

Effectiveness of Structured Teaching Programme Regarding Immunization Schedule on Knowledge among Antenatal Mothers in selected hospitals at Bareilly, U.P.

Mrs. Priyanka A Masih¹ Ph.D Scholar, Faculty of Nursing, Bareilly International University, BIU, Bareilly, U.P, India

Miss Pooja Baghari², Faculty of Nursing, Bareilly International University ,BIU, Bareilly, U.P, India

Address for Correspondence

¹Mrs. Priyanka A Masih, Ph.D Scholar, Faculty of Nursing

Bareilly International University, BIU, Bareilly-243002
Uttar Pradesh, India

E-mail: priyankamasih@21gmail.com

Phone no: 9368382930

²Miss Pooja Baghari, Faculty of Nursing

Bareilly International University, BIU, Bareilly-243002
Uttar Pradesh, India

Email: poojabaghari143@gmail.com

ABSTRACT

Background: Immunization is a global health along with development accomplishment story, saving millions of lives every year. Vaccines bring down risks of getting a disease by working with body's natural defences to build protection. When get a vaccine, immune system responds. We now have vaccines to prevent surplus 20 life-threatening diseases, helping people of all ages live longer, healthier lives. Immunization currently avert 2-3 million deaths every year from diseases like diphtheria, tetanus, pertussis, influenza and measles.¹ Immunization protect people from disease by introducing a vaccine into the body that triggers an immune response, just as through exposed to a disease unpretentiously .Immunization is the practice whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine.² **Objectives:** To evaluate the effectiveness of structured teaching programme on knowledge regarding immunization schedule among antenatal mothers. **Material and Methods:** A Quasi experimental non equivalent control group post test based study was carried out in antenatal OPD. Total 60 antenatal mothers were selected by random sampling technique. Structured knowledge questionnaire was administered regarding demographic variable of the women and their knowledge about the immunization schedule. This study was conducted in antenatal OPD at Rohilkhand and Medical Hospital, Bareilly. **Results:** The mean post-test knowledge score (23.40 ± 3.90) of the experimental group was higher than the mean post-test knowledge score (8.70 ± 4.69) of the control group with the mean difference of 14.7. The calculated t value was ($t=13.17$) more than the tabled value ($t_{ss} = 2.00$). Hence there is significance difference in the mean post-test knowledge scores. **Conclusion:** The study concluded that the Structured Teaching Programme for immunization schedule is very essential to enhance the knowledge of antenatal mothers.

KEYWORDS: Effectiveness, Knowledge, Antenatal mothers Immunization schedule, Structured Teaching Programme.

INTRODUCTION

Immunization is a global health along with development accomplishment story, saving millions of lives every year. Vaccines bring down risks of getting a disease by working with body's natural

defences to build protection. When get a vaccine, immune system responds. We now have vaccines to prevent surplus 20 life-threatening diseases, helping people of all ages live longer, healthier lives. Immunization currently avert 2-3 million deaths every year

from diseases like diphtheria, tetanus, pertussis, influenza and measles.¹

Immunization protect people from disease by introducing a vaccine into the body that triggers an immune response, just as through exposed to a disease unpretentiously. Immunization is the practice whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine.²

Immunization is a timbre component of primary health care and an indisputable human right. It's also one of the foremost health investments money can buy. Vaccines are further critical to the prevention and control of infectious-disease outbreaks. They buttress global health security and will be a vital tool in the battle against antimicrobial resistance. Yet despite tremendous progress, far too mutitude people around the world – including nearly 20 million infants each year – have insufficient access to vaccines. In some countries, progress has hamper or even reversed, and there is a real risk that complacency will undermine past achievements. Immunization is process by which a person flatter protected against a disease through vaccination. The vaccination is define as act of introducing a vaccine into the body to produce immunity to a specific disease.³

As the childhood is very precious period in human life cycle. It need more care and protection from the diseases. The childhood span is also high risk for communicable diseases. Giving knowledge to mother about immunization.⁴

