

Impact of a Planned Educational Programme on Awareness of Postpartum Intrauterine Contraceptive Device (PPIUCD) Among Primigravid Women Visiting the Obstetrics and Gynaecology Outpatient Department of H.S.K. Hospital and Research Centre, Bagalkot

Ashwini Mahadev Shindhe^{1*}; Pramilamary A. Dugepogu²

¹Nursing Officer, Community Health Centre Kagawad Karnataka

²Associate Professor, Department of Obstetrics and Gynaecological Nursing,
Vijaya College of Nursing Science Belagavi

Corresponding Author: Ashwini Mahadev Shindhe^{1*}

Publication Date: 2026/08/25

Abstract: Family planning constitutes an essential component of maternal and child healthcare, as it enables couples to make informed decisions concerning the number and interval of pregnancies. The Postpartum Intrauterine Contraceptive Device (PPIUCD) is considered a secure, highly effective, reversible, and long-acting contraceptive option. Nevertheless, insufficient awareness among antenatal mothers may hinder its acceptance and utilization. The current research was conducted to evaluate the extent of understanding of PPIUCD among primigravida mothers, assess the efficacy of a Structured Educational Initiative, and identify the relationship in the interval of post-assessment comprehension and selected demographic characteristics. A quantitative research methodology employing a pre-experimental, single-group preliminary assessment and subsequent evaluation framework was utilized. The investigation was carried out among 50 primigravida mothers attending the Obstetrics and Gynaecology Outpatient Department of HSK Hospital and Research Centre, Bagalkot. Subjects were selected by purposive sampling.. Information was obtained using a structured knowledge assessment tool comprising socio-demographic details and 30 multiple-choice items related to PPIUCD. After completion of the pre-test, The Scheduled Instructional Curriculum was delivered, subsequent to a post-assessment thereafter a period of seven days. The gathered data were analyzed employing both descriptive and inferential statistical methods. Findings revealed that during the pre-test, 63.3% of primigravida mothers demonstrated moderate knowledge, whereas 36.7% shown insufficient understanding concerning PPIUCD. After implementation of the Planned Teaching Programme, 86% of participants achieved an excellent level of knowledge and 14% demonstrated good knowledge. The mean knowledge score enhanced from 15.6 ± 3.14 (50.5%) prior to the intervention to 26.28 ± 1.90 (87.6%) following the intervention. The obtained paired *t* value of 20.4 was substantially greater than the critical value of 1.96, demonstrating that the Planned Teaching Programme produced a statistically significant improvement in knowledge. Furthermore, no A statistically significant correlation was discovered between post-test knowledge and the selected socio-demographic characteristics. The study therefore established that primigravida mothers possessed limited knowledge concerning PPIUCD prior to the educational intervention. The Proposed Instructional Plan was discovered. to be highly effective in enhancing their understanding of family planning and PPIUCD. Structured educational strategies may therefore be incorporated to strengthen awareness, encourage acceptance, and improve the utilization of PPIUCD among antenatal mothers.

Keywords: PPIUCD, Primigravida Mothers, Family Planning, Planned Teaching Programme, Knowledge, Contraception.

How to Cite: Ashwini Mahadev Shindhe; Pramilamary A. Dugepogu (2026) Impact of a Planned Educational Programme on Awareness of Postpartum Intrauterine Contraceptive Device (PPIUCD) Among Primigravid Women Visiting the Obstetrics and Gynaecology Outpatient Department of H.S.K. Hospital and Research Centre, Bagalkot. *International Journal of Innovative Science and Research Technology*, 11(8), 1691-1694. <https://doi.org/10.38124/ijisrt/26aug492>

