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A Study to Evaluate the Effectiveness of Structured Teaching Programme on Knowledge Regarding in Vitro Fertilization Treatment Among Women Age 30-45 in Selected Hospitals at Bangalore.

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INTRODUCTION:-

"Most of all other beautiful things in life come by twos and threes and by dozens and hundreds. Plenty of roses starts sunset rainbow brothers and sisters and sisters aunts and cousins but only one mother in the world."

Kate Douglas Wiggin

Motherhood is both a manic journey that deserves to be celebrated. A failure to conceive then is a major life stressor, which can break a harmonial relationship of well adjusted couples.[1] As your baby's life begins, a new life begins for you too, and life will never be same for you again. So it is said to be that motherhood is the golden period in women's life as it makes the changes on her both physically and mentally. To maximize the pregnancy the couple should have proper intercourse for few days when egg released. Infertility is the apparent failure of a couple to conceive within one or more years of regular unprotected coitus. Conception is the result of successful fertilization of female gamete by the sperm so both the partners contribute varyingly to occurrence of infertile state. It is therefore necessary to investigate both the partners, conduct test and undergo treatment to enhance the infertility potential of each partner to get better result.[1]

Infertility, also called primary infertility, is the inability of a couple to become pregnant (regardless of cause) after one year of unprotected sexual intercourse using no birth control methods. This is in contrast to secondary infertility, which refers to the inability to maintain a pregnancy until birth.1

Primary infertility affects about 6.1 million people in the United States, about 10% of men and women of reproductive age. Assisted reproductive technologies (ARTs) are techniques to help a woman become pregnant, including in vitro fertilization (IVF), intracytoplasmic sperm injection (ICSI), and other similar procedures.[2]

In vitro fertilization (or fertilization; IVF) is a process by which an egg is fertilized by sperm outside the body: in vitro ("in glass"). The process involves monitoring and stimulating a woman's ovulatory process, removing an ovum or ova (egg or eggs) from the woman's ovaries and letting sperm fertilize them in a liquid in a laboratory. The fertilized egg (zygote) is cultured for 2–6 days in a growth medium and is then implanted in the same or another woman's uterus, with the intention of establishing a successful pregnancy.[2]

IVF techniques can be used in different types of situations. It is a technique of assisted reproductive technology for treatment of infertility. IVF techniques are also employed in gestational surrogacy, in which case the fertilized egg is implanted into a surrogate's uterus, and the resulting child is genetically unrelated to the surrogate. In some situations, donated eggs or sperms may be used. Some countries ban or otherwise regulate the availability of IVF treatment, giving rise to fertility tourism. Restrictions on availability of IVF include to single females, to lesbians and to surrogacy arrangements. Due to the costs of the procedure, IVF is mostly attempted only after less expensive options have failed.3

The first successful birth of a "test tube baby", Louise Brown, occurred in 1978. Louise Brown was born as a result of natural cycle IVF where no stimulation was made. Robert G. Edwards, the physiologist who developed the treatment, was awarded the Nobel Prize in Physiology or Medicine in 2010. With egg donation and IVF, women who are past their reproductive years or menopause can still become pregnant. Adriana Iliescu held the record as the oldest woman to give birth using IVF and donated egg, when she gave birth in 2004 at the age of 66, a record passed in 2006. After the IVF treatment many couples are able to get pregnant without any fertility treatments.[3]

IVF may be used to overcome female infertility where it is due to problems with the fallopian tubes, making fertilization in vivo difficult. It can also assist in male infertility, in those cases where there is a defect in sperm quality; in such situations intra cytoplasmic sperm injection (ICSI) may be used, where a sperm cell is injected directly into the egg cell. This is used when sperm has difficulty penetrating the egg, and in these cases the partner's or a donor's sperm may be used. ICSI is also used when sperm numbers are very low. When indicated, the use of ICSI has been found to increase the success rates of IVF.[4]

IVF success rates are the percentage of all IVF procedures which result in a favorable outcome. Depending on the type of calculation used, this outcome may represent the number of confirmed pregnancies, called the pregnancy rate, or the number of live births, called the live birth rate. The success rate depends on variable factors such as maternal age, cause of infertility, embryo status, reproductive history and lifestyle factors.4

