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Sharma Garima
Assistant Professor of OBG
RPIIT College of Nursing
Bastara Karnal Haryana,
India

Sarkar Rita
Professor, Rita Sarkar
Principal Ved Nursing College
Baroli Panipat, Haryana,
India

NP Elsy
Assistant Professor, Veg
Nursing College Baroli
Panipat, Haryana, India

A pre experimental study to assess the effectiveness of an informational booklet on contraception among undergraduate college girls at selected colleges at Panipat in Haryana

Sharma Garima, Sarkar Rita and NP Elsy

Abstract
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 This requires that women have access to safe and effective methods of fertility control. The mean difference between pre-test and post-test knowledge score was 7.30.It was statistically significant at the level of 0.05 level of significance. In post test the higher mean knowledge score was in the area of temporary method i.e 16.51. In pre-test the higher mean knowledge score was in the area of temporary method i.e 10.93 and post-test i.e 16.51.that was indicated that girls having good knowledge using of temporary methods after giving the information booklet. There was a significant association between the knowledge scores and in the information on contraception of the undergraduate college girls x2=9.48, df4 at P value 0.008.thus the null hypothesis was rejected at 5% level of significance and research hypothesis is accepted. Information booklet was effective to improve the knowledge on contraception among undergraduate college girls.

Keywords: Effectiveness, information booklet, knowledge, under graduate girls, contraception

1. Introduction
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. Thus, in order to lead healthy, responsible and fulfilling lives, and protect themselves from reproductive health problems, young people need to be knowledgeable about themselves and the people they relate to, and need sound information about the physical, psychological and social changes that take place through childhood and adolescence. Girls are the core of human dynamics, only healthy female can make socio-economic upliftment of the country. College girls are in reproductive age and are future mothers, their awareness towards family welfare program is significant.

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 conception [8]. In a developing country like India, over population is a major concern. Despite progress resulting from making contraception widely available, there is poor acceptance of contraceptive methods either due to ignorance or due to fear of complications. Other than that there is other social, cultural, traditional, religious and financial limitations [9]. According to the National Family Health Survey (NFHS-III) 2005-06 the couple protection rate is 41%, 78% pregnancies in India are unplanned and at least 25% of these are unwanted. Lack of knowledge and unnecessary myths prevent young girls from adopting contraceptive methods.

Correspondence
Sharma Garima
Assistant Professor of OBG
RPIIT College of Nursing
Bastara Karnal Haryana,
India

Most young girls in India do not want to use contraceptive method on a long-term basis for the fear of side-effects especially the oral pill, or do not like to use a method linked with coitus barrier methods. Hence, unwanted and unplanned pregnancies are common [10].

2. Material and Methods

Quantitative research approach with pre experimental one group pre-test and post-test design was used and 100 girls were selected by non-probability purposive sampling techniques from 2 colleges. The Content reliability of the knowledge questionnaire was found to be 0.8421 by using Karl Pearson's co-efficient of co-relation. Structured Knowledge Questionnaire Consists of 11 items on personal data such as Age, Religion, Types of family, residence, education, Occupation of Father and Mother, Education of Father and Mother, family Income, Marital status, previous information. 35 contraception items are included 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.

2.1 Data collection procedure

Undergraduate college girls are selected by non probability purposive sampling techniques in different colleges. On 1st day pre-test of knowledge was assessed by structured knowledge questionnaire. Day 2nd information booklet was given to undergraduate colleges girls. Day 7th post test of knowledge of girls regarding using contraception methods.

3. Result and Discussion

The result of current study showed that girls have not proper knowledge regarding contraception methods before the administration of information booklet. Similarly the findings of current was consistent with the study conducted by Tintu Chacko *et al*. (2009), to assess the effectiveness of informational booklet on knowledge regarding the importance of birth spacing among 60 Primi para mothers, Mangalore where most of the mothers 34(56.07) were in the age group of 18-23 years. The study concluded that 81.7% had poor knowledge score, 18.3% had average knowledge

and none of them had good knowledge. The Mean knowledge score in the pre-test was 7.96 which had increased after administration of the information booklet, with mean knowledge score in the post-test by 31.15. A significant difference between pre-test and post-test knowledge was found (t=28.945, *P*< 0.05) among the prim para mothers. The study concluded that the information booklet was effective. Association of knowledge of college girls regarding contraception with selected demographic variable To achieve the 2nd, 3rd and 4th objectives of this study, the samples were assessed on the knowledge regarding contraception. The pre test mean score was 55% and post test mean score was 75%. This is evident by the consistent results of the study done by Sudha A *et al*. (2010), who conducted a study on assessment of improvement in knowledge where pre test mean knowledge score was 61% and post test mean was 95% indicating the effectiveness of PTP on sex education and contraception to improve knowledge of contraception. Findings in this study highlighted that undergraduate college girls have some awareness in certain areas of contraception. They are lack of information on certain important areas of contraception i.e. use of contraception, advantages of contraception, disadvantages of contraception and side effects of contraception.

