



EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAM ON KNOWLEDGE REGARDING MISSION INDRADHANUSH PROGRAM AMONG THE MOTHERS OF UNDER FIVE CHILDREN IN THE TRIBAL AREAS

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Article Info

Received 21/08/2021; Revised 18/09/2021

Accepted 25/10/2021

ABSTRACT

A quantitative study was aimed at assessing the knowledge regarding Mission Indradhanush Program among 30 Mothers of under five children in the tribal areas of Thenmala in Kollam district. The objectives of the study were to assess the knowledge scores regarding Mission Indradhanush Program among the Mothers of under five children, to evaluate the effectiveness of Video Assisted Teaching Program on knowledge scores regarding Mission Indradhanush Program, to find out the association between pretest knowledge scores regarding Mission Indradhanush Program among the Mothers of under five children with selected socio demographic variables. A quantitative research approach was employed for the research study. The research design adopted for the present study was pre experimental one group pretest posttest design. Data was collected through the interview method. Pretest was conducted by using structured interview knowledge questionnaire followed by administration of Video Assisted Teaching Program. Posttest was conducted after 7 days by using same structured interview knowledge questionnaire. The result showed that an average scores of knowledge before and after Video Assisted Teaching Program in the subjects were 6.233 and 12.633 respectively. The computed 't' value of knowledge regarding Mission Indradhanush Program was 13.178 with 'p' value of 0.001 and it was significant at 0.05 level ($p < 0.05$). Result also revealed that there was a significant association between pretest scores of knowledge and selected socio demographic variable like type of family. Hence the result showed that Video Assisted Teaching Program was effective in improving the knowledge of the mothers regarding Mission Indradhanush Program.

Key Words: Mission Indradhanush Program; Video Assisted Teaching Program; Mothers of under five children.

INTRODUCTION

Healthy children are the vital population to the Nation's wealth. Healthy children are more likely to become healthy adult. For the better growth and health of children vaccine is an important aspect. It is obvious that healthy children are tomorrow's healthy citizens. So in order to be healthy all the children have the right to take

vaccination at the right time and vaccinated children are necessary for building a healthy nation. [1]

According to 2011 census, the population of children between 0 to 6 years is 158.8 million which represents 13.12% of the total population. [1] Health care of children below 5 years should be given greater importance because these age groups are vulnerable to



various health problems due to weaker immune system as compared to adults. The child needs to be protected from six infectious and vaccine preventable diseases, it includes tuberculosis, tetanus, diphtheria, whooping cough, measles and poliomyelitis. More than one million children and pregnant mothers can be saved from death by immunizing them at the right age and right time and by completing the full course of immunization. [2]

Mission Indradhanush is to strengthen and re-energize the program and achieve full immunization coverage for all children and pregnant women at a rapid pace, the Government of India launched “Mission Indradhanush” in December 2014. [3] Mission Indradhanush Program brought considerable change in vaccination coverage from 1% to 6.7% in the period of 2015 – 2016. [4] Intensified Mission Indradhanush Program was implemented in 2017 – 2018, followed by a coverage evaluation survey, showed an average increase of 18.5% in fulfilling immunization coverage as compared to that of National Family Health Survey (NFHS – 4) carried out in 2015 – 2016. [5]

According to WHO 2019 report, in India vaccine preventable diseases were reported, diphtheria cases were 9622, measles cases were 10430, pertussis cases were 11875, tetanus cases were 7071, [2] tuberculosis cases were 24.04 lakhs [6] and hepatitis B cases were 60 million. [7] According to the National Family Health Survey – 4 report, vaccination coverage of India was 62%, the same for backward tribes were 55.8%. The literacy rate of India was 74.04% and that of backward tribes were 64.3%. [8] In Kerala, total vaccination coverage was 82.1% and backward tribe’s vaccination coverage were 80.6%. The literacy rate of Kerala was 93.91% and that of backward tribes were 85.8%. In Kollam district, the vaccination coverage was 87.3% and backward tribe’s vaccination coverage without delay were 74%. The literacy rate of Kollam was 94.09% and that of backward tribes were 79.09%. [9]

