

A Quasi Experimental Study to Assess the Effectiveness of Structured Teaching Programme Regarding Integrated Management of Neonatal and Childhood Illness (IMNCI) on Knowledge among Health Workers Working in Selected Health Centres of Odisha, India

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Abstract: A Quasi-experimental study with pre and post test was undertaken in different health centres in selected health centres of state Odisha. Data was collected from the 50 health workers, 25 control group and 25 experimental group to assess the effectiveness of structured teaching programme (STP) on integrated management of neonatal and childhood illness (IMNCI) & was analyzed by using descriptive and inferential statistics. Objective was to assess the knowledge of health workers regarding IMNCI before and after the implementation of STP in both the groups. To compare the level of knowledge before and after the implementation of STP in both group. To find out the association between levels of knowledge of IMNCI with selected demographic variables among health workers. **FINDINGS:** In the experimental group the pre-test health workers scored is only 43.4 % of knowledge score after implementation of STP they scored 87.98 %. The difference is 44.58 %. This 44.58 % difference in knowledge is the effectiveness of STP. In control group they scored in pre-test 55.1 % and 60.5 % in the post test. The different between pre-test and post test is only 5.4 %. Comparison of pretest & post test on 2 levels knowledge between experimental and control group shows that the pre-test and post-test knowledge score on IMNCI. This difference between pre-test and post-test score is statistically significant. The association between the level of knowledge regarding IMNCI with selected demographic variables among health workers with control and experimental group is tested by using F-test and Chi-square test.

Keywords: Knowledge, IMNCI, Structured Teaching Programme

1. Introduction

Every year more than 11 million children in developing countries die before the age of 5. India has one of the highest rates of childhood mortality in the world. Most of these deaths occurring within the first month of a newborn's life and nearly half of all neonatal deaths occurring within the first week of a child's life. India has made a strong commitment to the reduction of neonatal mortality through the implementation of the joint UNICEF and WHO initiative, IMNCI. The main strategy of IMNCI is to train and provide preventive and home based care through India's primary health care system. Studies show that the integrated approach ensures that all relevant needs of the child are looked at and attended to during the contact of the child with the health workers.

1.1 IMNCI strategy

The strategy includes both preventive and curative interventions that aim to improve practices in health facilities, the health system and at home. It includes 3 main components.

1) Improvements in the case-management skills of health staff through the provision of locally –adapted guidelines on integrated management of Neonatal and childhood illness and activities to promote their use.

- 2) Improvements in the overall health system required for effective management of childhood illness.
- 3) Over view of the Indian 3-tier health system.

CHC → PHC → SC

- 4) Improvements in family and community health care practices.

Twelve key practices have been identified by UNICEF and WHO to be of crucial importance in providing good home-care for the child (Hill et.al 2004).

- Take children as scheduled to complete full course of immunization.
- Breastfeed infants exclusively for 6 months
- Starting at six months of age feed children freshly prepared energy and nutrient-rich complementary foods. While continuing to breastfeed up to 2 years or longer.
- Ensure children receive adequate amount of micronutrients.
- Dispose of faeces safely and wash hands after defecation before preparing meals and before feeding children.
- Protect children in malaria endemic areas by ensuring they sleep under ITN.
- Continue to feed and offer more fluids including breast milk when they are sick.
- Give sick children appropriate home treatment for infections.
- Recognize when sick children need treatment.

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- Follow health workers advice about treatment, follow up and referral.
- Promote mental and social development by responding to a child's needs for care and through talking, playing and providing a stimulating environment.
- Ensure that every pregnant woman has adequate antenatal care.

1.2 Need for the Study

Reduction in child and neonatal mortality are major public and global health challenges (Arrive et al.2004).

The 4th millennium development goal (MDG-4) represents commitment to reduce mortality in children younger than 5 years by 2/3rd between 1990 and 2015 (Sachs et al. 2005 MDG MONITOR, 2009).

Input of efforts, between 1960 and 2000, resulted in reduction in child mortality (From 2 month to 5 years). Unfortunately the neonatal mortality rate could not be reduced desirably.(Ahmad et.al 2000 lawn et al.2005).

WHO & UNICEF lunched IMCI strategy during 1992 followed by IMNCI.

Strategy to improve child and neonatal survival through provision of individualized care.

