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Effectiveness of multicomponent intervention on contraceptive-related problems among women

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Abstract

This study assessed the effectiveness of a multicomponent intervention in reducing contraceptive-related issues, particularly among women using copper-T IUDs, in a community setting in Coimbatore. Contraceptives, such as copper IUDs, provide long-term pregnancy prevention but may lead to physical and psychological side effects. Existing research highlights the prevalence of such issues, including bleeding, pain, and anxiety, among IUD users. This study involved 60 women, divided into 30 in the Experimental Group, and 30 in the Control Group, with pre- and post-intervention assessments of their contraceptive-related problems. The multicomponent intervention included educational support, dietary adjustments, and physical exercises. Results demonstrated significant improvement in the experimental group compared to the control group. In the experimental group before intervention, most of the clients 18 (60.0%) reported a moderate degree of contraceptive related problems and 12 (40.0%) reported a mild degree of contraceptive problems. Whereas after the intervention all the clients reported no contraceptive related problems. In the control group there were no notable changes in the degree of contraceptive related problems between the baseline and subsequent observation. Post-intervention, women in the experimental group reported no physical or psychological problems, while the control group showed little to no change. Notably, mean scores of contraceptive-related issues dropped substantially in the experimental group, with significant differences observed between pre- and post-intervention measurements for both physical and psychological aspects ($p < 0.000$). Findings indicate that a holistic, non-pharmacological intervention effectively mitigates contraceptive-related concerns, enhancing the overall well-being of copper-T users. This study underscores the importance of comprehensive, personalized care in managing contraceptive side effects. It suggests that community health nurses can play a pivotal role in implementing these interventions. The findings advocate for integrating such non-pharmacological approaches into nursing practice to address contraceptive challenges, promoting healthier, more satisfied outcomes for women.

Keywords: Multicomponent intervention, contraceptive-related problem, IUD, women

Introduction

Contraceptive use has been a critical component of reproductive health, offering women the ability to plan and space their pregnancies, thus improving maternal and child health outcomes. Broader societal changes, including the trend towards higher education among women, increased participation in the workforce, and the evolving concept of family planning also influence the rise in contraceptive use. Contraceptives are particularly used among women of childbearing age between 15 to 49 years.

A wide range of contraceptive methods are available to women, and of which the common methods include copper IUDs, oral contraceptive pills, and hormonal injections. Among the methods, Copper IUDs are more popular, as it offers long-term protection for up to 10 years with minimal maintenance, making them very cost-effective.

Kn. Sonam *et al.* (2024) ^[1] reported in the descriptive study on the physical and psychological problems experienced by intrauterine contraceptive device (IUD) users that a significant proportion of IUD users experienced physical and psychological problems. The physical issues experienced after IUD insertion were excessive vaginal bleeding (64%), foul vaginal discharge (71%), breast tenderness (62%), suffered from severe dysmenorrhea (71%), allergic reactions (78%), dyspareunia (pain during intercourse) (66%), menstrual irregularities (65%), frequent urination (49%), and diagnosed with pelvic inflammatory disease (PID) (67%).

The psychological problems, observed in their study were fearing becoming pregnant despite having an IUD (63%), feeling more anxious (54%), more irritable (50%), losing interest in sexual activity (62%), fearing that the IUD might be displaced or move into the abdomen (60%), afraid of permanent infertility (67%), worried that next planned pregnancy would be delayed (62%), believed not breastfeed after IUD insertion (78%), frequent mood swings (57%), and felt the need to take extra precautions (55%).

A multicomponent intervention that includes educational activities, dietary modifications, and physical exercise can effectively address the complex issues related to contraceptive use. Together, these interventions provide a comprehensive approach to managing the challenges associated with contraceptive use, particularly with copper-T, leading to better overall health and satisfaction.

Statement of the problem

A study to assess the effectiveness of multicomponent intervention on contraceptive-related problems among women in a selected community at Coimbatore.

Objectives

- To assess the contraceptive-related problem among women with copper-T in the experimental and control groups before and after intervention.
- To evaluate the effectiveness of the multicomponent intervention on contraceptive-related problems and its management among women with copper-T in the experimental group.
- To associate the contraceptive-related problems with selected demographic variables among women with copper-T before intervention.