According to the Society of Assisted Reproductive Technologies (SART), the approximate chance of giving birth to a live baby after IVF is as follows:

- 41 - 43% for women under age 35
- 33 - 36% for women age 35 - 37
- 23 - 27% for women ages 38 - 40
- 13 - 18% for women age 41 and over

However, more than 250,000 babies have been born since then as a result of using the IVF technique. IVF offers infertile couples a chance to have a child who is biologically related to them. Robert G. Edwards, the doctor who developed the treatment, was awarded the Nobel Prize in Physiology or Medicine in 2010. While some have recorded success, some have recorded adverse consequences of this treatment. In Nigeria, health care workers, particularly nurses, are taking care of patients undergoing IVF procedures on a routine basis. This is particularly true of tertiary care hospital. The IVF nurse plays a significant role in the care received by both recipient and donor, acting as the coordinator for IVF cycles and providing direct care to both patients.[5]

According to one study, the nurse is the professional who spends the most time with donors as compared with physicians and mental health professionals. They are also greatly involved in donor/recipient matching. In another study, 73% of nurses practicing in infertility settings described their primary role as direct patient care. The success of IVF is the birth of healthy baby and such condition can only be met with the role each health workers play in the procedure. Over the years, there has been increasing number of facilities that offer IVF treatments in developing countries but only very few are in the public tertiary hospitals. The establishment of more IVF centers in the government owned hospitals in Nigeria is in progress. However, it has

been observed that the fear arising from lack of knowledge led to discriminatory behavior towards women embarking on IVF procedures.[5]

The authors therefore determined the level of knowledge and attitude of nurses in a teaching Hospital regarding IVF. It is believed that this study will form a useful guide to healthcare givers in developing country settings in educating them on the treatment of infertility and improved nurses'-patients' care.[5]

NEED FOR THE STUDY:-

The research over the past four decades suggested that the 60.2 million women of reproductive age in 1955-15 percent or 9.3 million had used some kind of infertility services. That was set up from 12percent or 6.8 million women in 1988. About 2 percent (1.2 million women) on reproductive age had an infertility clinic visit in the past year.

In vitro fertilization (IVF) is a complex series of procedures used to treat fertility or genetic problems and assist with the conception of a child. During IVF, mature eggs are collected (retrieved) from your ovaries and fertilized by sperm in a lab. Then the fertilized egg (embryo) or eggs are implanted in your uterus. One cycle of IVF takes about two weeks.[6]

The live birth rate is the percentage of all IVF cycles that lead to a live birth. This rate does not include miscarriage or stillbirth and multiple-order births such as twins and triplets are counted as one pregnancy. A 2012 summary compiled by the Society for Reproductive Medicine which reports the average IVF success rates in the United States per age group using non-donor eggs compiled the following data.[6]

In 2006, Canadian clinics reported a live birth rate of 27%.Birth rates in younger patients were slightly higher, with a success rate of 35.3% for those 21 and younger, the youngest group evaluated. Success rates for older patients were also lower and decrease with age, with 37-year-olds at 27.4% and no live births for those older than 48, the oldest group evaluated.[6] Some clinics exceeded these rates, but it

is impossible to determine if that is due to superior technique or patient selection, because it is possible to artificially increase success rates by refusing to accept the most difficult patients or by steering them into oocyte donation cycles (which are compiled separately). Further, pregnancy rates can be increased by the placement of several embryos at the risk of increasing the chance for multiples.[7]

In 2006, Canadian clinics reported an average pregnancy rate of 35%.A French study estimated that 66% of patients starting IVF treatment finally succeed in having a child (40% during the IVF treatment at the center and 26% after IVF discontinuation). Achievement of having a child after IVF discontinuation was mainly due to adoption (46%) or spontaneous pregnancy (42%).[7]

A 2013 review and meta analysis of randomized controlled trials of acupuncture as an adjuvant therapy in IVF found no overall benefit, and concluded that an apparent benefit detected in a subset of published trials where the control group (those not using acupuncture) experienced a lower than average rate of pregnancy requires further study, due to the possibility of publication bias and other factors.8

