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EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON POSTPARTUM INTRAUTERINE CONTRACEPTIVE DEVICE (PPIUCD) AMONG PRIMIGRAVIDAE IN SELECTED HOSPITALS, INDIA

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ABSTRACT

Background: Motherhood is the fulfilment of womanhood. Yet all pregnancies are not welcomed. Today the couples are in a situation to limit the size of their family by choice rather by chance. The appropriate family planning choices are those that people make for themselves depend on the options. Those who make choices can use family planning more securely and programs are responsible for helping people make informed family planning decisions. The IUCD is a highly reliable, discreet, intimate, long-acting form of contraception that is coitus independent, and rapidly reversible. **Objectives:** To assess the existing knowledge, evaluate the effectiveness of video assisted teaching and find out the association between pre-test and post test knowledge score regarding postpartum intrauterine contraceptive device among primigravidae in selected hospitals. **Methods:** Pre-experimental design, with non probability purposive sampling method was used. Information was collected from 50 primigravidae attending antenatal OPD regarding postpartum intrauterine contraceptive (PPIUCD) using the structured interview schedule. VAT was implemented and post-test was conducted after 7 days to find the effectiveness. **Results:** The overall mean knowledge score in the pre-test and post test was 42.5 % and 80.9 % respectively with improvement of 38.4 % and it was significant at 5% level. **Conclusion:** The study outcomes suggested that VAT is an effective instructional method in enlightening the awareness of primigravidae attending antenatal OPD regarding PPIUCD.

KEYWORDS: Antenatal Mothers, Effectiveness, Intrauterine Devices, Knowledge**,** Postparturm, Video Assisted Teaching.

INTRODUCTION

Motherhood is the fulfillment of womenhood. Yet all pregnancies are not welcomed. Today the couples are in a situation to limit the size of their family by choice rather by chance. India began its family planning programme in 1952 as the first country in the world. Population control was the goal of the national programme, so that economic development could keep pace with time. One of the main prongs of this national programme was contraception (both temporary and permanent). Contraception is a highly cost-effective measure of public health and it is also cost-effective to use the most effective methods.

There has been a great advance in understanding and assembling the use of contraception in the last few decades. Couples need contraception throughout their reproductive years; initially it is needed to delay first pregnancy and later on when the family is complete for spacing and finally permanent methods. They should be left with the choice and decision of contraception; commonly referred to as the 'cafeteria approach'. Couples should have adequate information on all the options available and they should make their own informed decisions. In accepting contraception, lack of adequate knowledge or incorrect information and beliefs are common obstacles. Fear of side effects and misconceptions is widespread and has been the most significant explanation for contraception not being used.

One of the important and crucial times when women and couples are highly motivated and more receptive to methods of family planning is the postpartum period. When the woman returns to her pre-pregnancy state, this period is defined as the period of six weeks after delivery. If a contraceptive is given before the hospital discharge, then the woman or couple need not come back specifically for contraception. Before accepting sexual activity, the couple were protected[6]. Delay in the practise of patient contraception during the postpartum period can

lead to many unwanted/unintended or mistimed pregnancies. It is important to delay the next pregnancy and spacing as this affects mother and child health. It is well known that there are higher chances of complications such as abortions, pre-term labour, postpartum haemorrhage, low birth weight babies, neonatal morbidity and mortality if the woman conceives within less than 24 months of delivery.

Not only is it beneficial to women and couples; even the service providers benefit from the insertion of PPIUCD as pregnancy is definitely excluded, time is saved as it is carried out on the same delivery table. There is no need for additional evaluation and separate clinical procedure. Under the new programme being implemented in some states by the Government of India, pregnant women are advised to use IUCDs themselves during the prenatal period and the IUCD is inserted shortly after the woman delivers the baby, after proper consent[13]. The acceptance of PPIUCD is low; probably due to lack of awareness among the baby.

Despite making contraception widely available, either because of ignorance or fear of complications using it there is poor acceptance of contraceptive methods. The main reasons for not accepting family planning are inadequate knowledge of contraceptive methods and incomplete or erroneous information about their use or where to procure them. This study was conducted to find out the knowledge of PPIUCD insertion which is a new concept.

