

## A Study to Develop and Evaluate the Effectiveness of Information Booklet on Emergency Contraception in Terms of Knowledge of Undergraduate College Girls and to Seek its Relationship with Selected Factors in a Selected College of Kashmir

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### Abstract

The Maternal Mortality Rate (MMR) is substantially high in India. One of the major reasons for MMR is unsafe abortion. The people are not well aware about the emergency contraception especially the college girls. They usually get married at an age of 18 to 20 years and continue their education at in-laws house. There is a real need to impart information on emergency contraception among college girls so that they can decide when to have a child and how to plan pregnancy. The objectives of the study were to develop an information booklet on emergency contraception for under graduate college girls, to assess the knowledge of college girls before and after the administration of information booklet, to seek relationship between post test knowledge scores of college girls and selected variables like subject, background subjects, educational status of parents and previous exposure to any educational program and to determine the utility and acceptability of the information booklet by the college girls. An evaluative research approach with one group pretest and post test design was used in the study. The population comprised of under graduate college girls studying at Govt. Degree College Handwara, Kashmir University. Purposive sampling technique was used to select a sample of 100 under graduate college girls. The findings of the study revealed that Mean post-test knowledge scores (38.58) of college girls were found to be significantly higher than their mean pre-test knowledge scores (14.1). The information booklet was found to be effective in enhancing the knowledge of college girls on emergency contraception. The information booklet had high acceptability and utility among college girls.

**Keywords:** Emergency Contraception; Information Booklet; Knowledge; Undergraduate College Girls.

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### Introduction

Adolescent pregnancy is a serious public health issue for India. It is estimated that 17% of TFR (Total Fertility Rate) is contributed by adolescent pregnancy. Pregnancy below the age of 20 and especially below the age of 15, leads to

increased maternal mortality, morbidity and increased incidence of low birth weight babies and increased infant mortality rate (IMR). The Indian Medical Association (IMA) is strongly committed to reduce the incidence of adolescent pregnancy. Many of these pregnancies are unplanned and unwanted leading to higher incidence of unsafe abortions. Lack of contraceptive or condom use, characterize the vast majority of sexual encounters among adolescents and youth, and consequently rates of unplanned pregnancy are high. The main reasons reported for the irregular, infrequent and no use of condoms is the spontaneity of sex, lack of awareness of the function, usage and procurement of the condom and the perception that use of condom reduces pleasure [1].

Lindberg C.E. [2] stated that emergency contraception, which refers to methods of pregnancy

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prevention used after unprotected intercourse, has the potential to prevent most unplanned adolescent pregnancies. Emergency contraceptive pills (ECP) containing estrogen and progestin or progestin alone are more than 75% effective when the first dose is taken within 72 hours after unprotected sex and the second dose is taken 12 hours later. However ECP's include lack of knowledge of the method, fear of loss of privacy, difficulties in finding a provider and cost. As a result, some nurses are not comfortable with suggesting emergency contraception to their patients. Nurses can play a critical role in providing ECPs to adolescents by developing programs to streamline distribution of ECPs, while maintaining adolescent privacy. Other essential roles for nurses include providing education about ECPs to parents, other healthcare providers and community members and also advocating for political and legal changes that will ease restrictions on ECP distribution. Nurses who are personally uncomfortable discussing emergency contraception can refer their patients to other providers for information and access to this method.

Sunita Mittal [3] stated that a woman faced with the prospect of an unplanned and unwanted pregnancy can, in many cases, avoid the pregnancy by using emergency contraception. Several scientific methods are available for emergency contraception now and most of these are safe and effective to prevent pregnancy occurring after unprotected intercourse or contraceptive failure. Emergency contraception should be regarded not only as a second chance of family planning but also as a means to emphasize the need for a regular contraception method and reduce maternal morbidity and mortality arising out of unsafe abortions and unwanted pregnancies. In India both women and health care providers are uninform about these methods. As awareness is limited, women as well as healthcare providers are unable to gain any benefit. Today, India has the right policy environment to improve the quality of reproductive healthcare and expand the contraceptive options for individuals and couples.