Hypothesis

- **H₁:** There will be a significant difference in the mean score of contraceptive-related problems among women with copper-T between the experimental and control groups after the intervention.
- **H₂:** There will be a significant difference in the mean score of contraceptive-related problems among women with copper-T before and after intervention in the experimental group.

Assumption

- Copper-T is used as a contraceptive method, commonly used by women in the age group of 18-40 years to prevent pregnancy
- Contraceptive-related problems among women with copper-T may cause physical challenges such as blood spotting, irregular menstruation, heavy bleeding, cramps
- Contraceptive-related problems among women with copper-T may experience psychological challenges such as mood changes, depression and stress

Delimitation

The present study was delimited to

- Women with contraceptive-related problems within the age range of 20-40 years.
- The research was conducted in only two specific areas

of a selected community.

Methodology

Research approach: Research approach used for this study was a quantitative evaluative approach.

Research design: Quasi-experimental pre-test and post-test design.

Population of the study: The population consisted of women with copper-T (20-40 years) who were experiencing contraceptive related problems.

Sample size: The samples included 60 women with contraceptive related problems (30 in the experimental group and 30 in the control group) who fulfilled the inclusion criteria.

Sampling technique: A non-probability purposive sampling technique was used to select the samples.

Results

The demographic characteristics of the women were categorized into personal characteristics, socioeconomic status, and maternal information.

According to the personal characteristics, in the experimental group, nearly half of the women 14(46.7%) belonged to the age group of & lt; 25 years. More than half of the women 17(56.7%) were Hindus. About one-third 11 (36.7%) were graduates, and nearly half (46.7%) were overweight. In the control group, nearly half of the women 14(46.7%) belonged to the age group of 26-30 years. More than half of the women were Hindus 17 (56.7%), graduates 16(53.3%), and nearly half 13(43.3%) had a normal weight.

The socioeconomic status revealed that the majority of the women in both experimental group 22(73.3%) and control group 22(73.3%) were homemakers, and also, 23(76.7%) in the experimental group and 20(66.7%) in the control group, had monthly income between Rs. 10,000 and Rs 20,000.

According to the maternal information majority of women in both the experimental 19(63.3%) and control groups 20(66.7%) had been married for 3-5 years, 24(80%) in the experimental group and 8(60%) in the control group had their first pregnancy before the age of 25 years, and 23-24(76.6-80%) in both experimental and control groups had one child. More than half of the women in the experimental group 16(53.3%) and control group 12(40%) had a normal vaginal delivery. The majority of women in both experimental group 22(73.3%) and control group 25(83.3%) had no history of abortion. Regarding the duration of copper-T insertion, most of the women in the experimental group 23(76.7%) had it inserted for less than 1 year, while in the control group 18(60%) had it inserted for 1-2 years.

There was a significant difference in the mean scores of contraceptive-related problems between the experimental and control groups after the intervention ($t=56.484$, $df=58$, $P=0.000$). Also, there was a significant difference in the mean score of contraceptive-related problems before and after intervention in the experimental group (t -value = 54.313, $df=29$, P -value = 0.000)