Need for the study

It is estimated that 12% of married or in-union women worldwide in 2015 had an unmet need for family planning; that is, they wanted to stop or delay childbearing but did not use any form of contraception. In the least developed countries, the level was much higher, 22 per cent. India has approximately 250 women with a maternal mortality rate of 254/100,000 live births. Due to limited quality choice, family planning services and the urgent need for family planning, Indian women have more children than desired and often too closely together. Higher maternal and child mortality and morbidity are associated with short intervals between births. Family sterilisation 34 percent, male sterilisation 1 percent, pills 4 percent, IUD 2 percent, condom 6 percent, any traditional method 7 percent and non-user 46 percent are the current approach of family planning in India. The modern IUCD is highly effective, safe, long acting, coitus independent and rapidly reversible method of contraception with few side effects. Many women also find the IUCD to be.

In India, 65% of females have an unmet need for family planning in the first year of the post-partum period. Therefore in this critical era, contraception must be practised. Studies show that pregnancies have an increased risk of adverse outcomes within 2 years of a previous birth, such as abortions, premature labour, postpartum haemorrhage, low birth weight babies, foetal loss and maternal morbidity and mortality. As morbidity and mortality rates are quite high, the post-partum period is a crucial time when both women and newborns require a special and integrated package of health services.

WHO reports that over 60 percent of maternal deaths in developing countries occur during the postpartum period. There are more than 3.3 million still births each year and more than 4 million neonatal deaths. Approximately half of all neonatal deaths occur within 72 hours of delivery. In India, 91 percent of women want to avoid another pregnancy during their first year after childbirth, but only 26 percent use any method of family planning. Because 65% have an unmet need for planning.

A Cochrane review concluded that a safe and effective contraceptive technique was PPIUCDs. The public health benefits of PPIUCDs stemmed from the increased accessibility of women to PPIUCDs following the birth of the facility, as PPIUCDs could be offered after birth at health facilities. This in turn reduced the opportunity and other costs incurred by customers who may otherwise have to return to contraceptive services facilities to access.

The commitment of states to pursue a robust strategy to improve the state's maternal and child health outcomes, including Janani Suraksha Yojna and Janani Shishu Suraksha Karyakram , has resulted in more than 70% of institutional deliveries in public health institutions offering a unique opportunity to revitalise postpartum family planning and to introduce postpartum family planning. Since 2009, following the national initiative of the Government of India to revitalise the services of PPIUCD.

Discussion with experts and review of literature helped the investigator to realize that providing an effective education on the knowledge regarding postpartum intrauterine contraceptive device is essential to reduce maternal and child morbidity and mortality rates.

Objectives

1. To assess the existing knowledge regarding postpartum intrauterine contraceptive device among primigravidae.
2. To evaluate the effectiveness of video assisted teaching regarding postpartum intrauterine contraceptive device.
3. To find out the association between pre-test knowledge regarding postpartum intrauterine contraceptive device and selected demographic variables.

Hypothesis.

H_1: There will be significant difference between the pre-test and post-test knowledge scores on postpartum intrauterine contraceptive device.

H_2: There will be a significant association between the pre-test knowledge scores and their selected socio demographical variables.

Methodology

Research Approach: An experimental approach was considered appropriate in order to accomplish the objectives.

Research Design

The research design selected was pre-experimental one group pre-test post-test design. In which pre-test was conducted followed by video assisted teaching and then conducted post-test for the same group after 7 days.

Table 1: Shows research design.

Group	Pre-test	Intervention	Post-test
Primigravidae	Day 1 Assessment of knowledge using structured interview questionnaire regarding postpartum intrauterine contraceptive device.	Day 1 Video assisted teaching regarding postpartum intrauterine contraceptive device.	After 7 days of video assisted teaching, knowledge of primigravidae is assessed using same structured interview questionnaire.
S	O_1	X	O_2

The symbols used are

S = single group, O_1 = pre test knowledge of primigravidae regarding PPIUCD., X = video assisted teaching regarding PPIUCD.,O_2 = post test knowledge of primigravidae regarding PPIUCD.

Target population: Target population in the present study was primigravidae attending antenatal OPD in Vanivilas Maternity Hospital at Bengaluru.

