

Knowledge And Attitude Regarding Immunization Among Parents Of Under-Five Children In Selected Rural Areas Of Ranchi, Jharkhand

Author

Abstract

Immunization is universally recognized as one of the most effective and economical public health strategies for preventing childhood morbidity and mortality. Vaccines protect children from a range of life-threatening infectious diseases and contribute significantly to the reduction of under-five mortality rates. Despite the availability of free immunization services under India's Universal Immunization Programme (UIP), complete and timely immunization coverage remains suboptimal in many rural and socioeconomically disadvantaged regions. Parental knowledge and attitude play a decisive role in determining immunization uptake, compliance with immunization schedules, and continuity of care.

The present study aimed to assess the level of knowledge and attitude regarding immunization among parents of under-five children in selected rural areas of Ranchi, Jharkhand, to determine the relationship between knowledge and attitude, and to identify associations between knowledge and selected demographic variables. A quantitative, descriptive cross-sectional research design was adopted. The study was conducted in selected villages of Ormanjhi Block, Ranchi District. A total of 100 parents of under-five children were selected using a non-probability purposive sampling technique. Data were collected using a self-structured questionnaire consisting of a demographic proforma, a knowledge questionnaire, and a five-point Likert attitude scale. The tool was validated by subject experts and demonstrated high reliability. Data analysis was carried out using SPSS version 16.0, employing both descriptive and inferential statistics.

The findings revealed that the majority of parents possessed an average level of knowledge regarding immunization, while most parents demonstrated a good attitude toward childhood vaccination. Healthcare workers were identified as the primary source of immunization-related information, and Anganwadi centers were the most commonly utilized immunization facilities. Pearson's correlation analysis indicated no statistically significant relationship between knowledge and attitude. However, a significant association was observed between knowledge and selected demographic variables.

The study concludes that although parental attitudes toward immunization are generally positive, gaps in knowledge persist, which may hinder optimal immunization practices. Strengthening community-based health education, empowering frontline health workers, and implementing targeted awareness programs are essential to improve parental knowledge and sustain positive attitudes toward immunization. The findings have important implications for nursing practice, education, administration, and future research aimed at achieving universal immunization and improving child health outcomes in rural settings.

Keywords: Immunization, Knowledge, Attitude, Under-five children, Parents, Rural health, Jharkhand

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I. Introduction

Childhood immunization is a cornerstone of preventive healthcare and a fundamental right of every child. Immunization has played a pivotal role in controlling, eliminating, and in some cases eradicating life-threatening infectious diseases such as smallpox, poliomyelitis, diphtheria, tetanus, pertussis, and measles. Vaccines stimulate the body's immune system to recognize and combat specific pathogens, thereby providing both individual protection and community-wide immunity. Over the decades, immunization has emerged as one of the most successful and cost-effective public health interventions worldwide.

Globally, vaccine-preventable diseases remain a significant cause of morbidity and mortality among children under five years of age, particularly in low- and middle-income countries. According to the World Health Organization (WHO), millions of children still miss out on essential vaccines every year, exposing them to preventable illnesses and complications. Although substantial progress has been made in expanding immunization coverage, inequities persist between and within countries, especially in rural, tribal, and underserved populations.

In India, the Universal Immunization Programme (UIP) is one of the largest public health initiatives in the world, targeting millions of infants and pregnant women annually. The programme provides free vaccination

against several vaccine-preventable diseases and has significantly contributed to the decline in child mortality rates. However, complete immunization coverage remains uneven across states and districts. Jharkhand, a predominantly rural state with diverse socio-cultural characteristics, continues to face challenges related to healthcare access, awareness, and utilization of immunization services. National surveys indicate that a considerable proportion of children in Jharkhand are either partially immunized or unimmunized, increasing their vulnerability to preventable diseases.

