
Effect of Information, Education, and Communication (IEC) package on Knowledge and Attitude regarding Reproductive Health among Adolescents Girls

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ABSTRACT

A study to evaluate the Effectiveness of Information, Education, and Communication (IEC) package on Knowledge and Attitude regarding Reproductive Health among Adolescents Girls in selected area of Mathi was undertaken. A pre experimental one group pre test & post test design was used. 60 adolescent girls were selected using simple Random Sampling. The study was conducted in selected community areas of Mathi village of Lucknow, IEC package regarding Reproductive Health was given for 10 hours in 5 sessions for 5 consecutive days. Data was collected using a self-structured knowledge questionnaire and self-structured attitude scale on Reproductive Health before and after intervention. The findings suggested that before IEC package 17% and 83% of them had moderately adequate and inadequate knowledge regarding Reproductive Health, and 90% of them had a negative attitude and only 10% of them had positive attitude regarding Reproductive Health .whereas after intervention 17% had moderately adequate knowledge, 83% had adequate knowledge Regarding Reproductive Health and 3% had negative attitude, 97% had positive Attitude regarding Reproductive Health. The calculated 't' value for knowledge and attitude (32.03 and 21.13 respectively) were much higher than the table value at 0.001 level of significance, also there was a significant association between Knowledge regarding RCH and age, diet, Iron tablet Intake. There was a positive relationship between the level of Knowledge and attitude.

***Key words:** IEC, Knowledge, Attitude, Reproductive and child Health and Adolescents.*

INTRODUCTION

The status of girls and women in society, and how they are treated or mistreated, is a crucial determinant of their reproductive health. Educational opportunities for girls and women powerfully affect their status and the control they have over their own lives and their health and fertility. Reproductive health is a crucial part of general health and a central feature of human development. It is a reflection of health during childhood, and crucial during adolescence and adulthood, sets the stage for health beyond the reproductive years for both women and men, and affects the health of the next generation.

In the Indian context, adolescent girls enter into reproductive life, with early marriage, pregnancies and child bearing resulting in detrimental effects to their general and reproductive health.

The government of India has adopted several policies in the past decade that have the potential to advance the reproductive health of adolescents, both directly and indirectly. Adolescent-specific reproductive health services continue to be scarce and inadequate, and targeted toward married adolescents.

Information, education and communication (IEC) combines strategies, approaches and methods that enable individuals, families, groups, organizations and communities to play active roles in achieving, protecting and sustaining their own health. IEC is the process of learning that empowers people to make decisions, modify behaviors and change social conditions (UNFPA).

Adolescent pregnancies constitute 10-15% of total pregnancies in India. Overall, one in six women age 15-19 years has begun childbearing. 12% have become mothers and 4 percent were pregnant with their first child at the time of the survey.

Among women age 20-49, half had a birth before they were 20 years old, and more than one in four before they were 18 years old. Early childbearing is most common in rural areas and among women with no education.

STATEMENT OF THE PROBLEM

“A study to Evaluate the Effectiveness of Information, Education and Communication (IEC) package on Knowledge and Attitude regarding Reproductive Health among adolescent girls in selected community area at Lucknow”.

OBJECTIVES

- 1) To assess the pretest and posttest level of knowledge, attitude regarding Reproductive Health among adolescent girls at selected community area Lucknow.
- 2) To evaluate the effectiveness of Information, Education and Communication (IEC) package on Knowledge and attitude regarding Reproductive Health among adolescent girls at selected community area Lucknow
- 3) To determine the relationship between knowledge and attitude regarding

Reproductive Health among adolescent girls at selected community area Lucknow.

- 4) To find out the association between pretest level of knowledge, Attitude regarding Reproductive Health among adolescent girls at selected community area Lucknow and their selected socio demographic variable

HYPOTHESIS

H₁: There is a significant difference between the pretest and posttest level of knowledge and Attitude regarding Reproductive Health among adolescent Girls.

H₂: There is a significant relationship between knowledge and attitude regarding reproductive Health among Adolescent Girls.

H₃: There is a significant association between pretest level of knowledge, attitude and Selected socio demographic variables among adolescent girls.

OPERATIONAL DEFINITIONS

Effectiveness: In this study, effectiveness refers to the outcome of Information Education and communication package on Knowledge and Attitude on reproductive Health as measured by self-structured questionnaire.

Information, Education and communication package: In this study It refers to teaching imparted regarding reproductive and child health using various teaching, learning material such as Roller Board, Chart, Pamphlets, Booklet, Posters, Hand Out, and Flash Cards.