Dr. Anjali Nayyar [4] emphasized the need for media advocacy for emergency contraception as opposed to a traditional information campaign as it is a sensitive subject. Using emergency contraception within the specified time period, which is soon after unprotected intercourse, remains critical to its effectiveness. Therefore, women need to have the knowledge about the method and the regimen in advance and must be able to access it either in advance of the need for use or upon identification of need. This may prove to be difficult in many service

delivery settings. Increasingly, organizations and government are realizing that providing information to people in a way that they can understand and act upon is an essential part of service.

According to Rupsa Mallik, Emergency Contraception (EC) can play a unique role in providing women in India with a second chance to prevent an unintended pregnancy. In turn, Emergency Department (ED) can also be part of an effective strategy to reduce persistently high rates of death and illness from complication of pregnancy and childbirth in India. Finally, EC can also help reduce heavy reliance on unsafe abortion, complications of which alone account for 13 per cent of all maternal deaths nationwide [5].

The researcher knows that the MMR is very high in India especially at Kashmir. The main cause is unsafe abortion. The people are not well aware about the emergency contraception especially the college girls. They usually get married at an age of 18 to 20 years and continue their education at their in-laws house.

So the researcher found that there is a need to impart information on emergency contraception among college girls so that they can decide when to have a child and how to plan pregnancy. The researcher, by virtue of her experience by working with college girls during workshop and during carrier counseling session, found that there is a need for the present study. As young adolescents are the shining stars of our country and we can make them more influential by providing them with the power of knowledge. Hence, this study has been selected.

## Objectives

The objectives of the study were to develop an information booklet on emergency contraception for undergraduate college girls, to assess their knowledge regarding emergency contraception before and after administration of Information Booklet, to seek relationship between post-test knowledge scores and selected variables and to determine the utility and acceptability of the information booklet among the under graduate college girls.

## Materials and Methods

The research approach used for this study was Evaluative Research Approach to accomplish the objectives of the present study. The research design

selected for this study was One Group Pre-test and Post-test Design because the present study intended to ascertain the gain in knowledge by under graduate

college girls after using the Information Booklet on Emergency contraception.

**Table 1:** Schematic representation of the Study Design

	Pre-test	Day 1 <sup>st</sup> Treatment	Day 6 <sup>th</sup> Post-test
College Girls	Knowledge Test	Introduction of Information Booklet	Knowledge Test and Opinionnaire

A formal administrative permission was obtained from the administrative authority of Govt. Degree College, Handwara, Kashmir.

The present study was undertaken at the Govt. Degree College, Handwara, Kashmir. The population in the present study comprised of under graduate college girls studying in this college. In the present study, a total sample of 100 under graduate college girls studying at Govt. Degree College, Handwara, Kashmir were selected using Convenient Sampling Technique.

The tools used to collect the data from the samples were Structured Knowledge Questionnaire and Structured Opinionnaire. The Structured Knowledge Questionnaire was prepared to assess the knowledge of undergraduate college girls before and after the administration of an Information Booklet on Emergency Contraception. The Structured Opinionnaire was prepared to determine the opinion of undergraduate college girls about the acceptability and utility of the Information Booklet.

The final study was conducted from 15<sup>th</sup> to 22<sup>nd</sup> June 2010. On Day 1, Pretest to assess the knowledge of undergraduate college girls on emergency contraception was conducted and after which they were given the Information Booklet. The group's doubts were cleared on day 5. On Day 6, Post-test to assess knowledge of under graduate college was conducted following which the assessment of opinion about the acceptability and utility of the Information Booklet was done using the Structured Opinionnaire.

All the data were entered in the master sheet in Microsoft Excel. The data were analyzed using descriptive and inferential statistical methods. The demographic variables of the samples were described using frequencies and percentages. The Mean Median and Standard Deviation of Pre-test and Post-test knowledge scores were computed.