For this, Health care staff especially serving in first level rural health care sector has been trained for clinical case management of IMNCI.

It is therefore, the investigator felt and need to identify the awareness with assessment of knowledge of health workers (as they are the direct care giver) regarding IMNCI by a quasi experimental design with control group.

1.3 Statement of the Problem

A quasi experimental study to assess the effectiveness of structured teaching programme regarding IMNCI on knowledge among health workers working in selected health centres in Odisha.

1.4 Objectives

- 1) To assess
The knowledge of health workers regarding IMNCI before and after the implementation of STP in control and experimental group.
- 2) To compare
The level of knowledge between before and after the implementation of STP in experimental and control group.
- 3) To find out
The association between level of knowledge of IMNCI with selected demographic variables among health workers in experimental and control group.

1.5 Assumptions

The Present study assumes that:

- 1) The knowledge of health workers regarding IMNCI will be less before STP.
- 2) The health workers will express their free and frank feelings about IMNCI.
- 3) The health workers are willing to participant in teaching programme to enhance their knowledge on IMNCI.
- 4) STP is an effective method of imparting knowledge to the health workers.

1.6 Hypotheses

H1- There will be significant difference between pre test and post test knowledge scores of health workers regarding IMNCI.

H2- There will be significant relation between the knowledge and the demographic variables.

2. Theoretical Framework

Wood & Haber (1994) stated that “when conducting research a theoretical framework serves as a guide or map to systematically identify a logical precisely defined relationship between variable.”

The present study is focused on assessing the effectiveness of structured teaching programme (STP) on knowledge of IMNCI among health workers.

In concepts of Kenny's open system model are input, throughout, output and feedback. Input refers to matters and information which are continuously processed through the system and released as outputs.

INPUT: in this study the input was the administration of STP to the health workers regarding various aspects of IMNCI.

Throughput: Throughput was the processing of information of IMNCI through lecture cum discussion and demonstration.

OUTPUT: The expected outcome was obtained by assessing the knowledge was obtained by assessing the knowledge through close-ended questionnaire.

Feed back-: Difference in pre and post test scores were observed from the knowledge scores of the samples.

In the present study, the feedback was considered as a process of maintaining the effectiveness of STP. It was assessed by comparing the pre and post test scores. Through 't' test. The effectiveness of the STP was also tested between the obtained scores of the samples with their demographic variables through chi-square test.

Delimitations-:

The study is limited to

- 1) The health workers who are working in the selected health centers of 2 districts i.e. Cuttack and Kendrapara, Odisha.

- 2) The health workers who are present during the time of data collection.
- 3) The health workers who are willing to participate in the study.
- 4) Knowledge of health workers regarding IMNCI.

3. Methodology

Research approach

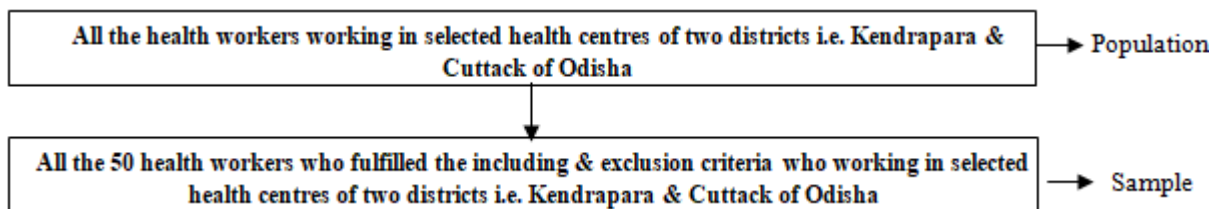
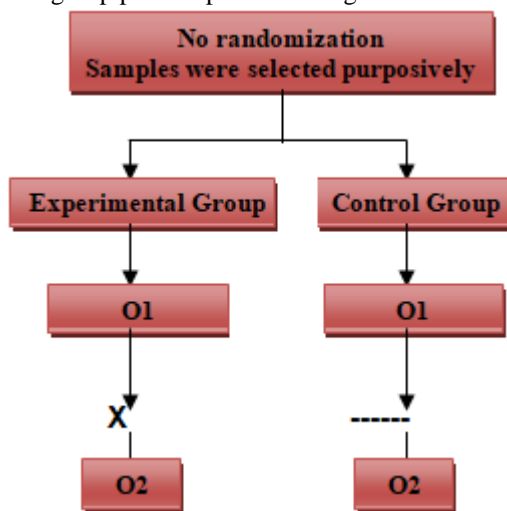
The research approach adopted for this study was an evaluative approach. Evaluative approach helps to explain the effect of independent variable on the dependent variable. This approach is considered by the investigator as the most suitable one for this study.