According to Directorate of Health Services (DHS), State Surveillance Unit, Integrated Disease Surveillance Project 2019, Kerala vaccine preventable diseases were reported, in its diphtheria cases were 32, hepatitis B cases were 828 and tuberculosis cases were 75 per lakhs. As per Directorate of Health Services 2019 in Kollam district reported 198 hepatitis B and 5 diphtheria cases. [10]

From international, national, institutional survey report and from the investigator side it has been understood that the children below the age of five in some parts of world are affected with vaccine preventable diseases such as diphtheria, tetanus, pertussis, hepatitis B, tuberculosis and measles. NFHS report of India still reports some vaccine preventable diseases. Likewise, Directorate of Health Services survey of Kerala also reported vaccine preventable diseases like diphtheria, tuberculosis and

hepatitis B. Most of the places that reported these type of diseases are nomadic, urban slum, living around brick kilns, fisherman’s villages, living in riverine areas, tribal communities and living in forest areas. It has been found that the reason for presence of these diseases are the low literacy rate, traditional belief, culture, religion, negligence, lack of knowledge, lack of awareness and lack of health resources. To limit these perceived immunization barriers, we have to extend and improve the knowledge about the vaccination for the mothers who are an essential part of the children’s life by recorded video regarding immunization program. The investigator understood all these issues and wishes to enhance the future of the children. So, the investigator would like to conduct research in Mission Indradhanush Program to pass this knowledge about immunization to mothers under the national immunization program.

OBJECTIVES

1. To assess the knowledge scores regarding Mission Indradhanush Program among the Mothers of under five children in the tribal areas.
2. To evaluate the effectiveness of Video Assisted Teaching Program on knowledge scores regarding Mission Indradhanush Program among the Mothers of under five children in the tribal areas.
3. To find out the association between pretest knowledge scores regarding Mission Indradhanush Program among the Mothers of under five children in the tribal areas with selected socio demographic variables.

ASSUMPTIONS

This study assumes that,

- The Mothers of under five children may have some knowledge regarding Mission Indradhanush Program.
- Video Assisted Teaching Program may improve the knowledge scores of the Mothers of under five children regarding Mission Indradhanush Program.

HYPOTHESES

H₁: There is a significant difference between pretest and posttest scores of knowledge regarding Mission Indradhanush Program among the Mothers of under five children in the tribal areas of Thenmala.

H₂: There is a significant association between the pretest scores of knowledge regarding Mission Indradhanush Program among the Mothers of under five children in the tribal areas with selected socio demographic variables.

NULL HYPOTHESES

H₀₁: There is no significant difference between the pretest and posttest scores of knowledge regarding



Mission Indradhanush Program among the Mothers of under five children.

H₀₂: There is no significant association between the pretest scores of knowledge regarding Mission Indradhanush Program with the selected socio demographic variables.

MATERIAL AND METHODOLOGY

A quantitative study was aimed at assessing the knowledge regarding Mission Indradhanush Program among Mothers of under five children in the tribal areas of Thenmala in Kollam district. The investigator obtained a formal written ethical clearance from Holy Cross Hospital, Kottiyam, Kollam, Kerala, ethics committee for conducting the research study. The investigator obtained formal written permission from the Directorate of Health Services, Thiruvananthapuram for data collection. A quantitative research approach was employed for the research study. The research design adopted for the present study was pre experimental one group pretest posttest design. 30 subjects identified by non-probability purposive sampling technique. After that, the investigator selected particular anganwadis for conducting Video Assisted Teaching Program and data collection. The investigator explained the purpose of the study to the subjects and obtained informed consent from subjects. The study was conducted during the period of COVID – 19 so the investigator had collected the data through interview method and following COVID – 19 protocol. The study tool consisted of Parts A and B. Part A was socio demographic proforma and Part B was structured interview knowledge questionnaire. Pretest was conducted on 17.03.2021 and 18.03.2021 by using structured interview knowledge questionnaire followed by administration of Video Assisted Teaching Program. The Video Assisted Teaching Program was implemented as a recorded video having the duration of 15 minutes. Posttest was conducted after 7 days at the date of 25.03.2021 and 26.03.2021 by using the same structured interview knowledge questionnaire.