3.1 Table and figures

Majority of the undergraduate college girls i.e. 40% belonged to age of 20 years.. Among the undergraduate college girls under study, majority (80%) respondents were from nuclear family followed by (20%) undergraduate college girls were from joint family. In relation to religion, majority (94%) of undergraduate college girls were Hindus. Undergraduate college girls belong to the study; majority (55%) respondents were from urban area followed by (45%) girls from rural area. In respect to their father's occupation majority 37% girls fathers were farmer. Similarly, in respect to their mother's occupation majority 91% girls mothers were housewives in respect to their mother's education majority 32% girls mothers were studied till primary level of school. In relation to marital status, majority (91%) of undergraduate college girls were unmarried. Also the undergraduate college girls were surveyed regarding the issue that ever they have any knowledge regarding contraception and 55% respond positive and among them 38% said their source of information was TV.

Table 1: Mean, standard deviation, mean difference Paired T – Test f Pre – Post Test Scores of the Undergraduate College Girls on various Parameters of Knowledge about Contraception

Content of areas	Mean		SD		Mean Difference	T – Test
	Pre	Post	Pre	Post		
Basic Knowledge	3.47	3.97	0.771	0.171	0.50	6.589*
Contraception	2.48	2.89	0.745	0.314	0.41	5.758*
Temporary Methods	10.93	16.51	2.928	2.949	5.58	20.029*
Natural Methods	1.79	2.28	1.038	1.111	0.49	5.957*
Permanent Methods	0.58	0.90	0.843	0.948	0.32	4.514*
Total	19.25	26.55	4.078	3.534	7.30	23.908*

Level of significance at 0.05= 1.98; df 99; *p*< 0.001 *Significant

The data presented in Table 1 show that college girls post test knowledge score was higher than pre test knowledge score. The obtained difference between mean pre test and post test knowledge score was found statistically significant, as evident form "t" value of 23.9.for df(99) at 0.05. Level of

significance and the following was the general null hypothesis designed for the paired t – test. Therefore it can be said that the difference observed in mean pre test (19.25) and post test (26.550 knowledge scores was real difference and was not only by chance.
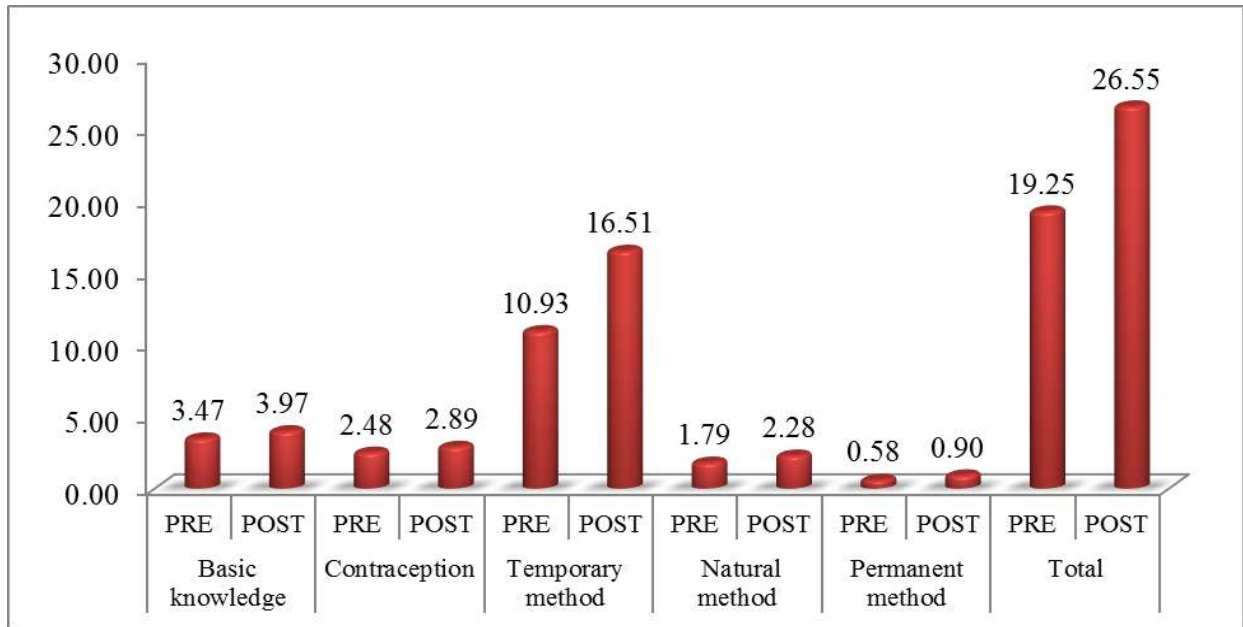
Fig 1: Comparison Bar Chart of the Pre & Post Test Mean Knowledge Scores of the Undergraduate College Girls regarding Contraception
N=100