I. INTRODUCTION

Motherhood is a unique and valuable experience in a woman's life. The health and well-being of mothers and children are closely related to appropriate reproductive choices and access to family planning services.¹ Family planning enables couples to determine the number and spacing of their children and contributes significantly to maternal and child health.² Appropriate birth spacing of at least 2–3 years reduces maternal morbidity, neonatal mortality, and adverse pregnancy outcomes.³ The World Health Organization (WHO) recognizes family planning as an essential component of reproductive health and recommends the use of effective contraceptive methods to achieve desired family size and spacing between pregnancies.⁴ Family planning also helps prevent unintended pregnancies, improves women's health, and enhances the quality of life of families.⁵ Spacing methods of contraception are particularly important during the postpartum period, as closely spaced pregnancies increase health risks for both mother and infant.⁶ Effective contraceptive use allows women to recover physically and emotionally after childbirth while ensuring better care for existing children.⁷ Postnatal mothers require accurate information regarding available contraceptive methods, their effectiveness, advantages, side effects, and duration of action.⁸ Counseling during the antenatal and postnatal periods can improve awareness and acceptance of family planning methods.⁹ Among the various contraceptive methods, the Intrauterine Device (IUD) is one of the most effective, reversible, and long-acting methods of contraception.¹⁰ The IUD is a small T-shaped device inserted into the uterus by a trained healthcare professional.¹¹ It provides long-term protection against pregnancy and can remain effective for 5–10 years depending on the type used.¹² Copper-bearing IUDs prevent fertilization by affecting sperm motility and viability and may also prevent implantation.¹³ They have a high effectiveness rate and are suitable for women seeking long-term contraception.¹⁴ Immediate postpartum and interval IUD insertions have been found to be safe and effective.¹⁵ Despite the availability of effective contraceptive methods, many women have limited knowledge regarding IUDs and their benefits.¹⁶ Misconceptions, fear of side effects, and inadequate counseling often influence utilization.¹⁷ Therefore, improving awareness among antenatal mothers regarding IUDs is essential for informed decision-making.¹⁸ Enhanced knowledge can increase acceptance and utilization of IUDs, thereby contributing to improved maternal and child health outcomes.¹⁹ Hence, assessing the knowledge and awareness of antenatal mothers regarding IUDs is of considerable importance.²⁰

II. METHODOLOGY

A quantitative research approach was utilized to assess the efficacy of a Planned Teaching Program (PTP) in enhancing knowledge related to the Postpartum Intrauterine Contraceptive Device (PPIUCD) among primigravida mothers. A pre-experimental research design with a single group with both pre-test and post-test measures was

employed for the study. The study was carried out in the Obstetrics and Gynaecology Outpatient Department (OBG OPD) of H.S.K. Hospital and Research Centre, Bagalkot, Karnataka. The intended demographic included all first-time mothers visiting the OBG outpatient department, whereas the accessible population included those mothers who visited the department during the data collection period and fulfilled the predetermined eligibility requirements. A total of 50 primigravida mothers were enrolled in the study through a purposive sampling method.

Participants were considered eligible if they were primigravida mothers attending the OBG Participants in the OPD, who understood Kannada, consented to participate in the study and supplied written informed consent, were present during the data collection phase, and were able to collaborate throughout the research process. Section I obtained information regarding the socio-demographic characteristics of the participants, while Section II contained 30 multiple-choice questions intended to measure knowledge concerning PPIUCD.

The content validity of the research instrument was established through evaluation by six experts from the fields of nursing and obstetrics. The dependability of the questionnaire was determined using the Split-Half Method, which yielded a reliability coefficient of $r = 0.863$, indicating satisfactory internal consistency of the instrument. Following administration of the pre-test, a Planned Teaching Programme was provided through a lecture-cum-discussion approach supplemented with audiovisual materials. The educational intervention covered major aspects of family planning and PPIUCD, including the concept of family planning, an overview of PPIUCD, its benefits, eligibility requirements, insertion procedure, advantages, limitations, post-insertion care, and follow-up.

Before commencement of the main investigation, a pilot study was undertaken to determine the feasibility and practicability of the research procedures. Necessary administrative authorization was secured from the appropriate authorities before initiating data collection. Informed permission in writing was secured from every participant following an explanation of the study's objectives and methods. A post-intervention assessment was conducted after seven days, utilizing the same knowledge questionnaire to determine changes in participants' knowledge following the educational intervention.

