

Case Study: Evaluation of Menstrual Cycle Changes and Anxiety in Mothers Who Are Family Planning Acceptors Using Injectable Contraceptives

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Abstract: Family planning is a health service that helps individuals and couples control fertility, prevent unplanned pregnancies, and determine the number and spacing of children. According to the World Health Organization (WHO), injectable contraceptives are the most widely used method globally, accounting for 35.3% of contraceptive users. Despite their effectiveness, injectable contraceptives are associated with side effects, including changes in the menstrual cycle, which can lead to anxiety among users. This case study aims to scientifically document nursing care for mothers using injectable contraceptives, focusing on the biological, psychological, social, and spiritual aspects. It emphasizes the importance of comprehensive nursing assessment, diagnosis, planning, intervention, evaluation, and documentation to support maternal and family health. Descriptive case study method was applied to explore changes in the menstrual cycle and anxiety in mothers using injectable contraceptives. Data collection involved interviews, physical examinations, observation, document review, demographic data, and Quality of Life questionnaires. Ethical considerations included informed consent, anonymity, and confidentiality. Data were analyzed systematically to identify key findings. Findings indicated that menstrual disturbances in mothers were linked to the hormonal effects of injectable contraceptives, specifically the impact of progesterone on the hypothalamic-pituitary axis, leading to suppression of ovulation and alteration of menstrual patterns. Nursing interventions contributed to a reduction in anxiety and improvement in menstrual regulation. Proper nursing care, guided by structured assessment and ongoing evaluation, can address anxiety and menstrual issues related to injectable contraceptive use. Continued documentation is essential for ensuring the effectiveness and continuity of care.

Keywords: Injectable contraceptives, menstrual cycle changes, anxiety, family planning

1. Introduction

Family planning plays a crucial role in enhancing maternal and child health, reducing maternal mortality, and supporting economic development by allowing families to control the number and spacing of children. According to the World Health Organization (WHO, 2023), family planning refers to strategies that enable individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. It is achieved through contraceptive methods and the treatment of involuntary infertility.

In Indonesia, family planning is a national priority program aimed at population control and reproductive health improvement. The Indonesian Ministry of Health (2023) reported that injectable contraceptives are the most widely used method among Indonesian women of reproductive age, due to their accessibility, effectiveness, and long-acting properties. This method, which typically uses Depo Medroxyprogesterone Acetate (DMPA), is administered every 1 to 3 months. However, despite its popularity, injectable contraception is frequently associated with side effects, most notably menstrual cycle disturbances, including amenorrhea, spotting, or irregular bleeding (Limpele, Telew, & Mamujaja, 2020; WHO, 2022). These physical changes often have a psychological impact, contributing to increased anxiety and reduced quality of life among users (Andika et al., 2022).

The use of contraception in Islam is also subject to religious interpretations. As noted by Sukri (2021) in *Masailul Fiqhiyah Wal Hadisah*, the permissibility of family planning depends on its intent. If contraception is used for health reasons or to protect maternal well-being, it is considered permissible, and under certain circumstances, even commendable. However, its misuse for permanently avoiding procreation without valid reason may be viewed as *makruh* (discouraged) or *haram* (prohibited).

National demographic data reinforces the prevalence of injectable contraception. Based on Indonesia's 2018 Health Profile, 51.53% of new contraceptive users selected injectable methods, surpassing other options such as pills (23.17%), implants (11.37%), and IUDs (7.23%) (Salsabilla, Nasution, & Avianty, 2018). Local data from West Java Province, including Ciamis District, echo this trend, with injectable methods dominating contraceptive use among women of childbearing age (BKKBN Jawa Barat, 2020).

The frequent occurrence of menstrual irregularities and the resulting psychological discomfort underscore the need for a holistic nursing care approach—one that integrates biological, psychological, social, and spiritual aspects. By employing the nursing process, nurses can assess, diagnose, plan, implement, and evaluate individualized care that addresses not only the physical symptoms but also the emotional and spiritual well-being of the patient. This case study aims to document such care in mothers who experience menstrual cycle changes and anxiety due to injectable contraceptive use.

2. Methods

This study employed a descriptive case study design utilizing a comprehensive nursing care approach. The research process was guided by the five steps of the nursing process: assessment, diagnosis formulation, planning, implementation, and evaluation, followed by thorough documentation. The purpose of this method was to explore nursing problems in mothers experiencing menstrual cycle changes and anxiety related to the use of injectable contraceptives.

Data collection consisted of both primary and secondary data sources. Primary data were obtained through patient interviews, observation of sensory and physical responses, and direct physical examination. Additional instruments included demographic questionnaires and Quality of

Life (QoL) assessments. Secondary data were gathered through documentation review and patient records.