Vaccines administered to women during pregnancy can provide protection against serious infectious diseases for the mother, for the newborn, or both. Maternal immunization boosts the concentration of maternal antibodies that can be transferred across the placenta to directly protect infants too young to be immunized. In addition, indirect prevention through breast milk antibodies can be achieved maternal immunization. In general, inactivated vaccines are considered safe for pregnant women and their fetuses, whereas live vaccines are owing to the theoretical potential risk to the fetus. However, the risks and benefits of vaccination must be carefully weighed and whenever possible, protection to the mother and her infant should be prioritized. Influenza ,tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) vaccines are routinely recommended for all pregnant women in the United States. Seasonal inactivated influenza vaccine recommended for all pregnant women in any trimester of pregnancy to protect the mother, there is also growing evidence that infants benefit from passive antibody protection against influenza complications. Tdap vaccine recommended during the third trimester of each pregnancy to provide optimal protection to infants who were high risk of pertussis complications and mortality in the first 3 months of life. The effects of maternal immunization on the prevention of maternal and infant disease.⁵

Extended vaccination programs worldwide have notably improved child survival by preventing infections such as polio, pertussis, smallpox, and measles .However, when it comes to neonatal immunization, few vaccines licensed for administration in the first days of life . Multiple factors might affect programming of the immune system in early life and immune response might differ at neonatal and later ages. Thus, scarce knowledge and awareness of risks and benefits contribute to low neonatal immunization Maternal immunization has been recognized and recommended as a public health strategy to protect mother, fetus, and infant from infections. Maternally derived pathogen specific antibodies implement to protect the vulnerable infants until their immune system can adequately respond to vaccinations or infections .In fact, maternal antibodies are passively transferred throughout the placenta and later

in colostrum and breast milk, combat infections in early life .Optimal concentration of transplacentally transferred maternal antibodies, and the exact timing of maternal immunization, are still a matter of debate .A munificent called “immunology blunting,” the phenomenon by which maternal Immunoglobulin G (IgG) antibodies may dampen the response of the child to vaccination .Moreover, it has been suggested that the mother may pass immune cells to the child by placental transfer. Maternal cells help the development of the fetal and neonatal immune system⁶

The approach of impart passive protection to young infants by immunizing pregnant women can bypass the problems of immunological immaturity in the neonate, avoid active immunization of the infant in first year of life, and prevent transmission of an infection from the mother to the neonate. Optimal vaccines for this approach should induce high immunoglobulin G antibody titers that rapidly reach their maximum level after immunization and persist at protective levels for several years, thus providing passive defence in subsequent pregnancies. Specific applications of this approach include the worldwide practice of maternal immunization with tetanus toxoid vaccine to avert Haemophilus influenzae type b, group B streptococcal, pneumococcal, meningococcal, and human immunodeficiency virus infection in the infant. ⁷

NEED OF STUDY

Pregnancy and early infancy are periods of relative immune suppression and increased vulnerability to infection. In these circumstances infections are connected with high morbidity and mortality. In particular, infants have high rates of invasive disease, higher than at any other stage of life with rates of 100 per 100 000 populations. The concept of maternal vaccination is that maternal levels of pathogen-specific antibody are boosted and provide protection to the infant until the infant is able to mount an effective immune response to immunization. However, an prime concern for women and healthcare providers is the safety of receiving vaccines during pregnancy. There are challenges associated with assessing safety in pregnant women. This study discusses rationale for maternal vaccination concepts and mechanisms used. An estimation is made of the safety of vaccination during pregnancy, and the challenges associated with this are considered. In general terms, it is considered that the risk from disease far outweighs the small risk associated with vaccination during pregnancy and that they offer a new platform for preventing significant and serious infections in mothers and young infants.⁸

