KNOWLEDGE OF OPTIONAL VACCINES AMONG MOTHERS OF “UNDER FIVE CHILDREN”
“Healthy Children Today Make Healthy Nation Tomorrow”
-Jawaharlal Nehru

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ABSTRACT

Statement of Problem: The mother plays a major role in promoting the health of children. Several misconception, ignorance and inadequacy of knowledge in relation to optional vaccine is prevalent among mothers especially under five children. The effectiveness of structured teaching programme on knowledge regarding optional vaccines among mothers of under five children in Kovilpalayam at Coimbatore.

Study Objectives: a) To assess the pretest knowledge regarding optional vaccines among the mothers with under five children. b) To evaluate the effectiveness of a planned teaching programme in terms of gain in knowledge score.

Methodology: One group pretest and post test experimental design. The sample for this study consisted for 40 mothers selected by convenience sampling technique. A structured interview schedule was used to assess the knowledge among mothers under five children. Result: 40 samples were enrolled in the study. Inferential statistics were used to analyze the data. The obtained ‘t’ value for knowledge was 18.91 at (P<0.05).

Conclusion: The results indicated that the knowledge regarding optional vaccine among mothers with under five children was significantly improved after education.

1. INTRODUCTION

World Health Organization (WHO) states that health is a state of complete physical, mental and social well being not merely the absence of disease or illness. Health is more than just the absence of disease. It is affected by a wide range of spectrum of physical, mental, social and political factors. The promotion of health is social as well as individual responsibility. 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. Immunization is a high priority area in care of infants and children. High immunization rates have almost eliminated many infectious diseases which used to decimate sizable of the population for countries. A number of deadly and disabling infectious diseases can be prevented by timely administration of vaccines when child is effectively immunized at the right age, most of these diseases are either entirely prevented or at least modified so that child suffer from a mild disease without any disability.
Vaccines are the greatest boon of modern medicine. It is hoped that paralytic poliomyelitis would be eradicated from the world by the year 2005 by the success of pulse polio immunization which has been launched in India.

National Immunization services now offers protection against an additional diseases in some specific areas. Hepatitis B Vaccine protects against serious disease of the liver. Homophiles influenza type b or Human Influenza B Vaccines (HIB) is another vaccine which protects against pneumonia, meningitis. Regarding Meningitis 2005 about 8357 cases were reported in India with 485 death. WHO (2007) each year in the world about 145 million children are born around 2.4 million deaths among children under five are still due to vaccine preventable diseases and infections in early life. Mortality rate may be greater in developing countries, because of low resistance of these children against infection. In the developing world some 23% of deaths among children under five years occur in the first month. However about 3 million babies in the developing countries die during early childhood. In recent years however relatively low immunization levels in this age group have occasional scattered out break of certain disease. For this reason in spite of the national effort some immunizations are administered optionally to improve the immunization levels of all children.

This vaccination helps to making the babies’ immune system stronger. People who are duly partially immunized or not immunized at all may be at risk for the disease that these vaccines prevent. Still the people are unaware of the immunization Schedule and its importance. Hence the study plays an important role in spreading the awareness on immunization among the mothers of under five children.

2. NEED FOR THE STUDY
Immunization is defined as the process by which individuals immune system becomes fortified against an immogenic optional vaccine are those which are given according to one’s own choice. Access to immunization services and up to date immunization coverage are essential for protecting every age group from debilitating and potentially life threatening effects of infectious diseases. The risk of mortality and morbidity is statistically high during childhood period. Prevention is ultimately the most effective defense system in controlling infectious diseases. So the knowledge regarding immunization in prevention of infectious disease among mothers of under five children is important. Keeping the point of view this study was conducted to assess the knowledge regarding optional vaccines among mothers with under five children.

3. STATEMENT OF THE PROBLEM
A study to assess the effectiveness of planned teaching programme on knowledge regarding optional vaccine among mothers with under five children in rural area at Coimbatore.

4. OBJECTIVES OF THE STUDY
1. To assess the pretest knowledge regarding optional vaccines among the mothers with under five children.
2. To deliver planned teaching programme on optional vaccine among mothers with under five children
3. To evaluate the effectiveness of a planned teaching programme in terms of gain in knowledge score

5. HYPOTHESIS
There will be a significant difference between the mean post test knowledge score and the mean pretest knowledge score.

Operational definition

- **Access**: It refers to evaluate (or) estimate the knowledge regarding optional vaccines.
- **Effectiveness**: It refers to determining the extent to which teaching programme has effect in terms of gaining adequate knowledge of optional vaccines.
- **Planned Teaching Programme**: It is a systematically developed instruction design to provide information about optional vaccines.
- **Knowledge**: It means information gained through experience or education. In this study it refers to the level of understanding of the mother about the importance of optional vaccines which is measured by structured interview schedule.
- **Optional vaccines**: The parents go for particular vaccine at their own choice. It includes varicella vaccine, Hib vaccine, Hepatitis A vaccine, Typhoid vaccines, Japanese encephalitis vaccine and MMR vaccine.
- **Under Five Mothers**: It means to the mother who is responsible for the care of under five children.

6. RESEARCH METHODOLOGY

**RESEARCH APPROACH**
Pre experimental approach, a subtype of Quantitative approach was adopted for the present study, Pre experimental involves the manipulation.

