

ORIGINAL ARTICLE

To Assess the Effectiveness of a Structured Teaching Programme on Knowledge Regarding Torch Infections, its Management and Infection Control Measures among Maternity Department Nurses in Selected Hospitals

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ABSTRACT

Background of the study: TORCH infections (Toxoplasmosis, Other agents, Rubella, Cytomegalo virus and Herpes simplex virus) are significant contributors to adverse maternal and neonatal outcomes worldwide. These infections often remain asymptomatic in mothers but can lead to severe fetal complications such as congenital anomalies, intrauterine death, and developmental disabilities.

Methodology: A quasi-experimental study was conducted among 60 maternity department nurses (30 experimental, 30 control). Data were collected by using a self structured questionnaire.

Results: The result revealed that mean of post-test level of knowledge score is 22.33 was significantly higher than the pre-test of knowledge score is 18.33 in the experimental group.

Conclusion: Structured teaching programme significantly improved knowledge among maternity department nurses.

KEYWORDS

- Torch Infections • Maternity Department Nurses • Teaching Programme
- Infection Control

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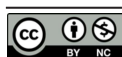
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INTRODUCTION

Background of the study:

TORCH infections are a group of perinatal infections transmitted from mother to fetus and can result in severe complications including congenital anomalies, intra uterine growth restriction and neonatal mortality. Maternity nurses play a vital role in prevention and management. "TORCH" is an acronym meaning (T)oxoplasmosis, (O)ther Agents, (R)ubella (also known as German Measles), (C)ytomegalovirus, and (H)erpes Simplex. TORCH infections are perinatal infections acquired in uterus through genital tract at any time during pregnancy, during delivery and after birth of a baby. TORCH infections give access to fetal stream transplacentally via chorionic villi.

Infections acquired in utero or during the perinatal period are important cause of fetal and neonatal mortality and is an important contributor to early and later mortality childhood illness. Infected neonates showed abnormal growth anomalies, or some clinical and laboratory abnormalities. Original concept TORCH infections refers to the infection of one in 20 developing fetuses or newborn group of infectious agents. Infection with one of these agents (eg. *Toxoplasma gondii*, rubella virus, cytomegalovirus, herpes simplex viruses) can show similar symptoms the baby is affected. The result of the development of the fetus infected with TORCH infection, pregnancy can be a miscarriage, stillbirth, delayed fetal growth or preterm delivery. Additionally, new-born infected with TORCH agents may develop similar symptoms and findings. Each infectious agent may also cause congenital abnormalities that may vary in degree and severity, depending upon the stage of fetal organogenesis at time of infection and severity of infection³

Aim

To assess the effectiveness of a structured teaching programme on knowledge regarding TORCH infections, its management and infection control measures among maternity department nurses.

Objectives

- To assess the pre-test knowledge regarding TORCH infections, its management and infection control measures among

maternity nurses of experimental and control group in maternity department in selected hospitals of district Sangrur, Punjab.

- To plan and implement structured teaching programme regarding TORCH infections, its management and infection control measures among maternity nurses of experimental group.
- To assess the post-test knowledge regarding TORCH infections, its management and infection control measures among maternity nurses of experimental and control group in maternity department in selected hospitals of district Sangrur, Punjab.
- To compare the pre and post-test knowledge regarding TORCH infections, its management and infection control measures among maternity nurses of experimental and control group in maternity department in selected hospitals of district Sangrur, Punjab.
- To find out association between the pre and post-test knowledge regarding TORCH infections, its management and infection control measures among maternity nurse of experimental and control group with selected socio-bio-demographic characteristics.

Hypothesis

- H₁**-There will be significant difference between pre and post-test knowledge score regarding TORCH infections, its management and infection control measures in experimental group.
- H₂**-There will be significant difference between pre and post-test knowledge score regarding TORCH infections, its management and infection control measures in control group.
- H₃**-There will be significant association between pre and post-test knowledge score regarding TORCH infections, its management and infection control measures of experimental group with their selected socio-bio-demographic variables.
- H₄**-There will be significant association between pre and post-test knowledge score regarding TORCH infections, its management and infection control

measures of control group with their selected socio-bio-demographic characteristics.

METHODOLOGY

A quasi-experimental study was conducted among 60 maternity nurses (30 experimental,

30 control) in selected maternity department of hospitals of district Sangrur, Punjab.

Nonrandomized technique was used to select the sample. Data were collected by using a knowledge structured questionnaire and analyzed by using both descriptive and inferential statistics.

RESULTS

Table 1: To compare the pre and post-test knowledge regarding torch infections, its management and infection control measures among maternity nurses of experimental and control group.