Varghese R,Pgn S et.al (2016)conducted a pre-experimental study to assess the Effectiveness of planned teaching programme on knowledge regarding immunization among antenatal mothers at selected villages of Taluka . A one group pretest posttest design and Non probability convenience sampling techniqueused with sample 60 Antenatal women, from selected villages of Waghodia Taluka. Structured questionnaire was worn as an instrument to measure the level of knowledge regarding immunization among antenatal mothers at selected villages of Waghodia Taluka. Result revealed that pre-test 41.66% have moderately knowledge, 58.33% have inadequate knowledge and 10% had adequate knowledge. The post-test knowledge score manifest 53.33% had moderately knowledge, 46.66 have adequate knowledge and no one have inadequate knowledge. The mean posttest knowledge score (36.42) also greater than the mean pre-test score (18.93). Comparison of pretest and post-test knowledge scores of antenatal mothers regarding Immunization the obtained ‘t’ value 25.508 is greater than the table value at 0.05 (2.00) level of significance. The study indicate that there is a significant difference between pre-test and post-test knowledge of antenatal mothers regarding Immunization. The findings indicate all variables such as Monthly income ($\chi^2= 3.32$),

Educational status ($\chi^2= 5.72$), Occupation ($\chi^2= 6.07$), Number of pregnancies ($\chi^2= 3.79$) were found to be significant at 0.05 level of significance & variables such as Mothers age ($\chi^2= 0.27$), Type of family ($\chi^2= 0.26$), Religion ($\chi^2= 0.91$) were not significant at 0.05 level of significance. This study interpreted that there is a significant association between pre-test level of knowledge among antenatal mothers with their selected socio-demographic variables. The study concluded that the planned health education programme was effective in improving knowledge of antenatal mothers regarding immunization.⁹

During clinical supervision the researcher observed numbers of women came with serious health problems along with serious illness during antenatal periods due to paucity of knowledge. Hence researcher felt need to assess and impart knowledge to the women regarding immunization among antenatal mothers.

Therefore, the researcher selected this topic for the study of her own interest and curiosity with hopes that this study may help those women to plan effective knowledge regarding immunization among antenatal mothers.

MATERIAL AND METHODS

Research Approach: Quantitative experimental research approach.

Research Design : Quasi experimental non equivalent control group post test only design.

Setting of the study: Antenatal OPD, Rohilkhand medical college and Hospital, Bareilly UP

Population: Antenatal mothers who attending Antenatal OPD

Target Population: Antenatal mothers attending antenatal OPD at Bareilly

Accessible Population: Antenatal mothers attending antenatal OPD at RMCH, Bareilly

Sample: Antenatal Mothers

Sample size: 60 sample

Sampling Technique: Random sampling Technique

Sampling criteria

Inclusion criteria:

- i. Women who are willing to participate in the study
- ii. Women who can read and write Hindi or English language.

Exclusion criteria:

- i. Women who are sensorily and psychologically deprived.

Variables:

Independent variable: Steaching programme regarding immunization schedule.

Dependent variable: Knowledge regarding immunization schedule.

Description of the tool Section

Section A: Consist of Sample characteristics

It includes Age , religion, educational status ,type of family, occupation, family income per month, residential area , number of pregnancy ,duration of marriage ,number of children, have you ever heard about immunization schedule ,if yes source of information.

Section B: Consist of Self Structured knowledge questionnaire

B1:(1-15) questions It includes introduction, definition of immunization, importance, needs, success of immunization, types of immunization, routes, instruction during pregnancy, Benefits, Timing of immunization

B2: (16-30) questions about immunization schedule.

Scoring of items:For knowledge questions, each correct answer was given of one mark and wrong answer awarded zero mark.

Validity of tools: The questionnaire after construction was tabulated into local language Hindi so that there is no language barrier.

Reliability of tools: 0.76

Data collection procedure:

- i. After getting ethical permission from the ethical committee of RMCH.
- ii. Women selected by random sampling technique.
- iii. Self introduction was given to women.
- iv. Rapport established with them.
- v. The purpose of the study and confidentiality of information also explained to women.
- vi. Written informed consent taken from the women after explaining research problem statement aims and objectives.
- vii. The antenatal mothers attending antenatal OPD at RMCH, Bareilly. Post test data from control group collected by taking filled responses of women taken by structured questionnaire through paper and pencil technique in separate room on first floor of antenatal OPD at RMCH, Bareilly
- viii. Each woman has taken an average time of 25-30 minutes to complete structured questionnaire.
- ix. The structured teaching programme given for 30 minutes then post test data collected by experimental group

Data collection method- Structured Interview schedule

Data analysis and Interpretation-

FINDINGS:

DESCRIPTION OF SAMPLE CHARACTERISTICS:

In experimental group, Majority 60 % of the participants were belongs to 26-35 years age group. In control group, Majority 54 % of the participants were belongs to above 15-25 years of age. In experimental group, majority of the participants i.e. 81 % were Hindu. In control group, 76 % of the participants were also Hindu.

