

**A STUDY TO ASSESS EFFECTIVENESS OF AN INFORMATIONAL BOOKLET
ON KNOWLEDGE REGARDING PPIUCD AMONG ANTENATAL MOTHERS IN
SELECTED RURAL AREA AT KANPUR, UTTAR PRADESH.**

**Mr. Deepak Suwalka, Dr. Jasmi Johnson, Mrs. Agnes Chinta Singh, Ms. Kesani Vanaja
Lakshmi Durga Bhavani**

Faculty of Nursing, Rama University, Kanpur

Email id: dean.nursing@ramauniversity.com

ABSTARCT

The words birth control, contraception and family planning are often used interchangeably and although they are not identical in meaning. The term birth control refers to regulation of the number of children that are conceived or born. Contraception refers to the prevention of pregnancy, which is accomplished by specific contraceptive or birth control methods. Family planning has the broadest connotation. A study to assess effectiveness of an informational booklet on knowledge regarding PPIUCD among antenatal mothers in selected rural area at Kanpur, Uttar Pradesh. Sample consists of a subset of a population selected in a research study. 70 The samples selected for the present study comprised of 70 mothers of selected rural area Kanpur, Uttar Pradesh. Sample consists of a subset of a population selected in a research study. 70 The samples selected for the present study comprised of 70 mothers of selected rural area Kanpur, Uttar Pradesh. PPIUCD, 38.57% respondents have previous information regarding PPIUCD. Source of Information received about PPIUCD: If Previous information received than Source of Information about PPIUCD are with majority of 48.14 % of respondents have information by mass media, 33.33% of respondents have information by health care professionals, 18.53 % of respondents have information by friends & neighbours regarding PPIUCD. Hence H₂ is accepted at 0.05 level of significance. In pre-test knowledge of control group, there is any significant association between pre-test test knowledge score of control group and selected demographic variables So research hypotheses H₃ is rejected.

Keyword: PPIUCD, Antenatal mothers

INTRODUCTION

The words birth control, contraception and family planning are often used interchangeably and although they are not identical in meaning. The term birth control refers to regulation of the number of children that are conceived or born. Contraception refers to the prevention of

pregnancy, which is accomplished by specific contraceptive or birth control methods. Family planning has the broadest connotation.

Current population of India in 2011 is 1.21 billion. Current population in Uttar Pradesh is 19.98 crores. In India total fertility rate in India is 2.62 children born.

The current realization that socio-economic development and wellbeing of a society can be affected by astronomical increase in population has led to the establishment of family planning programmes. Family planning is a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitude and responsible decision by individuals and couples in order to promote the health and welfare of the family group and thus contribute effectively to the social development of a country.

Women remain one of the most underserved segments of the Indian population, an alarmed number of women who want to space or limit their families currently do not have access to or cannot afford or use appropriate means to do so. Although India was the first country to adopt family planning as a national programme during 1951 – 52, the demographic situation in the country is still a matter of grave concern. The low use of spacing methods is reflected in early child bearing and short birth intervals. Where ever services exist, women are constrained from using the family planning methods by cultural mores or pressure to rebuild the population.

Need for the study

Ensuring universal access to sexual and reproductive health and reproductive rights for all women is Target 5.6 of the Sustainable Development Goals, promoted by the United Nations and adopted by 193 countries. To address women's, need for family planning, the provision of a wide range of safe, effective and affordable contraceptive methods is essential.

These findings already suggested the need for greater focus on improving access to reversible methods, especially for women who wish to delay or space pregnancies but are not ready to commit to ending their fertility. The global maternal mortality ratio is unacceptably high, with an estimated 42% of maternal deaths occurring during labour and delivery. Family planning (FP) is widely recognised as a life-saving and health-improving intervention for women and children. Because of the woman's frequent contact with the health system over a relatively long period of time that makes an opportunity for counseling women about the adoption of family planning methods. Closely spaced pregnancies within the first year post-partum are the riskiest for mother and child, resulting in an increased risk of adverse outcomes.

Statement of the problem

A study to assess effectiveness of an informational booklet on knowledge regarding PPIUCD among antenatal mothers in selected rural area at Kanpur, Uttar Pradesh.