Research Design

Research design refers to the researchers overall plan for obtaining answers to the research questions and it spells out strategies that the researchers adopt to develop information that is adequate, accurate, objective and interpretable.

A quasi-experimental research design with pre and post test with control group approach was used to evaluate the effectiveness of the structured teaching programme for the present study. The design to be used is depicted as follows:

Two group pre and post test design



Schematic Outline of Sampling Design

Criteria for selection of the sample

- Inclusion criteria**
- Health workers who are working in the selected health centres.
 - Health workers who are willing to participate in the study.

Keys:

- O1 – Pre-test on knowledge of IMNCI**
- X – STP on IMNCI**
- O2 – Post-test on knowledge of IMNCI**

Schematic representation of research design variables

Variables are qualities, properties or characteristics of persons, things or situations that change or vary.

In this study, three types of variables are used.

They are:-

- 1) Independent variables
- 2) Dependent variables
- 3) Extraneous variables

Independent variable

An independent variable is the variable is the variable that stands alive is not dependent on any other
 In this study independent variable refers to structured teaching programme on IMNCI.

Dependent variable

Dependent variable is the outcome variable of interest. The variable that is hypothesized to depend on or caused by another variable, the independent variable. In this study, knowledge of health workers are the dependent variables.

Extraneous variable

The extraneous variable under the study are age, professional qualification, years of experience, work place etc.

Sample size

Sample comprised of 50 health workers who are working in selected health centres of Cuttack and Kendrapara districts of Odisha. 25 experimental and 25 control group.

Sampling Technique

Non probability purposive sampling technique was used to select the sample for this study. The researcher selected the subjects purposively for both control and experimental group from selected health centres, Odisha.

Development of the tool

The tool used for the study were-
 Close ended questionnaire to assess the knowledge of the health workers about IMNCI
 Structured teaching programme (STP)
 The structured knowledge questionnaire consists of 30 items divided in to 5 areas. They are:

| | |
|-----------------------------------|---------|
| Meaning and concept of IMNCI | 6 items |
| Identification and classification | 5 items |
| General danger signs | 4 items |
| IMNCI Case management process | 9 items |
| Treatment and follow up | 6 items |

There was 30 maximum obtainable scores. The level of knowledge was categorized based on the percentage of scores obtained.

Table 1: Scoring for level of knowledge

| Level of the knowledge | Percentage of scores | Actual score |
|------------------------|----------------------|--------------|
| Very poor | < 20 % | 1-6 |
| Poor | 21-40 % | 7-12 |
| Average | 41-60 % | 13-18 |
| Good | 61-80 % | 19-24 |
| Excellent | 81 % and above | 25-30 |

Development of structured teaching programme (STP)

The STP was developed based on the objectives, review of related literature, sample size, method of teaching and the expert's opinion. The STP was prepared in English and odia.

The following steps are adopted for preparation.

- Preparation of STP
- Plan for teaching
- Plan for the implementation of STP.

Organisation of the content

The STP consisted of two sessions. Each session took 25 minutes to complete.

Section - 1

This was the theoretical session. The contents for this session were prepared by covering the following areas.

- Introduction to the IMNCI
- Meaning of IMNCI
- Purpose of IMNCI
- Importance of IMNCI
- IMNCI Strategy
- Components of IMNCI
- Classification of the sick young infants age upto 2 months.
- Treatment of sick young infants.
- Classification of sick child age 2 months upto 5 years.
- Treatment of the child.
- IMNCI case management process.
- Counsel the mother.
- Follow up.
- Role of health workers in IMNCI.

Section - 2

This session was the practical and demonstration session in which the IMNCI case management process was shown by video. The content are as follows. A power point presentation on IMNCI case management.

Method of teaching

Lecture cum discussion and demonstration with CD were selected as the appropriate method of teaching IMNCI to the health workers in selected health centres of the 2 districts,

Odisha. The evaluation of STP was planned to conduct through post test.