The research was conducted in accordance with established ethical principles. Approval was obtained from the Institutional Research and Ethics Committee, with Ethical Clearance Number: 21/SIONS-IRC/20.42018. Participation in the study was entirely voluntary, written informed consent was secured from all participants, and the privacy and confidentiality of the information provided by the participants were maintained throughout the research process.

The information obtained from the participants was processed and interpreted using both descriptive and

inferential statistical techniques. Descriptive measures included frequency, percentage, mean, and standard deviation to summarize the characteristics and knowledge scores of the participants. For inferential analysis, the paired t-test was employed to determine the difference between

pre-test and post-test knowledge scores, while the chi-square test was utilized to examine the association between post-test knowledge levels and selected socio-demographic characteristics. A p-value ≤ 0.05 was considered indicative of statistical significance.

III. RESULTS

Table 1 Pre-Test Knowledge Level of Primigravida Mothers (N=50)

Knowledge Level	Frequency	Percentage
Average	28	63.3%
Poor	22	36.7%

- Description: Table 1 shows that the majority of primigravida mothers (63.3%) had average knowledge regarding PPIUCD before the intervention.

Table 2 Post-Test Knowledge Level of Primigravida Mothers (N=50)

Knowledge Level	Frequency	Percentage
Excellent	43	86%
Good	7	14%

- Description: Table 2 indicates that most mothers (86%) attained excellent knowledge after the Planned Teaching Programme (PTP).

Table 3 Comparison of Pre-Test and Post-Test Knowledge Scores

Test	Mean Score	Mean %
Pre-test	15.6 $\pm$ 3.14	50.5%
Post-test	26.28 $\pm$ 1.90	87.6%

- Description: Table 3 reveals a marked improvement in knowledge scores after administration of the PTP.

Table 4 Area-Wise Effectiveness of PTP

Knowledge Area	Pre-test Mean %	Post-test Mean %
Family Planning Methods	62.6%	86%
PPIUCD	44.5%	88%

- Description: Table 4 demonstrates considerable improvement in knowledge regarding family planning methods and PPIUCD following the intervention.

Table 5 Effectiveness of Planned Teaching Programme

Test	Mean Score
Pre-test	13
Post-test	20.8
Paired t-value	20.4

- Description: The calculated t-value (20.4) was greater than the table value (1.96), indicating that the Planned Teaching Programme was highly effective in improving knowledge regarding PPIUCD.

Table 6 Association Between Knowledge Scores and Demographic Variables

Variable	Association
Age	Not Significant
Religion	Not Significant
Education	Not Significant
Income	Not Significant
Occupation	Not Significant
Type of Family	Not Significant
Source of Information	Not Significant

- Description: Table 6 shows that there was no significant association between post-test knowledge scores and selected socio-demographic variables.

IV. DISCUSSION

The present investigation was conducted to determine the effectiveness of a Planned Teaching Programme (PTP) in enhancing knowledge concerning the Postpartum Intrauterine Contraceptive Device (PPIUCD) among primigravida mothers attending the Obstetrics and Gynaecology outpatient department. The initial assessment revealed that a considerable proportion of the participants had only a moderate level of understanding regarding PPIUCD before the educational intervention. After implementation of the Planned Teaching Programme, a notable enhancement in knowledge was identified, with most of the participants attaining an excellent level of knowledge in the post-test assessment.

The considerable rise in the mean post-test knowledge score in comparison with the pre-test score indicates the beneficial effect of the educational intervention. The statistically significant findings obtained from the paired *t*-test further establish that the Planned Teaching Programme was effective in strengthening the participants' comprehension of PPIUCD. These findings indicate that systematically organized health education can serve as an effective approach for increasing awareness and understanding of postpartum contraceptive options among first-time pregnant women.