Objectives

1. To assess the pre-test knowledge scores regarding PPIUCD among antenatal mothers.
2. To find out the effectiveness of an information booklet on knowledge regarding PPIUCD among antenatal mothers.
3. To find out the association between pre-test knowledge scores and selected socio demographic variables.

Hypothesis

H1 There is a significant difference between mean pre and post-test knowledge scores regarding PPIUCD.

H2 There is a significant association between mean pre-test scores and selected sociodemographic variable.

METHODOLOGY

Research methodology is defined as a way to solve the research problem systematically. It deals with defining the problem, formulation of hypothesis, methods adopted for data collection and statistical techniques used for analysing the data with logical reason behind it, Research methodology is concerned with problem solving, problem statement, historical research and evaluation of research. It includes the collection, assembling and examination of available data, making assumptions about the data, testing the assumptions, and developing practical applications from the laws or principles that have been derived from the verifications of the assumption.

Research Approach

Research approach indicates the basic procedure for conducting research. evaluative approach was considered appropriate for the study.

Research Design

. The research design used was Pre experimental one group pre-test post-test design which is represented in the table given below was this study is

Pre Experimental One Group Pre-Test Post- Test Design without

	Pre-test	Intervention	Post-test
Group	O1	X	O ₂

Key:

O=Assessment of pre-test knowledge by using structured interview schedule.

X= An Information booklet on home management of selected childhood illness among the mothers of under five children.

O =Assessment of post-test knowledge using structured interview schedule

Setting of the Study

The settings for the present study was selected rural area CHC Badgaon, Kanpur, Uttar Pradesh Kanpur Uttar Pradesh,

Population

In this study population comprised of among antenatal mothers in selected rural area at of Kanpur (Raj.).

Sampling Technique

Sampling refers to the process of selecting a portion of the population to represent the entire population". In the present study simple random sampling technique was used to select 70 antenatal mothers from selected rural area Kanpur, Uttar Pradesh. The list of antenatal women registered under the CHC were taken from the CHC staff. The antenatal mothers were selected who fulfilled inclusion and exclusion criteria.

Sample and Sample Size

Sample consists of a subset of a population selected in a research study. 70 The samples selected for the present study comprised of 70 mothers of selected rural area Kanpur, Uttar Pradesh.

Sampling Selection Criteria

The following criteria were set to select the samples:

Inclusion criteria

Antenatal mother who are

- Willing to participate in study
- Present at the time of study

Exclusion criteria

Antenatal mothers who are

- Not willing to participate in study

- Not present at the time of study

Ethical Consideration

- Permission obtained from the ethical committee of RNT Medical college of Kanpur, Uttar Pradesh.
- Permission obtained from sarpanch of village.
- Informed consent obtained from the participants, at the time of data collection.
- Confidentiality and anonymity of the respondents maintained.

Variables under study

Independent variable

Independent variables are presumed cause/stimulus or activity that is manipulated or varied by the researcher to create the effect on the dependent variable. [63] In the present study the independent variable was an information booklet on knowledge regarding PPIUCD.

Dependent variable

Dependent variables is the presumed effect/outcome or respond due to the effect of the independent variable, which researcher wants to predict or explain. [63] In the present study the dependent variable was knowledge of antenatal mothers regarding PPIUCD.

Demographic variables

The demographic variable confounds the relationship between the independent and dependent variable and that need to be controlled either through building in research design or through statistical procedure. In the present study the demographic variables are age, education level of mother, parity, monthly income, source of information.

Development and Description of Tool

A structured interview schedule was selected based on the objectives of the study as it was considered the best and appropriate instrument to elicit the response from the literate subjects. The main strength behinds the tool was, Related review of literature based on the opinions and suggestion of experts. books, journals, internet etc.

All the above provided relevant data are necessary to construct the tools on knowledge of PPIUCD among mothers. A blue print was prepared prior to the construction of the interview scheduled.

Preparation of Blue Print

The investigator prepared a blue print before constructing the question. The items are distributed according to the content area. A blue print on structured interview schedule on

PPIUCD was prepared. A blue print on structured interview schedule regarding post-partum intrauterine contraceptive device among the antenatal mothers was as follow.

