



“An Experimental Study to Assess the Effectiveness of An Informational Booklet on Contraception among Undergraduate College Girls at Selected Colleges at Jhajjar in Haryana”

Name of 1st Author ARTI

¹Designation of 1st Author Assistant lecturer,

¹Name of Department of 1st Author Obstetrical & Gynecological Nursing,

¹Name of organization of 1st Author, BDM COLLEGE OF NURSING City Jhajjar, Country Indian

Abstract : Introduction: Family planning is defined by WHO as “ a way of thinking and lining that is adapted voluntarily, upon the basis of knowledge, Attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of family group and this contribute effectively to the social development of a country. Inadequate knowledge attitude and practice about contraception method and incomplete or enormous information about their use or where to procure them are the main reason for not accepting formula planning. Keeping all the facts in view this stand was carried and to assess the Knowledge Attitude and Practice of contraceptive methods among prime and Multi mothers in Coimbatore.

Objective of the study: To develop and validate information booklet regarding contraception for undergraduate college girls. To assess the pre test level of knowledge regarding contraception among undergraduate college girls. To assess the effectiveness of informational booklet in term of level of knowledge regarding contraception among undergraduate college girls. To find out the association between post test level of knowledge with their selected socio-demographic variables

Material and Method: The researcher conducted the study using quantitative approach and pretest and post test research design on 100 undergraduate college girls by purposive sampling technique. Structured questionnaire was used to assess the knowledge of undergraduate college girls regarding contraception. Descriptive and inferential statistics used to analyze the data.

Results: Through the analysis and interpretation of data, major findings of the study are Maximum no. of undergraduate girls 40% were in age of 20 year. The undergraduate college girls were surveyed regarding they have any knowledge regarding contraception and 55% respond positive and among them 38% said their source of information was TV, 15% said their source of information was their friends, one responded about books. Pretest and post- test mean knowledge score of undergraduate college girls is 19.25 & 26.55 respectively. 55% samples were having previous information regarding contraception. Mean percentage pre-test knowledge score was 55.00%. Mean post- test knowledge score was 75.86%

Conclusion: The investigator concludes that knowledge of undergraduate college girls in post-test is more as compare the pre-test. The Informational Booklet will help in improving the knowledge of undergraduate college girls regarding contraception

Keywords: Assess the effectiveness, Undergraduate College Girls, Contraception and Informational Booklet

INTRODUCTION

Background of the study

“Contraceptives Are the Greatest Life-Saving, Poverty-Ending, Women-Empowering Innovation Ever Created.” — Melinda Gates,

India was the first country in the world to formulate the national family planning programme in the year 1952 with the objective of reducing the birth rate of extent necessary to stabilize the population at a level consistent with requirement of national economy. One of the main objectives of the programme is to space the knowledge of family planning methods and develop among the people an attitude favorable for adoption of contraceptive methods. The progress achieved in this sphere is normally assessed form the result of Knowledge, Attitude and Practice survey. Despite the fact that contraception usage has increased over a period of time, there exist a Knowledge Attitude and Practice-gap. That is a gap between Knowledge Attitude and Practice regarding contraception. In developing country like India, over population is a major concern. Despite progress resulting from making contraception widely available, there is poor acceptance of contraception. Methods either due to ignorance or fear of complications using them.

Inadequate knowledge attitude and practice about contraception method and incomplete or enormous information about their use or where to procure them are the main reason for not accepting formula planning. Keeping all the facts in view this stand was carried and to assess the Knowledge Attitude and Practice of contraceptive methods among prime and Multi mothers in Coimbatore.

Family planning is defined by WHO as “ a way of thinking and lining that is adapted voluntarily, upon the basis of knowledge, Attitudes and responsible decisions by individuals and 22 couples, in order to promote the health and welfare of family group and this contribute effectively to the social development of a country^{1,2}

Spacing births at least two years apart can save the lives of millions of infants. Improving reproductive health is central to achieving the Millennium Development Goals on improving maternal health, reducing maternal mortality, infant mortality and eradicating extreme poverty^{1,2} This requires that women have access to safe and effective methods of fertility control. The promotion of family planning can avoid unwanted pregnancy and improve maternal health and becomes the core in achieving the Millennium Development Goals³ .

Pregnancy is a period which last for 38- 40 weeks, counting from the first day of the last normal period. It is one of the most precious periods in a woman’s life and also one of the most delicate. A better understanding of the do’s and don’ts during this critical period will go a long way in making this period is important in making this period more enriching for woman⁴ .

The concept of contraception has existed for as long as people have been capable of giving birth to offspring. From the very beginning, substances such as lemon juice, olive oil, as well as honey, have been used as contraceptives. Thousands of years ago women in China would drink mercury to avoid becoming pregnant while women in India would do the same with carrot seeds. Gradually as days passed with the advancing technology many forms of emergency contraceptives come in existences⁵ . Contraception is defined as the intentional prevention of conception through the use of various devices, sexual practices, chemicals, drugs, or surgical procedures. Thus, any device or act whose purpose is to prevent a woman from becoming pregnant can be considered as a contraceptive. In any social context effective contraception allows a couple to enjoy a physical relationship without fear of an unwanted pregnancy and ensures enough freedom to have children when desired. The aim is to achieve this with maximum comfort and privacy, at the same time minimum cost and side effects. Some barrier methods, like male and female condoms, also provide twin advantage of protection from sexually transmitted diseases (STDs) ⁶ .

Contraception means preventing the union of sperm and ovum, suppressing ovulation and interfering with implantation of fertilized ovum in the uterus. The temporary commonly used 23 methods are Condom, Mala – N, Emergency contraceptives and intrauterine devices. Contraceptives can be categorized in to Temporary; Permanent.⁷ The nationwide family planning program was started in India in 1952 making it the first country in the world to do so. In spite of these about 50% eligible couples in India are still unprotected against conception⁸ .

