

A Study to Assess the Effectiveness of Self Instructional Module on Level of Knowledge Regarding Recent Advancement in Infertility Treatment among the Staff Nurses Working in Obstetrical and Gynecological Department in Selected Hospital in Haridwar, Uttarakhand

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Abstract: Introduction: Infertility affects an estimated 15% of couples globally, amounting to 48.5 million couples. Males are found to be solely responsible for 20-30% of infertility cases and contribute to 50% of cases overall. One of the most common causes of female sterility is endometriosis, a common condition in which endometrial tissue almost identical to that of the normal uterine endometrium grows and even menstruates in the pelvic cavity surrounding the uterus, fallopian tubes, and ovaries. Statement of problem: "A study to assess the effectiveness of Self Instructional Module (SIM) on level of knowledge regarding recent advancements in infertility treatment among the staff nurses working in obstetrics and gynecological departments of selected hospital in Haridwar, Uttarakhand." Objectives of the Study: 1) To assess the effectiveness of SIM (Self Instructional Module) on level of knowledge regarding recent advancement in infertility treatment among the staff nurses. 2) To find out the association of pre-test level of knowledge regarding recent advancement in infertility treatment among the staff nurses with selected socio demographic variables. Method: A pre-experimental has provided comparison between a group of subjects before and after the experimental treatment used for this study. The sample consisted 60 staff nurses those were working in obstetric and gynaecology department in selected hospital Haridwar. They were selected by Convenient non – probability Sampling Technique. Data was collected by using a structured knowledge questionnaire regarding recent advancement in infertility treatment. Data analysis is done by using descriptive & inferential method. Result: There was significant difference statistically, between the staff nurses The study shows that there is significant association of pre-test level of knowledge score with age of staff nurses $X^2 = 24.05$ ($p=0.00024$), staff nurses religion $X^2 = 22.2102$ ($p=0.00059$), professional qualification of staff nurses $X^2 = 9.1584$ ($p= 0.010263$) and experience in maternity ward of the staff nurses $X^2 = 15.4847$ ($p= 0.001446$) with knowledge on recent advancement in infertility treatment. . There was significant association of pre-test knowledge regarding recent advancement in infertility treatment with age of staff nurses, religion of staff nurses, professional qualification of staff nurses, and experience in maternity ward of staff nurses. The findings were statistically significant at 0.0001 and 0.01 level. Conclusion: After detailed analysis, this study leads to the following conclusion Data presented shows that 83.33% staff nurses had good knowledge, 13.33% had very good knowledge regarding the recent advancement in infertility treatment while 3.33% were found excellent knowledge. After the implementation of self instructional module, there is a significant increases in knowledge of staff nurses regarding the recent advancement in infertility treatment. My study will be helpful for the other new researchers who are interested for do the research in this topic. Now a days, infertility is a major problem. So this study equally gives important to understand and find the solution of infertility.

Keywords: Assess; Self Instructional Module; knowledge; staff nurses; recent advancement in infertility treatment;

1. Introduction

"A Nurse will always give us hope, as an angel with a stethoscope"

-Carrie Latet

Fertility is the natural capability to produce offspring. A lack of fertility is infertility while a lack of fecundity would be called sterility. The term infertility is defined as the inability to conceive despite regular and unprotected intercourse for 2 years. Couples should be aware that 80% will conceive within a year and 90% within two years if they don't use contraception and have regular intercourse.^[1]

A woman may face various health problems that make her unable to conceive or the inability to carry to term. One of the most common causes of female sterility is endometriosis, a common condition in which, endometrial tissue almost identical to that of the normal uterine endometrium, grows and even menstruates in the pelvic cavity surrounding the uterus, fallopian tubes, and ovaries.^[2]

Infertility affects an estimated 15% of couples globally, amounting to 48.5 million couples. Males are found to be solely responsible for 20-30% of infertility cases and contribute to 50% of cases overall. However, this number does not accurately represent all regions of the world. Indeed, on a global level, there is a lack of accurate statistics on rates of male infertility.^[3]