S.No.	Area	Total no. of questions	Total %
1.	Introduction, Definition and Types	7	26.92
2.	Mechanism of action of PPIUCD	2	7.69
3.	Contraceptive effectiveness & life span	3	11.53
4.	Removal or replacement and return to fertility	3	11.53
5.	Advantages and Disadvantages	6	23.07
6.	Limitation, side effect and contraindication	3	11.53
7.	Follow up visit and care	2	7.69
	Total	26	100

Description of the Tool:

The structured interview schedule comprised of two section:

Section A: Consist of selected socio-demographic variables like age, educational qualification, types of family, monthly family income, mothers occupation, number of under five children in family, source of information. This section comprised of 7 items.

Section B: Comprised of structured interview schedule on PPIUCD. This section comprised of 26 items on selected aspects. The selected aspects were: Introduction, Definition and Types, Mechanism of action of PPIUCD, Contraceptive effectiveness & life span, Removal or replacement and return to fertility, Advantages and Disadvantages, Limitation, side effect and contraindication, Follow up visit and care.

Each item had only one correct response and each correct response was scored one and incorrect or not attempted was scored zero. The total possible score of the structured interview schedule was 26. The same interview schedule was used for the assessment of knowledge level in pre-test and post-test,

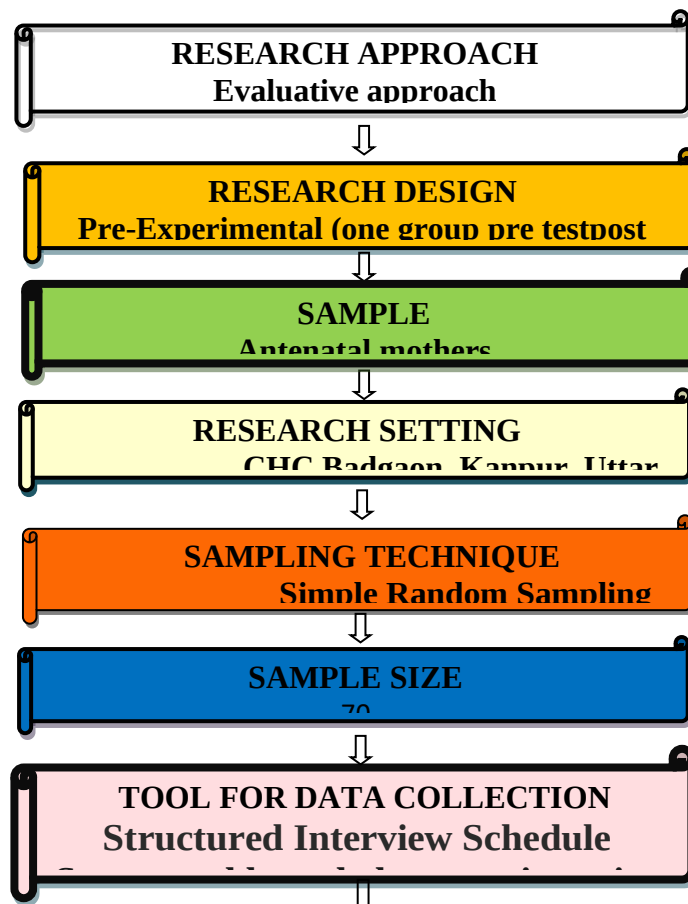
Intervention of the study

Intervention of the study was an information booklet on home. The booklet was prepared in Hindi with lots of pictures which provides information regarding home management of selected illness like Types, effectiveness of contraception, life span, insertion or removal, advantages, disadvantages, contraindication, follow up visit and care.

Content Validity of the Tool

Content validity is the degree to which the items in an instrument adequately represent the universe of content for the concept being measured. The prepared instrument along with objectives, blue print was submitted to experts comprising of 5 nursing experts in the field of obstetric and gynaecological Nursing department, 1 MD (obstetric) and 1 statistician for establishing the content validity. The modifications were done in the tool based on expert's suggestions and in consultation with the guide. The first draft of the tool consisted of 26 items and then based on expert suggestions it was rearranged. The final draft was reframed with 26 item.

The experts were requested to judge the items for relevance, organized, measurable of the content area. According to expert's opinion and final tool was modified.