A woman’s ability to choose if and when to become pregnant has a direct impact on her health and well-being. Family planning allows spacing of pregnancies and can delay pregnancies in young women at increased risk of health problems and death from early childbearing. It prevents unintended pregnancies, including those of older women who face increased risks related to pregnancy. Family planning enables women who wish to limit the size of their families to do so. Evidence suggests that women who have more than 4 children are at increased risk of maternal mortality. By reducing rates of unintended pregnancies, family planning also reduces the need for unsafe abortion.⁹ Contraception means preventing the union of sperm and ovum, suppressing ovulation and interfering with implantation of fertilized ovum in the uterus. The temporary commonly used methods are Condom, Mala – N, Emergency contraceptives and intrauterine devices. Contraceptives can be categorized in to Temporary, Permanent [7]. The nationwide family planning program was started in India in 1952 making it the first country in the world to do so. In spite of these about 50% eligible couples in India are still unprotected against conception¹⁰ .

Among adolescents, girls are particularly vulnerable, not only because they are more likely to be coerced invariably for unprotected sex than boys, but they are more susceptible biologically to sexually transmitted diseases (STDs), including HIV infection. Inequality between the sexes makes girls more vulnerable to violence and sexual abuse. Their long-term economic potential is reduced still further by early childbearing . More importantly, adolescents in the age group of 15–24 years contribute to a disproportional 31% of AIDS burden in India, despite the whole demographic comprising about 25% of the country's population. According to the last UNAIDS report,[16] there were 2300,000 people of 15 years and above, living with HIV in India, with one youth infected with HIV/AIDS almost every 15 s (Population Foundation of India, 2003). In India, 19% of girls and 35% of boys have comprehensive knowledge of both HIV and AIDS. Evidence suggests that early diagnosis and treatment of STIs/reproductive tract infections (RTIs), which include behavior change through education among the target groups, has the potential to reduce considerably the transmission of STIs/RTIs. This includes information about 24 the spread of the disease, contraception, and sexual health screening tests. In this way, well-designed school sex education can help combat the culture of ignorance, hesitation, shame, and fear associated with the disease in the community, from which the disease is born. This can only be achieved by scrapping away deep rooted and widely accepted misconceptions and speculations. The health of a mother can affect the health of subsequent generations. A U.S. study found that grandmother’s stature and mother’s birth weight were the strongest predictors of the mother’s stature, which in turn has implications for the birth weight of their children.

In the study of **Venkatesh et al. (2005)** it is revealed that there was a better awareness of health promotion availability of existing health services leading to better utilization of the same by the educated mothers whereas, it was otherwise amongst, illiterate women who were bound by cultural and superstitious beliefs¹⁴ . In India also there is evidence from studies amongst senior secondary school students that adolescents are increasingly becoming sexually active. A study in four public and two government schools of South Delhi conducted in 1992 showed that 63.3% of boys and 37.4% of girls were of the opinion that students of their age had sex; 17% boys and 9% girls agreed to take risk of AIDS rather than miss the chance of having sex with an attractive stranger The global population today stands at over 6 billion, one-sixth of which is in India. Uncontrolled population growth is recognized as the single most important impediment to national development. Despite the fact that India was the first country in the world to implement a national population control programme in 1952, the country is still struggling to contain the baby boom. A lot of efforts and resources have gone into the National Family Welfare Programme but the returns are not commensurate with the inputs. The programme has targeted eligible couples in its efforts to control the population. The United Nations Fund for Population Activities (UNFPA) notes that future population trends will hinge on the fertility decisions of today’s men and women aged 15–24 years and on their ability and freedom to act on those decisions¹⁵. In another study conducted in four senior secondary schools in rural Delhi, also in 1992, 23.4% boys and 15.1% girls admitted to have had sex, while 5.7% boys and 9.6% girls did not deny it. These facts

warrant an investigation into the knowledge and attitude of this agegroup regarding fertility control and contraception.¹⁵ The global population today stands at over 6 billion, one-sixth of which is in India. Uncontrolled population growth is recognized as the single most important impediment to national development. Despite the fact that India was the first country in the world to implement a national population control programme in 1952, the 25 country is still struggling to contain the baby boom. A lot of efforts and resources have gone into the National Family Welfare Programme but the returns are not commensurate with the inputs. The programme has targeted eligible couples in its efforts to control the population. The United Nations Fund for Population Activities (UNFPA) notes that future population trends will hinge on the fertility decisions of today's men and women aged 15-24 years and on their ability and freedom to act on those decisions¹⁶.

NEED OF THE STUDY.

“Population, when unchecked, increases in a geometrical ratio.” – Thomas Robert Malthus. Contraception is the boon for the present world if used at the right time. In developed countries the awareness and use of contraceptive methods among population have reached satisfactory heights, where as in developing countries the rise has to still gain pace. As we know the age of menarche is decreased and onset of sexual activity among young people is also occurring early, therefore they are getting exposed to unplanned and unprotected sexual increase leading to unwanted pregnancy leading to induced abortions. During adolescence when young women and their partners become sexually active many unintended pregnancies occur before they are fully aware of the need for contraception new methods would help couples meet the changing needs for contraception that they face during different stages of their reproductive lives. An increase in the total number and type of contraceptive options available would help to ensure a better, healthier match of methods to users. Furthermore, societal needs change over time, and new methods could help societies address important social problems. In recent years in the United States, for example, the pattern of premarital intercourse has changed, as has exposure to sexually transmitted diseases. To the extent that such social changes take place, the need for contraceptive methods is altered. In this respect, then, contraception is not like other aspects of preventive medicine. One polio vaccine solved the problem of poliomyelitis, but one contraceptive will never meet all societies' and all individuals' changing needs for fertility regulation (Potts and Lincoln, 1988). There are important and obvious gaps in the range of available methods. These gaps could be filled, in part, by developing new, safe, effective, and acceptable methods for men, for breastfeeding women, for teenagers, for older women, and for 26 those with particular health conditions¹⁷. Globally unplanned pregnancy in adolescents is a major public health problem with psychosocial and economic repercussions for the unprepared young individuals. The problem is grater in developing countries where 1/3 of women are mothers before 20 years of age¹⁸.

