

Experiences & Perspectives on Injectable Contraceptive on Its Users in Tamil Nadu- A Qualitative Report

Rajalakshmi R¹, Sasi Vaithilingan^{2*}, Rajeswari C³, T S Selvavinayagam⁴, Somasundaram A⁵

^{1,2}Vinayaka Mission's College of Nursing, Puducherry; Vinayaka Mission's Research Foundation (DU), Salem, India

³College of Nursing, NIMHANS, Bangalore, India

^{4,5}Directorate of Public Health and Preventive Medicine, Chennai, India

DOI: 10.55489/njcm.151120244609

ABSTRACT

Background: Injectable contraception, Depot Medroxy-Progesterone Acetate (DMPA), is a popular birth control option due to its safety, effectiveness, and discretion. It offers three months protection with minimal impact on the daily lives, reducing the need for frequent visits to healthcare facilities. Understanding women's experiences with DMPA is crucial for improving the quality of contraceptive services and their reproductive health outcomes. This study aimed to elucidate the experiences and perspectives of women using injectable contraceptive - Depot Medroxy-Progesterone Acetate.

Methodology: The study employed a Phenomenological approach, with in-depth, semi-structured interviews among ten women, aged 21-40 years, who received DMPA at a Family Planning Clinic in Tamil Nadu, India. Participants who had used DMPA for at least three months to one year were selected using convenience sampling. Data were analysed and identified themes through the Colaizzi method.

Results: Thematic analysis revealed eight key themes: reasons for choosing DMPA, decision-making process, concerns and discontinuation, information sources, management strategies, willingness to recommend, reluctance to recommend, and suggestions for improving DMPA utilization.

Conclusions: This study highlights the need for enhancements in injectable contraceptive services, providing insights to inform future family planning policies and strategies.

Keywords: Injectable contraception, Depot Medroxy Progesterone Acetate (DMPA), Perspectives towards DMPA, Contraceptive method, Reproductive age women

ARTICLE INFO

Financial Support: None declared

Conflict of Interest: None declared

Received: 30-08-2024, **Accepted:** 04-10-2024, **Published:** 01-11-2024

***Correspondence:** Dr. Sasi Vaithilingan (Email: sasicoumar@gmail.com)

How to cite this article: Rajalakshmi R, Vaithilingan S, Rajeswari C, Selvavinayagam TS, Somasundaram A. Experiences & Perspectives on Injectable Contraceptive on Its Users in Tamil Nadu- A Qualitative Report. Natl J Community Med 2024;15(11):942-947. DOI: 10.55489/njcm.151120244609

Copy Right: The Authors retain the copyrights of this article, with first publication rights granted to Medsci Publications.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-Share Alike (CC BY-SA) 4.0 License, which allows others to remix, adapt, and build upon the work commercially, as long as appropriate credit is given, and the new creations are licensed under the identical terms.

www.njcmindia.com | pISSN: 0976-3325 | eISSN: 2229-6816 | Published by Medsci Publications

INTRODUCTION

India, the world's first country took a lead in launching the family planning program in 1952, with the prime aim of controlling population growth. It is a voluntary approach to life choices, grounded in individual and couples' informed decisions, knowledge, and attitudes, with a view to improve the welfare and health of families, thereby making substantial contributions to a nation's social progress.¹⁻³

India introduced its first "National Population Policy," in 1976 and revised in 2000, implemented under the Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH+A), in order to promote awareness on family planning methods among all eligible couples. Already the population in India has reached 1.26 billion, an alarming decadal growth rate of 17.64, indicated that the country will exceed China by 2028.⁴ Recently, the National Family Planning Programme in India has undergone significant evolution, shifted its focus from mere population control to preserve the well-being of both mother and child which is a crucial one. It intended to promote the utilization of reversible spacing methods thereby to reduce instances of unwanted, closely spaced, and unintended pregnancies. Pregnancies that carry medical risks are prevented, also it reduces the incidence of unsafe abortions.⁵

The National Family Health Survey-5, (NFHS-5, 2019-2021), reported substantial increase of Contraceptive Prevalence Rate (CPR) from 54% to 67% in all-India level and in almost all Phase-II States/UTs with an exception of Punjab.⁶⁻⁸

Currently, the available options for birth spacing primarily consist of condoms, Intra Uterine Contraceptive Devices (IUCDs), and oral pills, contributing to 5.9%, 1.9%, and 4.2% of the modern Contraceptive Prevalence Rate, respectively.⁹ Globally, an estimated forty-two million women rely on injectable contraceptives for birth control and holds the fourth most commonly used contraceptive method because of its effectiveness, safety, and widespread acceptance.⁹⁻¹⁰