RESULTS:

The findings of the study were discussed under the following headings which were based on the objectives of the study:

Section-I Distribution of respondents According to Selected socio-Demographic Variable

Section-II Comparison of mean pre and post-test knowledge scores

Part-A: Area wise comparison of mean percentage of pre-test and post-test knowledge scores

Part-B: Interpretation of level of knowledge in pre-test and post-test knowledge scores

Part-C: Effectiveness of an information booklet by comparing mean pre-test knowledge and post-test knowledge scores.

Section-III Association between pre-test knowledge scores and selected socio-demographic variables.

SECTION I: Distribution of respondents According to Selected Socio-Demographic Variable

Age in years: About age group majority 41.42% of respondents were in the age group of 18-22 years, 31.42% of respondents were in the age group of 23-27 years, 20.00% in 28-32 age group and 7.16% respondents were above 32 years.

Parity: In Parity variable the majority 58.57% of respondents were multigravida, 35.71% primigravida and 5.72% grand multipara.

Number of Children: In number of children the majority 35.71% of respondents had no children, 30.00% of respondents had two children, 21.14% of respondents had single children, 12.58% of respondents had more than three children.

Educational Qualification: About Educational Qualification the most of 45.72% of respondents were primary level educated, 41.42% of respondents were non formal educated, 10.00% of respondents were Secondary and higher secondary educated whereas 2.86% of respondents were graduation or above educated.

Monthly income: About monthly income the majority 45.72% of respondents had 5001-10,000 monthly income, 37.14% of respondents had 10,001-20,000 monthly income, 10.00% of respondents had more than 20,001 monthly incomes, 7.16% of respondents had less than 5000 monthly incomes.

Occupation of Mother: In Occupation of Mother variable the majority 80.00% of respondents were house wife, 10.00% of respondents were business, 8.58% of respondents were Private employee, and 1.42% of respondents were Govt. employee.

Previous information regarding PPIUCD: In Previous information regarding PPIUCD variable the majority 61.43 % of respondents have no previous information regarding PPIUCD, 38.57% respondents have previous information regarding PPIUCD.

Source of Information received about PPIUCD: If Previous information received than Source of Information about PPIUCD are with majority of 48.14 % of respondents have information by mass media, 33.33% of respondents have information by health care professionals, 18.53 % of respondents have information by friends & neighbours regarding PPIUCD.

SECTION II: COMPARISON OF MEAN PRE AND POST-TEST KNOWLEDGE SCORES

Part-A: Area wise comparison of mean percentage of pre-test and post-test knowledge scores

- In the area of Introduction, Definition and Types, the pre-test&post-test knowledge mean percentage is 39.85% & 60.14% and SD is 6.3 & 12.
- In the area of Mechanism of action of PPIUCD, the pre-test&post-test knowledge mean percentage is 70% & 79.5% and SD is 9.2 & 5.9.
- In the area of Contraceptive effectiveness & life span, the pre-test&post-test knowledge mean percentage is 84.33% & 88.67% and SD is 7.5& 3.2.
- In the area of Removal or replacement and return to fertility, the pre-test&post-test knowledge mean percentage is 60.67% & 64.33% and SD is 9.8& 4.7.
- In the area of Advantages and Disadvantages, the pre-test&post-test knowledge mean percentage is 28.83% & 49.67% and SD is 4.2 & 2.9.

- In the area of Limitation, side effect and contraindication, the pre-test&post-test knowledge mean percentage is 69.33% & 79.67% and SD is 3.7 & 3.2.
- In the area of Follow up visit and care, the pre-test&post-test knowledge mean percentage is 44% & 84.50% and SD is 8.2 & 6.8.

Part-B: Interpretation of level of knowledge in pre-test and post-test knowledge scores

the pre-test knowledge level of antenatal mothers regarding PPIUCD, most of the participants had no adequate or moderately adequate knowledge, 100 % participants had inadequate knowledge regarding PPIUCD.

In the post-test, after providing information booklet, the participants gain adequate knowledge regarding PPIUCD that was 24.28 % whereas 61.44 % participants had moderately adequate knowledge & 14.28 % participants had inadequate knowledge regarding PPIUCD.