The present study aimed to assess the knowledge, attitude and practice of family planning methods to enhance the contraceptive practice in the rural community in future. Results showed that the overall knowledge about any method of Temporary contraception was 98% and permanent methods were 63.3%. The findings are similar to practice and attitude of study. Reveals good knowledge and favorable attitude of rural couples towards contraception¹⁹

Worldwide women have to cope up with heavy burden of unwanted pregnancies, mistimed, unplanned, with risk to their health. Their children and families also suffer. Such pregnancies are root cause of induced abortions (safe/unsafe) and grave consequences. Women, their partners can, for most part, prevent unwanted pregnancies by using contraceptives. However many women either do not use any contraceptive or use methods, with high failure rates. These women account for 82% of pregnancies that are not desired. Remaining unintended pregnancies occur among women who use modern contraceptive, either because they had difficulty using method consistently or because of failure. Helping women, their partner use modern contraceptives effectively is essential in achieving Millennium Development Goals for improving women's health, reducing poverty. If all women in developing countries use modern contraceptives, there would be 22 million less unplanned births, 25 million fewer induced, 15 million fewer unsafe abortions, 90000 less maternal deaths and 390000 less children losing their mothers. Also making abortion services broadly legal, by understanding size, type of unmet needs, most important by creating awareness in communities can surely help tackle this problem to a large extent.²⁰ Today, more than a quarter of the world's population is between the ages of 10 and 25 years. This cohort of 1.5 billion people is the largest ever to come of reproductive age. Hence, there is a demographic imperative to motivate this generation to adopt healthy child bearing habits including healthy timings and spacing of pregnancies. Adequate child spacing is considered to be a positive factor on the health of mother and their children.

A study conducted at Wardha district, Maharashtra, to assess awareness level of family planning methods in adolescent girls of different socio-economic groups in rural sectors, in 27 Maharashtra. The sample consisted of 850 higher secondary girl students between 15 to 19 years of age in 5 rural schools (Hindi & English medium) of Wardha district. The collected data was analyzed using descriptive and inferential statistics. A questionnaire was prepared in local language. The study result revealed that 81.7% had poor knowledge score, 18.3% had average knowledge and none of them had good knowledge with mean knowledge score in the post-test by 31.15. It was seen that out of 600 adolescents who participated in the study only 38.16% of adolescents were aware about over population.

United States Agency for International Development's (USAID) family planning program. One of the best ways is through birth spacing, which not only results in healthier pregnancy but also reduces under-five mortality. Optimal birth spacing is the interval between births that provides the greatest health, social, and economic benefits for a family²¹. Total fertility rate of the world has declined to 2.6 children in 2005-2010. Smaller families are slowly becoming the norm in India too.

Unintended pregnancies also contribute to the rapid population growth that impairs desperately needed social and economic progress. If family planning programs are not strengthened and nor successful, and if current fertility were to remain unchanged, world population would increase in size from the current 6.2 billion-13 billion in 2050, rather than to the 8.9 billion estimated by the UN.

The reasons for high fertility in developing countries are complex but past experience makes it clear that improve contraceptive technology and improve delivery of family planning information and services can help lower fertility and make an important contribution to reproductive health in all countries.

Many women and men will not use contraception because of their fears about contraceptive safety or side effects. Many others discontinue use because they did not find a method suitable often because of unpleasant side effect and many others have an unintended pregnancy because of contraceptive failure relating to difficulty of proper use or unreliability of the method.

Development of new and improved contraceptives that are more effective, safer and free from undesirable side effects would make an important contribution to helping individuals gain full control over the number and timing of childbearing. Experience shows that each new contraceptive method increases overall use because a greater variety of options increases the odds that an every individual will find a method that meets his/her needs. 28

The role of contraceptive delivery systems is to evaluate an extensive body of research to evaluate family planning service delivery systems has brought about improvements in both the efficiency and effectiveness of family planning and reproductive health programs.

Birth rate in India according to 2014 results is 2births per women. In spite of this, India is yet above the replacement level, with contraceptive prevalence rate for married women being only 56%. Recent study done on study of contraceptive use among married women in a slum in Mumbai, and it concluded with the following data analysis.

A cross-sectional descriptive study was done in the obstetrics and gynecology department of the STNM hospital and central referral hospital, both attached to the Sikkim Manipal institute of medical sciences. The study group included 443 women of reproductive age group (15-45 years) attending the two hospitals during the month of January 2004-march 2005. Their knowledge, attitude & practice on contraceptives were evaluated with the help of pre designed questionnaire and the study reports that 98% of women had knowledge about family planning and 94.2% of them had knowledge about contraceptives. Over 50% had gained information from media. Majority (98%) thought that contraceptive use was beneficial but only 55.2% had used contraceptives & 84% of them were satisfied. 62% were currently using contraceptives, 37.9% of them were using oral contraceptives & 31% were using condoms. & the study highlights that knowledge & awareness don't always lead to the use of contraceptives. There is still a need to educate & motivate the couple & improve family planning services to achieve more effective & appropriate use of contraceptives & to arrest the trend towards increase in population.22 With above mentioned data and discussion with experts in the nursing and medical field and discussion with women regarding contraception methods, investigator understood that women have insufficient knowledge and indifferent attitude towards contraception. Hence the Investigator felt the need to take up this study

3.1 Population and Sample

TARGET POPULATION Target population is the population about which the investigator wishes to make a generalization. In this study, the target population consisted of all the college girls' studying in selected college in JHAJJAR of Haryana state.

SAMPLE POPULATION AND SAMPLING TECHNIQUE Sample is a portion of the population chosen to represent the entire population and to attain data from a smaller particular sample which in turn increases efficiency by allowing generalizations about the population without examining every member⁵³. Sampling technique will affect the validity of research and should be undertaken with maximum rigor. The sample consisted of 100 college girls studying in selected college in JHAJJAR. Systematic non-probability (convenient) sampling technique was adopted to select the sample.