Setting of the study: This study was conducted in Vanivilas maternity hospital at Bengaluru. The criteria for selection of the setting are the availability of subjects, feasibility of conducting the study.

Sample and sampling technique: The sample of this study comprised of 50 primigravidae attending antenatal OPD in Vanivilas Maternity Hospital at Bengaluru. Non probability purposive sampling method was used to draw the sample.

antenatal mothers who are admitted in the hospital and who are in the age group of 38 and above.

Development of tool: The tool used for the study comprised of a structured interview questionnaire and video assisted teaching regarding PPIUCD.

Selection of the tool A Structured interview schedule used to assess the knowledge of primigravidae regarding PPIUCD.

Preparation of Blue Print The blue print of the structured interview questionnaire was prepared according to the demographic characteristics and knowledge of primigravidae regarding postpartum intrauterine contraceptive device. The blue print consists of 30 questions.

Description of the tool

Part - I: Consisted of 11 items related to socio demographic variables such as age, religion, education, occupation, income, type of family, duration of married life, place of delivery, previous exposure to information, source of information on Postpartum Intrauterine Contraceptive Device, willing to participate in family planning measures during delivery.

Part - II – Structured interview questionnaire consisted of 30 multiple choice questions on knowledge regarding Postpartum Intrauterine Contraceptive Device under 2 headings.

Section – A Questions on general information regarding IUCD

Section- B Questions on knowledge regarding PPIUCD

Each item of the schedule has one correct answer and three wrong answers, every correct answer would fetch one mark and wrong answer fetch zero mark and the total score of the knowledge questionnaire is 30.

Preparation of Blue Print: The blue print of the structured interview questionnaire was prepared according to the demographic characteristics and knowledge of primigravidae regarding postpartum intrauterine contraceptive device. The blue print consists of 30 questions.

Scoring of items

There were 30 items. Each of which has four options with one accurate answer. The score for correct response to each item was ‘one’ and incorrect response was ‘zero’.

$$\text{Percentage} = \frac{\text{Obtained Score}}{\text{Total Score}} \times 100$$

To find out the association with the selected demographic variables and knowledge scores, respondents are categorized into three groups.Adequate knowledge score 23& above (75- 100%),Moderate knowledge score 16 - 22 (50-74%),Inadequate knowledge score<15(below 50%).

RESULTS

The results were computed using descriptive and inferential statistics based on the objectives of the study. Pre-test phase Learning phase and Post-test phase.

Organization of data

In order to find out the gain in knowledge and also to find out the relationship between the variables the data gathered was tabulated, analyzed and interpreted and the data are presented under the following headings:-

Section 1: Socio-demographic characteristics of respondents.
Section 2: Overall and aspect wise knowledge scores of respondents.
Section 3: Analysis of association between Pre-test knowledge scores and selected socio-demographic variables.

Section 1 Analysis of Socio-Demographic Characteristics of Primigravidae Attending Antenatal OPD.

Table-2: Socio-Demographic Characteristics of respondents.

Characteristics	Category	Respondents	
		Number	Percent
Age group (years)	18-21	20	40.0
	22-23	21	42.0
	24-25	9	18.0
Religion	Hindu	18	36.0
	Muslim	28	56.0
	Christian	4	8.0
Educational status	No formal education	5	10.0
	Primary	6	12.0
	Secondary	31	62.0
	Graduation	8	16.0
Occupation	Home maker	42	84.0
	Private	8	16.0
Family income/month	Rs.5,000-10,000	17	34.0
	Rs.10,001-15,000	13	26.0
	Rs.15,001-20,000	20	40.0
Type of family	Nuclear	18	36.0
	Joint	26	52.0
	Extended	6	12.0
Duration of married life	1 year	27	54.0
	2 years	19	38.0
	3 years	4	8.0
Prefer to have delivery	Home	2	4.0
	Hospital	48	96.0
Previous exposure to information of PPIUCD	Yes	29	58.0
	No	21	42.0
Source of information	Health care personnel	21	42.0
	Family/Friends	8	16.0
	No	21	42.0