SAMPLING CRITERIA

Inclusion criteria

The study includes the Mothers

- Who are having at least one child below five years
- Who can understand Malayalam.
- Who are residing in that area for a minimum period of one year.

Exclusion criteria

The study excludes the Mothers

- Who attended any educational /training program regarding immunization.
- Who will not be present during data collection of post intervention.

RESULTS

Section 1: Distribution of subjects based on socio demographic variables.

Out of 30 subjects, 16.67% mothers were aged between 18 and 21 years, 23.33% mothers were the aged between 22 and 25 years, 23.33% mothers were aged between 26 and 29 years 36.67% mothers were aged between above 30 years. Regarding type of family, 86.67% mothers belong to nuclear family and 13.33% mothers belong to joint family. Regarding number of children, 23.34% mothers had a single child, 40% mothers had two children, 23.33% mothers had three children and 13.33% had more than three children. Regarding education of mothers, 76.67% mothers had primary education, 20% mothers had secondary education and 3.33% mothers had graduate and above. Regarding occupation of mothers, 13.33% mothers were homemakers, 83.34% mothers were NREGS employees and 3.33% mother were employed in government sector. Regarding socio economic status as per ration card, 96.67% mothers were having yellow ration card and 3.33% mother were having white ration card. Regarding immunization status of children, 100% children were fully immunized. Regarding preference of health care services, 90% preferred allopathy health care services, 6.67% preferred Ayurveda health care services, 3.37% were following homeopathy health care services. Regarding health sector approach, 3.33% subjects were depending on private health sectors, 93.34% subjects were depending on government sectors and 3.33% were depending on private and government health sectors. Regarding regular health visit by health staff, 100% said “yes” about regular health visit by health staff. Regarding frequency of health visit by health staff, 40% responded that health staff visited their home once in a week and 60% responded that health staff visited their home once in a month. Out of 30 subjects, 33.33% had awareness regarding any immunization programs and 66.67% had no awareness regarding any immunization programs.

Section 2: Distribution of subjects based on the pretest scores of knowledge regarding Mission Indradhanush Program.

Table 1 depicts that out of 30 subjects, 70% mothers had poor knowledge scores, 30% mothers had average knowledge scores in the pretest. In the posttest, 63.33% mothers had average knowledge scores and 36.67% had good knowledge scores regarding Mission Indradhanush Program.

Section 3: Effectiveness of Video Assisted Teaching Program among the Mothers of under five children.

Table 2 shows that an average scores of knowledge before and after Video Assisted Teaching



Program in the subjects were 6.233 and 12.633 respectively. Mean difference in scores of knowledge was 6.4. The computed 't' value of knowledge regarding Mission Indradhanush Program was 13.178 with 'p' value of 0.001. Since calculated p value (0.001) of knowledge regarding Mission Indradhanush Program was less than 0.05, aforementioned that increase in the scores of knowledge regarding Mission Indradhanush Program among the Mothers of under five children as a result of the Video Assisted Teaching Program is statistically significant at 0.05 level. So null hypothesis (H01) is rejected and research hypothesis (H1) is accepted.

Section 4: Association between pretest scores of knowledge and selected socio demographic variables.

There was a significant association between pretest scores of knowledge and selected socio demographic variable with type of family ($\chi^2 = 4.5$, p value = 0.035).