3.2 Data and Sources of Data

Research setting is the location in which the research is conducted. This study was conducted in the following colleges in JHAJJAR in Haryana State:

1. B.D.M. college of nursing

3.3 Theoretical framework

Variables are the qualities, properties or characteristics of person or situation that change or vary. The variables mainly included in the study are dependent variable and independent variable.

Independent variable: Informational booklet.

Dependant variable: Knowledge score of college girls.

RESEARCH METHODOLOGY

According to Polit Hungler research approach refers to the overall plan for obtaining answers to the research questions and for testing the hypotheses. It tells the researcher as to what data to collect, how to analyze and draw conclusions⁷⁵.

3.1 Population and Sample

TARGET POPULATION Target population is the population about which the investigator wishes to make a generalization. In this study, the target population consisted of all the college girls' studying in selected college in JHAJJAR of Haryana state.

SAMPLE POPULATION AND SAMPLING TECHNIQUE Sample is a portion of the population chosen to represent the entire population and to attain data from a smaller particular sample which in turn increases efficiency by allowing generalizations about the population without examining every member⁵³. Sampling technique will affect the validity of research and should be undertaken with maximum rigor. The sample consisted of 100 college girls studying in selected college in JHAJJAR. Systematic non-probability (convenient) sampling technique was adopted to select the sample.^{3.2}

Data and Sources of Data

TARGET POPULATION Target population is the population about which the investigator wishes to make a generalization. In this study, the target population consisted of all the college girls' studying in selected college in JHAJJAR of Haryana state.

SAMPLE POPULATION AND SAMPLING TECHNIQUE Sample is a portion of the population chosen to represent the entire population and to attain data from a smaller particular sample which in turn increases efficiency by allowing generalizations about the population without examining every member⁵³. Sampling technique will affect the validity of research and should be undertaken with maximum rigor. The sample consisted of 100 college girls studying in selected college in JHAJJAR. Systematic non-probability (convenient) sampling technique was adopted to select the sample.

TARGET POPULATION Target population is the population about which the investigator wishes to make a generalization. In this study, the target population consisted of all the college girls' studying in selected college in JHAJJAR of Haryana state.

SAMPLE POPULATION AND SAMPLING TECHNIQUE Sample is a portion of the population chosen to represent the entire population and to attain data from a smaller particular sample which in turn increases efficiency by allowing generalizations about the population without examining every member⁵³. Sampling technique will affect the validity of research and should be undertaken with maximum rigor. The sample consisted of 100 college girls studying in selected college in JHAJJAR. Systematic non-probability (convenient) sampling technique was adopted to select the sample.

3.3 Theoretical framework

Conceptual framework is a cohesive supporting linkage of selected, interrelated concepts. It is the device for organizing ideas, and in turn bringing the related objects, observation, events and experience in order. It serves as a guide to research and spring board for the generation of a research hypotheses (Polit and Hungler) 23 .

Polit and Beck (2008) defines conceptual framework as interrelated concepts of abstraction assembled together in rational scheme to form a virtue of relevance to a common theme²⁴ . Conceptual model conceit B.D.M. College for this study provided a frame to reference for the development of learning material for the college girls. The conceptual model also provided planning of built informational booklet and assessment of knowledge. It further gives direction to research for finding the solutions.

The conceptual framework of this study is based on Ludwing von betalanfy's (1968) General system model. A system is a group of elements that interact with another in order to achieve a goal. This theory has 3 components input, process and output. Matter, energy and information that enter the system are called the input. The systems or subsystems used are referred to as 31 process and the matter, energy and information released into the environment is called the output.

Input: Refers to the undergraduate college girl's characteristics, age, sex, knowledge regarding contraception.

Process: Refers to different operational procedures in the overall program implementation and include the factors that facilitate or block the implementation at various stages of development. It describes how input is going to be handled. The different processes included are:

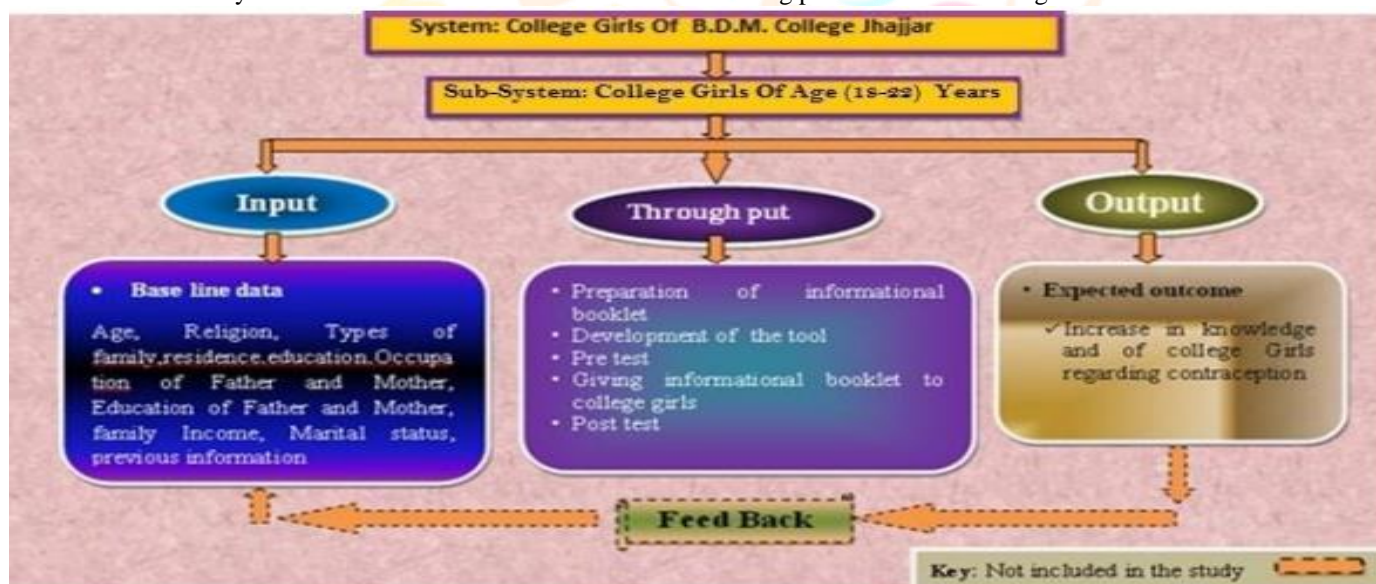
Development of informational booklet and structured knowledge questionnaire

Pre – test: Structured knowledge questionnaire was given to under graduate college girls to assess their knowledge and after that an informational booklet was given to each sample with the instruction to read carefully the booklet on contraception.

