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RESEARCH ARTICLE

The Relationship Of The Use Of Hormonal Contraceptives On Sexual Function In Family Planning Acceptors At Lubuk Buaya Health Center, Koto Tangah District Padang City

Dani Kartika Sari[1], Ferdinal Ferry[2], Ida Rahmah Burhan[3]

1. Department of Obstetrics and Gynecology, Faculty of Medicine, Andalas University/Dr. M. Djamil Hospital, Padang; 2.Department of Social Obstetrics and Gynecology of Obstetrics and Gynecology, Faculty of Medicine, Andalas University/Dr. M. Djamil Hospital, Padang; 3.Department of Public Health science and gynecology of Obstetrics and Gynecology, Faculty of Medicine, Andalas University/Dr. M. Djamil Hospital, Padang

Correspondence: Dani Kartika Sari; danikartika39@gmail.com ; 081293456922

Abstract

Background*: Decreased sexual desire (libido) in recipients of Depo Medroxyprogesterone Acetate (DMPA) injectable contraceptives, although rare and not experienced by all women, can occur with long-term use due to hormonal changes, resulting in drying of the vagina, which causes pain during intercourse and ultimately decreased sexual desire or arousal.*
Objective*: to determine the relationship between hormonal contraception and sexual function in hormonal birth control acceptors at the Lubuk Buaya Community Health Center, Koto Tangah District, Padang City.*
Method*: The research was observational with a cross-sectional approach on family planning acceptors at Lubuk Buaya Community Health Center, Koto Tangah District, Padang City, from November 2023 to January 2024. A total of 75 respondents who were active hormonal family planning acceptors at Lubuk Buaya Community Health Center, Koto District Tangah Padang City, were sampled.*
Results*: Bivariate analysis of the relationship between hormonal contraceptive use and sexual dysfunction using Chi-square resulted in a p-value>0.05.*
Conclusion*: There is no significant relationship between the use of hormonal contraception and sexual dysfunction in hormonal birth control acceptors at the Lubuk Buaya Community Health Center, Koto Tangah District, Padang City.*

Keywords: *Sexual Function, Sexual Dysfunction, Hormonal Contraception*

INTRODUCTION

Currently, the problem of sexual dysfunction in women is still considered a low-priority health problem because it is considered not threatening survival, even though the impact of these disorders can affect relationships with their partners and the quality of life of a woman and can adversely affect the harmony and survival of households that can lead to divorce.[1] Globally, the reported prevalence of sexual dysfunction in women is 40-45%.[2] The incidence of female sexual dysfunction in Turkey was 48.3%, and in Ghana 72.8%, while in Indonesia, it was 66.2%, resulting in an average prevalence rate of 58.04%, meaning that more than half of the women in the country have the potential to experience sexual dysfunction.[3]

The use of hormonal contraceptives can cause hormonal balance disorders, which will then have side effects that can reduce sexual libido so that it can have an impact on the quality of sexual life of married couples.[4] Decreased sexual desire (libido) in Depo Medroxyprogesterone Acetate (DMPA) injectable birth control acceptors, although rare and not experienced in all women but in long-term use can arise due to hormonal changes, resulting in drying of the vagina, which causes pain during intercourse and ultimately reduces sexual desire or arousal.[5]

The results of previous research conducted by Rumengan (2022) showed that long-term use of injectable family planning > 24 months can result in decreased libido.[6] Research conducted by Isfaizah in Semarang showed that most of the 1-month injectable family planning acceptors (combination) experienced sexual dysfunction at 58%, DMPA family planning acceptors in the form of 3-month injections and implants experienced sexual dysfunction at 62% and 60%.[7] This is in line with research conducted by Ningsih in Madura on 64 respondents, giving the result that there is a relationship between the use of hormonal family planning and sexual phase disorders.[8]

The existence of research on the relationship between sexual dysfunction and contraception causes healthcare providers to evaluate sexual function problems and consider alternative contraceptive options when needed. However, results regarding the relationship between sexual dysfunction and contraception are still inconsistent, and there is a general lack of in-depth research on the subject of sexuality in family planning acceptors, especially in Padang City, thus requiring additional studies. Therefore, researchers are interested in

discussing the effect of hormonal contraceptive use on sexual function in family planning acceptors at Lubuk Buaya Health Center, Koto Tangah District, Padang.

