:**

In this study 72% were in the age group of 21-25 years, 64% were belongs to Hindu religion, 56% of family's income below 2000, 42% of pediatric nurses were having two children, 76% pediatric nurses stayed in joint family, 92% of pediatric nurses were educated, 98% of pediatric nurses were possessing immunization card, 50% came from middle class, 92% of pediatric nurses were earlier heard about immunization,

The average level of paediatric nurses' immunisation knowledge for children under the age of five was 58.1, which is considered to be reasonably adequate. This finding conflicts with that of a study on the knowledge, attitudes, and behaviour of paediatric nurses in Italy that was undertaken in 2006 and which found that the paediatric nurses had enough knowledge and a positive attitude toward immunisation. In order to evaluate paediatric nurses' knowledge and practise of the universal immunisation programme for children under the age of five, Jayakumar (2006) conducted a study. The results showed that respondents' total mean knowledge score was 52.72 percent, which is consistent with the present study's findings. Based on the results of the current study, 58 percent of paediatric nurses who cared for children under the age of five had a moderately adequate understanding of immunisation.

The standard deviation of paediatric nurses' attitudes toward immunisation in children under the age of five was 16.1%, with the mean value being 41.4. These results demonstrate that paediatric nurses have a generally negative attitude regarding vaccination. Additionally, it shows that paediatric nurses hold incorrect beliefs about vaccinations. However, if paediatric nurses have the right training, they will be able to protect their patients' health by stopping the spread of contagious diseases (Bavesia 2005).

The results demonstrated a significant positive connection ( $r = 0.483$ ) between paediatric nurses' knowledge of immunizations and their attitudes toward children under the age of five. This

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This shows that there is no relationship between vaccine attitudes and demographic factors such as age, religion, family income, number of children, education, immunisation card, and immunisation information. Significant correlations exist between attitude and demographic factors like family structure and socioeconomic level (Ananthanarayan 2004).

#### **CONCLUSION:**

The paediatric nurses who cared for children under the age of five in remote communities showed a somewhat competent understanding of immunizations and a moderately supportive attitude toward them. According to these data, community health nurses need to educate paediatric nurses a little more in order to reach 100% immunisation.

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