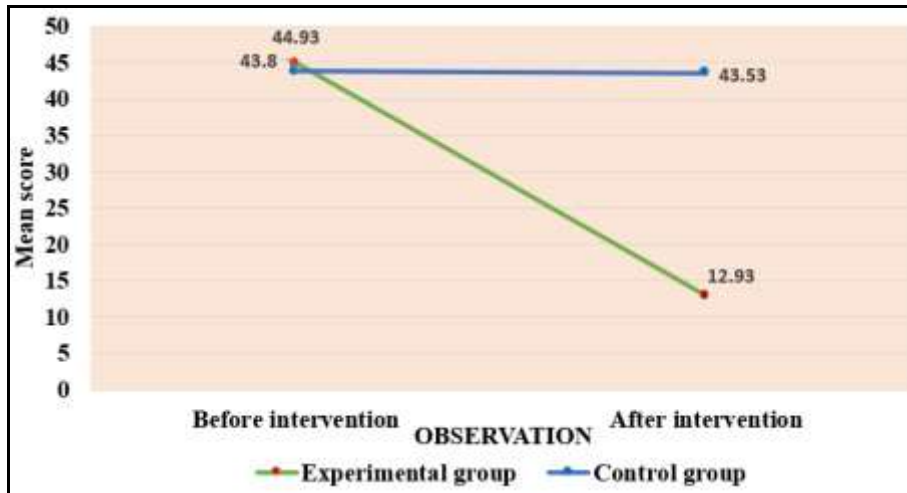
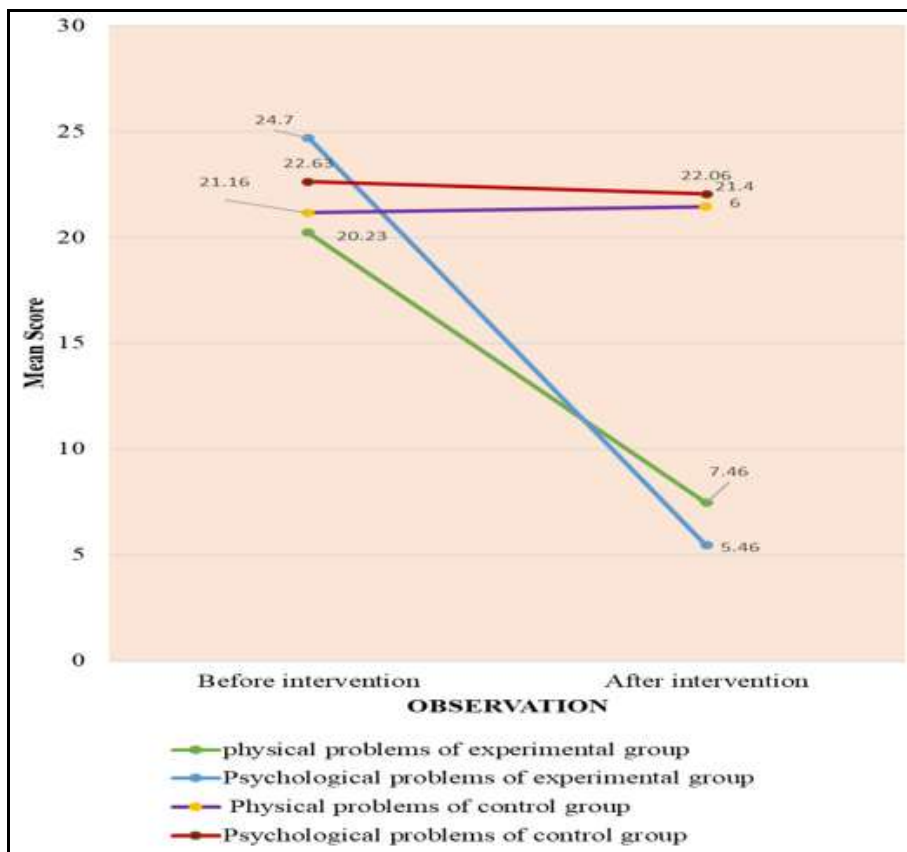


Fig 1: Presents the mean score of contraceptive-related problems before and after intervention in the experimental group and control group.



There was a significant difference in the mean score of physical problems between the experimental and control groups after the intervention ($t=-37.865$, P value=0.000, $df=58$) and psychological problems between the experimental and control groups after the intervention ($t=-63.565$, $P=0.000$, $df=58$)

Discussion

The findings were supported with the study conducted by Km Sonam *et al.* (2024) [1] on the physical and psychological problems experienced by intrauterine contraceptive device (IUCD) users. Their findings revealed that majority preferred IUCD insertion during the interval period (66%) and chose the Cu-T 380 model (64%). Physical problems reported by participants included weakness (53%), lower back pain (34%), excessive vaginal bleeding (64%), and foul vaginal discharge (71%).

Psychological concerns included fear of pregnancy (63%), anxiety (54%), irritability (50%), and decreased sexual interest (62%). They concluded that most women using IUCDs experienced both physical and psychological problems, with physical issues being more prevalent. Supported the findings of dietary modification in the systematic review, which investigated interventions for preventing or treating heavy menstrual bleeding and pain associated with intrauterine device (IUD) use. Their study's findings revealed that vitamin B1 supplementation significantly decreased menstrual bleeding, as evidenced by reduced pad usage, spotting days, and bleeding days, compared to a placebo. Additionally, the review showed that mefenamic acid was more effective in reducing blood volume than tranexamic acid, while sodium diclofenac demonstrated minimal difference in pain alleviation. These results concludes that targeted interventions, such as vitamin

B1 and mefenamic acid, can effectively manage IUD-related menstrual bleeding and discomfort.