METHODS

This research was conducted at Lubuk Buaya Health Center, Koto Tangah District, Padang City, from November 2023 to January 2024. This observational study uses a cross-sectional approach to family planning acceptors at Puskesmas Lubuk Buaya, Koto Tangah District, Padang City. This study was conducted to find the effect of contraception on sexual function. The population in this study were all family planning acceptors at Lubuk Buaya Health Center, Koto Tangah District, Padang City. The sample for this study consisted of all hormonal birth control acceptors at Lubuk Buaya Health Center, Koto Tangah District, Padang City, who were healthy, had no history of comorbidities, and met the inclusion criteria. The sampling technique in this study was non-probability sampling with the total sample method. The reason for using a total sample is because the population is less than 100, which is 51 samples.

The data collection instrument in this study was a questionnaire. The questionnaire consisted of 3 components: primary data of respondents, history of contraceptive use, and FSFI-6 questionnaire. Respondent's basic data include name, age, education level, history of illness, history of childbirth, education level, and the number of children. Furthermore, the questionnaire contains the contraceptive method used and how long it takes to use it. The FSFI questionnaire is an instrument to assess whether a woman has sexual dysfunction. A total score equal to or lower than the cut-off value indicates the presence of sexual dysfunction in the respondent.

Before data analysis, a normality test was conducted using the Kolmogorov-Smirnov test because there were more than 50 samples. The data analysis used was chi-square. The degree of significance used is 0.05, with a confidence level of 95%. The statistical test results are decided using the p-value. If the p-value ≤ α, then Ho is rejected, or there is a meaningful relationship between the two variables; otherwise, if the p-value> α, then Ho fails to be rejected, or there is no meaningful relationship between the two variables.

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RESULT

Table 1. Characteristics of Research Respondents

Characteristics	Frequency (n)	Percentage (%)
Age		
- <40 years old	66	88,0
- >40 years old	9	12,0
Education		
- High	72	96,0
- Low	3	4,0
Number of Deliveries		
- Primipara	29	38,7
- Multipara	46	61,3
Work		
- Work	29	38,7
- Doesn't work	46	61,3
Length of family planning use		
- 2-5 years	74	98,7
- >5 years	1	1,3
Delivery History		
- Surgery/Sectio Caesaria	11	21,47
- Pervaginal	59	78,7
- Operation/Sectio Caesaria and Vaginal	5	6,7
Total	**75**	**100**

Based on Table 1, it can be seen that the majority of respondents are in the age category that is not at risk for using hormonal contraception, namely 55 people (73.3%). In comparison, respondents who are at risk are 20 people (26.7%). The respondents' education level is divided into 2, a high level of education if the respondent has the last high school education / equivalent or higher. While low education is a respondent whose last education is junior high school / equivalent or lower. From Table 5.1 it can be seen that almost all respondents have a high category of education, namely 72 people (96%), while respondents who have a low category of education are 3 people (4%). The age of marriage is divided into 2, namely age <21 years and >21 years. In this study, 14 people (18.7%) out of 75 people were married at the age of <21 years. While respondents who got married at the age of >21 years were 61 people (81.3%). Based on the number of births, respondents who had given birth only once (primipara) were 29 people (38.7%) out of 75 people, and respondents who gave birth twice or more (multipara) were 46 people (61.4%). A total of 29 people (98.7%) while respondents who did not work were 46 people (61.3%). Respondents who used family

planning 2-5 years were 27 people (89.3%), and respondents who used family planning> 5 years were 1 person (1.3%). Based on previous delivery history, respondents were categorized into 3 groups, namely, Sectio Caesaria (SC), vaginal delivery, and SC and vaginal delivery. As seen from Table 5.1, out of 75 respondents, vaginal delivery is the largest group as many as 59 people (78.7%), followed by the SC group as many as 11 people (14.7%), SC and vaginal groups as many as 5 people (6.7%).

Table 2. Frequency distribution of hormonal contraceptive use

Hormonal Contraception Implant	Frequency (n)	Percentage (%)
Combination pills	13	17,3
mini pill	13	17,3
3-month injection	19	25,3
1-month injection	14	18,7
Implant	16	21,3
Total	**75**	**100**

Based on Table 2, it can be seen that most respondents used 3-month injectable hormonal contraception as many as 19 people (25.3%), respondents who used implant hormonal contraception were 16 people (21.3%), respondents who used 1-month injectable hormonal contraception 14 people (18.7%), while respondents who used hormonal contraception combined pills and mini pills were 13 people (17.3%) each.