Part-C: Effectiveness of an information booklet by comparing mean pre-test knowledge and post-test knowledge scores.

the mean post-test knowledge score is 17.61 (67.73%) is greater than the mean pre-test knowledge score 7.42 (28.53%). The above table also depicts that the enhancement in the knowledge of participants is 10.19 (39.20%) supporting the post-test knowledge score are higher than the pre-test knowledge score. The data further represent that the 't' value of 15.92 is significantly higher than the tabular value at 0.001 level of significance. This indicates that there was difference in pre-test and post-test knowledge score of participants and information booklet is effective in improving the knowledge score of antenatal mothers in selected rural area of Kanpur regarding PPIUCD.

SECTION III: ASSOCIATION BETWEEN PRE TEST KNOWLEDGE SCORES AND SELECTED DEMOGRAPHIC VARIABLES

the association between the pre-test knowledge and demographic variables such as age in years ($\chi^2 = 13.51^*$), parity ($\chi^2 = 10.79^*$), numbers of children ($\chi^2 = 12.72^*$), educational qualification ($\chi^2 = 13.09^*$), monthly income ($\chi^2 = 11.49^*$), occupation of mother ($\chi^2 = 13.99^*$), information received about PPIUCD during antenatal period ($\chi^2 = 10.62^*$), found significantly associated with pre-test knowledge at 0.001% level

The chi-square test was carried out to find out the association between pre-test knowledge score of experimental group and selected demographic variables. the study revealed that there is a significant association between the pre-test level of knowledge among staff nurses working in NICU with their selected socio demographic variables such as Age in years, there was no significant association between demographic variables such as gender, professional qualification, previous information and attended any workshop Hence research hypotheses H2 is accepted at 0.05 level of significance. In pre-test knowledge of control group, there is any significant association between pre-test test knowledge score of control group and selected demographic variables So research hypotheses H3 is rejected.

CONCLUSION

The present study was done to assess the effectiveness of self- instructional module on knowledge regarding care of Neonatal Jaundice among staff nurses working in NICU at selected hospitals at Kanpur.

In respondents showed that among the 30 subject of both experimental & control groups, in which pre-test level 10 (66.67 %) had inadequate knowledge, 5 (33.33 %) had moderately adequate knowledge, and none of them had adequate knowledge in care of neonatal jaundice. In post-test level of knowledge, the majority of respondents 11 (73.33 %) had adequate knowledge, 4 (26.67 %) had moderately adequate knowledge, and none of them had Inadequate knowledge in care of neonatal jaundice. In Control group in pre-test level 09 (60 %) had inadequate knowledge, 06 (40 %) had moderately adequate knowledge, and none of them had adequate knowledge in care of neonatal jaundice. In post-test level of knowledge, the majority of respondents 11 (73.33 %) had moderately adequate knowledge, 4 (26.67 %) had inadequate knowledge, and none of them had adequate knowledge in care of neonatal jaundice.

REFERENCES

1. B T Basvanthappa Text book of Community Health NursingJaypee Brothers Medical PublishersNew Delhi
2. Population of india <http://censusindia.gov.in/2011-prov-results/indiaatglance.html>
3. Pejaver Ranjan Kumar Main effects of population explosion in india<http://www.economicsdiscussion.net/articles/main-effects-of-population-explosion-in-india/2254>