A prominent advantage of DMPA lies in its confidential and discreet nature, ensuring personal privacy. With three-month duration of action and an additional grace period of four weeks, DMPA provides a dependable and reversible contraceptive method. Importantly, it does not interfere with sexual pleasure or intercourse, eliminating the need for a pelvic examination before use. Moreover, DMPA is suitable for women unable to use contraceptives containing oestrogen and safe for breastfeeding women (after six weeks postpartum). However, it can be employed immediately after childbirth (for non-breastfeeding women) and post-abortion.¹¹⁻¹⁴

When adhered to the recommended regimen, the effectiveness of DMPA was estimated at an impressive 99.7%. This exceptional effectiveness surpasses oth-

er contraception methods, with a lower perfect use failure rate of 0.3% compared to 0.5% for female sterilization, 0.8% for IUCDs, and three percentage for Combination birth control¹⁰. A study involving nearly three million DMPA users reported no increase in the risk for various cancers, congenital defects, or infertility.¹⁵⁻¹⁷

Presently, the Government of India introduced DMPA as "ANTARA" and it is offered free of cost in public health facilities across India.¹⁸⁻²⁰ It is necessary to understand the perspectives of DMPA users which help to enhance strategies to move forward.

The study was conducted to explore the experiences and perspectives towards injectable contraception, and their concern for continuation and discontinuation among Depot Medroxy Progesterone Acetate (DMPA) users.

METHODOLOGY

This study was approved from Institutional Ethics Committee (VMCN PDY/IEC 2022/072) and approval was also obtained from the Director of Public Health and Preventive Medicine, Chennai, Tamil Nadu. Prior to the interview, each participant was provided with information about the study, and written informed consent was obtained.

This study was conducted from December 2022 to April 2023 at government hospital in Cuddalore district, Tamil Nadu. A qualitative phenomenological research design was employed to explore the perspectives of DMPA users. A sample of 10 participants were recruited based on findings from a previous study, with addition of 5% to combat attrition rate.²¹ Women who use only DMPA as contraceptive method for minimum of three months to one year were included for the study. DMPA users with medical condition were excluded from the study. Data saturation was achieved after interviewing all 10 participants, and two additional interviews were conducted to reconfirm the saturation. Baseline information was gathered from the family welfare register maintained in Antara clinic.

In-depth face-to-face interviews were scheduled at the convenience of the interviewees and took place in a separate room at the Antara Clinic initially; further interviews were conducted at their home, lasting for 20 - 25 minutes, delved into the past and present experiences of using the injectable contraceptive - DMPA. All interviews were recorded with the extent of the participants. and field notes were taken. Semi-structured, open-ended questions were asked for the participants, to share diverse perspectives and facilitating the collection of comprehensive data. One such question was, "How did you become aware of the injectable contraceptive - DMPA?" Participants then recalled their experience of acquiring information towards DMPA usage, which was followed by probing questions which explored the factors influ-

encing continuation and discontinuation of the DMPA. The interviewer assured the anonymity to the participants and emphasized that their perceptions are focussed rather than "right" or "wrong" response.

Data collection was continued till recurring patterns were identified. The Colaizzi method was employed to code the data, with relevant themes derived through both inductive and deductive approaches. These themes reflected the perceptions of women using DMPA as a birth control method, including their reasons for continuing or discontinuing its use (Women were categorized as "continuers" or "discontinuers" based on whether they returned for a second or third dose of injectable contraception).

Each recorded interviews were being transcribed verbatim after completion. Co-investigators meticulously reviewed each interview narrative line by line, cross-referencing the transcripts. To ensure trustworthiness, Lincoln and Guba's (1985) criteria for dependability, conformability, transferability, and credibility were followed.²² The findings and discussion sections were compiled based on the assessment of these themes. The MAXQDA 10 trial version was used for data analysis, with all authors participating in the review of themes and subthemes.

RESULTS

Among the ten participants, six were continued for DMPA and four discontinued the DMPA. Participant demographics and characteristics are detailed in Table 1.