Post – test: Structured knowledge questionnaire was given after 10 days to assess the knowledge of under graduate college girls

Output: Refers to evaluation of the effectiveness of an informational booklet as seen by the resultant change in the knowledge of under graduate college girls.

Feedback: It is the process by which information is receives B.D.M. from each level of the system. It gives emphasis on the need to strengthen the input and process so that it leads to the desirable output. If there is insufficient increase in knowledge of the sample, the whole process has to be repeated to attain objectives. If the output is that of efficient increase in knowledge of college 32 girls then also the whole cycle has to be continued because it is a never ending process as shown in figure 1



3.4 Statistical tools and econometric models

Treece and Treece stated, “The instrument selected in a research should as far as possible be the vehicle that would best obtaining data for drawing conclusions, pertinent to study and add to the body of knowledge in a discipline.”⁵⁴ To collect data for present study structured knowledge questionnaire was constructed. It is a set of questions for assessment of knowledge in which the samples are asked to select the best possible answer out of the choices from a list⁵⁵ .

Development of tool for data collection: A review of research and non-research literature, expert's opinion and investigator's experience were the basis for construction of tools for data.

DESCRIPTION OF TOOL: The structured knowledge questionnaire was developed for the present study to assess knowledge of the sample studying in selected college in JHAJJAR.

Structured Knowledge Questionnaire:

Section-A: Consists of 12 items on personal data such as Age, Religion, Types of family, residence, education, Occupation of Father and Mother, Education of Father and Mother, Marital status, previous information, source of previous information.

Section B: Comprised of items regarding contraception. There are total 35 contraception multiple choice items having one correct answer and maximum score was 35 and items were divided in 5 categories which are: Structured questionnaire on assessment of knowledge related to selected temporary family planning methods, consisting of four knowledge items, which were divided into seven areas, thirteen items on selected family planning methods, eight items related to oral pills, nine items related to Copper-T, seven items related to condom, five items related to safe period, three items related to breast feeding and two items related to emergency or post coital contraception items related to permanent methods of family planning.

In this knowledge aspect Section B, the items were closed ended multiple choice question with choosing the most appropriate response for each item. The correct answer was given a score of ‘one’ and wrong answer ‘zero

3.4.1 Descriptive Statistics

Section-I: Description of demographic characteristics This section analyzes the demographic characteristics of respondent's undergraduate girls under study. The sample characteristics of respondents are described in terms of age, religion, type of family,

residences, education, father – mother occupation, father – mother education, marital status, information about contraception and source of information. The following Table 1 gives the frequency and percentage distribution of the respondents according to their demographic profile.

There were no significant differences between the pre and post test knowledge scores of the undergraduate college girls. The analysis of the above Table 2 showed that regarding the basic knowledge of contraception the null hypothesis assumed above was rejected and there was significant difference was recorded for the pre test i.e. 3.47 ± 0.77 which was incremented to 3.97 ± 0.17 in the post test scores of the undergraduate girls.

Also it was analyzed that the regarding knowledge of contraception the null hypothesis assumed above was rejected and there was significant difference was recorded for the pre test i.e. 2.48 ± 0.74 which was incremented to 2.89 ± 0.31 in the post test scores of the undergraduate girls.

Also it was analyzed that the regarding knowledge of temporary methods for contraception the null hypothesis assumed above was rejected and there was significant difference was recorded for the pre test i.e. 10.93 ± 2.92 which was incremented to 16.51 ± 2.94 in the post test scores of the undergraduate girls.

Also it was analyzed that the regarding knowledge of natural methods for contraception the null hypothesis assumed above was rejected and there was significant difference was recorded for the pre test i.e. 1.79 ± 1.03 which was incremented to 2.28 ± 1.11 in the post test scores of the undergraduate girls.

Also it was analyzed that the regarding knowledge of permanent methods for contraception the null hypothesis assumed above was rejected and there was significant difference was recorded for the pre test i.e. 0.58 ± 0.84 which was incremented to 0.90 ± 0.94 in the post test scores of the undergraduate girls.

3.4.3.1 Davidson and MacKinnon Equation

The analysis of the table 3 shows that there was no association between the levels of knowledge scores and the age ($\chi^2 = 12.59; df6$, at P value 0.83), religion ($\chi^2 = 5.99; df2$, at P value 0.5), type of family ($\chi^2 = 5.99; df2$, at P value 0.86), area of residence ($\chi^2 = 5.99; df2$, at P value 0.8), education ($\chi^2 = 9.48; df4$, at P value 0.51), Occupation of the father ($\chi^2 = 12.59; df6$, at P value 0.81), mothers occupation ($\chi^2 = 5.99; df2$, at P value 0.58), fathers education ($\chi^2 = 15.50; df8$, at P value 0.47), mothers education ($\chi^2 = 15.51; df8$, at P value 0.85), Marital status ($\chi^2 = 5.99; df2$, at P value 0.23), Previous knowledge about contraception ($\chi^2 = 5.99; df2$, at P value 0.81), of the undergraduate girls, therefore null hypothesis was accepted at 5% level of significance.