Conclusion

The findings from the study revealed that a significant improvement was observed in contraceptive-related problems (Both physical and psychological problems) after implementing the multi-component intervention among women using copper-T in the experimental group. The study concluded that the multicomponent intervention, which included video-assisted teaching, personalized dietary plans, and a physical exercise regimen, was highly effective in reducing contraceptive-related problems (Both physical and psychological problems) among women using Copper-T. This underscored the importance of a holistic, multifaceted approach in addressing contraceptive-related concerns, thereby improving the well-being and quality of life among women using Copper-IUDs.

Limitation

The limitations of this study were

- The study was limited to a small sample size, which will restrict the generalizability of the findings
- Difficulty in screening contraceptive-related problems among women with Copper-T in community areas
- The samples were selected using a purposive sampling technique, affecting the representativeness of the sample
- Data collection relied on self-reported information, as participants may have misreported or withheld certain issues

Implication

The study has significant implications across nursing practice, education, administration, and research. The study emphasizes the essential role of community health nurses in implementing multicomponent interventions to address contraceptive-related issues, particularly for women using Copper-T. By offering personalized care that includes education, support, and guidance, nurses can significantly enhance women's physical and psychological well-being, enabling them to lead healthier and more productive lives. The study emphasizes the need to integrate comprehensive content on non-pharmacological approaches in nursing education, with a focus on multi component interventions, to equip future nurses with the knowledge and skills necessary to holistically address contraceptive-related problems. Nurse administrators should plan, organize, and implement continuing education and in-service training programs to increase community health nurses awareness of non-pharmacological approaches for addressing contraceptive-related issues. Nurse researchers should encourage clinical and community nurses to apply research findings in practice, promoting evidence-based care to improve outcomes for women experiencing contraceptive-related issues.

Recommendations

The findings of the study, propose the following recommendations

- Replicate the study with larger samples.
- A comparative study can be done with other non-pharmacological treatment.
- The study can be done with long duration to see the

effect to alleviate the symptoms.

- The similar study can be done among women with oral contraceptives
- A study can be conducted to assess the barriers to implement the multicomponent interventions for contraceptive management in community setting
- A study can be conducted to assess the influence of dietary and exercise plans on reducing physical side effects among women using hormonal IUD.
- A qualitative study can be done to identify the womens experience with Copper T IUD and its impact of contraceptive use

Conflict of Interest

Not available

Financial Support

Not available

References

1. Sonam KM, Deepak PY. Physical and psychological problems experienced by the intra-uterine contraceptive devices user: a descriptive study. *Obstetrics and Gynaecology Forum*. 2024 May 26;34(3s):1137-1141.
2. Radwan NE. Effect of an educational program on women's knowledge toward the intrauterine device. *Egyptian Journal of Health Care*; c2019.
3. Mahmoud SK, Yousef AM, El-Shenoufy HE, Hasanin ME. Effect of core muscles strengthening exercises on pelvic pain caused by copper intrauterine device. *Egyptian Journal of Physical Therapy*. 2020 Sep 1;3(1):9-15.
4. Ali K, Ali M, Kaushik H, Khan MH. Effectiveness of posterior pelvic tilt exercise on stable and unstable surface in patients with chronic low back pain. *Journal of Musculoskeletal Research*. 2024 Jun 1, 27(2).
5. Jaffery SN, Mubarik F, Zubair F, Laique T. Percentage of Menorrhagia Leading to Iron Deficiency Anemia in Non-Hormonal Intrauterine Device Users. *Age (Years)*. 2018;18(30):87.
6. Costescu D, Chawla R, Hughes R, Teal S, Merz M. Discontinuation rates of intrauterine contraception due to unfavorable bleeding: a systematic review. *BMC Women's Health*. 2022 Mar 21;22(1):82.
7. Safdar Z, Sabir SF, Zaib S, Abid S. Female's experience with post-placental intrauterine contraceptive device use in a tertiary care centre in Pakistan. *Reproductive Health*. 2022 May, 88.
8. Gupta S, Bansal R, Shergill HK, Sharma P, Garg P. Correlates of post-partum intra-uterine copper-T devices (PPIUCD) acceptance and retention: an observational study from North India. *Contraception and Reproductive Medicine*. 2023 Mar 28;8(1):25.
9. Ponusamy S, Sharon M, Singh A. A prospective study of acceptability, safety, and efficacy of postpartum insertion of intrauterine copper device (CU-T380a) in a tertiary care teaching hospital in South India.
10. Stein TB, Summit AK, Louis MS, Gold M. Patient satisfaction with IUD services in a school-based health center: A pilot study. *Journal of Pediatric and Adolescent Gynecology*. 2020 Aug 1;33(4):388-392.
11. Esther NE, Ejikem Mazi EC. Profile of intrauterine contraceptive device (IUCD) acceptors at the Rivers State University Teaching Hospital, Southern Nigeria.