Table 1: Demographic Characteristics of DMPA users

Variables	Continuation Group (%)	Discontinuation Group (%)
Age		
21 - 25 yrs	2(20)	2(20)
26 - 30 yrs	3(30)	1(10)
31 - 35 yrs	1(10)	1(10)
Residence		
Rural	4(40)	2(20)
Urban	2(20)	2(20)
Educational status of the DMPA users		
Graduates	1(10)	0
High school	4(40)	2(20)
Middle school	1(10)	2(20)
Occupational status of the DMPA users		
Shop & Market Sales Workers	1(10)	0
Agricultural	2(20)	2(20)
Home maker	3(30)	2(20)
Number of children in the family		
1	2(20)	2(20)
2	3(30)	1(10)
3	1(10)	1(10)

The participants' perspectives towards DMPA usage were analysed and derived with eight major themes and outlined below



Figure 1: Representation of Experiences perceived by DMPA users

Theme 1: Reasons for choosing injectable contraceptive

In our study, participants revealed the underlying motivations that led women to choose injectable contraceptives as their preferred method of contraception. By articulating their individual reasons, participants offered valuable insights into the factors that shaped their decision to choose this method. In the in-depth face - to - face interview,

Six participants expressed that,

“there is no need for a daily reminder like, we have for oral pills, it can be taken at 3 months interval so, I had opted this method”.

Four participants expressed that

“this is the first time, I am hearing that an injection can prevent pregnancy so out of curiosity, I tried this method”.

Seven participants expressed that

“this is available in free of cost from government and I can take once in 3 months, nobody knows that I am using contraceptive method for spacing, so I opted for this”.

Theme 2: Decision-making process

Our study findings revealed that all the ten participants recounted their decision-making process, highlighting the ongoing necessity to obtain consent from their husbands and family members. The support from their spouses and families played a crucial role in their choice to use injectable contraceptive - DMPA. One participant particularly emphasized the importance of spousal support and described her decision-making process, stating that

"following the information provided by a nurse about the injectable contraceptive method (Antara), I decided to use this after getting permission of my husband."

Another participant said,

"After my husband and family permission & acceptance, I decided to use this method."

Theme 3: Concerns and discontinuation

Based on the experiences of seven participants, several recommendations were proposed to improve the process of making informed decisions about DMPA usage. For instance, participants mentioned that...

"was using DMPA but now I discontinued it, as I experienced menstrual flow two weeks earlier than the last month, and it remains same in later months. I am bit worried causing concern though a doctor told me that these effects are normal, I'm much more scared about my health and I felt that I am becoming weaker and weaker".

Another participant verbalised that,

"I stopped using it because my husband is going abroad, and if I keep taking it, neighbours and relatives might gossip about me."

"I stopped the injection because my periods became irregular, coming earlier or later in every month, and I had decided to undergo tubectomy".

One of the Postpartum mothers expressed her concern for how she felt while DMPA.

"After adopting this method, the amount of breast milk is not been affected, am feeding my child with sufficient amount of breast milk as I had for my first child. I am comfortable with contraception injection this is my second baby I am breast feeding him, I could not sense any difficulty and emptiness of the breast.

Theme 4: Information Source

In our study, all ten participants consistently identified nurses as the primary information provider regarding injectable contraceptives. For instance, the participants stated that,

"When I went for my sister – in – laws delivery a staff nurse said about this method from that I decided to opt this one".

"I went to OPD for consultation to have spacing between my conception the staff nurse educated about various methods of contraceptive methods and focused on injectable one and its availability"

Theme 5: Management strategies in DMPA usage

During our interview, participants discussed their experiences regarding managing the intervals between injections, responding to reminders, and addressing any side effects that occurred during usage. Seven participants mentioned that,

"for the next dose the staff nurse makes a call and reminds me the date one week before and I mark it in the calendar as a remainder and go on that date to take the injection".

Six participants mentioned that,

"I experienced irregular menstrual period and consulted the doctor she explained that this occurs due to the action of the drug and it is quite normal. So, I had not taken any treatment on my own for this, and after two weeks I got my periods.

Theme 6: Intentions to suggest the method to others

In our study, seven participants consistently showed a readiness to recommend injectable contraceptives to friends and relatives with their positive experiences, such as a sense of normalcy and the lack of significant side effects, motivated their intentions to promote this method. For instance, one participant expressed her strong belief in its effectiveness and suitability,

"I had irregular menstrual bleeding nearly for three months when I consulted the doctor for which she had explained that this occurs because of the action of the drug – considered to be normal. Despite this, I would recommend this method to others because I didn't experience any major side effects."