The 't' value to test the significance of the difference between 'Mean (pre-test and post- test) knowledge score of the group was computed. Chi-square values were calculated to find a relationship between the gain in knowledge scores of the group and selected factors. Data related to the acceptability and utility of information booklet was analyzed – using descriptive statistics, i.e., frequencies and percentages.

## Results

At the conclusion of the predetermined study, the data revealed the following results.

### Section 1

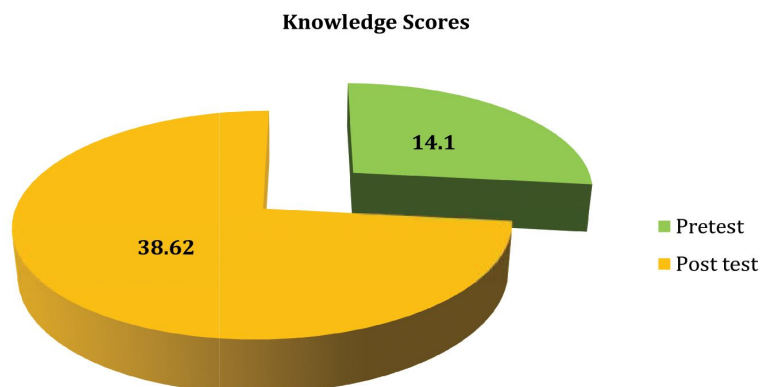
*Demographic Data* like age, stream of education, educational status and occupation of parents, previous knowledge on Emergency Contraception and source of previous knowledge were collected, (Table 2).

### Section 2

*The Mean, Median and Standard Deviation of the Pre-test and Post-test Knowledge Scores* were computed. Further, area wise mean, mean difference, median, standard deviation of difference and "t" value of pre-test and post-test knowledge scores were computed. The mean post-test knowledge scores (38.62) of the undergraduate college girls were higher than the mean pre-test knowledge scores (14.1) suggesting gain in knowledge of the subject. The 't' value was computed, it was 90.81, which indicated a significance difference mean pre-test knowledge scores and the post-test knowledge scores, (Table 3). This indicated that the information booklet was effective in enhancing the knowledge of undergraduate college girls.

**Table 2:** Demographic Profile of the Sample **n=100**

S. No	Characteristics	Frequency	Percentage
1.	<i>Age</i>		
	• Below 20	100	100%
2.	<i>Stream of Education</i>		
	• Arts	40	40%
	• Science	60	60%
	• Commerce	0	0
3.	<i>Father's Education</i>		
	• Illiterate	0	0
	• Primary	0	0
	• Secondary	0	0
	• 10 <sup>th</sup>	4	4%
	• 12 <sup>th</sup>	66	66%
	• Graduation	30	30%
	• Post-graduation	0	0
	• PhD	0	0
	• Professional	0	0
	<i>Mother's Education</i>		
	• Illiterate	0	0
	• Primary	0	0
	• Secondary	8	8%
	• 10 <sup>th</sup>	26	26%
	• 12 <sup>th</sup>	56	56%
	• Graduation	10	10%
	• Post-graduation	0	0
	• PhD	0	0
	• Professional	0	0
4.	<i>Father's Occupation</i>		
	• Unemployed	0	0
	• Self Employed	38	38%
	• Private Employee	0	0
	• Govt. Employee	62	62%
	• Retired	0	0
	<i>Mother's Occupation</i>		
	• Unemployed	0	0
	• Self Employed	36	36%
	• Private Employee	0	0
	• Govt. Employee	64	64%
	• Retired	0	0
5	<i>Studied science at 10+2 level</i>		
	• Yes	60	60%
	• No	40	40%
6	<i>Previous knowledge about Emergency Contraception</i>		
	• Yes	44	44%
	• No	56	56%
	<i>Source of Previous Knowledge</i>		
7	• Newspaper/maga zines/books	30	68.18%
	• Friends	14	31.82%