In experimental group, 61 % of the participants were secondary pass. In control group, 58% of the participants were also secondary pass. In experimental group, Majority of the participants i.e. Majority 70 % were belongs to Nuclear family. In control group, 80 % of the participants also belong to nuclear family. In experimental group, Majority 73 % were housewife. In control group, 68 % were also housewife. In experimental group, Majority 50 % were having 10,000 to 20,000 monthly incomes. In control group, equal 50% of the participants were also having 10,000 to 20,000 monthly incomes. In experimental group, Majority 50 % were belongs to rural area. In control group, 60% were belongs to urban area. In experimental group, Majority 50 % were heard about immunization. In control group, 40% were also heard immunization.

SECTION B: Effectiveness of structured teaching programme regarding immunization schedule on knowledge among antenatal mothers

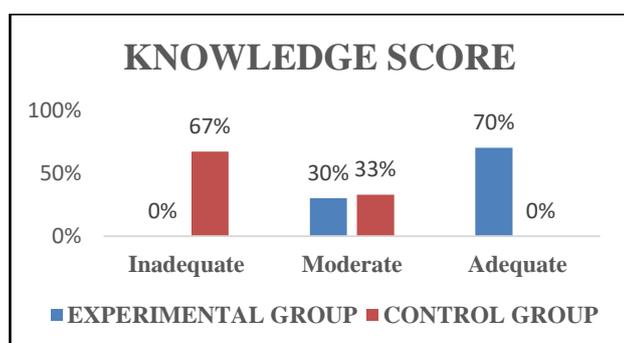
i. Comparison of mean post-test knowledge scores of the experimental and control group

Table 1
(n=30+30)

Post-test	Range	Mean± SD	Mean Difference	t- value (p value)
Experimental group	29-15=14	23.40 ± 3.90	14.7	13.17 (0.000)*
Control group	19-02=17	8.70 ± 4.69		

$t_{(58)} = 2.00, p < 0.05$

Table 1 depicts that the mean post-test knowledge score (23.40 ± 3.90) of the experimental group was greater than the mean post-test knowledge score (8.70 ± 4.69) of the control group with the mean difference of 14.7. The calculated t value was ($t=13.17$) more than the tabled value ($t_{58} = 2.00$). Hence there is significance difference in the mean post-test knowledge scores.



The Figure . Comparison of mean post-test knowledge scores of the experimental and control group.

Section C:

The analysis revealed that there is no significant association established with the selected socio-demographic variables in experimental and control group..

DISCUSSION

The above mentioned findings are supported by the following study:

P Karesh,S Ankita,et al (2019)conducted a study to assess the effectiveness of structured teaching programme on knowledge regarding vaccines among mothers of under five years children in people's hospital , bhopal,(M.P.)The research design was non experimental descriptive design. In this study pre test and post test carried out for assessing the knowledge of mothers of under five years children on optional vaccine. The result revealed that Analysis of pre test knowledge score of mother regarding optional vaccines was done majority of the 42(84%) mothers are having average knowledge, 8(16%) mothers are having poor knowledge. Analysis of post test knowledge score of mother regarding optional vaccines was done majority of the 45(90%) mothers are having good knowledge, 5(10%) are having average knowledge. In pre test majority of the 42(84%) mothers had average knowledge and after providing information pamphlet post test knowledge score majority 45(90%) had good knowledge. After comparison proved that the information booklet was effective for increasing the on knowledge regarding optional vaccines among mothers of under five years children. in pre test the majority ofmothers have poor knowledge regarding optional vaccine is(72%), and mother have average knowledge regarding optional vaccine is (28%).In post test majority of mothers have good knowledge regarding optional vaccine is (90%), mothers having average knowledge regarding optional vaccine is (10%).The study concluded that the knowledge of mothers regarding optional of under five years children that (90%) of the mothers had good knowledge.¹⁰