To ensure the validity and trustworthiness of the data, four key criteria were applied: credibility (providing trust), transferability (providing involvement), dependability (creating dependency), and confirmability (providing certainty) (Mekarisce, 2020). Techniques such as prolonged engagement with participants and data triangulation were utilized to enhance the accuracy and depth of findings.

The data analysis process involved systematically collecting, categorizing, evaluating, and synthesizing information into a structured and coherent format. This allowed for meaningful interpretation aligned with the nursing care goals.

In terms of research ethics, informed consent was obtained from all participants. Confidentiality and anonymity were strictly maintained throughout the study to protect participant privacy and ensure ethical integrity.

3. Results and Discussion

Based on a case study conducted on May 18 to June 18, 2024, involving Mrs. E, a 34-year-old woman using 3-month injectable contraceptives, it was found that she experienced irregular menstrual cycles accompanied by significant anxiety. The patient reported never having menstrual issues prior to using injectable contraception. She expressed confusion and concern, which contributed to a decline in her quality of life.

Injectable contraceptives such as Depo Medroxyprogesterone Acetate (DMPA) work primarily by suppressing ovulation through sustained levels of progestin, which inhibit the secretion of luteinizing hormone (LH) via negative feedback to the hypothalamic-pituitary axis (Koerniawan, Daeli, & Srimiyati, 2020). Research by Widyawati et al. (2022) also supports that up to 50% of women using DMPA may experience amenorrhea or irregular bleeding within the first year of use, which can lead to psychological distress including anxiety and depressive symptoms.

A nursing diagnosis was established based on the Indonesian Nursing Diagnosis Standards (SDKI), identifying "Anxiety related to menstrual irregularities as evidenced by patient expressions of fear and uncertainty." The WHOQOL-BREF questionnaire was used to assess the patient's quality of life, showing a decrease in the psychological and environmental domains, likely impacted by the unresolved anxiety (Purwaningsih & Susanti, 2023).

Interventions included psychoeducation about injectable contraceptives, family involvement in care, relaxation techniques, and anxiety management. The nursing care plan emphasized biopsychosocial-spiritual assessment, which is critical in Indonesian cultural settings where family and spiritual well-being play central roles in health (Utami et al., 2021).

Over the 5-day nursing intervention, significant improvements were observed. The patient demonstrated increased understanding of her condition, decreased anxiety levels, and improved quality of life. By the final evaluation, Mrs. E and her husband showed readiness to manage her contraceptive choice and its effects. Documentation of nursing care was completed systematically, covering assessment, diagnosis, planning, implementation, and evaluation stages.

This case supports findings from other studies (e.g., Andika et al., 2022; Santa, 2019) that comprehensive nursing care, especially when involving family and psychoeducation, can effectively reduce anxiety related to hormonal contraceptive use. Therefore, this case study emphasizes the importance of holistic nursing care in managing psychological effects of hormonal contraception.

4. Conclusions

This case study highlights the importance of comprehensive and holistic nursing care that integrates biological, psychological, social, and spiritual assessments in addressing anxiety related to menstrual irregularities caused by injectable contraceptive use. The nursing process applied to Mrs. E, a 34-year-old contraceptive acceptor experiencing menstrual changes and anxiety, revealed that such disturbances can significantly affect a woman's quality of life. The use of the WHOQOL-BREF questionnaire helped identify specific domains impacted by the anxiety, emphasizing the relevance of patient-centered and culturally sensitive approaches in nursing practice.

The formulated nursing diagnosis—*anxiety related to menstrual irregularities*—was addressed through structured interventions based on Indonesian Nursing Intervention Standards (SIKI), including observation, therapeutic communication, psychoeducation, and collaboration with family support systems. The implementation of relaxation techniques and continuous therapeutic engagement proved effective in reducing the patient's anxiety, as evidenced by improved outcomes over five days of care.

Evaluation of nursing actions showed that planned interventions successfully reduced the patient's anxiety and improved her understanding and adaptation to contraceptive side effects. If interventions had not been successful, the nursing plan would have been revised and extended. Documentation was performed in a structured and comprehensive manner, ensuring that each stage of the nursing process was clearly recorded.

Overall, this case underscores the critical role of tailored nursing care and patient education in managing the psychosocial effects of hormonal contraceptive methods, advocating for greater attention to mental health and quality of life among family planning users.

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Limitations: This case study presents several limitations that should be considered when interpreting the results. Firstly, the research is confined to a single patient (Mrs. E), limiting the generalizability of the findings to a broader population. Additionally, the study's duration of 5 days may not fully capture the long-term effects of nursing interventions on anxiety and quality of life. Another limitation is the reliance on self-reported data, which may introduce subjectivity and bias in the assessment of anxiety and quality of life. Furthermore, the research was limited by the availability of resources and tools for physical examination, which may have impacted the depth of the data collected. Future studies with larger sample sizes, longer observation periods, and objective measures of anxiety and quality of life are recommended to enhance the reliability and generalizability of the findings.

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