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

Zamrooda Mushtaq*, Manju Chhugani**, Veena Sharma***

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. A n 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.

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...
need. This may prove to be difficult in many service
advance of the need for use or upon identification of
advance and must be able to access it either in
knowledge about the method and the regimen in
effectiveness. Therefore, women need to have the
unprotected intercourse, remains critical to its
pregnancy occurring after unprotected intercourse
methods are available for emergency contraception
by using emergency contraception. Several scientific
conception can, in many cases, avoid the pregnancy
the potential to prevent most unplanned adolescent
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
uniformed 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
impair 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 undergraduate
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 undergraduate college girls after using the Information Booklet on Emergency contraception.

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 undergraduate college girls studying in this college. In the present study, a total sample of 100 undergraduate 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 15th to 22nd 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 undergraduate 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

<table>
<thead>
<tr>
<th>S. No</th>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Below 20</td>
<td>100</td>
<td>100%</td>
</tr>
<tr>
<td>2.</td>
<td>Stream of Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arts</td>
<td>40</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td>60</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Commerce</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3.</td>
<td>Father's Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Illiterate</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>10&lt;sup&gt;th&lt;/sup&gt;</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>12&lt;sup&gt;th&lt;/sup&gt;</td>
<td>66</td>
<td>66%</td>
</tr>
<tr>
<td></td>
<td>Graduation</td>
<td>30</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Post-graduation</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>PhD</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Professional</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>4.</td>
<td>Mother's Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Illiterate</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>8</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>10&lt;sup&gt;th&lt;/sup&gt;</td>
<td>26</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>12&lt;sup&gt;th&lt;/sup&gt;</td>
<td>56</td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>Graduation</td>
<td>10</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Post-graduation</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>PhD</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Professional</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>5.</td>
<td>Father's Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Self Employed</td>
<td>38</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>Private Employee</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Govt. Employee</td>
<td>62</td>
<td>62%</td>
</tr>
<tr>
<td></td>
<td>Retired</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>6.</td>
<td>Mother's Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Self Employed</td>
<td>36</td>
<td>36%</td>
</tr>
<tr>
<td></td>
<td>Private Employee</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Govt. Employee</td>
<td>64</td>
<td>64%</td>
</tr>
<tr>
<td></td>
<td>Retired</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>7.</td>
<td>Studied science at 10+2 level</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>60</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>40</td>
<td>40%</td>
</tr>
<tr>
<td>8.</td>
<td>Previous knowledge about</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emergency Contraception</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>44</td>
<td>44%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>56</td>
<td>56%</td>
</tr>
<tr>
<td>9.</td>
<td>Source of Previous Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Newspaper/magazines/books</td>
<td>30</td>
<td>68.18%</td>
</tr>
<tr>
<td></td>
<td>Friends</td>
<td>14</td>
<td>31.82%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Knowledge test</th>
<th>Maximum Possible Score</th>
<th>Pretest Mean %age Score</th>
<th>Posttest Mean %age Score</th>
<th>Mean %age gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General Information about Reproduction</td>
<td>13</td>
<td>7.54</td>
<td>58</td>
<td>26.77</td>
</tr>
<tr>
<td>2. General Information about EC</td>
<td>10</td>
<td>3.66</td>
<td>36.6</td>
<td>62.00</td>
</tr>
<tr>
<td>3. Methods of EC</td>
<td>10</td>
<td>1.42</td>
<td>14.2</td>
<td>63.60</td>
</tr>
<tr>
<td>4. Side effects and management</td>
<td>8</td>
<td>1.08</td>
<td>13.5</td>
<td>53.75</td>
</tr>
<tr>
<td>5. Important points to remember</td>
<td>7</td>
<td>0.4</td>
<td>5.71</td>
<td>74.57</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>S.N.o.</th>
<th>Selected variables</th>
<th>Knowledge scores Below Median</th>
<th>Knowledge scores Above Median</th>
<th>Chi square</th>
<th>df</th>
<th>Significant/not Significant at 0.05 level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Science Background</td>
<td>14 9</td>
<td>16 11</td>
<td>0.013</td>
<td>1</td>
<td>NS</td>
</tr>
<tr>
<td>2.</td>
<td>Study Subjects</td>
<td>14 9</td>
<td>16 11</td>
<td>0.013</td>
<td>1</td>
<td>NS</td>
</tr>
<tr>
<td>3.</td>
<td>Parent’s Education (Mother)</td>
<td>10th 12th Graduation Post Graduation</td>
<td>3 1 6 7 14 14</td>
<td>1.27</td>
<td>3</td>
<td>NS</td>
</tr>
<tr>
<td>4.</td>
<td>Parent’s Education (Father)</td>
<td>10th 12th Graduation Post Graduation</td>
<td>0 0 1 1 15 18</td>
<td>0.15</td>
<td>2</td>
<td>NS</td>
</tr>
<tr>
<td>5.</td>
<td>Heard about EC</td>
<td>10 14</td>
<td>11 15</td>
<td>0.002</td>
<td>1</td>
<td>NS</td>
</tr>
</tbody>
</table>
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 closest 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

<table>
<thead>
<tr>
<th>Group</th>
<th>Range of Scores</th>
<th>Mean</th>
<th>S.D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate College</td>
<td>16-20</td>
<td>19.72</td>
<td>0.92</td>
</tr>
</tbody>
</table>

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 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.

References