Validation of the tool

The content validity of the tool was obtained from various experts of concerned fields like paediatrics, nursing and medicine.

Reliability of the tool

In order to establish reliability of the tool, it was administered to 8 health workers working in other than sample area. Reliability of the STP was established through test-retest method where spearman's correlation formula was used to find out the reliability of the STP(R=0.86)

Pilot Study

Pilot study was conducted with 8 samples, 4 control group and 4 experimental group who fulfilled the criteria other than the sample area.

Prior to collection of data, permission to conduct the study was obtained from the Medical officer in charge of the CHC. An informed consent was obtained from the health workers. Assurance was given to them that the anonymity of each individual was maintained.

The knowledge was assessed by structured knowledge questionnaire.

Plan for data analysis

Descriptive and inferential statistics was used for analysis. The collected data was organized, tabulated and analysed by using descriptive statistics i.e. percentage, mean, standard deviations and inferential statistics such as "t" test and chi-square test. The findings of the study were presented in the form of tables and figures.

Presentation of data

The analyzed data has been organized and presented in the following sections.

Section -1: Description of Socio demographic variables of the health workers experimental and control group.

Section -2: Analysis and interpretation of pre test and post test level of knowledge between the experimental and control group.

Section 1

Table 2:

| Knowledge | Experimental Group | | Control Group | |
|---------------------------------|--------------------|-------------------------|---------------|-------------------------|
| | Mean Score | Percentage of knowledge | Mean Score | Percentage of knowledge |
| Meaning and concept | 2.12 | 35.3 % | 2.68 | 44.6 % |
| Identification & Classification | 2.24 | 44.8 % | 3.08 | 61.6 |
| General danger signs. | 1.8 | 45 % | 2.68 | 67 % |
| IMNCI case management process | 5.12 | 57.7 % | 5.68 | 63 % |
| Treatment & follow up | 2.04 | 34 % | 2.36 | 39.3 % |
| Total | 13.32 | 43.4 % | 16.48 | 55.1 % |

Table – 2 shows that the Pre-test knowledge of the experimental and control group in all aspects. In pre-test, experimental group having 43 % and the health workers are having on an average of 55 % knowledge on IMNCI.

Table 3

| Knowledge | Experimental Group | | Control Group | |
|---------------------------------|--------------------|-------------------------|---------------|-------------------------|
| | Mean Score | Percentage of knowledge | Mean Score | Percentage of knowledge |
| Meaning and concept | 5.36 | 89.3 % | 3.04 | 50.6 % |
| Identification & Classification | 4.6 | 92 % | 3.16 | 63.2 % |
| General danger signs. | 3.52 | 88 % | 2.92 | 73 % |
| IMNCI case management process | 7.68 | 85.3 % | 6.52 | 72.4 % |
| Treatment & follow up | 5.12 | 85.3 % | 2.6 | 43.3 % |
| Total | 26.28 | 87.98 % | 18.24 | 60.5 % |

Table – 3 shows post test, after implementation of VATM experimental group health workers scored up to 88 %. Where as in control group 60 % of knowledge regarding IMNCI.

Table 4: Comparison of Pre-test knowledge score between experimental and control group in all 5 aspects

| Knowledge | Group | | | | “t” - test |
|---------------------------------|--------------|------|---------|------|--|
| | Experimental | | Control | | |
| | Mean | SD | Mean | SD | |
| Meaning and concept of IMNCI | 2.12 | 1.05 | 2.68 | 1.24 | t=1.72NS df=48 P=0.0913 |
| Identification & Classification | 2.24 | 1.09 | 3.08 | 0.95 | t=2.9048 p=0.0055 Very statistically significant |
| General danger signs. | 1.8 | 0.7 | 2.68 | 0.9 | t=3.8591 p=0.0003 Extremely significant |
| IMNCI case management process | 5.12 | 1.20 | 5.68 | 2.4 | t=1.0435 p=0.3019 Not statistically significant |
| Treatment & follow up | 2.04 | 0.97 | 2.36 | 0.7 | t=1.3376 p=0.1873 Not statistically significant |
| Total | | | | | |

Table – 4 shows that, in pretest before implementation of STP, experimental and control group health workers having the same level of knowledge on each aspects, only in aspect no.-2 *i.e.* Identification and classification there is very statistically significance between the experimental and control group and there is no significance different between experimental and control group in other 4 aspects. It was calculated by using independent t-test.