The study further assessed whether post-test knowledge was associated with selected socio-demographic characteristics of the participants. The results demonstrated that there was no statistically significant relationship between knowledge levels and demographic factors such as age, religion, educational qualification, occupation, monthly family income, type of family, and source of information. This finding indicates that the educational intervention produced a consistent beneficial effect among participants irrespective of their socio-demographic background. Therefore, the Planned Teaching Programme appears to have contributed effectively to improving knowledge regarding PPIUCD across different demographic groups.

V. CONCLUSION

The outcomes of the study demonstrated that primigravida mothers possessed inadequate awareness and understanding of the Postpartum Intrauterine Contraceptive Device (PPIUCD) prior to the implementation of the educational intervention. The Planned Teaching Programme was found to be highly effective in producing a significant improvement in participants' knowledge concerning family planning and PPIUCD. The findings emphasize the value of systematically organized health education in strengthening awareness, facilitating informed choices regarding contraceptive methods, and fostering greater acceptance of PPIUCD among antenatal mothers. Therefore, incorporating structured educational programmes into antenatal care services may contribute to improving knowledge and promoting the appropriate utilization of postpartum contraceptive methods.

REFERENCES

- [1]. Pillitteri A. Maternal and child health nursing. 8th ed. Philadelphia: Lippincott Williams & Wilkins; 2018.
- [2]. Park K. Park's textbook of preventive and social medicine. 27th ed. Jabalpur: Banarsidas Bhanot Publishers; 2023.
- [3]. World Health Organization. Report of a WHO technical consultation on birth spacing. Geneva: World Health Organization; 2007.
- [4]. World Health Organization. Family planning: a global handbook for providers. Geneva: World Health Organization; 2022.
- [5]. United Nations Population Fund. State of world population report 2023. New York: UNFPA; 2023.
- [6]. Hatcher RA, Nelson AL, Trussell J, Cwiak C, Cason P, Policar M, et al. Contraceptive technology. 22nd ed. New York: Ardent Media; 2024.
- [7]. Lowdermilk DL, Perry SE, Cashion K, Alden KR. Maternity nursing. 12th ed. St. Louis: Elsevier; 2022.
- [8]. Dutta DC. Textbook of obstetrics. 10th ed. New Delhi: Jaypee Brothers Medical Publishers; 2022.
- [9]. Sharma S. Essentials of family planning. New Delhi: CBS Publishers and Distributors; 2021.
- [10]. World Health Organization. Medical eligibility criteria for contraceptive use. 5th ed. Geneva: World Health Organization; 2015.
- [11]. Cunningham FG, Leveno KJ, Bloom SL, Dashe JS, Hoffman BL, Casey BM, et al. Williams obstetrics. 27th ed. New York: McGraw-Hill Education; 2023.
- [12]. Johns Hopkins Bloomberg School of Public Health. Family planning handbook. Baltimore: Johns Hopkins University; 2022.
- [13]. Hubacher D, Reyes V, Lillo S, Zepeda A, Chen PL, Croxatto H. Mechanisms of action of intrauterine devices. *Contraception*. 2018;98(2):89-95.
- [14]. Winner B, Peipert JF, Zhao Q, Buckel C, Madden T, Allsworth JE, et al. Effectiveness of long-acting reversible contraception. *N Engl J Med*. 2012;366(21):1998-2007.
- [15]. Cwiak C, Cordes S. Postpartum intrauterine device placement. *Clin Obstet Gynecol*. 2014;57(4):766-76.
- [16]. Sharma R, Gupta S. Knowledge and attitude regarding intrauterine devices among antenatal women. *Int J Reprod Contracept Obstet Gynecol*. 2021;10(3):1025-30.
- [17]. Cleland J, Ali MM, Shah IH. Dynamics of contraceptive use. *Lancet*. 2017;390(10102):123-35.
- [18]. Ministry of Health and Family Welfare. National family planning programme. New Delhi: Government of India; 2023.
- [19]. World Health Organization. Contraception and family planning fact sheet. Geneva: World Health Organization; 2024.
- [20]. Glasier A, Gülmezoglu AM, Schmid GP, Moreno CG, Van Look PF. Sexual and reproductive health: a matter of life and death. *Lancet*. 2006;368(9547):1595-607.