Structured Teaching Program on Assisted Reproductive Technology among Nursing Students

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Abstract: *Nurses play the vital role in fertility healthcare team and assume responsibilities for health assessment, client education and treatment. As nursing students are the bright future of nursing profession; they must have the adequate knowledge regarding assisted reproductive technology to accomplish their role adequately. This study aimed to evaluate the effectiveness of structured teaching program on knowledge regarding assisted reproductive technology among B.Sc nursing 4th year and G.N.M 3rd year students of PIPRAMS, Greater Noida, Uttar Pradesh. Non-randomized control group design was used. 60 samples (30 B.Sc nursing 4th year & 30 GNM 3rd year) were chosen & divided into experimental and control group by purposive sampling technique. Pre test was conducted from both the experimental and control group. On the same day structured teaching program was administered to the experimental group and no treatment was given to the control group. On 7th day after structured teaching program post test was conducted from both the groups. The findings revealed that mean post-test knowledge score of experimental group was higher than the control group i.e. 21.60 & 14.60 respectively. Mean difference between two was 7, 't' value was 4.2807 & 'p' value was < 0.0001 which was significant.*

Keywords: knowledge, structured teaching program, assisted reproductive technology, nursing students

1. Introduction

Infertility is a major health problem that affects couples quality of life. Infertility has treated by the assisted reproductive technologies. With the help of assisted reproductive technologies the rate of infertility become reduce that sorrow can converted to hope. After the use of Assisted reproductive technology growth has raised in the range of prenatal outcomes which result in preterm birth, low birth weight, and neonatal death.[1]

On 25th July 1978, the first child Louise Brown is born with the help of in-vitro fertilization in United Kingdom and India's first test tube baby (Harsha) is born in 1986, which provides the hopes to couples suffering from infertility. Now it is difficult to imagine the world without assisted reproductive technologies. Nurses play the vital role in fertility healthcare team and assume responsibilities for health assessment, client education and treatment. As nursing students are the bright future of our nursing profession, they must have the adequate knowledge regarding the assisted reproductive technology to accomplish their role adequately.

According to CDC (Centres for Disease control and prevention) definition, assisted reproductive technologies include all fertility treatments in which either eggs or embryos are handled. Assisted reproductive technologies procedures involve surgically removing eggs from a woman's ovaries, combining them with sperm in the laboratory, and returning them to the woman's body or donating them to another woman.[2]

Assisted reproductive technology involves number of techniques and procedures that allow pregnancy and childbirth to occur where the chances of pregnancy and childbirth have been zero. As a key person nurses will need to expand their knowledge regarding infertility and its treatment to share appropriate and accurate information with couples suffering from infertility. Therefore, it is a need to enhance the nursing education curriculum, and create awareness for students and health care providers.[3]

Objectives

Objectives of the study were:

- To determine the pre-test knowledge regarding assisted reproductive technology among experimental and control group.
- To determine the post-test knowledge regarding assisted reproductive technology after structured teaching programme in experimental group and without structured teaching programme in control group.
- To evaluate effectiveness of structured teaching programme on post test knowledge score regarding assisted reproductive technology among experimental group and control group.
- To seek the association of knowledge score regarding assisted reproductive technology with selected demographic variables.

2. Literature Survey

The related literature of the present study is organized and presented under the following headings:

1. Review of literature related to infertility
2. Review of literature related to assisted reproductive technology.
3. Review of literature related to structure teaching program regarding infertility.

Review of literature related to infertility:

A descriptive study was conducted in New Art's college of Ahmednagar in 2018. The aim of the study was to assess the knowledge and attitude regarding infertility among teenagers with a view to develop health education pamphlet among teenagers. 60 samples were selected by using simple random sampling technique and data was collected by using structured knowledge questionnaire and Likert's 5 point scales. The findings revealed that 58.33% had average knowledge, 25% had poor knowledge and remaining 16.66% had good knowledge regarding infertility. The attitude scores of teenagers revealed that 56.66% had neutral attitude, 25% had positive attitude and remaining 18.33% had negative attitude regarding infertility. The study concluded that the knowledge and attitude in the respective field was inadequate among the teenagers. So it is important to initiate actions to enhance the knowledge and attitude of the students in the college so that they can take necessary measures to prevent infertility.[4]

A study was conducted to assess the effectiveness of self instructional module on knowledge regarding recent advancement in infertility treatment among staff nurses. The research was conducted at SAIMS Hospital, Life line hospital, Greater Kailas hospital and Dolphin hospitals of Indore city. Pre- experimental one group pre- test post- test research design was adopted for the study. 60 samples were selected by using convenient sampling technique and data was analysed and interpreted by descriptive and inferential statistics. Study findings revealed that the mean post test score was 30.85 which were much higher than the pre-test knowledge scored i.e. 16.25. The study concluded that knowledge gained through self instructional module was good.[5]