A Cochrane review came to the result that endometrial injury performed in the month prior to ovarian hyper stimulation appeared to increase both the live birth rate and clinical pregnancy rate in IVF compared with no endometrial injury. However, there was a lack of data reported on the rates of adverse outcomes such as miscarriage, multiple pregnancy, pain and/or bleeding.[9]

For females, intake of antioxidants (such as N-acetyl-cysteine, melatonin, vitamin A, vitamin C, vitamin E, folic acid, myo-inositol, zinc or selenium have not been associated with a significantly increased live birth rate or clinical pregnancy rate in IVF according to Cochrane reviews.[21] On the other hand, oral antioxidants given to the men in couples with male factor or unexplained sub fertility resulted in significantly higher live birth rate in IVF.[9]

A Cochrane review in 2013 came to the result that there is no evidence identified regarding the effect of pre-conception lifestyle advice on the chance of a live birth outcome.[10]

Success rates for IVF depend on a number of factors, including the reason for infertility, where you're having the procedure done, and your age. The CDC compiles national statistics for all assisted reproductive technology (ART) procedures performed in the U.S., including IVF, GIFT, and ZIFT, although IVF is by far the most common; it accounts for 99% of the procedures.[11]

Pregnancy was achieved in an average of 29.4% of all cycles (higher or lower depending on the age of the woman).The percentage of cycles that resulted in live births was 22.4% on average (higher or lower depending on the age of the woman).[11]

A woman's age is a major factor in the success of IVF for any couple. For instance, a woman who is under age 35 and undergoes IVF has a 39.6% chance of having a baby, while a woman over age 40 has an 11.5% chance. However, the CDC recently found that the success rate is increasing in every age group as the techniques are refined and doctors become more experienced.[12]

The live birth rate for one cycle varies by maternal age. According to the Society of Assisted Reproductive Technologies (SART):

- The live birth rate per IVF cycle is 40%-43% among women younger than 35 years of age and 33%-36% for those aged 35 to 37 years.
- The success rate ranges from 13%-18% in those older than 40 years of age.
- Pregnancy in women older than 44 years of age is rare.[12]

OBJECTIVES

This chapter deals with the statement of the problem, objectives of the study, operational definitions, assumptions, hypothesis and conceptual framework which provide a frame of reference. The statement of the selected for the study is as follows.

Statement of the Problem:

"A study to evaluate the effectiveness of structured teaching programme on knowledge regarding in vitro fertilization treatment among women age 30-45 in selected hospitals at Bangalore"

Objectives of the study:

The objectives of the study are to:-

- determine the pre-test knowledge regarding in vitro fertilization treatment among women age 30-45
- determine the post-test knowledge regarding in vitro fertilization treatment after structured teaching programme
- Evaluate and compare the effectiveness of structured teaching programme on in vitro fertilization treatment.
- Find out the association between pre test knowledge scores and selected demographic variables among women age 30-45 years.

OPERATIONAL DEFINITIONS:

Evaluate: In this study, evaluate refers to a systematic process of determining the extent of knowledge achieved by women age 30-45 regarding in vitro fertilization with the help of structured teaching programme.

Effectiveness: In this study, effectiveness refers to the extent to which the structured teaching programme has achieved the desired effect in improving the knowledge about in vitro fertilization.

Structured teaching programme: In this study, it refers to a systematically organized teaching strategy regarding in vitro fertilization technique.

Knowledge: In this study, knowledge refers to the subjects' correct responses to knowledge questions on in vitro fertilization technique by a structured knowledge questionnaire and expressed in terms of knowledge scores

In vitro fertilization treatment. - In vitro fertilization treatment is a process by which an egg is fertilized by sperm outside the body

Women:-In this study it refers to an adult female person age 30-45 in the selected hospitals at Bangalore.

Hospital: it refers to a place where sick or injured people are given care or treatment

INCLUSION CRITERIA:

1. Women who are willing to participate in the teaching programme.
2. Women who are present at the time of study.
3. Women who knows to read and write Kannada
4. Women age of 30-45 years

EXCLUSION CRITERIA:

1. Women who are not willing to participate in the teaching programme.
2. Women who are severely ill

HYPOTHESIS:-

The study is based on the hypothesis:

H_1: There will be significant difference between the pre-test and post-test knowledge scores as measured by the knowledge questionnaire.