There was association between the levels of the knowledge scores and the source of information of the girls, thus null hypothesis assumed above was rejected at 5% level of significance. In post test analysis those girls who scored average and high were 12% and 26% respectively were reading newspaper while 7% each girl whose source of information was friends scored average and high. One girl each scored average and low and both of them were having source of information either books or friends respectively.

Description of the level of knowledge regarding contraception among the undergraduate college girls This section describes finding related to evaluation of the effectiveness of the structured teaching program in term of level of the knowledge of undergraduate college girls regarding contraception. The pre test and post test knowledge score obtained through structured knowledge questionnaire are analyzed using frequency distribution of respondents in different levels of the knowledge.

I. ACKNOWLEDGMENT

I would first like to express my deep sense of gratitude to almighty God for grace and blessings which gave me strength for the successful completion of this project.

I express my sincere gratitude to Mr. Amarjeet Phogat Chairman, Mr. Satbir Phogat, president, Ms. Annu, secretary, Ms. Anju patron of BDM college of Nursing, for guiding regarding research study.

I am humbly obliged to Dr.C.P.Sharma Principal, BDM College of Nursing for permitting me to undertake this project.

I would like to express my deepest appreciation and gratitude to my Guide Ms. Anuradha Vyas for the guidance, persistent help and inspiration which enabled me to complete this task.

I extend my sincere thanks to my co-guide Ms. Kavita for guiding and suggesting me to conduct the study.

Besides my advisor, I would like to thank the Participants for giving me their precious time and co-operating with me by the best possible way.

An expression of deep and sincere appreciation to my loving friends without whom I can never give a thought of completion of this dissertation work. Words are less to express the support which they provided me. They always boost me for doing best, help me in every possible way, encouraged me when I was in low spirit, boost confidence in me. They always say that yes you can do when I felt that no I can't do. Thank You.

I express my gratitude to my dear ideal i.e. my parents (Mr. Roshan Kuashik & Mrs. Sunita Kaushik), who had guide me more than anybody in this project. They have to remain always short of time from my side. 9

I must express my very profound gratitude to my brothers and all other family members for providing me with unfailing support and continuous encouragement throughout my years of study and through the process of research.

Last but not the least; it is my privilege to salute my esteemed BDM College of nursing chhuhhakwas, Jhajjar for grooming me into a Post Graduate.

I also place on record, my sense of gratitude to one and all, who directly or indirectly, have let their hand in this venture..

REFERENCES

- 1) Ban Ki-Moon, Secretary-General Of The United Nations, text book of "Millennium Development Goals Progress towards A World Fit for Children" chapter 1, page no-5
- 2) A report of WHO study group : health education in health aspect of family planning with the view of international group of experts Report Series No. 483
- 3) Darnoch JE, Nadeau J, Contraception: an investment in lives, health and development, 2008 December; (5) 1-4;
- 4) The Pregnancy Book Your complete guide to: A healthy pregnancy Labour and childbirth The first weeks with your new baby
- 5) Ababejenda V, F Historical survey of modern reversible contraceptive methods, 1980 April (5); 6 Contraceptive Methods: Needs, Options and Utilization