**Fig. 1:** A Pie Diagram Illustrating the Pre-test and Post-Test Knowledge Scores of Undergraduate College Girls on Emergency Contraception

**Table 3:** Mean, Median, Mode and Standard Deviation of Pre-test and Post-test Knowledge Scores **n=100**

Knowledge test	Mean	Median	Mode	Standard Deviation	't' value
Pretest	14.1	14	14	6.67	90.81
Post test	38.62	39	38	1.85	

### Section 3

The area wise mean, mean percentage of Pre-test and Post-test knowledge scores of undergraduate college girls were computed. The data presented in table 4 shows the comparison between Pre-Test and Post-Test knowledge scores obtained by undergraduate college girls on Emergency Contraception in all the five areas of the Structured Knowledge Questionnaire.

Data revealed that the lowest mean percentage of pretest score (0.4) was in the area of important points to remember, followed by side effects and management, (1.08) and the highest pre-test knowledge scores was in the area of General Information about Contraception at (7.54).

This indicated knowledge deficit in all the areas suggesting inadequate knowledge of college girls regarding emergency contraception.

The data further indicated that the Post Test mean percentage knowledge scores in all the content areas were higher than the Pre Test mean percentage knowledge scores, the maximum mean percentage gain was in the area of Important Points to Remember at (74.57) followed by Side Effects and Management at (65.57) and the least mean % gain was in the area of General Information about Contraception at (26.77).

Thus, there was gain in knowledge in all the areas indicating the effectiveness of Information Booklet, (Table 4).

**Table 4:** Area wise Mean, Mean Percentage of Pre-test and Post-test Knowledge Scores of Undergraduate College Girls **n=100**

Knowledge	Maximum Possible Score	Pre-test Mean Score	Pre-test Mean %age Score	Post-test Mean Score	Post-test Mean %age Score	Mean %age gain
1. General information about Reproduction	13	7.54	58	11.02	84.77	26.77
2. General information about EC	10	3.66	36.6	7.86	78.6	42.00
3. Methods of EC	10	1.42	14.2	7.78	77.8	63.60
4. Side effects and management	8	1.08	13.5	6.34	79.25	65.75
5. Important points to remember	7	0.4	5.71	5.62	80.29	74.57

### Section 4

Relationship between Post-test Knowledge Scores of Undergraduate College Girls regarding Emergency Contraception and Selected Factors (Stream of

Education, Science Background, Educational Status of Parents and Previous Knowledge on Emergency Contraception) were computed using Chi Square values.

**Table 5:** Chi-square value showing Relationship between Post-test Knowledge Scores and Selected Factors of Undergraduate College Girls on Emergency Contraception **n=100**

S.No.	Selected variables	Knowledge scores Below Median	Knowledge scores Above Median	Chi square	df	Significant/not Significant at 0.05 level
1.	Science Background	14	16	0.013	1	NS
	• Yes	9	11			
	• No					
2.	Study Subjects	14	16	0.013	1	NS
	• Science	9	11			
	• Arts					
3.	Parent's Education (Mother)			1.27	3	NS
	• 10 <sup>th</sup>					
	• 12 <sup>th</sup>	3	1			
	• Graduation	6	7			
	• Post Graduation	14	14			
		2	3			
4.	Parent's Education (Father)			0.15	2	NS
	• 10 <sup>th</sup>					
	• 12 <sup>th</sup>	0	0			
	• Graduation	1	1			
	• Post Graduation	15	18			
		6	9			
5.	Heard about EC			0.002	1	NS
	• Yes	10	11			
	• No	14	15			

The computed Chi square values (0.013, 0.013, 1.27, 0.15, 0.002) to establish the relationship between the selected variables of the college girls and the post-test knowledge was not found to be statistically significant at 0.05 level of significance for degree of freedom 1, 1, 3, 2, 1 respectively, (Table 5). Hence, there was no significant relationship between the post-test knowledge scores of undergraduate college girls regarding emergency contraception and the selected factors.