Theme 7: Reluctance to recommend

Though the majority of participants showed a willingness to endorse injectable contraceptives, there were instances of hesitancy rooted in personal experiences and side effects. Four participants discontinued due to concerns about irregular menstrual periods, with two expressing reservations about recommending the method to others. For example,

"I stopped taking it because I had irregular menstrual periods and am afraid of that. I will not suggest this method to others because of the irregular menstrual periods experienced by me".

Theme 8: Suggestions for improved utilization of DMPA

The majority of participants in the study recommended various strategies to increase public awareness about injectable contraceptive. Suggestions for enhancing DMPA utilization comprised

"public awareness can be given through advertisement by tv and newspaper about contraceptive injection and suggest to motivate more number of women to use this method of contraception".

Three participants suggested

"public awareness through anganwadi and school can be given about this injectable contraceptive method will be my suggestion to make a greater number of women to choose this method".

DISCUSSION

This study primarily explores the first-hand experiences of participants with Injectable contraceptive - DMPA.

This study delves into the lived experiences of women using the injectable contraceptive DMPA, reveal-

ing significant variations in usage patterns across different demographic categories. Age emerged as an important factor, with participants aged 21-25 displaying an equal rate of continuation and discontinuation, while those aged 26-30 showed a higher continuation rate. This suggests that younger users may be more ambivalent about long-term use, while those in the slightly older age bracket might have found it more suitable for their contraceptive needs. Furthermore, rural participants demonstrated higher continuation rates compared to their urban counterparts, indicating that geographic and possibly socioeconomic factors play a role in contraceptive adherence.

Educational attainment and occupation also significantly influenced DMPA usage. Participants who completed 12th grade exhibited the highest continuation rates, underscoring the potential impact of education on contraceptive knowledge and sustained use. Homemakers showed both high continuation and discontinuation rates, suggesting that other contextual factors, such as domestic responsibilities or family dynamics, may affect their contraceptive choices. Additionally, family size appeared to be a decisive factor, with women who had two children more likely to continue using DMPA, possibly due to a greater need for reliable long-term contraception.

These findings are consistent with previous research, such as Ross J's study in Sub-Saharan Africa, which reported high discontinuation rates within the first year of contraceptive use. Similarly, Jenny Liu's research, which found that a substantial proportion of women expressed a desire to continue using DMPA, mirrors the trends observed in our study. These parallels reinforce the broader global challenges of ensuring continued contraceptive use, particularly with methods that may have side effects affecting users' quality of life.²²⁻²⁴

In our study, different motivations emerged for choosing injectable contraceptive as a preferred method of contraception. Sixty percentage of participants highlighted the convenience of not needing a daily reminder, unlike oral pills, and appreciated that the injection could be taken every three months. However, participants were motivated by curiosity, as it was their first time hearing that an injection could prevent pregnancy, leading them to try this method. Although specific motivations were highlighted by the majority, the decision-making process for all participants required the consent and support of their husbands and sometimes other family members. This support was critical in their decision to continue the injectable contraceptive (DMPA), with two participants specifically emphasized that their spousal approval was the primary choice to proceed with the method.

Even then, forty percent of them discontinued the DMPA due to irregular menstrual cycle than the expected, which mainly led to anxiety about their health, despite reassurance and motivation from

healthcare professionals. One stopped to use this method due to fear of gossip and another opted for permanent sterilization due to the irregularity in her menstrual periods. Moreover, nurses were not only the primary source of information about injectable contraceptives, but also act as reminders for their timely injection, and noticed very few with minor side effects.

Supportively, Jenny Liu, identified that a substantial percentage of women, around 60%, reported to have side effects, with irregular bleeding pinpointed as the primary reason for discontinuing DMPA-SC.²⁴ Also, the current study observations were in concordance with Nigerian study.²⁵ In the current study, nearly two-thirds of the users cited irregular menstrual issues as major cause for discontinuation which mirrors the findings of another study from India.²⁶ In a study by Rai L, the irregular menstrual problems and amenorrhea were identified as reasons for discontinuation. Kotecha PV reported amenorrhea, excessive bleeding, irregular periods, and weight gain as reasons for discontinuation.²⁷ However, few of them expressed reluctance to use it due to personal experiences with side effects, particularly irregular menstrual and reluctant to suggest this method of contraception.

Moreover, Jane T. Bertrand, reported that women relied on an appointment card to recall the date for the next injection, with fewer mentioning the use of a calendar, self-notes, or spontaneous recollection. As reported by Burke, all clients in his study expressed their willingness to recommend DMPA self-injection to women who were not part of the study, citing the same reasons they had for preferring DMPA.²⁸⁻³⁰

Current study participants also placed their suggestion to enhance the use of DMPA, which includes creating public awareness through television and newspaper and through community centres', such as Anganwadi and schools, for the women about the benefits and availability of the injectable contraceptive method.