V.S.Visanth, Halemani Kurvatteppa (2018)Immunization had laid a major development in areas of preventive pediatrics. Immunization had also helped in preventing various childhood diseases and decreasing mortality rates among children. Child Health is a major concern in developing countries like India. The objectives of the study were to assess the attitude regarding of Mother of under five children regarding Immunization, assess the knowledge of Mother of under five children regarding Immunization and to find the association between knowledge and demographical variables. The 60 samples were selected by purposive sampling technique and study was conducted in mau village under mohanalaljanj community health center. Three types of tool were used such as Questionnaire to assess demographic variable, Questionnaires for knowledge assessment and a Five point Likert scale for attitude assessment. The results showed that 31.7% had moderate knowledge, 68.3% had inadequate knowledge and none had adequate knowledge. The study concluded that70% had moderate attitude and none had good attitude. There was statistical significant

association in knowledge level of mothers with age ($\chi^2=5.805^*$), Educational level ($\chi^2=3.651^*$), religion ($\chi^2 = 6.158^*$), The remaining variables Like Occupation, Number of children, Family income, Type of house, Type of family, were found to be not significant.¹¹

CONCLUSION The study concluded that the STP for immunization schedule is very essential to enhance the knowledge of antenatal mothers.

CONFLICT OF INTEREST -Nil

SOURCE OF FUNDING – Self

ETHICAL CLEARANCE –The ethical permission taken by ethical committee of Rohilkhand Medical College and Hospital ,Bareilly

REFERENCES

1. http://www.who.int/health_topics/vaccines_and_immunization
2. Sharma Rimple. A Textbook of Essentials of Pediatric Nursing 1st edition:Jaypee Brothers Medical Publishers, Page. no.131-135
3. Dutta Parul. A Textbook of Pediatric Nursing (II edition): Published by Jaypee Brothers Medical Publishers, Chapter 4, Page no 97-103
4. .www.http.healthcare.com
5. Jones C, Heath P. Antenatal immunization: Concepts and challenges. Hum Vaccin Immunother. 2014;10(7):2118–22. Available from: <https://doi.org/10.4161/hv.29610>
6. Munoz M Flor, Jamieson J Denise. Maternal immunization. Journal of Obstetrics and Gynecology 2019 April ;133 (4): 739-753. Available from: <http://pubmed.ncbi.nlm.nih.gov/30913173>
7. Cinicola B, Sgrulletti M, Elfeky R, Carsetti R, Fernandez Salinas A. The Protective Role of Maternal Immunization in Early Life. Available from: <http://europepmc.org>
8. Bulletin of the world Health Organization 2019. Available from: <http://www.WHO.in>
9. Varghese Ruhi, PGN Swami, Patel V Srushti, Patel H Sweta, Patel J Sweta. Effectiveness of planned teaching programme on knowledge regarding immunization among antenatal mothers at selected villages of Waghodia Taluka. International journal of applied research. 2016;2(8) :157-160. Available from: <http://dx.doi.org>.
10. Karesh Prasad, Ankita Shayni, Andrews, Aamrapali, Deepmala Chouhan, Kanchan Yadav, Moulic Immanuel James, Poonam Rathore, Raksha Kushwaha, Raksha Jonjar, Sakshi John Sheela Shahu, Vaishali Lokhande. A study to assess the effectiveness of structured teaching programme on knowledge regarding optional vaccines among mothers of under five years children in people's hospital, Bhopal, (M.P.). International journal of scientific research. 2019;8(11):2277-8179.
11. V.S. Visanth, Halemani Kurvatteppa. Immunization had laid a major development in areas of preventive pediatrics. Immunization had also helped in preventing various childhood diseases and decreasing mortality rates among children. IJPN .2018. Available from <http://dx.doi.org/10.21088/ijpen.2454.9126.4218.7>