H_2: There will be significant association between pre-test knowledge score and selected demographic variables

PROJECTED OUTCOME

- The result of the study would reveal the existing knowledge regarding in vitro fertilization treatment among the women age 30-45.
- It will determine the effectiveness of structured teaching programme on in vitro fertilization in terms to gain knowledge towards the in vitro fertilization treatment.

CONCEPTUAL FRAMEWORK:

Conceptual framework acts as building block for the research study. The overall purpose of framework is to make the scientific finding, meaningful and generalized. It provides a certain framework of reference for clinical practice, education and research. Framework can guide the researcher's undertaking of not only 'what' of natural phenomena but also 'why' of their occurrence. They also give direction for relevant questions to practical problems.[13]

A conceptual model is a group of concepts and set up propositions that provides prescription on the major concepts. Conceptual model refers to set of values, beliefs and preferences for research approach. Conceptual framework plays several interrelated roles in the progress of science. There overall purpose is to make scientific meaningful and generalisable. The conceptual model also called as conceptual frameworks or systems. [13]

The present study aims at evaluating the effectiveness of structured teaching programme among women age 30-45 regarding knowledge on in vitro fertilization treatment. In the study, Leininger's culture care diversity and university theory was selected. In this theory he uses Sunrise Model to illustrate the major components of the cultural care theory. Model describes how the theory's components influence the health and care of individuals in various cultures. This model consists of four levels.

Level 1 :

According to the Leininger's, the level 1 represents the world view and a social system leads the study of the nature, meaning and attributes of care from their perspectives; micro perspective (individual within a culture), middle perspective (more complex factors in a specific culture) and macro perspective (phenomena across several cultures).

In this study, the investigator deals world views and social system through the technological, religious and philosophical, kingship of social, educational, economical and culture value of factors influence care expression, patterns and practices to women age 30-45.

Level 2 :

According to the Leininger's the level 2 attempts to have provide information about individuals, families, groups and institution in different health systems and also provides about specific meaning and expression as they relate to health care.

In this study, the investigator provides information about the study among women age 30-45 at infertile clinic in different health system regarding specific values, belief and practices of a culture and expression as related to in vitro fertilization treatment.

Level 3 :

According to the Leininger's the level 3 information about folk and professional system, including nursing that operate with a culture and allows identification of culture care diversity (perceiving, knowing and practicing care in different ways) and universality (commonalities of care)

PRE TEST :

Assess the knowledge among women age 30-45 administrated questionnaire regarding in vitro fertilization treatment.

Structured teaching programme

Administration of structured teaching programme on in vitro fertilization treatment among women age 30-45 using appropriate A.V Aids (blackboard, Charts, Flashcards and slide show) by investigator.

POST TEST:

Assess the knowledge among the women age 30-45 after administrated questionnaire regarding in vitro fertilization treatment.

Level 4 :

According to the Leininger's the level 4 depicts the level of nursing care action decision and also nursing care is delivered at this level. Here it includes cultural care preservation, accommodation and repapering and cultural – congruent care is developed.

In this level, the outcome of study among women age 30-45 has recognized as adequate, moderately adequate and inadequate knowledge levels. If the outcome of the study were moderately adequate and inadequate for knowledge levels then again they should go back for feedback to structured teaching programme.

RESEARCH METHODOLOGY

Research Methodology is the way of solving the problem. It explains the various steps that are generally adopted by a researcher in studying the research problem along with the logic behind it. Methodological research is the research designed to develop or refine procedures for obtaining, organizing or analyzing data. This chapter of Research Methodology deals with description of methodology and different steps, which were undertaken for gathering and organizing data. It includes research approach, research design, variables, setting of the study population, inclusive and exclusive criteria for selection of the sample, sampling technique, sample size, description of tool, scoring, structured teaching programme, content validity, pilot study and procedure for data collection and plan for data analysis.[36]

Research Design

Research design is defined as the plan, structure and strategy of investigations' of answering the research question. It is the overall plan or blue print that the researchers select to carry out their study.[37]

The selection of the design depends upon the purpose of the study, research approach and variables to be studies. **Quasi experimental design**, which consists of pretest posttest randomization. Observations were made before and after teaching programme. Hence the researcher has chosen the quasi-experimental design to assess the effective of structured teaching programme among women age 30-45 regarding in vitro fertilization treatment.