Section 2

Table 5: Comparison of Post test knowledge score between the experimental and control group

| Knowledge | Group | | | | “t” - test |
|---------------------------------|--------------|------|---------|------|---|
| | Experimental | | Control | | |
| | Mean | SD | Mean | SD | |
| Meaning and concept of IMNCI | 5.36 | 0.7 | 3.04 | 0.84 | t=10.6088 P=<0.0001 Extremely statistically significant |
| Identification & Classification | 4.6 | 0.57 | 3.16 | 1.02 | t=6.1620 p=<0.0001 Extremely statistically significant |
| General danger signs | 3.52 | 0.50 | 2.92 | 0.81 | p=0.0028 t= 3.1516 Very statistically significant |
| IMNCI case management process | 7.68 | 1.21 | 6.52 | 1.68 | p=0.0073 t=2.8014 Very statistically significant |
| Treatment & follow up | 5.12 | 0.83 | 2.6 | 0.70 | P<0.0001 t=11.6047 Extremely statistically significant |
| Total | | | | | |

Table No.-5 shows that post test after implementation of STP, experimental and control group health workers are having the different level of knowledge on each aspects of IMNCI. The difference between the experimental and control group are very large. That difference is statistically significant. It was calculated by using independent t-test. In the 5 aspects. 2 aspects are very statistically significant and the other 3 are extremely statistically significant.

When P < 0.0001

Table 6: Comparison of Pretest & post test knowledge score in the experimental group

| Knowledge | Experimental Group | | | | “t” - test |
|---------------------------------|--------------------|------|-----------|------|---|
| | Pre Test | | Post test | | |
| | Mean | SD | Mean | SD | |
| Meaning and concept of IMNCI | 2.12 | 1.05 | 5.36 | 0.7 | P=<0.0001 t=12.8378 Extremely statistically significant |
| Identification & Classification | 2.24 | 1.09 | 4.6 | 0.57 | p=<0.0001 t=9.5932 Extremely statistically significant |
| General danger signs. | 1.8 | 0.7 | 3.52 | 0.5 | p=<0.0001 t= 9.9973 Extremely statistically significant |
| IMNCI case management process | 5.12 | 1.2 | 7.68 | 1.2 | p=<0.0001 t=7.5425 Extremely statistically significant |
| Treatment & follow up | 2.04 | 0.97 | 5.12 | 0.83 | P<0.0001 t=12.0630 Extremely statistically significant |

Table No.-6 shows that comparing the knowledge score, before implementation of STP and after implementation of STP experimental group health workers gained more knowledge regarding IMNCI after STP.

The difference between pretest and posttest is very large difference. That difference is proved extremely statistically significant. It was calculated by using paired “t”- test where $p < 0.0001$.

Table 7: Comparison of pre test & post test knowledge score of control group.

| Knowledge | Control Group | | | | “t” - test |
|---------------------------------|---------------|------|-----------|------|--|
| | Pre Test | | Post test | | |
| | Mean | SD | Mean | SD | |
| Meaning and concept of IMNCI | 2.68 | 1.24 | 3.04 | 0.84 | P=0.2353 Not statistically significant t=1.2018 |
| Identification & Classification | 3.08 | 0.95 | 3.16 | 1.02 | p=0.7754 t=0.2870 Not statistically significant |
| General danger signs. | 2.68 | 0.9 | 2.92 | 0.81 | p=0.3266 t= 0.9911 Not statistically significant |
| IMNCI case Management process | 5.68 | 2.42 | 6.52 | 1.68 | p=0.1604 t=1.4257 Not statistically significant |
| Treatment & follow up | 2.36 | 0.7 | 2.6 | 0.70 | P=0.2314 t=1.2122 Not statistically significant |

Table No.-7 shows that comparing the knowledge score without STP before and after STP control group health workers gained very meager knowledge regarding IMNCI. The difference between pretest and posttest is very small. That difference is not statistically significant. It was calculated by using un paired “t” – test where $p = 0.23$

Table 8: Effectiveness of STP regarding IMNCI

| Group | Pretest % of knowledge | Posttest % of knowledge | Percentage of gain knowledge |
|--------------------|------------------------|-------------------------|------------------------------|
| Experimental group | 43.4 % | 87.98 % | 44.58 % |
| Control group | 55.1 % | 60.5 % | 5.4 % |

Table No.-8 shows that in the experimental group the pre-test health workers scored in only 43.4 % of knowledge score after implementation of STP they scored 87.98 %. The difference is 44.58 %. This 44.58 % difference in knowledge is the effectiveness of STP. The health workers gained 44.58 % of more knowledge due to STP.