The above table reveals that majority 21(42.0%) respondents belongs to the age group of 22-23 years,20(40.0%) respondents belongs to the age group of 18-21 years, 09(18%) respondents belongs to the age group of 24-25 years,28(56.0%) respondents were Muslim, 18(36.0%) respondents were Hindhu and remaining 4(8.0%) respondents were Christian**,** 31(62.0%) respondents were studied up to secondary education,8(16%)respondents were graduates, 6(12%) were studied up to primary education and 5(10.0%) had no formal education, 42(84.0%) respondents were home maker, 8(16.0%) were private employee, 20(40.0%) respondents had family monthly income between 15001-20,000, 17(34.0%) respondents had monthly family income between 5,000-10,000, 13(26.0%) had family income between 10,001-15,000,26(52.0%) respondents belongs to joint family and 18(36.0%) belongs to nuclear family and 6(12.0%) belongs to extended family. 27(54.0%) had 1-year duration of married life, 19(38.0%) had 2-years duration of married life, and 4(8.0%) 3-years duration of married life.48(96.0%) prefer hospital delivery and 2 (4.0%) prefer home delivery. 29(58.0%) had information and 21(42%) had no information. 21(42.0%) respondents had no information, 21(42.0%) respondents had source of information from health personnel, 8(16.0%) respondents had source of information from family/friends. 26(52.0%) would consider family planning measures

after delivery and 24 (48.0%) would not consider family planning after delivery.

Section–2: Overall and Aspect wise Pre-test and Post-test Knowledge Scores on Postpartum intrauterine contraceptive device

Table–5: Over all Pre-test and Post-test Mean Knowledge scores on Postpartum intrauterine contraceptive device.

Aspects	Max. Score	Knowledge Scores				Paired 't' Test
		Mean	SD	Mean (%)	SD (%)	
Pre-test	30	12.74	4.0	42.5	13.2	20.57*
Post-test	30	24.26	2.1	80.9	7.1	
Enhancement	30	11.52	4.0	38.4	13.2	

* Significant at 5% level, t (0.05,49df) = 1.96

The Pre-test mean knowledge percentage was 42.5% and post –test mean knowledge percentage was 80.9% with enhancement of 38.4%, with paired 't' test value of 20.57 which is significant at 0.05 level as calculated value is greater than table value.

Table–6: Classification of Respondents on Pre-test and Post-test Knowledge level on Postpartum intrauterine contraceptive device.

Knowledge Level	Category	Classification of Respondents				χ^2 Value
		Pre-test		Post-test		
		N	%	N	%	
Inadequate	≤ 50 % Score	34	68.0	0	0.0	71.31*
Moderate	51-75 % Score	16	32.0	13	26.0	
Adequate	> 75 % Score	0	0.0	37	74.0	
Total		50	100.0	50	100.0	

* Significant at 5% level, χ^2 (0.05,2df) = 5.991

In pre-test 34 (68)% had inadequate knowledge and in Post-test none of them had inadequate knowledge, 16(32.0%) respondents had moderate knowledge in Pre-test and 13(26.0%) in Post-test, no respondents had adequate knowledge in Pre-test and 37 (74.0%) respondents had adequate knowledge in Post-test.

Table-7: Aspect wise Mean Pre-test and Post-test Knowledge scores on Postpartum intrauterine contraceptive device.

No.	Knowledge Aspects	Respondents Knowledge (%)						Paired't' Test
		Pre-test		Post-test		Enhancement		
		Mean	SD	Mean	SD	Mean	SD	
I	General information on IUCD	54.5	19.5	88.0	12.0	38.1	16.6	16.23*
II	Knowledge on PPIUCD	38.1	16.6	78.3	9.2	40.2	16.4	17.33*
	Combined	42.5	13.2	80.9	7.1	38.4	13.2	20.57*

* Significant at 5% level, t (0.05,49df) = 1.96

The aspect wise mean pre-test and post-test and knowledge enhancement scores onPostpartum intrauterine contraceptive device. The mean pre-test knowledge percentage regarding general information regarding IUCD was 54.5% and the post-test mean percentage is 88.0%. The enhancement of the knowledge is found to be 38.1%. Knowledge regarding Postpartum intrauterine contraceptive device the pre-test mean % was found to be 38.1 % and post-test mean% of 78.3% with the enhancement of 40.2%.