Table 2: Associations of Knowledge Scores with the Selected Demographic Profile N=100

	Low	Average	High	Yates/Chi Test	p Value	df	$\chi^2_{0.05\%}$
Age of under graduate college girls (in years)	0	12	18				
19	0	11	29	2.75	0.83	6	12.59**
20	1	7	7				
21	1	7	7				
22	2	34	58	1.32	0.51	2	5.99**
Religion	0	3	3				
Hindu	0	9	11	0.28	0.86	2	5.99**
Muslim	2	28	50				
Type of family							
Joint	1	17	27	0.32	0.85	2	5.99**
Nuclear	1	20	34				
Area of residence	0	13	12				
Rural	1	6	7	3.25	0.51	4	9.48**
Urban	1	18	42				
Education	0	4	6				
B.A 1st	0	5	15	2.92	0.81	6	12.59**
B.A 2nd	2	16	19				
B.A. 3rd	0	12	21				
Father's occupation	2	35	54	1.05	0.58	2	5.99**
Govt.	0	2	7				
Private	1	1	6				
Farmer	1	2	0				
Business				7.589	0.475	8	15.507**
Mother's occupation	0	21	25				
Housewife	0	7	17				
Employed	0	6	13				
Father's education	1	7	10				
Illiterate	1	14	17				
Primary	0	9	17	4.06	0.85	8	15.51**
Higher	0	6	7				
Sr. Secondary	0	1	10				
Graduation and above	0	6	3	2.97	0.23	2	5.99**
Mother's education	2	31	58				
Illiterate	1	16	28	0.33	0.85	2	5.99**
Primary	1	21	33				
Higher	0	12	26				
Sr. Secondary	0	1	0				
Graduation and above	0	0	0	13.6*	0.008	4	9.488*
Marital status							
Married	1	7	7				

Unmarried							
Any previous knowledge about contraception							
No							
Yes							
If yes then source							
T.V.							
Books							
News Paper							
Friends							

* Significant ** Significant

The analysis of the table 3 shows that was no association between the levels of knowledge scores and the age χ^2= 12.59;df$_6$, at P value 0.83, religion χ^2= 5.99;df$_2$, at P value 0.5,type of family (χ^2= 5.99;df$_2$, at P value 0.86) area of residence (χ^2= 5.99,df$_2$, at P value 0.8) education (χ^2= 9.48;df$_4$, at P value 0.51),Occupation of the father (χ^2= 12.59;df$_6$, at P value 0.81),mothers occupation (χ^2= 5.99;df$_2$, at P value 0.58.fathers education, (χ^2= 15.50;df$_8$, at P value 0.47), mothers education (χ^2= 15.51;df$_8$, at P value 0.85), Marital status (χ^2= 5.99;df$_2$, at P value 0.23), Previous knowledge about contraception (χ^2= 5.99;df$_2$, 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 significances. In post test analysis those girls who scored average and high was 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.

4. Conclusion
Information booklet was effective in enhancing the knowledge of undergraduate girls regarding contraception methods. The view to develop a information booklet was effective in improvement of knowledge regarding contraception method in all content area. The information booklet was effective in enhancing the knowledge irrespective of the sample Charactersticsi.e age, religion, types of family, area of residence, education, Fathers occupation, Mothers occupation, marital status, information regarding contraception methods used. Thus information booklet was effective in enhancing knowledge of undergraduate girls.

5. Recommendations
The study can be replicated on large sample to validate the findings and make generalization. A co-relational study can be conducted to find the relationship between knowledge and practice regarding the use of contraception. A similar study can be undertaken in different settings like urban and rural areas. The study can be conducted by using different design such as quasi-experimental or experimental research design. A study can be carried out by using other teaching strategies, workshop, seminar, developing guideline, peer support, self monitoring. A comparative study can be conducted for the two groups: One group is given the treatment and other group is control group.

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