- World Journal of Advanced Research and Reviews. 2019;4(2):096-101.
12. Gupta S, Jakhar R, Manju DC, Crazy Choudhary SR. Interventional study to evaluate and compare the reasons for contraceptive discontinuation and menstrual irregularity among women using IUCD and DMPA.
 13. Sangita M, Dharitri S. Barriers and acceptance of intrauterine contraceptive devices (IUCD) among married women of reproductive age in Odisha, India. *Cureus*. 2023, 15(6).
 14. Wemrell M, Gunnarsson L. Claims in the clinic: A qualitative group interview study on healthcare communication about unestablished side effects of the copper IUD. *PLOS ONE*. 2023 Sep 28;18(9):e0291966.
 15. Svahn S, Niemeyer Hultstrand J, Tydén T, Ekstrand Ragnar M. Contraception use and attitudes: women's concerns regarding hormonal contraception and copper intrauterine devices. *The European Journal of Contraception & Reproductive Health Care*. 2021 Nov 2;26(6):473-478.
 16. Esther NE, Nonyenim ES, Jumbo AI. A retrospective analysis of Copper T380A intrauterine device in Rivers State, Nigeria: side effects and discontinuation rate. *Journal of Advances in Medicine and Medical Research*. 2020 Nov 4;32(20):25-31.
 17. Howard B, Grubb E, Lage MJ, Tang B. Trends in use of and complications from intrauterine contraceptive devices and tubal ligation or occlusion. *Reproductive Health*. 2017 Dec;14:1-7.
 18. Armo M, Minj IB, Triki AR, Shrivastava N, Mishra S. Copper T (380 A) and risk of uterine perforation in lactating women: rural scenario. *International Journal of Reproduction, Contraception, Obstetrics, and Gynecology*. 2017 Jul 1;6(7):3026-3029.
 19. Christelle K, Norhayati MN, Jaafar SH. Interventions to prevent or treat heavy menstrual bleeding or pain associated with intrauterine-device use. *Cochrane Database of Systematic Reviews*. 2022, (8).
 20. Radwan NE, El-Din SA, Mohamed AH, Salem NS. The impact of women-centered counseling on intrauterine contraceptive device satisfaction and continuation. *International Journal of Pharmaceutical Research and Allied Sciences*. 2019;8(2):214-226.
 21. Bentley TG, D'Andrea-Penna G, Rakic M, Arce N, LaFaille M, Berman R, *et al*. Breathing practices for stress and anxiety reduction: conceptual framework of implementation guidelines based on a systematic review of the published literature. *Brain Sciences*. 2023 Nov 21;13(12):1612.
 22. Kazeminia M, Rajati F, Rajati M. The effect of pelvic floor muscle-strengthening exercises on low back pain: a systematic review and meta-analysis on randomized clinical trials. *Neurological Sciences*. 2023 Mar;44(3):859-872.
 23. Bougault V, Schiano-Lomoriello S, Castanier C, Buisson C, Ericsson M, Teulier C, *et al*. Physical activity and combined hormonal contraception: association with female students' perception of menstrual symptoms. *Frontiers in Physiology*. 2023 May 17;14:1185343.
 24. Ciołek A, Kostecka M, Kostecka J, Kawecka P, Popik-Samborska M. An assessment of women's knowledge of the menstrual cycle and the influence of diet and adherence to dietary patterns on the alleviation or

exacerbation of menstrual distress. *Nutrients*. 2023 Dec 25;16(1):69.

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