The quasi experimental design chosen for the study is as prescribed in the table

Study Group	**Pre-Test**	**Intervention**	**Post-Test**
	(Administration of structured knowledge questionnaire)	(Administration of structured teaching programme)	(Administration of self structured knowledge questionnaire)
Women age 30-45	**O_1**	**X**	**O_2**

Research Approach

The selection of research is the basic procedure for the research of enquiry. The research approach helps the researcher to determine what data to collect and how to analysis it. It also suggests possible conclusions to be drawn from the data. In a view of nature the problem was selected and objectives to be accomplished comparative study with evaluative approach were considered as an appropriate one.[38]

Evaluative research is generally an applied research that involves the findings out of how well a programme; practice, procedure or policy is working. The major aim of evaluative research is to achieve, some practical goal, that is, to have major emphasis on utility. Hence this approach is most widely used when the primary objective is to determine the extent to which given procedures achieve some desired result.

The classical approach for the conduct of evaluative research consists of:

- Determining the objectives of the programme.
- Developing a means of measuring the attainment of those objectives.
- Collecting data
- Interpreting the data with the objectives.

In the analysis of data, the relationship between the initial and the

Terminal (pre and post) measurement represent the effect of independent variables.

SETTING:

Setting is the physical location and conditions in which data collection takes place. The study was conducted in Remamani malernity hospital at Rajajinagar 4th Block, Bangalore. The College was selected for the study on the basis of:

- Geographical proximity
- Feasibility of conducting the study
- Availability of sample

VARIABLES UNDER INVESTIGATION:

Variable is a quality of an organism, group or situation that takes on different values. Research variables are concepts at various levels of abstraction that are measured, manipulated and controlled in a study.

Independent variable:

The variables which can be purposely manipulated and controlled in a study.5In the present study the independent variable is the structured teaching programme on in vitro fertilization treatment.

Dependent variable:

Change occurring as a result of manipulation of Independent variable. In the present study it refers to the knowledge of women age 30-45 regarding in vitro fertilization treatment measured by self administered questionnaire. Pregnancy and Childbirth as measured by structured knowledge questionnaire.

Extraneous variable (Demographic variable) :

Independent variable that are not related to the purpose of the study, but may affect the dependent variable are termed as extraneous variable.54 In the present study the demographic variables are age, educational status, type of family, family's monthly income and source of health information ,age of menarche, gender residency, habit of using tobacco, had experience of IVF.

TOOLS FOR DATA COLLECTION:

Selection and development of the tool:

The instrument is a vehicle that could obtain data pertinent to the study and at the same time adds to the body of general knowledge in the discipline. The investigator developed self administered questionnaires to assess the effectiveness of structured teaching programme on knowledge regarding in vitro fertilization treatment among women age 30-45 attending infertility clinics

The following steps were carried out for preparing the tool:

1. Review of related literature.
2. Preparation of blue print.

3. Expert's opinion.
4. Investigator's personal experience.

Preparation of blue print:

The blue print on self administered questionnaire on in vitro fertilization treatment was prepared, which consisted of 7 sub areas. According to the content area in the blue print, adequate number of items was prepared in each area. Then the prepared items were subjected to content validation, pre-testing and estimation of reliability.

Development of criteria rating scale:

Criteria rating scale for validation of tool was developed. Part –I - Comprised of demographic data.

Part –II - Comprised of self administered questionnaire on in vitro fertilization treatment which had very relevant, relevant, needs modification, not relevant and remarks of experts.

DESCRIPTION OF THE TOOL.