**RESEARCH DESIGN**
One group pretest-post test, pre experimental. research design was used for the present study

\[ O_1 = \text{pretest} \]
\[ X = \text{Teaching programme} \]
\[ O_2 = \text{post test} \]

![Figure1. The schematic representation of the study design](image-url)
SETTING OF THE STUDY
The study was conducted in the rural area of Kovilpalayam, which is situated 20kms away from the city. The total population of 30,000 living in which under 5 children were about 1600.

SAMPLE AND SAMPLE TECHNIQUE
The sample for the study consists of 40 mothers with under five children from selected area of Kovilpalyam at Coimbatore district and were using convenience sampling technique.

CRITERIA FOR SELECTION OF SAMPLE
- Mothers who had children under five years of age.
- Availability of mothers at home during the time of interview
- Mothers who are willing to participate in the study
- Mothers who know Tamil

RESEARCH TOOL
Data were collected from the respondents by personal interview using schedule. It consists of personal profile and general knowledge about OPTIONAL vaccines which includes Human Influenza B Vaccines (HIB), Hepatitis A, Typhoid, Japanese Encephalitis, Varicella vaccine, Measles mumps and rubella (MMR).

PLANNED TEACHING PROGRAMME
The planned teaching programme covered the following content areas.
Audio visual aids consisted of flash cards and discussion. Flash cards were developed by the investigators in the following areas
- List out optional vaccine
- Describe about Hemophillus influenza Type B HIB
- Measles, mumps and rubella (MMR)
- Pneumococcal conjugate vaccine (PCV)
- Enumerate about varicella vaccine
- Specify about Japanese Encephalitis vaccine
- Explain about Typhoid vaccine

TESTING OF TOOLS
CONTENT VALIDITY
The tool was ascertained by experts in the field of child health nursing.

RELIABILITY
The reliability was established by spearman Brown’s split of technique which shows the tools is highly reliable $r = 0.92$.

DATA COLLECTION PROCESS
Formal permission was obtained from the concerned authority written consent was obtained from the subjects. On day 1 pretest was followed by Planned Teaching Programme (PTP) on Optional vaccine. The average time for knowledge
Questionnaire was 15-20 minutes and for Planned Teaching Programme (PTP) 45 minutes. The post test was conducted on the 7th day using the same tool.

MAJOR FINDINGS OF THE STUDY

Out of 40 children 23 (57.5%) were males and 28 (70%) belonged to age group of 3-4 years. Study subjects represented Hindu religion and Majority of them belonged to joint family. Mothers of 19 (47.5%) were just literate

Distribution of statistical value of Pretest and Post Test Knowledge on optional vaccines. n = 40

<table>
<thead>
<tr>
<th>S.No</th>
<th>Knowledge</th>
<th>Mean</th>
<th>S.D.</th>
<th>‘t’</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pretest</td>
<td>19.35</td>
<td>3.39</td>
<td>18.91*</td>
<td>P&lt;0.05</td>
</tr>
<tr>
<td>2.</td>
<td>Post test</td>
<td>22.5</td>
<td>1.54</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*significant

The pretest mean score of knowledge was 19.35 and the post test score of knowledge among the rural mothers was 22.5

The obtained ‘t’ value for comparison of knowledge score was 18.9 at 39 degree of freedom at 0.05 level of significance. It reveals that there was a significant difference between pretest and post test knowledge on optional vaccines so the finding implies that the planned teaching programme as a significant effect in improving the knowledge of mother under five children

6. DISCUSSION

Finding of the study show that the mean score of pretest knowledge was 19.35. It implies that there is inadequate knowledge regarding optional vaccines among mothers with under five children. Measures were provided to improve the knowledge through planned teaching programme regarding optional vaccines among mothers with under five children was given by using flash cards and it was found to be effective as they were communicating and clarifying their doubts related to optional vaccines. Gupta (2004) stated that mother is an important primary care provider and therefore her education and access to information will help her children. As children constitute the most important and vulnerable segment of our population. Mothers represent the most important health workers as far as child health is concerned. Health education inputs for mother should be strengthened. The calculated ‘t’ value for knowledge was 22.5 at 39 degree of freedom and significance at 0.05 level. It implies that planned teaching programme was effective in improving the knowledge regarding optional vaccines among the mothers. It can be interpreted that mean post test knowledge score is higher than mean pretest knowledge. This results supported by the child survival and safe motherhood review news letter (2006) stated that any formal education programme such as structured teaching programme and provision of self learning materials motivates mothers with under five children in improving knowledge about current health practices.

7. CONCLUSION

The mean post test score of knowledge was higher than mean pretest knowledge score. So flashcard assisted teaching on knowledge regarding optional vaccines has significant influence on the rural people. The mothers with under five children gained knowledge regarding optional vaccines after the planned teaching programme.
RECOMMENDATIONS

- A study can be conducted with a large sample size to confirm the result of the study
- A comparative study can be conducted in rural and urban areas
- A study can be conducted among other community people in various areas
- A similar study can be conducted in the hospital set up
- Experimental study with control group should be conducted to evaluate the difference in knowledge of mothers with under five children

REFERENCES