Knowledge Score							
Pre-Experimental group (n=30)							
	Mean	Mean difference	SD	DF	T-test	Table Value	Results
Pre Interventional	18.33	4	5.41	29	2.535	2.05	Significant
Post Interventional	22.33		6.32				
Knowledge Score							
Post-Experimental group (n=30)							
	Mean	Mean difference	SD	DF	T-test	Table Value	Results
Pre Interventional	16.36	0.04	5.65	29	0.23	2.05	Non Significant
Post Interventional	16.40		5.84				

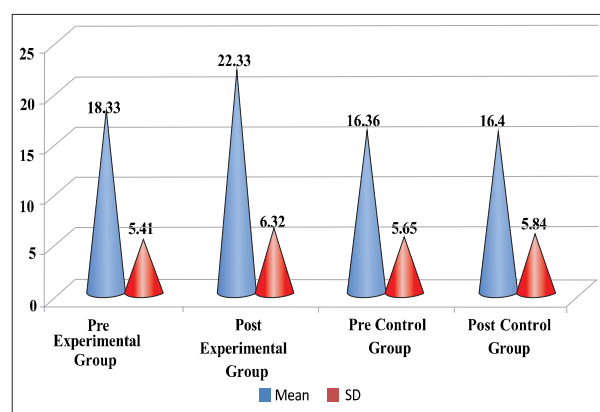


Figure 1: To compare the pre and post-test knowledge regarding torch infections, its management and infection control measures among maternity nurses of experimental and control group

Table 1 & Figure 1 Shows that in experimental group the mean of pre-test level of knowledge score is 18.33 and the mean of post-test level of knowledge score is 22.33. The mean difference of level of knowledge score is 4. The Standard Deviation of pre-test is 5.41. And Standard Deviation of post-test is 6.32. The DF is 29 and T value is 2.535 and the table value is 2.05. So, it was significant at 0.05 level of significance. While comparing the pre-test knowledge score with the post-test knowledge score in experimental group, the data shows that there was significant difference between

pre and post-test knowledge score among experimental group. The results show that after administration of structured teaching programme was effective to enhance the knowledge score of maternity nurses have improved significantly.

On the other hand, shows that in control group the mean of pre-test level of knowledge score is 16.36 and the mean of post-test level of knowledge score is 16.40. The mean difference of level of knowledge score is 0.04. The Standard Deviation of pre-test is 5.65 and Standard Deviation of post-test is 5.84. The DF is 29 and T value is 0.23 and the table value is 2.05. So, it was not significant at 0.05 level of significance. While comparing the pre-test knowledge score with the post-test knowledge score in control group, the data shows that there was no significant difference between pre and post-test knowledge score among control group. The results show that after administration of structured teaching programme remains same of maternity nurses have not improved significantly. Based on above findings it shows that there is an effectiveness of administration of structured teaching programme was effective to enhance the knowledge of maternity nurses.

Table 2: To find out association between the pre-test knowledge regarding TORCH infections, its management and infection control measures among maternity nurse of control group with selected socio-bio-demographic characteristics

Demographic Variables		Association of knowledge score with demographic variables (pre knowledge) Experimental Group								
Variables	Excellent Knowledge	Good Knowledge	Average Knowledge	Below average Knowledge	Poor Knowledge	Chi test	P value	Df	Table Value	Result
Age										
25-30	3	2	2	0	0	10.673	0.299	3	7.82	Significant
31-35	1	4	4	2	0					
36-40	0	2	2	3	0					
Above 40	1	1	3	0	0					
Gender										
Male	0	0	0	0	0	—	—	—	—	—
Female	5	9	11	5	0					
Training Background										
Private	0	0	0	0	0	—	—	—	—	—
Government	5	9	11	5	0					
Academic Qualification										
GNM	3	0	3	0	0	7.606	0.40	3	7.82	Non Significant
B.Sc.	0	5	4	3	0					
Post Basic B.Sc.	0	4	1	1	0					
M.Sc.	2	0	3	1	0					
Clinical Experience										
1 year	1	0	3	0	0	6.238	0.716	3	7.82	Non Significant
2 years	1	4	4	3	0					
3 years	2	2	2	1	0					
Above 3 years	1	3	3	1	0					
Source of Knowledge										
Lecture	0	3	5	1	0	5.565	0.474	2	5.99	Non Significant
Printing Media	2	4	3	3	0					
Mass Media	3	2	2	1	0					

Table 3: To find out association between the pre-test knowledge regarding TORCH infections, its management and infection control measures among maternity nurse of control group with selected socio-bio-demographic characteristics

Demographic Variables		Association of knowledge score with demographic variables (pre knowledge) Control Group								
Variables	Excellent Knowledge	Good Knowledge	Average Knowledge	Below average Knowledge	Poor Knowledge	Chi test	P value	Df	Table Value	Result
Age										
25-30	2	2	1	3	0	1.963	0.580	3	7.82	Non Significant
31-35	0	2	7	0	0					
36-40	0	0	4	4	0					
Above 40	1	2	2	0	0					

table cont....