In control group they scored in pre-test 55.1 % and 60.5 % in the post test. The different between pre-test and post test is only 5.4 %.

Table 9: Comparison of pretest & post test on 2 levels knowledge between experimental and control group

| Knowledge | Experimental group | | | | Control group | | | | |
|------------|--------------------|------|-----------|--|---------------|---|-----------|------|--|
| | Pre Test | | Post Test | | Pre Test | | Post Test | | |
| | F | % | F | % | F | % | F | % | |
| Adequate | 11 | 44 % | 19 | 76 % | 13 | 52 % | 14 | 56 % | |
| Inadequate | 14 | 56 % | 6 | 24 % | 12 | 48% | 11 | 44% | |
| | | | | $X^2 = 14.035$ $df = 1$ $p = 0.0002$ extremely statically significant | | $X^2 = 0.162$ $df = 1$ $p = 0.6870$ not statically significant | | | |

Table No.-9 shows that the pre-test and post-test knowledge score on IMNCI. In the pre-test 44 % of experimental and 25 % control group are having adequate knowledge. After implementation of STP in the post-test in experimental group 76% and in control group 56 % having adequate knowledge.

56 % in experimental group and 48 % in control group are having inadequate knowledge before implementation of STP and after implementation of STP, 24 % of experimental and 44 % of control group are having inadequate knowledge.

This difference between pre-test and post-test score is statistically significant.

In experimental group
 $X^2 = 14.035$
 $df = 1$
 $p = 0.0002$

This is considered to be extremely statically significant.

In control group
 $X^2 = 0.162$
 $df = 1$
 $p = 0.6870$

It is statically not significant.

Table 10: Association between age and knowledge of health workers regarding concept and meaning of IMNCI in the experimental group and control group before STP.

| Age | Adequate | Inadequate | X^2 -Test |
|----------|----------|------------|----------------------------|
| Above 40 | 19 | 5 | $X^2 = 42.982$ $df = 1$ |
| Below 40 | 5 | 20 | $P < 0.0001$ |

Table No.-10 shows that the association between the age and knowledge score of health workers regarding meaning and concept of IMNCI in experimental and control group. In this the $X^2 = 42.982$, $df = 1$ and $p < 0.0001$

This difference is considered to be extremely statistically significant.

Table 11: Association between the knowledge score of health workers with age regarding meaning and classification of IMNCI in both experimental and control group after STP

| Age | Adequate | Inadequate | X ² -Test |
|----------|----------|------------|--------------------------------|
| Above 40 | 20 | 14 | X ² =5.844 df= 1 |
| Below 40 | 5 | 11 | P=0.0156 |

Table No.-12 shows that the association between the knowledge score with age reveals that the difference is proved to be statistically significant where

X²=5.844
 df=1
 p=0.0156

Table 12: Association between the experience and knowledge score of health workers regarding IMNCI on Pre-test and Post-test of experimental and control group

| Experience | Experimental Group | Control Group |
|----------------|--------------------|---------------|
| Below 10 Years | 7 | 12 |
| Above 10 Years | 18 | 13 |

Table No.-13 shows that the association between the experience and knowledge score and reveals that by Chi-square test.

X²=5.769, df = 1, p=0.0163

The difference is considered to be statistically significant.

Table 13: Association between the professional qualifications that of knowledge score of health workers regarding management of IMNCI.

| | Experimental Group | Control Group |
|-------------------|--------------------|---------------|
| Specially trained | 16 | 8 |
| A.N.M. | 9 | 17 |

Table No.-14 shows that the association between the professional qualification with that of knowledge score by X² test.

Hence the X²=11.765, df= 1, p=0.0006

It is proved to be statistically significant.