The tool for the data collection consists of three sections:-

Section A: Socio-demographic variables

It deals with demographic variables which include age, type of family of religion occupation, education, family income/month, had experience of IVF, habits of tobacco, nature of marriage, age of menarchae, history of abortion, type of family, residence receive any information regarding in vitro fertilization treatment.

Section B: Knowledge regarding in vitro fertilization treatment:

This part consists of 40 multiple choice questions which includes the following selected aspects on in vitro fertilization treatment.

1. Anatomy and physiology of male & female reproductive system.
2. Definition of fertility.
3. Types of infertility.
4. Causes of infertility.
5. Signs, symptoms of infertility.
6. Diagnostic test for infertility.
7. Treatment of infertility.
8. Definition of in vitro fertilization.
9. Different method of in vitro fertilization treatment.
10. Advanced methods of in vitro fertilization treatment.
11. Complications of in vitro fertilization treatment.

STEPS OF PREPARING SELF INSTRUCTION MODULE:

Teaching module is a guide for the investigator because it helps to cover the topics comprehensively with proper sequence of points without missing anything. Structured teaching programme was developed by the investigation using the steps below:

1. Framing the outline of the teaching programme.
2. Preparing the outline of the content.
3. Deciding method of teaching and audio-visual aids.

1. Framing the outline of the content:

The existing knowledge of the samples was assessed by using a self structured questionnaire. The outline of content was framed which include setting of the general and specific objectives, specifying date, time, place, size of the group, number of session and duration of session.

2. Preparing the outline of the content:

The content of the module includes topics on introduction, anatomy and physiology of male and female reproductive system, basic concepts, etiology, signs and symptoms treatment of infertility.

3. Administrating the structured teaching programme.

The administration of structured teaching programme was done by giving the knowledge to women age 30-45 who is participating in the programme.

CONTENT VALIDITY:

Validity refers to the degree to which an instrument measures and what it is supposed to be measuring.

To ensure the content validity the instrument was given to 10 experts from different fields along with blue print, objective of the study and evaluation criteria checklist (Annexure – V, VIII)

The expert included 6 from the field of obstetrics and gynecology, one from the field of medical gynecology and 1 from statistician and gynecologist (Annexure- IV). The experts were requested to give their opinions and suggestions regarding the relevance, adequacy and appropriateness of the tool (Annexure-III, VIII).

PRESENTATION OF TOOL:

Presenting of self administered questionnaire was done to check the clarity of the items, their feasibility and practicability.

Pre testing was done in Hosahally Referral hospital Bangalore. It was administer to 10 women age 30-45. The sample chosen were similar in characteristic to those of the population under study.

It was found it took 40 minutes to complete the tool and it was found that the items were simple to comprehend.

The first draft of the tool consists of 70 items.

Based on the pretesting and suggestion by experts, modification and rearrangement of few items were done a (11, 12, 9, 10, 7, 16, 18, 19, 20, 21, 29, 30,31,13,14,15) and few items were not found appropriate by item analysis, so they were deleted.

The items deleted were: (1,7,16,18,19,23,33,34,39,43,46)

Thus the second draft of the prepared tool consisted of 60 items

RELIABILITY OF THE TOOL:

Reliability of the research instrument is defined as the extent to which the instrument yields the same result on repeated measures. It is then concerned with consistency, accuracy, precision, stability, equivalence and homogeneity.

The final tool was tested for reliability. The self administered questionnaire was tested for reliability by administering it to 10 women age30-45 attending infertility clinic.

Reliability of the tool was established by testing the stability and internal consistency. Stability was assessed with test and retest method. Internal consistency was assessed by using split half technique with row score method and deviation method and spearman brown prophesy formula.

Spearman's Brown Prophesy Formula for Reliability:

$$r^1 = \frac{2r}{1+r}$$

r = the correlation, coefficient , computed on the split haves. r^1 = the estimated reliability of the entire test.

For competing the coefficient of correlation the formula use to were.

Raw score method:-

Raw score method:-

$$r = \frac{\sum XY - \frac{X\bar{Y}}{n}}{s_1 s_2}$$

Deviation Method:-

$$R = \frac{\sum X Y}{\sqrt{\sum X^2 \times \sum Y^2}}$$

The reliability of the tool was found to be 0.9 which is indicated that the tool was reliable.