STRENGTH AND LIMITATIONS

This study too has limitations. Employing a qualitative research approach with open-ended questions highlighted some limitations, as participant's social desirability bias influence over the data's content. Despite this challenge, the study holds value by highlighting patterns that might otherwise go unnoticed, given the wide range of responses expressed by study participants. Further, the study recommends for conducting a quantitative analysis.

CONCLUSION

This study indicated the significance of DMPA and the side effects experienced by its users, and call to propose potential enhancements through communi-

ty-based follow-up visits and the provision of high-quality pre-counselling services the staffs. Moreover, by creating public awareness about DMPA, a greater number of women could be supported in the future. While this study's research questions focused on DMPA users' perspectives, future projects could broaden the scope by including husband, family members and faculty members' perspectives towards DMPA usage and its service utilisation.

REFERENCES

1. Family planning in health services. Report of a WHO Expert Committee. World Health Organ Tech Rep Ser. 1971;476:1-65. PMID: 5004039.
2. Family Planning. National Health Mission [Internet]. Available at: <https://nhm.gov.in/index1.php?lang=1&level=2&sublinkid=821&lid=222>.
3. Phukan RS. Family planning in India: Its history, programmes, importance and impact [Internet]. My India. 2015. Available at: <https://www.mapsofindia.com/my-india/society/family-planning-in-india-its-history-programmes-importance-and-impact>. Accessed 2024 Aug 16.
4. National Health Mission Tamil Nadu: Department of Health & Family Welfare Govt. of Tamil Nadu, India. 2022. Available from: <https://nhm.tn.gov.in/en> Accessed on 2024 Aug 16.
5. National Population Policy [Internet]. www.pib.gov.in. Available from: <https://www.pib.gov.in/pressreleasepage.aspx?prid=1601839>. Accessed 2024 Aug 16.
6. Department of Health & Family Welfare Ministry of Health & Family Welfare Government of India. Annual Report 2023-24. New Delhi: Department of Health & Family Welfare Ministry of Health & Family Welfare Government of India; 2024: 72-79.
7. Update on NFHS-5 & Rural Health Statistics. Available from [https://pib.gov.in/Pressreleaseshare.aspx?PRID=1843842#:~:text=Overall%20Contraceptive%20Prevalence%20Rate%20\(CPR,from13%20percent%20to%209%20percent](https://pib.gov.in/Pressreleaseshare.aspx?PRID=1843842#:~:text=Overall%20Contraceptive%20Prevalence%20Rate%20(CPR,from13%20percent%20to%209%20percent). Accessed on 2024 Aug 16.
8. National Family Health Survey (NFHS-5), 2019-21: India: Volume 1. International Institute for Population Sciences (IIPS) and ICF: Mumbai; 2021.
9. Why Method Mix Matters? Evidence on contraceptive method mix in developing countries: South and South-East Asia [Internet]. Available at: <https://www.populationfoundation.in/wp-content/uploads/2020/04/Fileattached-1513326457-Infographic.pdf>. Accessed 2024 Aug 16.
10. Advantages and disadvantages of DMPA injectable contraceptives [Internet]. Tech Featured. 2018. Available at: <https://techfeatured.com/12284/advantages-and-disadvantages-of-dmpa-injectable-contraceptives>. Accessed 2024 Aug 16.
11. DMPA contraceptive injection: Use and coverage [Internet]. KFF. 2020 [cited 2024 Apr 18]. Available at: <https://www.kff.org/womens-health-policy/fact-sheet/dmpa-contraceptive>. Accessed 2024 Aug 16.
12. Contraceptive injection. DMPA: Progestogen hormone [Internet]. Patientinfo. Available at: <https://patientinfo/sexual-health/long-acting-reversible-contraceptives-larc/contraceptive-injection>. Accessed 2024 Aug 16.
13. Park K. Textbook of Preventive and Social Medicine. 27th ed. Jabalpur: Bhanot Publishers; 2023.
14. Implementation research on DMPA-SC self-injection [Internet]. WHO. Available at: <https://www.who.int/publications/m/item/implementation-research-on-dmpa-sc-self-injection>. Accessed 2024 Aug 16.