There was no significant association between pretest scores of knowledge and selected socio demographic variables with age of mothers ($\chi^2 = 0.238$, p value = 0.626), number of children ($\chi^2 = 1.2$, p value = 0.282), education of mothers ($\chi^2 = 0.009$, p value = 0.925), occupation of mothers ($\chi^2 = 0.879$, p value = 0.348), socio economic status as per ration card ($\chi^2 = 2.41$, p value = 0.120), preference of health care services ($\chi^2 = 0.018$, p value = 0.894), health sector approach ($\chi^2 = 0.408$, p value = 0.523), frequency of health visit by health staff ($\chi^2 = 1.7$, p value = 0.193) and awareness regarding any immunization ($\chi^2 = 2.85$, p = 0.09).

Table 1: Distribution of subjects according to scores of knowledge regarding Mission Indradhanush Program.

n = 30

Scores of knowledge	Pretest		Posttest	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Poor	21	70	0	0
Average	9	30	19	63.33
Good	0	0	11	36.67

Table 2: Effectiveness of Video Assisted Teaching Program on knowledge regarding Mission Indradhanush Program.

n = 30

Knowledge	Mean	SD	Mean Difference	Paired t test	p value
Pre test	6.233	1.92	6.4	13.178	0.001*
Post test	12.633	2.37			

* = Significant at 0.05 level

DISCUSSION

The Mission Indradhanush Program aims to cover all those children who are either unvaccinated, or are partially vaccinated against vaccine preventable diseases. Under this drive, focus is given on pockets of low immunization coverage and hard to reach areas where the proportion of unvaccinated and partially vaccinated children is highest. It is not only aimed to rapidly increase the immunization coverage through special drives during specified months but also focused towards strengthening health system for addressing equity issues in access to immunization. [4]

The study was focused to assess the effectiveness of Video Assisted Teaching Program on knowledge regarding Mission Indradhanush Program among the Mothers of under five children in the tribal areas of Thenmala and data was collected using structured knowledge questionnaire from 30 subjects and analyzed using descriptive and inferential statistics.

Objective 1: To assess the knowledge scores regarding Mission Indradhanush Program among the Mothers of under five children in the tribal areas.

The finding of the present study revealed that, out of 30 subjects, 70% mothers had poor knowledge scores, 30% mothers had average knowledge scores in the pretest. In the posttest, 63.33% mothers had average knowledge scores and 36.67% had good knowledge scores regarding Mission Indradhanush Program.

Objective 2: To evaluate the effectiveness of Video Assisted Teaching Program on knowledge scores regarding Mission Indradhanush Program among the Mothers of under five children in the tribal areas.

The finding of the present study revealed that an average scores of knowledge before and after Video Assisted Teaching Program in the subjects were 6.233 and 12.633 respectively. Mean difference in scores of knowledge was 6.4. The computed 't' value of knowledge regarding Mission Indradhanush Program was 13.178 with 'p' value of 0.001. Since calculated p value (0.001) of knowledge regarding Mission Indradhanush Program was less than 0.05, above mentioned that increase in the scores of knowledge regarding Mission Indradhanush Program among the Mothers of under five children as a result of the Video Assisted Teaching Program is statistically



significant at 0.05 level ($p < 0.05$). So null hypothesis (H_0) is rejected and research hypothesis (H_1) is accepted.

Objective 3: To find out the association between pretest knowledge scores regarding Mission Indradhanush Program among the Mothers of under five children in the tribal areas with selected socio demographic variables.

The finding of the present study revealed that there was a significant association between pretest scores of knowledge and selected socio demographic variable with type of family ($\chi^2 = 4.5$, p value = 0.035).

NURSING IMPLICATIONS

Nursing Practice

- Nursing practice is an ongoing process of assistance which aims the all-round development of humankind. The main focus of nursing practice is to reduce the morbidity and mortality rate related to vaccine preventable diseases and to improve the quality of life.
- The community health nurse should identify the various factors which affects the immunization of children and pregnant mothers and create awareness about importance of immunization.
- Video Assisted Teaching Program can be effective in improving the knowledge regarding Mission Indradhanush Program.
- Regular health education program can be conducted by the nursing personnel in community setting which helps the mothers to be aware about the ongoing immunization Program for children and pregnant mothers, the optional vaccines, benefits of immunization and about the killer or vaccine preventable diseases.
- The study carries an implication that community health nurse plays an important role in imparting knowledge and helping the mothers regarding Mission Indradhanush Program and help the Government to achieve the goals and objectives.
- Nursing professionals can motivate the significant others and family members regarding Mission Indradhanush Program.