- 6) National Research Council, Division of Behavioral and Social Sciences and Education, Commission on Behavioral and Social Sciences and Education, Committee on Population Contraception and Reproduction: Health Consequences for Women and Children in the Developing World, 01-Feb-1989 – Medical
- 7) Pareek U. Training Instruments in HRD & OD.2002.2"" Edition.Tata McGraw Hill Publishing Company, New Delhi.
- 8) R.K. Narendra Singh, T. Ibetombi Devi, Th. Bidhumukhi Devi, Y. Manihar Singh, Th. Nonibala Devi, N. Sharat Singh, acceptability of contraceptive methods among urban eligible couples of imphal, manipur, indian journal of community medicine vol. xxix, no.1, jan.-mar., 2004
- 9) Festin MP, Peregoudov A, Seuc A, Kiarie J, Temmerman M., Effect of BMI and body weight on pregnancy rates with LNG as emergency contraception: analysis of four WHO HRP studies, Epub 2016 Aug 12.
- 10) Malawi Ministry of Health (MOH) and Intra Health International. 2010. Preservice Education Family Planning Reference Guide. Lilongwe, Malawi: MOH Preservice , Education Family Planning Reference Guide, September 2010
- 11) R. S. P. Rao, A. Lena, N. S. Nair¹ , V. Kamath, A. Kamath, effectiveness of reproductive health education among rural adolescent girls: a school based intervention study in udupi taluk, karnataka, Indian J Med Sci, Vol. 62, No. 11, November 2008 94
- 12) Shajahan Ismail, Ashika Shajahan,¹ T. S. Sathyanarayana Rao,² and Kevan Wylie³, Adolescent sex education in India: Current perspectives, Indian J Psychiatry. 2015 Oct-Dec; 57(4)
- 13) Emanuel I, Kimpo C, Mocerri V. The association of grandmaternal and maternal factors with maternal adult stature. Int J Epidemiol 2004; 33(6)
- 14) Zinia Sultana¹ , Liza Chowdhury² , Nahid Reaz Shapla³, Journal of National Institute of Neurosciences Bangladesh, July 2019, Vol. 5, No. 2,
- 15) Agyei W, Epema EJ. Sexual behaviour and contraceptive use among 15–24 year olds in Uganda. International Family Planning Perspectives. 1992;18:13–7
- 16) Prachi Renjhen,¹ Ashwini Kumar,² Sanjay Pattanshetty,² Afrin Sagir,² and Charmaine Minoli Samarasinghe, A study on knowledge, attitude and practice of contraception among college students in Sikkim, India, 2010; 11(2)
- 17) Luigi Mastroianni, Peter J. Donaldson, Thomas T. Kane, Developing new contraceptives: obstacles and opportunities, National Academy Press, 1990 - Health & Fitness - 193
- 18) Mansureh YAZDKHASTI,*¹ Abolghasem POURREZA,² Arezoo PIRAK,¹ and Fatemeh ABDI³, Unintended Pregnancy and Its Adverse Social and Economic Consequences on Health System: A Narrative Review Article, 2015 Jan; 44(1)
- 19) Nagamala J, Muthulakshmi P, Kayalvizhi M (2018) A Study to Assess the Knowledge, on Temporary and Permanent Methods among Primi and Multi Mothers in Selected Areas in Coimbatore. Health Sci J. Vol. 12 No. 3: 569,2018
- 20) Amy O. Tsui,* Raegan McDonald-Mosley, and Anne E. Burke, Family Planning and the Burden of Unintended Pregnancies, 2010 Apr; 32(1)
- 21) Report of a WHO Technical Consultation on Birth Spacing. World Health Organization, 2006
- 22)Renjhen Prachi, Gupta Shuva Das, Barua Ankur, Jaju Shipra, Khati Binita A study of knowledge, attitude and practice of family planning among the women of reproductive age group in Sikkim, November 2007
- 23)Mathew Varghese V Msn(Rak),Fhnp (Cmc Vellore),Cpepc Nursing Officer Aiiims Delhi, conceptual framework based on bettyneuman'shealth care system model
- 24)Polit, D. F., & Beck, C. T. (2012). Nursing research: Generating and assessing evidence for nursing practice (9th ed.). Philadelphia, PA: Lippincott Williams & Wilkens.
- 25) Cooper, H. M. (1988). Organizing knowledge synthesis: A taxonomy of literature reviews. Knowledge in Society, 1, 104-126. Cooper, H., & Hedges, L. V. (Eds.). 95
- 26) Adedini SA, Omisakin OA, Somefun OD, Trends, patterns and determinants of long-acting reversible methods of contraception among women in sub-Saharan Africa.. 2019 Jun 4;14(6)
- 27) Poonam Muttreja, Sanghamitra Singh, Family planning in India: The way forward Year : 2018 | Volume : 148 | Issue : 7 | Page : 1-9
- 28) Poonam Muttreja, Sanghamitra Singh, Review Article Family planning in India year Volume : 148, 2018
- 29) Thulaseedharan JV , Contraceptive use and preferences of young married women in Kerala, IndiaAuthors , Published 5 January 2018
- 30)Johnston H, Abortion Practice in India: A Review of Literature, Mumbai: Centre for Enquiry into Health and Allied Themes (CEHAT), 2017.
- 31) Cahill N, Stover J, Gupta YP, Alkema L, Levels and trends in contraceptive prevalence, unmet need, and demand for family planning for 29 states and union territories in India: a modelling study using the Family Planning Estimation Tool. March 2017
- 32) Himiede W. Wilson, Donne K. Ameme and Olayinka Stephen Ilesanmi, Contraceptive Methods Accessed in Volta Region, Ghana, 2009–2014, Volume 2017, Article ID 7257042 |
- 33)Jin Rou New, M Niamh Cahill, John Stover, MAYogender Pal Gupta, Dr Leontine Alkema, Levels and trends in contraceptive prevalence, unmet need, and demand for family planning for 29 states and union territories in India: a modelling study using the Family Planning Estimation Tool, MARCH 01, 2017
- 34) Shantha Kumari, Article, Permanent Sterilisation to Long-Acting Reversible Contraception: April 2016
- 35) Choi Y1, Fabic MS2, Hounton S3, Koroma D , Meeting demand for family planning within a generation: prospects and implications at country level. 2015 Nov 9;8
- 36) Faujdar Ram, Chander Shekhar, and Biswabandita Chowdhury, Use of traditional contraceptive methods in India & its socio-demographic determinants 2014
- 37) Donta B, Begum S, Naik DD, Acceptability of male condom: an Indian scenario, The Indian Journal of Medical Research, 31 Oct 2014
- 38) K. Malleshappa¹ , Shivaram Krishna² , Nandini C¹, Knowledge and attitude about reproductive health among rural adolescent girls in Kuppam mandal: An intervention study , Biomedical Research 2011; 22 (3): 305-310 96
- 39) . Hinson L, Edmeades J, Murithi L, Puri M, Developing and testing measures of reproductive decision-making agency in Nepal. 2019 Dec