Table 14: Association between the professional qualification and knowledge score of health workers regarding management of IMNCI.

| Knowledge Level | Experimental Group | Control Group |
|-----------------|--------------------|---------------|
| Adequate | 14 | 19 |
| Inadequate | 11 | 6 |

Table No.-15 shows that the association between the adequate and inadequate knowledge of health workers of control and experimental group regarding the management of IMNCI and reveals

X²=5.482, df=1, p=0.0192

This difference is statistically significant.

4. Discussion

The study attempted to examine the following hypothesis

H1- There will be significant difference between pre test and post test knowledge scores of health workers regarding IMNCI.

H2- There will be significant relation between the knowledge and the demographic variables.

Research Hypothesis

The health workers those who were attended the STP having more knowledge than the health workers who were not attending the programme. The independent “t”-test and chi-square test was used to test the hypothesis and significant difference in the knowledge between experimental and control group.

5. Results

The analysis of the data was based on the objectives and hypothesis. Both descriptive and inferential statistics were used for the data analysis. Descriptive statistics used were mean, frequency and percentage with tabular presentation of the data. “t” test was computed to taste the association between knowledge gain score in each aspects.

Chi-square test was used to test the hypothesis and significance difference in the knowledge between experimental and control group.

In post test, after implementation of STP, experimental group health workers scored upto 87.98 % and control group health workers scored 60.5 % of knowledge regarding IMNCI.

6. Conclusion

Major recommendations are:

Based on the finding of the study the followings recommendations have been made for further study.

- A large scale study can be carried out to generalize the findings.
- A similar study can be conducted by true experimental approach.
- A similar study can be conducted by using the STP for educating paramedical professionals.
- This study can also be conducted on all the people based on interest.
- This study can be carried out for the knowledge of mothers regarding home management.
- This study can also be conducted on the common people who can save the life of neonates in their family and surrounding.

From the finding it can be concluded that the most of the samples were between the age group of 41-50 years and 80% of the samples were specially trained and majority of the samples have more than 11 years of experience.

Prior to the implementation of STP samples had poor knowledge in all areas of IMNCI.

Nursing implication

The findings of this study have implications for nursing service

Nursing Service
Nursing education
Nursing administration
Nursing research

Nursing Service

- Content of the STP will help the nursing professional for reinforcing their knowledge.
- The findings will help the nursing personnel to estimate the effectiveness of STP.
- The study findings will help the nursing personnel to understand about the necessity of providing in – service education programme.

Nursing education

Nursing is a key compound in improving the knowledge of an individual. The right method of education with an opportunity to practice and apply what has been taught is essential.

The nursing education programme providing effective and efficient nursing care for patients.

- 1) This study has provided the important of improving the knowledge and skills regarding formulation of STP.
- 2) The findings will help the nursing students to understand about the need to be equipped with adequate knowledge.

Nursing administration

Nursing administration are the key to plan, organize and conduct in-service education programme to nursing personnel. The findings of this study also emphasizes on the need to educate the nursing personnel regarding IMNCI.

Nurse is an administrator has a crucial role in planning the policies of imparting health information to the patients.

- Nursing administration must see that a separate budget should allocate for in service education in the nursing department.
- Nursing administrator may use the continuing education finding to improve the quality of patient care.

Nursing research

Nursing research can help increase the body of the nursing knowledge which improves the care provided. A large scale study can be done for replication to standardized the STP on IMNCI. The finding can be utilized for conducting research on the effectiveness of STP on various aspects of nursing.

7. Limitations

- 1) No standardized tools were available therefore the investigator prepared a tool for the purpose of the study.
- 2) The questionnaire with a multiple choices must have prompted the health workers to give responses. Hence the possibilities of getting average on good score could be a chance factor in this study which was a limitation of the tool.

8. Recommendations

Based on the finding of the study the followings recommendations have been made for further study.

- 1) A large scale study can be carried out to generalize the findings.

- 2) A similar study can be conducted by true experimental approach.
- 3) A similar study can be conducted by using the STP for educating paramedical professionals.
- 4) This study can also be conducted on all the people based on interest.
- 5) This study can be carried out for the knowledge of mothers regarding home management.
- 6) This study can also be conducted on the common people who can save the life of neonates in their family and surrounding

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