Table 3. Overview of Sexual Function of Hormonal Birth Control Acceptors

Sexual Function	Frequency (n)	Percentage (%)
Normal	60	80,0
Sexual Dysfunction	15	20,0
Total	**75**	**100**

Sexual function in hormonal birth control acceptors is assessed using the FSFI questionnaire, said to be normal if the FSFI score is > 26.5 and said to be sexual dysfunction if the FSFI score is ≤ 26.5. Based on the table, it can be seen that the majority of 68 respondents did not experience sexual dysfunction, namely 60 people (80%), while 15 respondents (20%) experienced sexual dysfunction.

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Table 4. Relationship of hormonal contraceptives to sexual function

Hormonal Contraseption	Sexual Function				Total n(%)		P-value
	Normal		Sexual Dysfunction		n	%	
	n	%	n	%			
Mini pills	12	92,3	1	7,7	13	100,0	0,983
Combination pill	10	76,7	3	23,1	13	100,0	
1-month injection	14	73,7	5	26,3	19	100,0	
3-month injection	12	85,7	2	14,3	14	100,0	
Implant	12	75,0	4	25,0	16	100,0	
Total	60	80,0	15	20,0	75	100,0	

Of the 13 mini-pill family planning acceptors, the majority had normal sexual function as many as 10 people (76.9%), while 3 people (23.1%) experienced sexual dysfunction. Of the 19 3-month injectable family planning acceptors, the majority had normal sexual function as many as 14 people (73.7%), while 5 people (26.3%) experienced sexual dysfunction. Of the 14 1-month injectable family planning acceptors, the majority had normal sexual function as many as 12 people (85.7%), while 2 people (14.3%) experienced sexual dysfunction. Of the 16 implantable family planning acceptors, the majority had normal sexual function as many as 12 people (75%), while the other 4 people (25%) experienced sexual dysfunction. Of all types of hormonal contraceptives, 3-month injections had the highest tendency to experience sexual dysfunction (26.3%), followed by implants (25%), mini pills (23.1%), 1-month injections (14.3%) and the lowest was combined pills (7.7%). Based on bivariate analysis using Chi-Square, the results showed that there was no significant relationship between the use of hormonal contraceptives and the incidence of sexual dysfunction in hormonal birth control acceptors in the Lubuk Buaya Health Center Working Area, Koto Tangah District, Padang City (p=0.983). Based on these results it can be concluded that Ha is rejected and H0 is accepted, meaning that there is no relationship between the use of hormonal contraceptives and sexual function in family planning acceptors at Lubuk Buaya Health Center, Koto Tangah District, Padang City.

DISCUSSION

Based on the results obtained, the majority of hormonal contraceptive acceptors have normal sexual function, which is 80%, while 20% of hormonal contraceptive acceptors have sexual dysfunction. In this study, it was found that the 3-month injectable contraceptive method (DMPA) and implantable contraceptives were the contraceptive categories that had the highest dysfunction compared to other hormonal contraceptive methods with a percentage of 26.3% and 25% respectively, while mini-pill contraceptives, 1-month injections, combined pills had sexual dysfunction presentations of 23.1%, 14.3%, and 7.7% respectively, but these results did not have a significant relationship based on statistical results. This study is in line with Isfaizah and Ari Widyaningsih (2019) on 200 respondents of hormonal contraceptive acceptors stating that there is no relationship between the use of hormonal contraceptives with sexual dysfunction in KB acceptors in the Lerep Health Center working area (p = 0.101).[7] Reinforced by research by Ozgoli et al (2015) which states there is no significant difference in sexual dysfunction in DMPA and cyclofem (combination) birth control acceptors while sexual desire and intercourse pain is lower in DMPA birth control acceptors than cyclothem (combination) birth control acceptors.[9] Previous research conducted by Burrows et al. (2012) also showed no incidence of sexual dysfunction in hormonal birth control acceptors.[10]