### Section 5

The data for assessing the acceptability and utility of the information booklet on emergency contraception was collected using the Structured Opinionnaire, (Table 6). The mean score of college girls, i.e. 19.72 was close to the maximum score of 20. This indicated a high level of acceptance of the information booklet by the girls. Moreover, the S.D was 0.92 showed that there was not much of variation of opinion among college girls about acceptability and utility of the information booklet.

**Table 6:** Mean and Standard Deviation of Acceptability and Utility Scores of Undergraduate College Girls about Information Booklet on Emergency Contraception **n=100**

Group	Range of Scores	Mean	S.D
Undergraduate College girls	16-20	19.72	0.92

## Discussion and Conclusion

The study demonstrated a marked difference in the knowledge scores before and after administration of the information booklet on emergency contraception, thereby indicating effectiveness of the information booklet. The study also revealed a high level of acceptance and utility of the information booklet. In the present study, the mean post-test knowledge scores (38.62) of the undergraduate college girls were higher than the mean pre-test knowledge scores (14.1) suggesting gain in knowledge of the subject. The 't' value was computed, it was 90.81, which indicated a significance difference mean pre-test knowledge scores and the post-test knowledge scores. There was no significant relationship between the post-test knowledge scores of undergraduate college girls regarding emergency contraception and the selected factors. A high level of acceptance of the information booklet by the girls was indicated using a Structured Opinionnaire.

The study was found to be effective in changing the knowledge of Undergraduate college girls regarding emergency contraception.

Findings of the study revealed that the undergraduate college girls had low level of knowledge about emergency contraception before administration of information booklet. Findings of the present study also revealed that there was a significant gain in knowledge of the undergraduate college girls after the information booklet which showed the effectiveness of information booklet in increasing the knowledge. The findings of the study are consistent with that of a study conducted by Jyothi Prince who developed and evaluated the effectiveness

of an information booklet on emergency contraception for college girls. The booklet was found to be effective in increasing the knowledge of college girls [6].

The findings of the present study have implications for nursing education, nursing practice, nursing administration, nursing research and general education.

In the present trend of health care delivery system, the emphasis is shifted from cure to care oriented services. Also, there is an increased awareness about quality assurance in today's consumers. Only through standard education can there be standard practice. Hence, there is a need for integrating and updating new trends in nursing education.

Nursing curriculum should include more content on emergency contraception. It will equip the nursing students with adequate knowledge on the topic, to plan and conduct education sessions for general public.

An understanding of the special psycho-social needs of college girls is essential for nursing personnel to understand them better, to motivate them, to upgrade their knowledge regarding emergency contraception.

Emergency contraception plays an important role in preventing unwanted pregnancies and illegal abortions. The need of the hour is to equip the young women with information on the available methods of contraception. With the correct knowledge they will be able to take appropriate decisions.

Nurses with their unique role as health educator, can empower young women by providing them with information on emergency contraception so as to enable them to take the correct decision, later in life.

Nurses during their practice come in contact with women of all age groups. They can play an important role in dissemination information about emergency contraception. This can create awareness among the target group and will bring down the incidence of unwanted pregnancies and abortion rates.

It is the responsibility of Nursing Administration to provide for the necessary facilities and opportunities for nursing staff to keep themselves abreast with the latest information. Nurses should be encouraged to increase their knowledge about emergency contraception, its methods and usage. This will help them in conducting health education sessions with women of all age groups.

Research studies are needed to identify the various learning needs of teenagers, the socio-cultural variations and some of the common problems faced by them. This will help in the development of educational program which are relevant to this particular age group.

Now-a-days, reproductive (sex) education is being taught at school level. Still, there is a need to include topics like contraception, especially emergency contraception at under graduate level. It will provide the much needed information to the young adults.

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