- 40) Rabbanie Tariq Wani, Imrose Rashid, Sheikh Sahila Nabi, and Hibba Dar, Knowledge, attitude, and practice of family planning services among healthcare workers in Kashmir – A cross-sectional study april 2019
- 41) Madhu Gupta ,Madhur Verma,Kiranjit Kaur,Kirti Iyengar,Tarundeep Singh,Anju Singh, Competency assessment of the medical interns and nurses and documenting prevailing practices to provide family planning services in teaching hospitals in three states of India, Published: November 6, 2019
- 42) Mahvish Qazi, Najmus Saqib, Sachin Gupta, Knowledge, attitude and practice of family planning among women of reproductive age group attending outpatient department in a tertiary, 2019
- 43) Rajesh N Lakde, Malangori Abdulgani Parande, Prachi S Wakankar maech , Knowledge of emergency contraception among women seeking abortion services at tertiary care hospital in Western Maharashtra 2018
- 44) Poonam Muttreja and Sanghamitra Singh, Family planning in India: Dec. 2018
- 45) Rajiv Kumar Gupta, Parveen Singh, Chandini Gupta, Rashmi Kumari, Bhavna Langer, Riya Gupta, Emergency contraception: knowledge, attitude and practices among recently married females in a rural area of North India September 2017
- 46) Cahill N, Sonneveldt E, Stover J, Weinberger M, Williamson J, Wei C, Brown W, Alkema L, Modern contraceptive use, unmet need, and demand satisfied among women of reproductive age who are married or in a union in the focus countries of the Family Planning 2020 initiative: a systematic analysis using the Family Planning Estimation Tool., 2017 Dec 5
- 47) Rajiv Kumar Gupta Aruna Kumari Verma Tajali Shora, KAP on Emergency Contraception among currently married females aged 20-49 yrs in rural area of Jammu district, J&K, March 2017
- 48) Yogendra v, shuaib ahmed, sana jaweriya, study of knowledge, attitude & practice regarding the various methods of contraception in a rural setup 2016
- 49) Anjana Verma, Satya Vir Singh, Vimal Kishore Gupta, Suneela Garg and Jitendra Kumar Meena, Attitude, Practice and Need Assessment of Emergency Contraception among Women of Reproductive Age Group in Delhi July 2015 97
- 50) Saroj Pachauri, Priority strategies for India's family planning programme, November 2015
- 51) Suneela Garg & Ritesh Singh, Need for integration of gender equity in family planning services. November 2015
- 52) Ghulam Mustafa, Syed Khurram Azmat, Waqas Hameed, Safdar Ali, Muhammad Ishaque, Wajahat Hussain, Aftab Ahmed, and Erik Munroe, Family Planning Knowledge, Attitudes, and Practices among Married Men and Women in Rural Areas of Pakistan: Findings from a Qualitative Need Assessment Study September 2015
- 53) Karen Pazol, Lauren B. Zapata, Stephen J. Tregear, Nancy Mautone-Smith, and Loretta E. Gavin, Impact of Contraceptive Education on Contraceptive Knowledge and Decision Making august 2015
- 54) Preethi Fernandes, Sonia R.B.D'souza Sushmitha Karkad june , Knowledge and Attitude of Married Women in the Reproductive Age Group Regarding Emergency Contraception in Selected Rural Areas of Udupi District september 2014
- 55) Jibi Stephen George, Hemant Kumar, Knowledge, attitude and practices of contraception among urban women in Mangaluru, Karnataka January 2012
- 56) Chacko Philomena, Fernandes, Effectiveness of an information booklet on knowledge regarding the importance of birth spacing tintu, June 2012
- 57) Sara Hogmark, Marie Klingberg-Allvin, Kristina Gemzell-Danielsson, Hannes Ohlsson, and Birgitta Essén, Medical students' knowledge, attitudes and perceptions towards contraceptive use and counselling: a cross-sectional survey in Maharashtra, India December 2013
- 58) Chopra Seema, Acceptability and usage of contraceptive among women of reproductive age group in hilly areas of Garhwal, Uttarakhand, India, march (2010),
- 59) Roumi Deb, Knowledge, Attitude and Practices Related to Family Planning Methods among the Khasi Tribes of East Khasi hills Meghalaya april 2010
- 60) Hlongwa M, Mashamba-Thompson T, Makhunga S, Hlongwana K., Evidence on factors influencing contraceptive use and sexual behavior among women in South Africa: A scoping review March 2020
- 61) PS Wakankar MA Parande , Determinants of Emergency Contraceptive Pill use among the Patients Presenting for Pregnancy Termination at Tertiary Care Hospital in Western Maharashtra dec. 2019 98
- 62) Nabamallika Dehingia, Anvita Dixit, Sarah Averbach, Vikas Choudhry, Arnab Dey, Dharmendra Chandurkar, Priya Nanda, Jay G. Silverman & Anita Raj , Family planning counseling and its associations with modern contraceptive use, initiation, and continuation in rural Uttar Pradesh, India, Reproductive Health volume 16, Article number: 178 (2019)
- 63) Shiva S. Halli, Damaraju Ashwini, Bidyadhar Dehury, Shajy Isac, Antony Joseph, Preeti Anand, Vikas Gothwal, Ravi Prakash, B. M. Ramesh, James Blanchard & Ties Boerma, Fertility and family planning in Uttar Pradesh, India: major progress and persistent gaps Published: 23 August 2019
- 64) Arupendra Mozumdar, Vandana Gautam, Abhishek Gautam, Arnab Dey, Uttamacharya, Ruhi Saith, Pranita Achyut, Abhishek Kumar, Kumudha Aruldas, Amit Chakraverty, Dinesh Agarwal, Ravi Verma, Priya Nanda, Suneeta Krishnan & Niranjana Saggurti, Choice of contraceptive methods in public and private facilities in rural India, Published: 25 June 2019
- 65) Aliya Farogh, Tushar Palve Study of choices of contraception in postpartum women in a tertiary care institute in Mumbai, Maharashtra, India , December 2019
- 66) Dasari Gayathry, Anil Moluguri, Sachin Gurnule, Chandrasekhar Valleppalli, Visweswara Rao Guthi Satisfaction and discontinuation with the use of family planning methods among eligible couples of rural and urban areas of Karimnagar April 2019
- 67) Sharan Kumar Karthikeyan, Kohila Kalimuthu, A study on awareness about temporary contraceptive methods among women in reproductive age group October 2019
- 68) Poonam Kashyap and Sudha Prasad, Assessing the Knowledge, Attitude and Practice of Contraception in Semi-Urban Area in India: A Qualitative Assessment of Contraceptive Usage, International Journal of Medical Research & Health Sciences, 2018, 7(10): 150-154
- 69) J Biosoc Sci, , International Journal of Medical Research & Health Sciences, 2018, 7(10):
- 70) Aalok Ranjan Chaurasia, Contraceptive Use in India: A Data Mining Approach, 2014 |Article ID 821436
- 71) Sengupta P, Benjamin AI, Singh Y, Grover , Prevalence and correlates of cognitive impairment in a north Indian elderly population. 2014 Apr-Jun;3(2):135

- 72) Ndola Prata, Ashley Fraser, Megan J. Huchko, Jessica D. Gipson, Mellissa Withers, Shayna Lewis, Erica J. Ciaraldi, And Ushma D. Upadhyay, women's empowerment and family planning: a review of the literature
- 73) Diana Mansour, Efficacy of contraceptive methods: A review of the literature 2010 99
- 74) PoHt DF, Hungler BP. Nursing Research: Principles and Methods, 1995. 5th edition. Philadelphia. JB Lippincott.
- 75) Kassu Jilcha Sileyew, Research design and methodology, submitted; January 23rd 2019
- 76) Quentin Ainsworth, Data Collection Methods Apr 02, 2020