4. A Shankar S Sebayang Women role in family planning
<http://www.prb.org/Publications/Datasheets/2013/family-planning-worldwide-2013.aspx>
5. Meghendra Banerjee Meenakshi Agarwal. family planning programme in India
<http://nrhm.gov.in/nrhm-components/rmnch-a/family-planning/background.html>
6. Blumenberg C, Hellwig F, Ewerling F, Barros AJD. Socio-demographic and economic inequalities in modern contraception in 11 low- and middle-income countries: an analysis of the PMA2020 surveys. *Reprod Health*. 2020;17(1):82. <https://doi.org/10.1186/s12978-020-00931-w>.
7. Maru RM. Incentives and disincentives in the Indian family welfare program. *Stud Fam Plann*. 1986;17(3):136–45.
8. hatterjee N, Riley NE. Planning an Indian modernity: the gendered politics of fertility control. *Signs J Women Cult Soc*. 2001;26(3):811–45.
9. Lawn JE, et al. Two million intrapartum-related stillbirths and neonatal deaths: where, why, and what can be done? *Int J Gynecol Obstet*. 2009;107:S5–S19. doi: 10.1016/j.ijgo.2009.07.016. [PubMed] [CrossRef] [Google Scholar]
10. World Health Organization . WHO recommendations on postnatal care of the mother and newborn. Geneva: World Health Organization; 2014. [Google Scholar]
11. 3. World Health Organization . Trends in maternal mortality: 1990–2015: estimates from WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division. Geneva: World Health Organization; 2015. [Google Scholar]
12. Singh S, et al. Adding it up: the costs and benefits of investing in family planning and maternal and new born health. New York: Guttmacher Institute; 2009. [Google Scholar]
13. 6. Cates W, et al. Family planning and the millennium development goals. *Science*. 2010;329(5999):1603–1603. doi: 10.1126/science.1197080. [PubMed] [CrossRef] [Google Scholar]
14. Organization WH. Programming strategies for postpartum family planning, 2013. Geneva: WHO; 2014. [Google Scholar]
15. DaVanzo J, et al. Effects of interpregnancy interval and outcome of the preceding pregnancy on pregnancy outcomes in Matlab Bangladesh. *BJOG*. 2007;114(9):1079–1087. doi: 10.1111/j.1471-0528.2007.01338.x. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
16. E Demographic . Health Survey, key indicators. Rockville: CSA, ICF; 2016.

17. Copper Intrauterine Device (IUD) FACT SHEET; September, 2008. <https://contraceptivechoice.wustl.edu/wpcontent/uploads/2015/07/Copper-IUD-Fact-Sheet.pdf>.
18. Hagos H, Tiruneh D, Necho W. Postpartum intra-uterine contraceptive device utilization among mothers who delivered at debre tabor general hospital: cross sectional study design. *Int J Fam Commun Med*. 2020;4(5):139–145. doi: 10.15406/ijfcm.2020.04.00203.
19. Thapa K, et al. Institutionalizing postpartum family planning and postpartum intrauterine device services in Nepal: role of training and mentorship. *Int J Gynecol Obstet*. 2018;143:43–48. doi: 10.1002/ijgo.12604.
20. Grimes DA, et al. Immediate post-partum insertion of intrauterine devices. *Cochrane Database Syst Rev*. 2010 doi: 10.1002/14651858.CD003036.
21. Sonalkar S, Kapp N. Intrauterine device insertion in the postpartum period: a systematic review. *Eur J Contracept Reprod Health Care*. 2015;20(1):4–18. doi: 10.3109/13625187.2014.971454.
22. lvarez F, et al. New insights on the mode of action of intrauterine contraceptive devices in women. *FertilSteril*. 1988;49(5):768–773. doi: 10.1016/S0015-0282(16)59881-1.
23. Dagnew GW, et al. Modern contraceptive use and factors associated with use among postpartum women in Ethiopia; further analysis of the 2016 Ethiopia demographic and health survey data. *BMC Public Health*. 2020;20:1–9. doi: 10.1186/s12889-020-08802-6.
24. https://nhm.gov.in/images/pdf/programmes/family-planing/guidelines/IUCD_Reference_Manual_for_MOs_and_Nursing_Personne_-Final-Sept_2013.pdf=UTF-8
25. World Health Organization (WHO). (2007). *Report of a WHO “technical consultation on birth spacing.”* Geneva, Switzerland: World Health Organization. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/69855/WHO_RHR_07.1_eng.pdf?sequence=1
26. Boerma JT, Bicego GT. Preceding birth intervals and child survival: Searching for pathways of influence. *Studies in Family Planning*. 1992;23:243–256. doi: 10.2307/1966886.
27. Hanson JD, Nothwehr F, Yang JG, Romitti P. Indirect and direct perceived behavioral control and the role of intention in the context of birth control behavior. *Matern Child Health J*. 2015;19(7):1535–1542. doi: 10.1007/s10995-014-1658-x.
28. Singh S, Shekhar C, Acharya R, et al. The incidence of abortion and unintended pregnancy in India, 2015. *Lancet Glob Health*. 2018;6(1):e111–e120. doi: 10.1016/S2214-109X(17)30453-9.