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Recent advances in investigators ‘understanding of the causes of infertility and of assisted reproductive technology (ART) have led to the development of complex diagnostic tools, prognostic models and treatment options. The Third Evian Annual Reproduction (EVAR) Workshop Meeting was held on 26 – 27 April 2011 to evaluate evidence supporting current approaches to the diagnosis and management of infertility and to identify areas for future research efforts. [4]

In the males, the seminiferous tubular epithelium can be destroyed by a number of diseases. For instance, bilateral orchitis of the testes resulting from mumps causes sterility in some affected males. Also, many male infants are born with degenerate tubular epithelia as a result of strictures in the genital ducts or other abnormalities. Finally, another cause of sterility, usually temporary, is excessive temperature of the testes.

The Human Fertilization and Embryology Authority (HFEA) Code of Practice identifies three types of compulsory counselling for clients undergoing In-Vitro Fertilization (IVF): Implication counselling to educate them on the implications of their treatment option; support counselling to assist them during the period of emotional stress; and therapeutic counselling to help them cope with the consequences of treatment and adjust their expectations and acceptance of their situation. This supports the rationale for suggesting that counselling for In-Vitro Fertilization clients should be provided by specialist doctors, because these women are seeking clarification of their problems more than just emotional support. [5]

Some studies discuss the effects of pressure from family members and the community affecting the quality of life of infertile couple. Men and women are believed to react differently to infertility. Females, therefore, take more responsibility for fertility evaluation even when they are sure that their husbands are the cause of their childlessness. Some of the investigations and treatment for artificial reproductive technology are performed on females, so they directly face the success or failure of treatment [6]

2. Purpose

The purpose of study is to improve the level of knowledge of staff nurses regarding recent advancement in infertility treatment.

Objectives of the study

- 1) To assess the effectiveness of SIM (Self Instructional Module) on level of knowledge regarding recent advancement in infertility treatment among the staff nurses.
- 2) To find out the association of pre-test level of knowledge regarding recent advancement in infertility treatment among the staff nurses with selected socio demographic variables.

3. Material and Method

A pre experimental has provided comparison between a group of subject before and after the experimental treatment used for this study. The sample comprised of 60 staff nurses was taken by convenient non probability sampling technique and no control group was made. Data was collected by using a structured knowledge questionnaire regarding recent advancement in infertility treatment. Data analysis is done by using descriptive & inferential method.

4. Result

Effectiveness of Self Instructional Module (SIM) by comparing pre-test and post-test level of knowledge regarding recent advancement in infertility treatment among the staff nurses

Table 1: Comparison of pre-test and post-test level of knowledge of staff nurses N= 60

Group	Mean	Mean %	SD	Enhancement	t-value	P value	Df
Pre-test	15.45	45.44 %	3.88	43.11%	-23.036	<.00001	59
Post-test	30.11	88.55 %	3.44				

p<0.05

Table 1. Depicts that, the pre-test knowledge score was 15.45 ±3.88 which has increased to post-test knowledge score 30.11 ±3.4. Independent sample “t” test was calculated to find the significant difference between means of pretest and post test knowledge scores. The calculated t value was-23.036 (df=59 at p<0.05). Hence the null hypothesis was rejected and research hypothesis was accepted. This significant improvement in the knowledge can be attributed to the intervention

Association between pre-test level of knowledge recent advancement in infertility treatment among the staff nurses with selected socio demographic variables.

Table 2: Association between pre-test level of knowledge regarding recent advancement in infertility treatment among the staff nurses with selected socio demographic variables. N=60

Demographic variables	Average	Good	Excellent	df	Chi-square	Inference
Age in years						
21-25 years	24	7	1	6	24.05	S
26-30 years	20	0	1			
31-35 years	5	1	0			
36-40 years	1	0	0			
Religion						
Hindu	17	0	0	6	22.2102	S
Muslim	8	2	2			
Christian	19	5	0			

