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Original Research Paper

Nursing

EVALUATE THE KNOWLEDGE AND KNOWLEDGE ON PRACTICE OF FEMALE HEALTH WORKERS ON IMPORTANCE AND MAINTENANCE OF VACCINE POTENCY

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ABSTRACT **BACKGROUND:** The importance of proper storage conditions for vaccines is often over looked. When vaccines are inactivated at high temperatures, there is typically little physical evidence of inactivation. The periodic up gradation of knowledge and standards of practice for the storage of vaccines have been established by education. **METHODS:** Quantitative research approach with one group pre-test and post-test was used in this study. Purposive sampling technique was adopted. The population in this study consists of 30 female health workers who are working in the Thudiyalur and Karamadai block level primary health centre. The data were collected from thirty female health workers were tabulated, analyzed and interpreted to understand the knowledge and knowledge on practice before and after education. The paired 't' -test and karl pearsons correlation co-efficient was adopted to verify the results. **RESULTS:** After the reassessment all the data were analyzed and interpreted, comparison was done by using master code sheet for comparison. The researchers found marked improvement in the post-test score from pre-test score.

KEYWORDS : Vaccine storage, Female health workers, vaccine potency, Education

INTRODUCTION

The immune system has the ability to recognize and destroy antigens to protect ourselves against certain infections with the use of vaccines. A vaccine contains antigens of a particular organisms and provokes the immune system to recognize, remember and produce antibodies and cells that destroy antigen. Vaccine is an immuno biological substance designed to produce specific protection against a particular disease (Park.K, 2005). The importance of proper storage conditions for vaccines is often over looked. When vaccines are inactivated at high temperatures, there is typically little physical evidence of inactivation, making visual inspection of products an unreliable method of assuring potency. (Health care management, 2005).

Need for the study

Cold chain equipment, transport facilities and other essential supplies and equipment immunization services will be provided through all health institutions, health care camps and teams and the cold chain will be suitably strengthened for vaccine storage (Health and Family Welfare,2002).The vaccines require refrigeration, while some should be frozen until use. These storage requirements must be adhered to from the time of manufacture to the time of administration to the patient, through a process often referred to as maintenance of the cold chain. Standards of practice for the storage of vaccines have been established by organizations such as the World Health Organization.

Statement of the problem

Education to female health workers on importance and maintenance of vaccine potency in selected primary health centres of Coimbatore district

OBJECTIVES

1. Assessment of the knowledge and knowledge on practice of female health workers on importance and maintenance of vaccine potency.
2. Evaluate the knowledge and knowledge on practice of female health workers on importance and maintenance of vaccine potency.

Materials and Methods

Quantitative research approach with one group pre-test and post-test design was used in this study. Purposive sampling technique was adopted. The population in this study consists of 30 female health workers who are working in the Thudiyalur and Karamadai block level primary health centre.

Data collection procedure

The formula used in pre-test(Q1) Treatment PTP Post-test(Q2)effectiveness of PTP = Q2 – Q1

Group	PHASE-I Preparation of structured interview schedule & PTP	PHASE-II Pretest (Q1)	PTP (X)	PHASE-III Post test (Q2)	After Post test
Female health worker in selected primary Health center of Coimbatore district tamilnadu	• Review of existing literature • Discussion with experts • Preparation of structured interview schedule • Development of PTP • Validation of the tool and PTP • Pre testing the tool for reliability assessment • Pilot study	Pre-test to assess the knowledge by a structured interview schedule prior to the PTP	Administration of PTP to the subjects after the pre test	Post-test knowledge assessment on the 7th day with the same structured interview schedule	• Comparison of pre and post test score • Analysis and interpretation of data • Hypothesis testing • Interpretation of data with diagnosis

Technique of data analysis and interpretation

The data were collected from thirty female health workers were tabulated, analyzed and interpreted to understand the knowledge and knowledge on practice before and after education. All right answers had been considered as score of knowledge and knowledge on practice based on this total scoring for each workers. The paired 't'- test and karl pearsons correlation co-efficient was adopted to verify the results.

RESULTS AND DISCUSSION

The mean score in the post test was 39.1.Among the 2 content areas, the highest mean score was 19.37(96.85%) on importance and maintenance of vaccine .The difference in score for each content area was compared. The difference was statistically significant ($P < 0.05$).

The data presented in the table 2 indicates that the mean post

test scores (39.2)was higher than the mean pre test scores(29).This shows an average increases of 10.2.The calculated 't'- value 21.28 is greater than the table value 1.699 at 29 degrees of freedom at 0.005 level of significance. Thus the null hypothesis was rejected. This reveals a significant difference between the pre-test and post-test mean scores.

Table I: Comparison of pre-test and post-test knowledge and knowledge on practice score in specific content area

Sl. no	Content area	Maximum possible Score	Pretest			Post test			Difference		Paired 't' test
			Mean	Mean (%)	SD	Mean	Mean (%)	SD	Mean	SD	
1.	Importance and maintenance of vaccine	20	13.77	68.85	1.86	19.37	96.85	0.82	5.57	1.85	16.38
2.	Importance and maintenance of cold chain	25	15.07	60.28	1.33	19.73	78.92	1.08	4.67	1.92	13.32

Table 2: Comparison of pretest and post-test knowledge and knowledge on practice score of female health workers (N=30)

Test	Mean	SD	Mean Difference	Paired t test
Pre-test	29	5.48	10.2	21.28
Post-test	39.2	6.37		

Findings on relationship between selected background factors

There is a positive relationship between the Age of the health workers on Knowledge $r=0.83$ ($p<0.05$). Age and work experience on knowledge on practice score $r=0.70$ ($p<0.05$).

CONCLUSION

This study was undertaken to evaluate the effectiveness of the educational programme to female health workers on importance and maintenance of vaccine potency. Mean knowledge and knowledge on practice score increased from 64.44% to 87.1% .Which was statistically significant. Hence the education was effective method in enhancing the knowledge and knowledge on practice of female health workers.

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