The overall mean score in the pre-test was 42.5% and 80.9% in the post-test with an enhancement of 38.4%. The statistical paired 't' test indicates the enhancement in the mean knowledge scores is found to be significant at 0.05 level for all the aspect under the study.

DISCUSSION

The major finding of the study was summarized as follows:

The majority 42% respondents fall between the age group of 22-23 years,40% respondents fall between the age group of 18-21 years, 18% respondents fall between the age group of 24-25 years. The majority 56%respondents were Muslim, 36% respondents were Hindu and remaining 8% respondents were Christian. The majority 62% respondents were studied up to

secondary education, 16% respondents were graduates, 12% were studied up to primary education and 10% had no formal education The majority (84.0%) respondents were home maker, (16.0%) were private employee. The majority 40% respondents had family monthly income between 15001-20,000, 34% respondents had monthly family income between 5,000-10,000, 26% had family income between 10,001-15,000.

The majority 52% respondents had joint family and 36% had nuclear family and 12% had extended family. The majority 54% had 1-year duration of married life, 38% had 2-years duration of married life, and 8% had 3-years duration of married life. The majority 96% prefer hospital delivery and 4% prefer home delivery. The majority 58% had previous exposure to information and 21(42%) had no information. The majority 42% respondents had no information, 42% respondents had source of information from health personnel, 16% respondents had source of information from family/friends. The majority 52% would consider family planning measures after delivery and 48% would not consider family planning after delivery.

The present study confirms that the majority (68.0%) of respondents in the pre test had inadequate knowledge level, (32.0%) of respondents with moderate knowledge level and none of the respondents had adequate knowledge level on PPIUCD. This shows that there is lack of in formation among primigravidae regarding PPIUCD. Hence, it is necessary to provide education in order to enhance knowledge on PPIUCD.

An observational study was conducted in one of the zonal service hospitals. The results showed the knowledge and acceptance of postpartum insertion is very low among antenatal women; probably because the concept is new in the community. There is a strong need to increase the knowledge and awareness about this by health education and counseling.

The present study confirmed that there was a considerable improvement of knowledge after the video assisted Teaching on postpartum intrauterine contraceptive device (PPIUCD) and is statistically established as significant. The overall pretest mean knowledge score was 42.5 % and post test score was 80.9 % with 38.4% mean percentage knowledge enhancement.

Testing the hypotheses

H_1: There will be a significant difference between pre test and post test knowledge scores regarding postpartum intrauterine contraceptive device among primigravidae. The overall pretest mean knowledge score was 42.5 % and post test score was 80.9%. with 38.4% mean percentage knowledge enhancement. The hypothesis **H_1** stated in the study is accepted since there was significant change found between the pre-test and post-test knowledge scores regarding PPIUCD among primigravidae at $P < 0.05$ level (5%). Hence, the stated hypothesis **H_1** is accepted because there was a significant improvement in knowledge scores of primigravidae attending antenatal OPD after administration of the video assisted teaching on PPIUCD.

H_2: There will be a significant association between pre test knowledge scores regarding PPIUCD among primigravidae and selected Socio- demographic variables. The investigator accepts the hypothesis **H_2** for significant association between age in years, monthly income, type of family, duration of married life, pervious exposure to the information regarding PPIUCD, source of information regarding, consider family planning measures after delivery. But the investigator rejects the hypothesis **H_2** with few non-significant socio-demographic variables such as religion, educational status, occupation, place prefer to have delivery and the pre-test knowledge scores regarding postpartum intrauterine contraceptive device and knowledge scores.

Conclusions

The pre-test knowledge score among majority of primigravidae were found to be inadequate and post-test knowledge score is enhanced. There was increase in knowledge of mothers attending antenatal OPD after teaching on PPIUCD.

Recommendations

An Experimental research can be carried out with pre-test - post-test control group design on PPIUCD. Comparative research in urban and rural areas at community settings among the primigravidae. Study can be conducted at hospital settings among the postnatal mothers and self-instructional module can be prepared related to PPIUCD and find out its effectiveness.