Knowledge: In this study it refers to the respondent's responses regarding Reproductive Health as measured by a self-structured knowledge Questionnaire

by the correct responses during both pre and posttest.

Attitude: It refers to the respondent's responses about the feeling and thinking regarding Reproductive Health as measured by a self-structured Attitude scale

Reproductive Health: In this study it refers to knowledge of Anatomy and Physiology of female reproductive system, Physiological changes during puberty, menstrual cycle, menstrual hygiene, Self Breast examination, prevention of Reproductive tract Infections and Diet during Adolescent period.

Adolescent Girls: In these study adolescent girls refers to the age group of girls between 14-17 years.

Selected Area: Selected area refers to community areas of Mathi village of Lucknow

REVIEW OF LITERATURE

The literature search was categorized under the following heading.

- 1) Literature related to reproductive health.
- 2) Literature related to effectiveness of information, education and communication package.
- 3) Literature related to information, education and communication package on reproductive health among adolescent girls.

Conceptual Framework

The conceptual framework used in this study was based on Daniel .L. Stuffle Beam's CIPP Model (1971).

Research Approach

Quantitative Research approach was used in the study.

Research Design

A Pre experimental one group pretest and posttest design was used in this study.

RESEARCH VARIABLE

Independent Variable: Information, Education and Communication package.

Dependent Variable: Knowledge and Attitude regarding Reproductive Health among Adolescent girls.

Demographic Variable: Age, Type of family, Monthly income, Religion, Class, First information about puberty, Type of diet intake, Iron tablet intake, Education of mother and Educational of father.

SETTING OF THE STUDY

The study was conducted at Mathi village of Lucknow. It is situated 16 kms from Lucknow. The total adolescent's strength was 1588. Out of which 922 were boys and 644 were girls. Out of 524 adolescent girls, 510 were within the age group of 14-17 years. Hence it was also feasible and easily accessible for the researcher to conduct the study in this setting.

POPULATION

Target Population

The target population in this study was all Adolescents girls between the age of 14-17 years.

Accessible Population:

All adolescent girls between the age of 14-17 years residing at Mathi village, Lucknow were the accessible population.

SAMPLE

The sample consists of adolescent girls between the age of 14-17 years residing at Mathi village, Lucknow and those who fulfilled the inclusion criteria.

Sample Size

Sample size for the study was 60 adolescent girls of 14-17 years residing at Mathi village, Lucknow.

Sampling Techniques

Simple Random Sampling technique was used. In this lottery method was adopted in this study.

CRITERIA FOR SELECTION OF THE STUDY

Inclusion Criteria

- 1) Adolescent girls who were in the age group of 14-17 years.
- 2) Adolescent girls who can understand either Hindi or English.
- 3) Adolescent girls who were willing to participate in the study.

Exclusion Criteria

- 1) Adolescent Girls who were not available at the time of data collection.
- 2) Adolescent girls who have attended any classes on RCH before.

Tool and Technique

The tool for data collection consists of 3 sections namely

Section - A: Demographic characteristic of the subjects.

Section - B: Self structured knowledge questionnaire on Reproductive Health

Section - C: Self structured attitude scale on Reproductive Health.

Section-A: It consisted of Demographic data which comprises of the items such as Age, Type of family, Monthly income, Religion, Class, First information about puberty, Type of diet intake, Iron tablet intake, Education of mother and Educational of father.

Section-B: Self-structured Knowledge questionnaire on Reproductive Health contains 30 Multiple Choice items. Each item has 3 options, among which appropriate answer was chosen. The concepts included for developing the tool were Anatomy and Physiology of Female Reproductive system, Menstrual cycle, pubertal changes, Menstrual hygiene, Breast Self Examination, Prevention of Reproductive tract Infections, and Diet during Adolescence. A score of "1" was given for each correct answer and a score of "0" was given to each wrong answer. The total score ranges from 0- 30.

SCORING

S.NO	SCORING	INTERPRETATION
1	21-30	Adequate Knowledge
2	11-20	Moderate Knowledge
3	0-10	Inadequate Knowledge.

Section- C: Self-Structured Attitude Scale On Reproductive Health - It consist of 20 items in the aspects of attitude related to Female Reproductive anatomy, and Physiology including menstrual cycle, and

Pubertal changes, Menstrual hygiene, Breast self-examination, prevention of Reproductive tract infections and diet during Adolescence. The total score varies between 20-100.