15. White K, Potter JE, Hopkins K, et al. The association between injectable contraception and invasive cervical cancer risk in women aged 15-44 years. *Cancer Causes Control*. 2020;31(5):471-9. doi:10.1007/s10552-020-01314-2.
16. Edelman AB, Cherala G, Blue SW, et al. Depot medroxyprogesterone acetate contraceptive use and cancer risk in women: A meta-analysis. *Contraception*. 2021;104(4):417-24. doi:10.1016/j.contraception.2021.05.001.
17. Kaunitz AM, Grimes DA. Depot medroxyprogesterone acetate: A highly effective contraceptive option with benefits beyond birth control. *Obstet Gynecol*. 2019;133(2):351-9. doi:10.1097/AOG.0000000000003050.
18. Ministry of Health and Family Welfare Government of India [Internet]. 2015. Available at: <https://dhsprogram.com/pubs/pdf/FR339/FR339.pdf>. Accessed 2024 Aug 16.
19. National Family Health Survey [Internet]. rchiips.org. Available at: <https://rchiips.org/nfhs/nfhs4.shtml>. Accessed 2024 Aug 16.
20. Forero R, Nahidi S, De Costa J, Mohsin M, Fitzgerald G, Gibson N, et al. Application of four-dimension criteria to assess rigour of qualitative research in emergency medicine. *BMC Health Serv Res*. 2018;18(1):1-11. <https://doi.org/10.1186/s12913-018-2915-2>.
21. Burke HM, Packer C, Buluzi M, Healy E, Ngwira B. Client and provider experiences with self-administration of subcutaneous depot medroxyprogesterone acetate (DMPA-SC) in Malawi. *Contraception*. 2018;98(5):405-10.
22. Basu G, Bairagya A, Mondal R, Roy S. Prevalence and reasons behind use of injectable contraceptive among the women of reproductive age group: A cross-sectional survey in rural areas of Nadia District, West Bengal. *J Family Med Prim Care*. 2021;10(7):2566-71. DoI: 10.4103/jfmpc.jfmpc_2465_20.
23. Shah S, Asghar A, Rafiq S. A study on injectable DMPA (Depomedroxy Progesterone Acetate) and effect of its use as a short-term contraception in immediate postpartum women. *Int. J. of Health Sci*. [Internet]. 2023 May 2;7(S1):296-304. Doi: <https://doi.org/10.53730/ijhs.v7nS1.14195>
24. MacLachlan E, Atuyambe LM, Millogo T, Guiella G, Yaro S, Kasasa S, et al. Continuation of subcutaneous or intramuscular injectable contraception when administered by facility-based and community health workers: findings from a prospective cohort study in Burkina Faso and Uganda. *Contraception*. 2018;98(5):423-9. DoI: 10.1016/j.contraception.2018.08.007.
25. Liu J, Shen J, Diamond-Smith N. Predictors of DMPA-SC continuation among urban Nigerian women: The influence of counseling quality and side effects. *Contraception*. 2018;98(5):430-7. DoI: 10.1016/j.contraception.2018.04.015.
26. Osinowo K, Ekholuonetale M, Ojomo O, Hassan A, Ladipo OA. Patterns of triggers, ideation and motivational factors of contraceptive utilization among women and gate-keepers in Nigeria: A scoping study on the resilient and accelerated scale-up of DMPA-SC in Nigeria (RASUDIN). *Contracept Reprod Med*. 2020;5(1):38. DoI: 10.1186/s40834-020-00141-6.
27. Rai L, Prabakar P, Nair S. Injectable depot medroxyprogesterone: A safe and effective contraception for an Indian setting. *Health Popul Perspect Issues*. 2007;30(1):12-23.
28. Kotecha PV, Patel SV, Baxi RK, Kapadia S, Mehta K. Women's and providers' experiences with injectable contraceptives (Depo-Provera): A view from Vadodara, India. *Indian J Clin Pract*. 2020;31(2):152-6.
29. Bertrand JT, Bidashimwa D, Makani PB, Hernandez JH, Akilimali P, Binanga A. An observational study to test the acceptability and feasibility of using medical and nursing students to instruct clients in DMPA-SC self-injection at the community level in Kinshasa. *Contraception*. 2018;98(5):411-7. DoI: 10.1016/j.contraception.2018.08.002.
30. Burke HM, Mueller MP, Perry B, Packer C, Bufumbo L, Mbenque D, et al. Observational study of the acceptability of Sayana® Press among intramuscular DMPA users in Uganda and Senegal. *Contraception*. 2014;89(5):361-7. DoI: 10.1016/j.contraception.2014.01.022.