Parents are the primary decision-makers regarding their children's health and well-being. Their knowledge, beliefs, attitudes, and perceptions toward immunization directly influence vaccine acceptance, adherence to immunization schedules, and follow-up for booster doses. Lack of knowledge, misconceptions about vaccines, fear of side effects, cultural beliefs, and misinformation can contribute to vaccine hesitancy or non-compliance. Conversely, informed parents with positive attitudes are more likely to ensure timely and complete immunization of their children.

Understanding parental knowledge and attitudes toward immunization is therefore essential for designing effective strategies to improve immunization coverage. In rural areas, where health literacy levels may be low and access to reliable information limited, assessing these factors becomes even more critical. Nurses and community health workers play a vital role in educating parents, addressing misconceptions, and promoting positive health behaviors.

The present study was undertaken to assess the knowledge and attitude regarding immunization among parents of under-five children in selected rural areas of Ranchi, Jharkhand. By identifying existing gaps and associated demographic factors, the study aims to provide evidence-based insights to strengthen community health interventions, nursing practices, and policy initiatives focused on achieving universal immunization and improving child health outcomes.

II. Materials And Methods

Research Design

A quantitative, descriptive cross-sectional research design was adopted for the present study. This design was considered appropriate to assess the existing level of knowledge and attitude regarding immunization among parents of under-five children at a single point in time.

Setting of the Study

The study was conducted in selected rural villages of Ormanjhi Block, located in Ranchi District, Jharkhand. The area is predominantly rural, with healthcare services delivered through Anganwadi centers, primary health centers, and outreach programs under the Universal Immunization Programme.

Population

The population for the study comprised parents of under-five children residing in rural areas of Ranchi, Jharkhand. The target population included all parents of under-five children in selected rural communities, while the accessible population consisted of parents residing in Ormanjhi Block during the period of data collection.

Sample and Sampling Technique

A total of 100 parents of under-five children were selected for the study using a non-probability purposive sampling technique. This technique enabled the researchers to select participants who met the inclusion criteria and were available and willing to participate in the study.

Inclusion and Exclusion Criteria

Parents of under-five children who were residing in the selected rural areas, could read and write Hindi, and were willing to participate were included in the study. Parents residing in urban areas or those with children above five years of age were excluded.

Data Collection Tools

Data were collected using a self-structured questionnaire developed by the researchers. The tool consisted of three sections:

- 1. Demographic Proforma:** Included variables such as number of under-five children, age of parents, age of child, educational status, occupation, religion, preferred immunization center, and source of immunization-related information.
- 2. Knowledge Questionnaire:** Comprised 20 multiple-choice questions designed to assess parents' knowledge regarding immunization, including concepts of immunity, immunization schedules, vaccines under UIP, benefits of immunization, side effects, and precautions.

3. Attitude Scale: A five-point Likert scale containing 20 statements to assess parents' attitudes toward immunization, ranging from strongly agree to strongly disagree.

The content validity of the tool was established through expert review, and reliability was confirmed using Cronbach's alpha, indicating high internal consistency. The questionnaire was translated into Hindi to ensure clarity and comprehension.

Data Collection Procedure

After obtaining administrative permission from the concerned authorities and informed consent from the participants, data were collected over a period of four days. The researchers personally administered the questionnaires and clarified doubts where necessary. Confidentiality and anonymity of the participants were strictly maintained throughout the study.

Data Analysis

Data were analyzed using SPSS version 16.0. Descriptive statistics such as frequency and percentage were used to describe demographic variables and levels of knowledge and attitude. Inferential statistics, including Pearson's correlation coefficient and Chi-square test, were used to examine relationships and associations between variables. Statistical significance was set at $p < 0.05$.

III. Results

The demographic analysis revealed that the majority of parents had one under-five child and were predominantly young adults. Most respondents had completed intermediate-level education and belonged to the Hindu religion. Anganwadi centers were the most preferred immunization facilities, reflecting the accessibility and trust placed in community-based services. Healthcare workers emerged as the primary source of information regarding immunization, highlighting their crucial role in community health education.

Analysis of knowledge levels showed that more than half of the parents possessed an average level

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