PILOT STUDY:

"Pilot study is small scale version, or trial run, done in preparation for major study".

Purposes of pilot study:

The main purposes of pilot study were:

1. To assess the effectiveness of the data collection plan.
2. To identify the inadequacies of the plan and make due modifications as required.
3. To find out the feasibility of conducting the final study and to determine the methods of statistical analysis.
4. Pilot study is small preliminary investigation of the same general character as a major study. It was conducted in Hosahalli Referral Hospital, Bangalore on 09/09//2016 to 15/09/2016. The study was conducted among 10 women age30-45 after obtaining the permission from the concerned authority. On the first day pretest was conducted by using purposive sampling technique. After that structured teaching programme was administered to the women age30-45. The posttest was conducted after 7th days.

Findings of the pilot study:

Majority of the subjects 29(75 %) were 30 – 40 years age group. 87.5% were Hindus,45 % were completed B.Sc Nursing. In designation in the hospital 58.33 % were staff nurses, 70 % were married, 50% have an income of Rs.5001 – 10,000/-, 33

% were having an experience of 1 – 5 years, 43 % belong to joint family, 43.33 % were attended In-service education/ Work shop/ Seminar,20 % of staff nurses have performed newborn resuscitation above 11 times,31.67 % from friends and colleagues were source of information.

Reveals Aspects wise post test Mean knowledge score of respondents on in vitro fertilization treatment,

Regarding Basic concepts about infertility the knowledge score was 15 was 20%, In the aspect of Anatomy and physiology of reproductive system the mean knowledge score was (74.55%) & S.D Score was 1.7, regarding Causes of infertility the mean knowledge score was (3%), and, regarding Diagnostic evaluation the mean knowledge score was (69.53%) and regarding Treatment of infertility the mean knowledge score was(16.67%), regarding in vitro fertilization treatment technique the mean knowledge score was 9.3%.

Problem faced during pilot study:

- It consumed more time to collect the data from the women age35-40 as they were hesitated to participate.
- Some questions that had been framed were found to be slightly difficult to understand by the participant and they were modified so that they were easy for them to understand.

The tool proved to be feasible and practicable. A change was done after pilot study in the tool as instead of women age30-45 from the statement of problem. The investigator then proceeded for the final study.

PROCEDURE FOR DATA COLLECTION:

1. A prior formal permission was obtained from institution authority for conduction the study.
2. Formal permission was obtained from medical superintendent Bangalore (Annexure-I)
3. Assess the pretest knowledge on in vitro fertilization treatment by using self administrated questionnaire on 3rd October 2016.
4. On same day administered structured teaching programme on in vitro fertilization treatment in women age30-45.
5. And subsequently posttest was done on 25th October 2016 by using the same structured questionnaire.

PLAN FOR DATA ANALYSIS:

The data obtained were analyzed in terms of objectives of the study using descriptive and inferential statistics. The plan of data analysis was as follows;

- Organize data in a master sheet or computer.
- Personal data would be analyzed in terms of frequencies and percentages.
- The level of knowledge among women age30-45 before and after administration of structured teaching programme on in vitro fertilization treatment.
- Would be analyzed in terms of frequencies, percentages, mean, median, standard deviation and would be presented in the form of bar/column diagram, Pie diagram.
- The significant difference between pre-test and post-test knowledge would be determined by "chi-square" test.
- The association between infertility and demographic variables could be determined by using x^2 tests (Chi-square) and t –test.

Ethical consideration:

The proposed study was conducted after the approval of dissertation committee of Bangalore City College of Nursing. Permission was obtained from the higher authority of Ramamani maternity Hospital, Bangalore. Assurance was given to them that anonymity of each individual would be maintained.

SUMMARY:

This chapter of methodology has deals with research approach an evaluative one; research design , the setting of the study, the population, sample and sampling technique, the description of tool, scoring, structured teaching programme, content validity, reliability, pilot study, data collection procedure and plan for data analysis

RESULTS:

Statistical analysis is a method of rendering quantitative information meaningfully and intelligently. Statistical procedures enable the researcher to reduce, summarize, organize, evaluate, interpret and communicate numeric information.[39]

This chapter deals with analysis and interpretation of data collected from 60 women age30-45 regarding in vitro fertilization treatment keeping in a view the objectives of the study use Quasi experimental approach which was adopted to evaluate the effective of structured teaching programme on in vitro fertilization treatment.