INTERPRETATION

S.NO	SCORING	INTERPRETATION
1	61-100	Positive Attitude
2	Below 60	Negative Attitude.

Intervention

The Information, Education and Communication Package Covered Definition of Reproductive Health, female Reproductive Anatomy And Physiology Including Menstrual Cycle, and Pubertal Changes, Menstrual Hygiene, Breast Self-Examination, prevention of Reproductive Tract Disease and Diet during Adolescence. The Duration of Information, Education, Communication (IEC) package on Reproductive Health was 10 hours through 5 Sessions for 5 consecutive days.

Validity and Reliability of the Tool

The content validity of the tool was obtained from 5 experts from the field of obstetrics, OBG Nursing, Psychology, statistics, and from IEC technician.

The reliability of the tool for self-structured knowledge questionnaire on Reproductive Health was established by test – retest method ($r = 0.86$) and self-structured attitude scale ($r = 0.9$) hence the tool was reliable and was used in this study.

Pilot Study

A pilot study was conducted in Matyari village, Lucknow among 6 subjects to find out the feasibility and practicability of the study. Findings of the pilot study revealed that the study was feasible & practicable to conduct the main study.

DATA COLLECTION PROCEDURE

Formal permission was obtained from the Village Pradhan of Mathi Village to conduct the study. The researcher first introduced and had a general talk with all subjects who fulfilled the inclusion criteria.

The purpose of the study was explained and obtained written informed consent from all subjects and their parents. On the 2nd day pretest knowledge and attitude was

collected by using self- structured knowledge questionnaire and self-structured attitude scale. The entire 60 subjects were divided into 6 groups based on their class. Each group consisted of 8-12 subjects. On the third day the first group received IEC package on Reproductive Health for 5 sessions in 5 consecutive days. Each session was given for 40 min daily during 11 am- 1 pm.

Post test was conducted for the first group with the same tool on 8th day, from the end of last session. Likewise the 2nd, 3rd, 4th, 5th and 6th group received IEC package on Reproductive Health for 5 sessions for 5 consecutive days.

Plan for Data Analysis

- 1) Frequency and percentage was used to analyze the demographical variables.
- 2) Paired “t” test was used to evaluate the effect of IEC package on Knowledge and Attitude regarding Reproductive Health.
- 3) Karl Pearson’s Correlation was used to find out the relationship between knowledge and attitude of Reproductive Health.
- 4) Chi- square analysis was done to find out the association between pretest level of knowledge, attitude and selected socio demographical variables.

Protection of Human Rights

The investigator obtained approval from the ethical committee of the institution, and formal written permission from the village Pradhan of selected village. Informed consent was obtained from all study participants. Confidentiality and Anonymity was maintained throughout the study.

Findings of the study

Level of Knowledge and Attitude Regarding Reproductive Health among adolescent Girls in pretest and posttest.

TABLE 1. Frequency and percentage wise distribution of pretest and posttest level of knowledge regarding Reproductive Health among Adolescent Girls

LEVEL OF KNOWLEDGE	PRETEST		POST TEST	
	f	%	F	%
Inadequate knowledge	50	83 %	-	-
Moderately adequate knowledge	10	17 %	10	17
Adequate knowledge	-	-	50	83

The above table illustrates that out of 60 adolescent girls 50 (83 %) of them had inadequate knowledge and 10 (17 %) of them had moderately adequate knowledge regarding Reproductive Health, In posttest

none of them had inadequate knowledge, 10(17%) of them had moderate knowledge, most of them 50(83%) of had adequate knowledge about Reproductive Health

Table 2: Level of Attitude Regarding Reproductive Health among Adolescent Girls

LEVEL OF ATTITUDE	PRETEST		POST TEST	
	f	%	F	%
Negative	54	90	2	3
Positive	6	10	58	97

The above table depicts that In pretest out of 60 adolescent girls, 54 (90 %) of them had negative attitude and 6 (10 %) of them had positive attitude regarding reproductive Health. In posttest out of 60

adolescent girls, 58 (97%) of them had positive attitude, and only 2 (3 %) of them had negative attitude about Reproductive Health.