Nursing Education

- Nurse should equip themselves by reading more books, recent advances and current health related issues to keep themselves updated.
- As a nurse educator, there were abundant opportunities for nursing professionals to educate the nursing students and the health personnel regarding Mission Indradhanush Program.
- The nursing curriculum should include more modules on the recent National Health Program for effective utilization of the ongoing health program including

immunization program so that the public can benefit from various Health schemes.

- The study can be extended for educating the family members or the care givers.
- This study emphasizes the need for in service education for the nursing personnel in order to prevent the missing of vaccines among under five year children.

Nursing Administration

- The nursing administrators should explore and encourage innovative ideas in preparation of an appropriate teaching material, he/she should organize sufficient manpower, money and material for disseminating information regarding prevention and control of vaccine preventable diseases.
- Nurse administrators should arrange special training, in service education and staff development program to nursing personnel, school teachers, anganwadi workers and social workers about Mission Indradhanush Program, Universal Immunization Program and its importance of vaccine preventable diseases or killer diseases.
- Nurse administrators should collaborate and co-ordinate with community leaders in creating awareness in community for effective utilization of Universal Immunization Program including Mission Indradhanush Program.

Nursing Research

- The study will motivate the beginning researchers to conduct same study with different variables on a large scale.
- The study should be disseminated through research journals and scientific papers.
- Nurses should come forward to take up unsolved questions in the field and nursing fraternity. The public and private agencies should also encourage researcher in the field through materials and funds.
- The study should be utilized for future studies and references.

LIMITATIONS OF THE STUDY

- The study was limited to mothers who were having children below five years in the tribal areas of Thenmala, Kollam.
- Study was conducted during the period of COVID 19, so there were some restrictions in tribal areas.
- Duration of data collection was limited to 2 weeks only.
- The sample size of the study was limited to 30 Mothers of under five children due to COVID 19.



RECOMMENDATIONS

- A replication of present study can be conducted with a larger population.
- A similar study can be conducted in different settings at Hospitals in tribal, hilly areas, construction sites, rural areas and urban areas and then due results can be compared.
- Manuals and information booklets may be developed to enhance knowledge on Mission Indradhanush Program.
- The same study can be conducted on other domains such as attitude and practice.
- Educational program may be designed for mothers, anganwadi workers, health workers, school teachers, panchayat members and social workers to disseminate knowledge regarding Mission Indradhanush Program.
- Comparative study can be conducted between different groups.

CONCLUSION

The following conclusions were drawn based on the findings of the study. The present study is done to assess the effectiveness of Video Assisted Teaching

Program on knowledge regarding Mission Indradhanush Program among the Mothers of under five children in the tribal areas of Thenmala. The study revealed that, 70% mothers had poor knowledge scores, 30% mothers had average knowledge scores in the pretest. In the posttest, 63.33% mothers had average knowledge scores and 36.67% had good knowledge scores regarding Mission Indradhanush Program. The paired 't' test was carried out and it was found to be significant at $p < 0.05$ level. So null hypothesis (H01) is rejected and research hypothesis (H1) is accepted. This study shows that there was significant association between pretest scores of knowledge and selected socio demographic variable with type of family. Hence the null hypothesis (H02) is rejected and research hypothesis (H2) is accepted. There was no significant association between pretest scores of knowledge and selected socio demographic variables with age of mother, number of children, education of mother, occupation of mother, socio economic status as per ration card, preference of health care services, health sector approach, frequency of health visit by health staff and awareness regarding any immunization programs. Hence the null hypothesis (H02) is accepted and research hypothesis (H2) is rejected.

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