Sikh	6	1	0			
Professional qualification						
G. N. M	23	8	2	4	9.1548	S
Post Basic B. Sc nursing	8	0	0			
B. Sc nursing	19	0	0			
Experience in maternity ward						
<2 years	29	6	1	4	15.4847	S
2-4 years	14	1	1			
4-6 years	6	1	0			
>6 years	1	0	0			
Exposed to any in service education program						
Yes	17	3	0	2	2.1429	NS
No	33	5	2			
Any previous information						
Yes	34	7	0	2	1.6406	NS
No	16	1	2			
Source of information						
Books	6	2	0	8	2.6283	NS
Journals	4	0	0			
Nursing professionals	19	1	0			
Medical professionals	9	2	1			
Mass media	12	3	1			

Table. No.2 shows that the association between pre test level of knowledge score with selected demographic variables. Since all data were categorical in nature, chi-square test was performed to find association. The result showed that there was significant association between level of knowledge with their demographic variable in accordance with age 24.05, religion 22.2102 and professional qualification 9.1584 found. The result showed that there was no statistically significant association between level of knowledge and selected demographic variables in accordance with exposed to any in service education programme on infertility treatment (2.1429). Only experience in maternity ward (15.48) were shows the significant association. And no statistically significant association between level of knowledge and their selected demographic variables in accordance with any previous information regarding advance treatment of infertility (1.6406) and source of information (2.6283) found.

5. Discussion

Assessment of the level of knowledge regarding recent advancement in infertility treatment among the staff nurses by conducting post-test.

According to post-test level of knowledge on recent advancement in infertility treatment 91.66% (55) subjects had an excellent knowledge and remaining 8.33% (05) had good knowledge regarding recent advancement in infertility treatment. These findings showed that, the maximum of staff nurses had excellent knowledge regarding recent advancement in infertility treatment.

Deals with association of pre-test level of knowledge regarding recent advancement in infertility treatment among the staff nurses with selected demographic variables.

The findings revealed that, there was statistically significant association of pre-test level of knowledge score with demographic variables namely age $X^2 = 24.05$ ($p=0.00024$), religion $X^2 = 22.2102$ ($p=0.000059$), professional qualification $X^2 = 9.1584$ ($p= 0.010263$) and $X^2 = 15.4847$

($p= 0.001446$) experience in maternity ward of staff nurses with knowledge on recent advancement in infertility treatment. Thus, research hypothesis is accepted and null hypothesis is rejected. Whereas there was no statistically significant association of pre-test level of knowledge with demographic variables namely exposed to any in service education programme on infertility treatment $X^2=2.1429$ ($p=0.14323$), any previous information regarding advance treatment of infertility $X^2=1.6406$ ($p=0.20024$) and source of information $X^2=2.6283$ ($p=0.62181$) level. Thus, research hypothesis is rejected and null hypothesis is accepted.

6. Major Findings

On the comparison of pre-test and post-test level of knowledge regarding recent advancement in infertility treatment among the staff nurses revealed that there was a significant difference between pre-test and post-test knowledge score ($t=-23.036$). Self Instructional Module was found to be highly effective in enhancing the knowledge score 43.11%. Hence hypothesis H1 is accepted and null hypothesis is rejected.

7. Limitations

- 1) The present study is limited to only one group; no control group adopted for the study.
- 2) The study is also limited to a small sample in four hospitals hence the findings of the study cannot be generalized.
- 3) The structured knowledge questionnaire and Self Instructional Module was developed.
- 4) The study samples was confined only to staff nurses those who were GNM, Post Basic B. Sc Nursing and basic B. Sc Nursing.
- 5) The study is limited staff nurses only.
- 6) Limited time available for data collection.

8. Conclusion

The main concept of the study was to make the basic learners like staff nurses aware about the recent treatment in infertility. It was found that the Self Instructional Module regarding recent advancement in infertility treatment will increase the knowledge of the staff nurses. This study will prove its importance and essentiality in infertility treatment. This study could be considered as a part of continuing professional development of the students and the staff nurses. Self Instructional Module regarding recent advancement in infertility treatment served that purpose and was effective in increasing this knowledge of staff nurses.

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