Table- 3 Effectiveness of IEC Package On Reproductive Health Knowledge And Attitude Among Adolescent Girls

over all	post test		pre test		difference in mean	“ t” value	p- value
	MEAN	SD	MEAN	SD			
Knowledge	22.63	2.79	7.45	3.95	15.18	32.03	0.000***
Attitude	83.46	13.36	54.25	7.41	29.21	21.13	0.000***

* $P < 0.05$, significant and ** $P < 0.01$ & *** $P < 0.001$, highly significant

The above table reveals that the calculated ‘t’ value (32.03) for knowledge regarding Reproductive Health was higher than the table value at 0.001. Similarly the calculated “t” value (21.13) for attitude regarding Reproductive Health was higher than the table value at 0.001. Thus it was proved that the difference in the mean scores showed a significant change in the level of knowledge and attitude regarding Reproductive Health among adolescent girls. Thus, IEC package on reproductive health was effective in improving

knowledge and brought a change in attitude regarding Reproductive Health among adolescent girls.

MAJOR FINDINGS OF THE STUDY

1) The pretest level of knowledge revealed that out of 60 subjects 50 (83 %) of them had inadequate knowledge, 10 (17 %) of them had moderately adequate knowledge and none of them had adequate knowledge regarding Reproductive health.

- 2) In posttest none of them had inadequate knowledge, 10(17%) of them had moderate knowledge, most of them 50(83%) of had adequate knowledge about Reproductive Health
- 3) The pretest level of attitude revealed that out of 60 adolescent girls 54 (90 %) of them had negative attitude and only 6 (10 %) of them had positive attitude regarding reproductive Health.
- 4) In posttest Out of 60 adolescent girls 58 (97%) of them had positive attitude, and only 2 (3 %) of them had negative attitude about Reproductive Health.
- 5) The calculated value 't' value (32.03) for knowledge regarding Reproductive Health was much higher than the table value. Hence the difference in the level of knowledge was due to the intervention IEC.
- 6) Similarly the calculated 't' value (21.13) for attitude regarding Reproductive Health was much higher than the table value at 0.001. Thus IEC package on reproductive health was effective in bringing a change in the level of attitude regarding Reproductive Health among adolescent girls.
- 7) There was no correlation between pretest level of knowledge and attitude regarding Reproductive Health.
- 8) There was positive correlation between posttest level of knowledge and attitude regarding Reproductive Health. ('r' was 0.30 at $p < 0.05$)
- 9) There was a significant association between pretest level of knowledge and selected demographic variables such as Type of diet, Iron tablet Intake, at 0.05 level of significance.
- 10) There was a significant association between the pretest level of attitude and age.

CONCLUSION

Based on the study findings it was found that IEC package was effective in terms of knowledge gain and change in attitude regarding Reproductive Health. The IEC

package regarding Reproductive health is a highly feasible intervention. The researcher concluded that it can be used as an Effective Intervention to improve the knowledge and attitude of Adolescent girls regarding Reproductive Health.

Implications for Nursing Practice

- 1) Nurses have the responsibility to impart knowledge and promote a positive attitude towards Reproductive Health.
- 2) The extended roles of professional Nurses can emphasize more about the preventive and promotive aspects of Reproductive Health.

Implications for Nursing Education

- 1) The nursing curriculum should consist of knowledge related to health information using different method of teaching. Nursing students should be made aware of their role in health promotion and disease prevention in present and future, which may help in achieving the goal of health for all.
- 2) Nursing at post graduate level have to develop their skill in preparing health teaching materials according to the level of community understanding.

Implications for Nursing Administration

- 1) Nurse as an administrator should plan and organize educational programs for Nursing personnel and motivating them in conducting Reproductive Health programme beneficial to the adolescents and married women.
- 2) The nurse administrator can also encourage the nurses to use other cost effective intervention such as video teaching, structured teaching to improve the knowledge and attitude about reproductive health.

Implications for Nursing Research

- 1) Nurse should take initiative to conduct research on the nature and severity of problems related to adolescent girls.

- 2) The nurse researcher should motivate the clinical and community Nurse to apply research findings and can bring out new cost effective and innovative procedures to improve the knowledge and attitude of Reproductive health among adolescent girls.
- 3) This study findings can be a baseline for future studies and this study can be inspired by other investigators to carry out further studies.

RECOMMENDATION

- 1) A similar study can be replicated with a large sample size at different setting, with a control group.
- 2) A comparative study can be done between a rural and urban community.
- 3) A comparative study can be done between self instruction module & Video Assisted Instruction to evaluate the effectiveness in terms of improving knowledge and attitude regarding Reproductive health among Adolescent girls.
- 4) An exploratory study can be conducted to find out the nature of problems related to Reproductive health.

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