Declaration

Consent to participate

The informed consent has been obtained from participants who are involved in the study and all methods were performed in accordance with the relevant guidelines and regulations.

Consent for publication

It is not applicable.

Availability of data and materials

All data and materials are available with authors and same can be produced on request.

Competing Interests

Authors have declared that no competing interests exist.

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REFERENCES

1. World population awareness. How to attain population sustainability. [Internet] 2015. Available from: http://www.overpopulation.org/pop-sustainability.html. (Accessed on 10th may), 2015.
2. Orji E.O., Onwudiegwu U. Prevalence and determinants of contraceptive practice in a defined Nigerian population. J ObstetGynaecol, 2002; 22: 540-543. [PubMed]
3. Ashoke S., John S., Jayanti M.T. The KAP-gap in Nepal: reasons for non-use of contraception among couples with an unmet need for family planning. Asia Pac Popul J., 2000; 6: 25—38. [PubMed]
4. Srivastava R., Srivastava D.K., Jina R. Contraceptive knowledge, attitude and practice (KAP Survey) J ObstetGynaecol, 2005; 55: 546-550.
5. Okonofua F. Abortion and maternal mortality in developing world. J ObstetGynaecol Can, 2006; 28: 974—979. [PubMed]
6. Majhi A.K. Importance of PPIUCD in the perspective of present Indian population scenario. Indian J Perinatal Reproductive Biol., 2012; 2: 5—7.
7. Nelson A. lntrauterine contraceptive. J Obstet Gynaecol, 2008; 6: 219—224.
8. Kaneshiro B., Abey T. Long-term safety, efficacy and patient acceptability of the intrauterine copper T-380A contraceptive device. Lnt J Women's health, 2010; 2: 211—220. [PubMed]
9. NaizaiAsfandyar, Bhutani J., Bhutani S. The revival of postpartum intrauterine contraceptive devices. Archives Gynaecol Obstetrics, 2014; 290: 9. [PubMed]
10. Trivedi A., Kasar P.K., Tiwari R. Immediate postpartum IUD: analysis of factors making it contraceptive of choice. Int J Reproduction, Contracept Obstetrics Gynaecol, 2014; 986-989.
11. PriyaSanskriti. Postpartum intrauterine device insertion: the unfinished agenda. New India J Surg, 2011; 2: 245-247.
12. Bhasin S.K., Pant M., Mehta M., Kumar S.Prevalence of usage of different contraceptive methods in East Delhi-a cross sectional study. India J Community Med, 2005; 30: 53-55.
13. http://www.un.org/en/development/desa/population/publications/pdf/family/trendsContraceptiveUse2015Report.pdf.
14. RajniGautam, K. N. Arya, S. Kharakwal, Sudhir Singh, Monika Trivedi. "Overview of Immediate PPIUCD application in Bundelkhand Region". Journal of Evolution of Medical and Dental Sciences, 2014; 3(36): 9518-9526. DOI: 10.14260/jemds/2014/3230.
15. Maluchuru S, Aruna V. Post Partum – Intrauterine Device Insertion – 2yr Experience at a Tertiary Care Center in Guntur Medical College /Govt. General Hospital, Guntur. IOSR J Dent Med Sci Ver IV [Internet], 2015; 14(3): 2279–861. Available from: www.iosrjournals.org.
16. Kumar S, Sethi R, Balasubramaniam S, Charurat E, Lalchandani K, Semba R, et al. Women's experience with postpartum intrauterine contraceptive device use in India. Reprod Health [Internet], 2014; 11(4): 32. Available from: http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=4062773&tool=pmcentrez&rendertype=abstract
17. Global uses of IUCD. Overview of IUCD uses in different countries. [Internet], 2015. Available on: http://www.uptodate.com/contents/intrauterine-contraception-iud-overview (Accessed on 21 may 2015).
18. Maternal and child morbidity and mortality. Initiatives of govt. Of India. [Internet], 2015. http://medind.nic.in/ibl/t11/i4/iblt11i4p354.pdf. accessed on 9th, June 2015.
19. Polit, D.F, Hunger B.D, "Nursing Research Principles and Methods", J.B Lippencott.co, Philadelphia, 2005; 88.