The data was collected from the respondents before and after giving STP. The collected information was organized, tabulated, analyzed and interpreted using descriptive and inferential statistics. Analysis was done based on the objectives and hypothesis of the study.

PRESENTATION OF THE DATA:

The data were presented under the following headings.

Section A : Data on demographic variables of the respondents.

Section B : Data on knowledge regarding in vitro fertilization treatment.

Section C : Data on effectiveness of structured teaching programme regarding in vitro fertilization treatment.

Section D : Data on association between pretest & Post test regarding knowledge on in vitro fertilization treatment.

Section E : Data on association between pretest & Posttest regarding knowledge on in vitro fertilization treatment among women age30-45 with their selected demographic variables

DISCUSSION

The findings of the study have been discussed with reference to the objectives and hypothesis stated. The findings in the demographic characteristics and effectiveness of structured teaching programme on knowledge regarding in vitro fertilization treatment among women age30-45 attending infertility clinician are compared with the findings of other studies.

The present research was carried out to assess the effectiveness of structured teaching programme on knowledge regarding the in vitro fertilization treatment among women age30-45 in selected hospitals at Bangalore"

The findings of the study are discussed under the following headings.

- Sample characteristics
- Knowledge score of participants regarding in vitro fertilization treatment.
- Data on effectiveness of STP regarding IVF
- Data on association between pretest and posttest regarding knowledge on IVF.
- Association of knowledge scores of participants with selected demographic variables.

CONCLUSION

On the basis of findings of the study the below set conclusions were drown. It also brings about the limitations of study in to practice. The implications are given on the various aspects like nursing education, nursing practice, nursing administrations and it also gives insight in to the future studies.[42]

Many studies show that there is a lack of knowledge regarding in vitro fertilization treatment among women age30-45 attending infertility clinic in Bangalore. Structured teaching programme is the best method to improve knowledge regarding in vitro fertilization treatment among women age30-45 attending infertility clinics.

The knowledge of women age30-45 regarding in vitro fertilization treatment was inadequate when assessed in pretest. Whereas the knowledge level has improved during the post test.

Structured teaching programme was effective in improving the knowledge of women age30-45 regarding in vitro fertilization treatment. There is a significant difference between the and post test knowledge.

The study shows the majority of respondents 57(95%) had inadequate knowledge, 3(5%) had moderate knowledge and none of them had adequate knowledge in pre test knowledge level on in vitro fertilization treatment.

The above study shows the majority of respondents 33(55.0%) had moderate knowledge, 27(45%) had adequate knowledge and none of them had inadequate knowledge in post test knowledge level on in vitro fertilization treatment

The study indicates, association between demographic variables & knowledge level on in vitro fertilization treatment there exists a non significant associated between pretest knowledge score on in vitro fertilization treatment among women age30-45 & selected demographic variable such as Age, type of family, religion, educational status, occupation, had experience of IVF, age at menarche, nature of marriage, residence, history of abortion, habit of using tobacco/smoking, receiving family planning method and source of information hence comes under null hypothesis $H_0$2 is non significant.

SUMMARY

This chapter presents the summary of the study, its discussion, conclusion, its nursing implications and recommendations.

An evaluative study on assessing the effectiveness of structured teaching programme regarding knowledge among women age 30-45. A sample of 60 women age30-45 was selected by using purposive sampling. . It was concluded that structured teaching programme was effective strategy knowledge among women age30-45.

OBJECTIVES OF THE STUDY

The objectives of the study are to:-

- Determine the pre-test knowledge regarding in vitro fertilization treatment among women age 30-45

- Determine the post-test knowledge regarding in vitro fertilization treatment after structured teaching programme
- Evaluate and compare the effectiveness of structured teaching programme on in vitro fertilization treatment.
- Find out the association between pre test knowledge scores and selected demographic variables among women age 30-45 years.

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