Gender										
Male	0	0	0	0	0	NA				
Female	3	6	14	7	0					
Training Background										
Private	4	5	12	9	0	NA				
Government	0	0	0	0	0					
Academic Qualification										
GNM	0	0	5	2	0	2.2 770.51 737.82				
B.Sc.	0	1	3	4	0					
Post Basic B.Sc.	0	2	4	1	0					
M.Sc.	3	3	2	0	0					
Clinical Experience										
1 year	0	0	4	1	0	5.5 500.13 637.82Non Significant				
2 years	2	2	4	1	0					
3 years	0	2	5	3	0					
Above 3 years	1	2	1	2	0					
Source of Knowledge										
Lecture	0	2	5	1	0	4.3 040.63 625.99Non Significant				
Printing Media	2	1	5	4	0					
Mass Media	1	3	4	2	0					

Table 4: To find out association between the post-test knowledge regarding TORCH infections, its management and infection control measures among maternity nurse of experimental group with selected socio-bio-demographic characteristics

Demographic Variables	Association of knowledge score with demographic variables (post knowledge) Experimental Group									
Variables	Excellent Knowledge	Good Knowledge	Average Knowledge	Below average Knowledge	Poor Knowledge	Chi test	P Value	Df	Table Value	Result
Age										
25-30	3	2	1	1	0	8.55 8	0.47 9	3	7.8 2	Significant
31-35	3	3	3	2	0					
36-40	1	3	3	0	0					
Above 40	1	4	0	0	0					
Gender										
Male	0	0	0	0	0	NA				
Female	8	12	7	3	0					
Training Background										
Private	0	0	0	0	0	NA				
Government	9	11	6	3	0					
Academic Qualification										
GNM	1	2	1	0	0	3.58	0.93	3	7.8 2	Non Significat
B.Sc.	3	5	2	0	0	6	6			
Post Basic B.Sc.	2	2	0	0	0					
M.Sc.	2	3	0	0	0					

table cont....

Demographic Variables	Association of knowledge score with demographic variables (post knowledge) Experimental Group									
Variables	Excellent Knowledge	Good Knowledge	Average Knowledge	Below average Knowledge	Poor Knowledge	Chi test	P Value	Df	Table Value	Result
Clinical Experience										
1 year	1	3	0	0	0	9.47 6	0.39 4	3	7.8 2	Significant
2 years	3	4	3	1	0					
3 years	3	1	1	2	0					
Above 3 years	1	4	3	0	0					
Source of Knowledge										
Lecture	1	4	3	1	0	2.94 3	0.81 6	2	5.9 9	Non Significant
Printing Media	5	4	3	1	0					
Mass Media	2	4	1	1	0					

Table 5: To find out association between the post-test knowledge regarding TORCH infections, its management and infection control measures among maternity nurse of control group with selected socio-bio-demographic characteristics

Demographic Variables	Association of knowledge score with demographic variables (post knowledge) Control Group									
Variables	Excellent Knowledge	Good Knowledge	Average Knowledge	Below average Knowledge	Poor Knowledge	Chi test	P Value	Df	Table Value	Result
Age										
25-30	1	1	4	2	0	5.271	0.810	3	7.82	Non Significant
31-35	1	2	3	3	0					
36-40	1	0	5	2	0					
Above 40	1	2	1	1	0					
Gender										
Male	0	0	0	0	0	NA				
Female	4	5	13	8	0					
Training Background										
Private	3	6	14	7	0	NA				
Government	0	0	0	0	0					
Academic Qualification										
GNM	1	0	5	1	0	5.298	0.808	3	7.82	Non significant
B.Sc.	1	2	2	3	0					
Post Basic B.Sc.	1	2	2	2	0					
M.Sc.	1	1	4	2	0					
Clinical Experience										
1 year	0	0	3	2	0	7.004	0.534	3	7.82	Non significant
2 years	1	2	4	2	0					
3 years	1	1	4	4	0					
Above 3 years	2	2	2	0	0					
Source of Knowledge										
Lecture	2	0	5	1	0	4.683	0.372	2	5.99	Non significant
Printing Media	2	2	4	4	0					
Mass Media	0	3	4	3	0					

DISCUSSION

The present study demonstrated that Structured teaching programmes significantly improves knowledge among maternity department nurses. The findings are consistent with previous studies which reported improved awareness and infection control practices following educational interventions.

The improvement in knowledge scores indicate that targeted educational strategies can bridge the gap between theoretical knowledge and clinical practices. This indicates significant improvement in knowledge after structured teaching, consistent with previous research.

CONCLUSION

The main concept of the study was to make the maternity department nurses aware about TORCH infections, its management and infection control measures. Keeping this importance in mind, the researcher prepared a structured teaching programme further evaluated by structured knowledge questionnaire to enhance their knowledge on TORCH infections, its management and infection control measures. It was found that structured teaching programme improved the knowledge of maternity nurses. This study plays an important role to improve the knowledge of maternity department nurses; it could be considered as apart of professional development of maternity nurses in all aspects.

Conflict of Interest: There is no conflict of interest with respect to the research, authorship and publication of article.

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Ethical Approval: Ethical approval obtained and consent taken.

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