Review of literature related to assisted reproductive technology

A study was conducted in Tamil Nadu. The aim of the study was to assess the knowledge of nursing students on assisted reproductive technology and effectiveness of planned teaching programme in improving the knowledge in the selected college in Tamil Nadu in January 2008. The finding revealed that the mean percentage knowledge score in pre-test was 39.8 and post-test was 74.5. The study concluded that the planned teaching programme was effective method in terms of creating knowledge regarding assisted reproductive technology.[6]

A study was conducted in University of Benin teaching hospital, Nigeria. The aim of the study was to examine the knowledge and perception of assisted reproductive technology among women that attended a tertiary health facility. 348 samples were selected by using stratified probability sampling technique and self structured questionnaire with open ended and Likert scale questions used as an instrument. The finding revealed that assisted reproductive technology had a huge mean of 3.99 and awareness level was 73.0%. The study conclude that samples were having high awareness level but low knowledge about ART, therefore appropriate policies and

program must be put in place to educate the populace on the importance and success rate of ART.[7]

Review of literature related to structure teaching program

A quasi-experimental study with one group pre-test post-test research design was conducted to evaluate the effectiveness of planned teaching programme on knowledge regarding infertility and its management among the infertile couple at selected infertility clinic of Ahmadabad district Gujarat state. The findings reveal that the mean post-test score was significantly higher than the mean pre-test score. The mean pre-test score was 9.56 (38%) which increase to 19.53 (78%) in the post test with the mean differences of 9.97 (40%). It was significantly proved that a planned teaching programme on infertility and its management was effective in terms of knowledge among infertile couple.[8]

A study was conducted on the effectiveness of planned teaching programme on assisted reproductive technology among 55 GNM III year students of selected nursing school at Mangalore. Purposive sampling technique was used and data was collected by using structured questionnaire and analysed by using descriptive and inferential statistics. The mean difference between pre-test (15.25) and post-test (30.50) knowledge score of students on ART was found to be statistically significant (t_{54}=30.9, $p \le 0.001$). The study concluded that the planned teaching programme was effective.[9]

Problem definition:

A study to evaluate the effectiveness of structured teaching program on knowledge regarding assisted reproductive technology among BSc nursing 4th year and GNM 3rd year students of PIPRAMS, Greater Noida, Uttar Pradesh.

3.Methods / Approach

An evaluatory approach with non-randomized control group design was used for this study. The study was carried out in selected nursing college at Greater Noida (U.P). The sample comprised of 60 nursing students (30 samples were from B.Sc nursing 4th year and 30 samples were from GNM 3rd year) who met the inclusion criteria from the selected nursing college was chosen and divided into experimental and control group by purposive sampling techniques. The data collection was done from 10th Oct.2020 to 17th Oct.2020. Formal written permission was obtained from the authorities to conduct the study and informed consent was obtained from subject prior to the data collection process. Pre test was conducted from both the experimental and control group. On the same day structured teaching program was administered to the experimental group and no treatment was given to the control group. On 7th day after structured teaching program post test was conducted from both the groups. The knowledge regarding assisted reproductive technology was measured in term of knowledge scores which was classified under five headings i.e. very poor, poor, average, good & excellent. The data was analysed using descriptive

and inferential statistics. Paired and unpaired "t" test was used to evaluate the effectiveness of structured teaching program and unpaired "t" test and one way ANOVA was used to find the association of pre-test knowledge score with selected demographic variables in experimental and control groups.

4. Results / Discussion

The findings shows that mean post test knowledge score of experimental and control group i.e. 21.60 & 14.60 was higher than the mean pre test knowledge score of experimental and control group i.e. 11.60 & 10.57 respectively. The structured teaching program was highly effective in improving the knowledge of nursing students as the mean post test knowledge score of experimental group was higher than the mean post test knowledge score of control group. Mean difference between two was 7, 't' value was 4.2807 and 'p' value was < 0.0001 which was significant. Demographic variables such as gender, level of education and source of information shows significant association with pre-test knowledge regarding assisted reproductive technology in both experimental and control group, there 't'/ 'f' value was 2.5936, 2.1553, 4.37858 & 2.3334, 3.0856, 6.9443 respectively, 'p' value for them was 0.0149, 0.0399, 0.022543 & 0.0270, 0.0045, 0.003688 respectively which was highly significant. Whereas age and religion did not show significant association in both experimental and control group their "t"/'f' value was 0.19894, 0.0088 & 0.1355, 0.85967 respectively, "p" value for them was .820793, .99124 & 0.873871, 0.434565 respectively which was not significant.

5. Conclusion

The study concluded that samples did not have excellent knowledge regarding assisted reproductive technology. There was a significant increase in the knowledge of samples after the implementation of structured teaching programme. To find the effectiveness of structured teaching program, t test and one way ANOVA was applied and was calculated. Post test score was found significantly higher than the pre test score in experimental as well as control group. Mean post test score of experimental group was significantly higher than mean post test scores of control group. Thus it was concluded that structured teaching program was found effective on knowledge of samples regarding assisted reproductive technology.

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