The results of this study are also in line with recent research conducted by Dewi RA (2022) on 71 respondents of DMPA hormonal birth control acceptors giving the results that there is no relationship between the use of 3-month contraceptives with sexual dysfunction with a p-value of 0.075. Several studies are not in line with this study, including research conducted by Hartatik in 2017 which shows the relationship between the length of use of hormonal contraceptives with the incidence of sexual dysfunction with a p-value <0.05. The research conducted by Hartatik is in line with research conducted by Ningsih (2021) in Madura with the results showing a relationship between the use of hormonal birth control and sexual phase disorders.[8]

A systematic review conducted by Casado Espada, et al. in 2019 stated that women's sexual function is complex and multifactorial (influenced by many factors) such as biological, psychological, and environmental factors. These factors are related to each other. Biological factors include hormonal changes such as the age of menarche, the menopausal process, and

aging, which can affect libido or medical/anatomical problems that affect genital sexual response. Women aged 26-40 have been reported to have slightly lower sexual desire and fewer pain problems compared to women aged 18-25. [11] years of age is the beginning of the process of change towards menopause. This condition is the end of the biological process that marks the end of a woman's fertile period. A woman who enters the age of about 45 years will experience aging of the ovaries so that the need for the hormone estrogen is not met and the hormonal system throughout the body also experiences a decline in producing hormones which will ultimately have an impact on sexual function.[10] The older the age, the 17.52 times will experience sexual health problems.[12]

Psychological factors include mood such as anxiety or depression. Related environmental factors are parity, education level, women's occupation, length of marital relationship, medical history, drug use, and contraceptive use.[13] In primiparous women, a condition where women give birth for the first time so that adaptation to postpartum changes is still low. These changes will increase anxiety, stress, and fatigue in the mother it can reduce sexual function. Vaginal delivery and childbirth increase anxiety and worry in sexual intercourse, this is because the vaginal organ is one of the organs of sexual function which is also the birth canal. Trauma due to stage II and episiotomy causes a decrease in libido, awakening, orgasm, and lubrication, and increases dyspareunia. Research conducted by Aisah (2009) and Dewi (2010) concluded that work activities can affect women's sexual function due to fatigue and increased attention to work. The use of injectable contraceptives for 3 months, or more than 2 years, causes the accumulation of progesterone in the body that suppresses estrogen. The decrease in estrogen will affect the release of testosterone. This hormone plays a role as a libido generator. The risk of decreased libido is 0.275 times in acceptors < 2 years compared to acceptors > 2 years.[14]

Thus, it can be concluded that hormonal contraception is not the only factor that affects a woman's sexual dysfunction. The difference in the incidence of sexual dysfunction in hormonal contraceptive acceptors can be caused by differences in the hormone content of each contraceptive. Combined hormonal contraceptives in the form of pills and 1-month injections contain the hormones estrogen and progesterone, while DMPA, implants, and mini pills only contain the hormone progesterone.[7]

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The use of contraceptives, both combined contraceptives and progesterone, has different effects on each individual. The administration of hormones such as hormonal contraceptives both estrogen and progesterone causes an increase in blood levels of both hormones, this will be detected by the anterior pituitary and will cause negative feedback by decreasing the secretion of the hormones FSH and LH. The presence of progesterone from outside will have a double inhibitory effect on estrogen. In a certain period, the body can compensate by increasing estrogen secretion to remain in a normal state but a long period will cause a loss of body compensation and decreased hormone secretion, especially estrogen, causing decreased sexual function in a person.[7]

CONCLUSION

Based on the results of research on the relationship between the use of hormonal contraceptives and sexual function in family planning acceptors at Lubuk Buaya Health Center, Koto Tangah District, Padang City, it can be concluded that:

1. The characteristics of the majority of respondents were <40 years old, highly educated, multiparous, history of vaginal delivery, and used hormonal contraceptives for 2-5 years.
2. The description of the use of hormonal contraceptives at the Lubuk Buaya Health Center, Koto Tangah District, Padang City varies, but the use of 3-month injectable contraceptives is the most common.
3. The incidence of sexual dysfunction in hormonal birth control acceptors at the Lubuk Buaya Health Center, Koto Tangah District, Padang City is mostly in 3-month injectable birth control acceptors and the least in combined pill birth control acceptors.
4. There is no significant relationship between the use of hormonal contraceptives and sexual function in family planning acceptors at Lubuk Buaya Health Center, Koto Tangah District, Padang City.

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