

*Original Article***A comparative study on satisfaction from hormonal contraceptives: depot medroxyprogesterone acetate (DMPA), Cyclofem and LD***Nahid Fathizadeh**, *Fatemeh Abdi***, *Mitra Savabi******Abstract**

BACKGROUND: Irregular population growth is considered as a serious threat to the international community and is also a major obstacle for nations' social and economic development. Thus, one of the ways to have a healthy community is to control the population and provide safe and effective contraceptive methods. Hormonal contraceptives are the most effective method of birth spacing. The present study aimed to determine and compare satisfaction from hormonal contraceptives including depot medroxyprogesterone acetate (DMPA), Cyclofem and LD in women referred to selected health care centers of Isfahan in 2010.

METHODS: This was a descriptive-comparative study with cross-sectional data collection method from 26 April 2010 to 28 October 2010. Simple non-probability sampling was used to select 150 individuals (divided into three groups of 50) among the females who referred to 8 selected health care centers in Isfahan to receive DMPA, Cyclofem, or LD for the first time, and/or those who had used contraceptives for three months. To assess satisfaction rate and its related factors, the standard ORTHO Birth Control Satisfaction Assessment Tool (BC-SAT) was completed three months after medicine consumption through interviewing. Data was analyzed using descriptive and inferential statistics (Fisher's exact, chi-square, ANOVA, and LSD tests).

RESULTS: There were no significant differences in terms of mean score of satisfaction between the three groups. Cyclofem (192.2) and DMPA (188.1) gained the highest and lowest mean satisfaction scores, respectively. Although the mean satisfaction score in areas of ease of use/appropriateness, interference in menstruation pattern, acceptance and continuation of the method had significant differences in three groups, no statistically significant difference was observed in lifestyle, confidence to the method, side effects, concerns about future pregnancies and total satisfaction.

CONCLUSIONS: Generally, there was no difference in satisfaction from the three studied hormonal contraceptives.

KEY WORDS: Satisfaction, Depo-Provera, Cyclofem, LD.

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One of the biggest problems developing countries are facing is irregular population growth which in fact is a serious threat for the international community and a major obstacle for nations' social and economic development.¹ It is estimated that one-fourth of 910000 pregnancies worldwide are unwanted and 150000 cases end in abortion among whom 500 cases lead to death.² Therefore, one of the ways to achieve a healthy family and society is

population control and providing safe and effective contraceptive methods.¹ Although hormonal contraceptives are the most effective method of birth spacing,³ they have some deficiencies and are sometimes associated with dissatisfaction.⁴⁻⁶

Depo-Provera is a contraceptive widely used by 90 million women in 130 countries due to its high efficiency and ease of use.⁷ However, it causes some changes in menstrual bleeding pattern.⁸ In addition, while oral combina-

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tion pills are used by 100 million women all over the world,⁹ their proper consumption had been reported in about 50-55 percent of the users.¹⁰ Lee and Jezewski conducted a study in 2007 and stated that women's dissatisfaction and fear of forgetting the daily usage leads to the reduction of oral contraceptives consumption.¹¹ Therefore, the best one-month combined hormonal method involves injection which is followed by a regular bleeding pattern¹² and does not require daily consumption or consumption at sexual relationships.¹³

Every individual's satisfaction is one of the factors forming their beliefs and thoughts toward a method and influences their tendency to use contraceptive methods.¹⁴ Using or not using hormonal contraceptives is influenced by many factors such as knowledge, information, needs, expectations, lifestyle, age, religion, understanding of individual and others, anxiety and concerns.¹⁵ Choosing an improper method may lead to dissatisfaction and undesired outcomes such as unwanted pregnancy. Previous studies indicated 300 million couples to be dissatisfied with their own contraceptive method.¹⁶

Aladag et al. assessed satisfaction from barrier and non-barrier methods and introduced satisfaction rate among women, which is influenced by side-effect frequency, as a major factor affecting contraceptive method selection.¹⁷ Moreover, Tuchman et al. found inadequate accessibility as the main cause of Cyclofem discontinuation.¹⁸ In addition, Beekle and McCabe mentioned that fear of side-effects is one of the major causes of dissatisfaction and withdrawal of contraceptive methods.¹⁹

People's satisfaction is one of the objectives of every health care organization,²⁰ and satisfaction from hormonal contraceptives influences the effectiveness of the methods and also the consumption rate. Furthermore, Cyclofem injection has recently been added to family planning system. Therefore, assessing the satisfaction rate from hormonal contraceptives and evaluating different satisfaction factors are necessary in order to implement some measures for eliminating obstacles and enhance the satisfaction level. Thus, to achieve such objectives and according to permanent need of women to hor-

monal contraceptives, the present study aimed to determine satisfaction rate of hormonal contraceptives such as depot medroxyprogesterone acetate (DMPA), Cyclofem and LD.

Methods

This was a descriptive-comparative, cross-sectional study which was conducted from 26 April 2010 to 28 October 2010. Simple non-probability sampling was used to select 150 individuals (divided into three groups of 50) among the females who referred to 8 selected health care centers in Isfahan to receive DMPA, Cyclofem, or LD for the first time, and/or those who had used contraceptives for three months. Women were included if they had regular menstrual cycles with an average length of 21-35 days, did not have contraindications for using hormonal contraceptives, did not use drugs affecting aforementioned hormonal methods, were not diagnosed with any psychiatric diseases, and agreed to enroll in the study and answer the questions. A two-part questionnaire including demographic data (the first part, 5 questions) and questions related to the ORTHO Birth Control Satisfaction Assessment Tool (ORTHO BC-SAT) to assess satisfaction from hormonal contraceptives (the second part, 42 questions) was used to collect data. The second part covered eight domains, namely ease of use/appropriateness, interference in menstruation pattern, lifestyle, acceptance and continuation, confidence to the method, side effects, concern about future pregnancies, and total satisfaction. The participants answered the questions using a 6-choice Likert scale ranging from "completely dissatisfied" (1) to "completely satisfied" (6). The minimum and maximum scale scores were 42 and 252, respectively (42-252). The content was validated through poll survey of expert faculty members and the reliability of the questionnaire was confirmed (Cronbach's alpha > 0.7). After obtaining permission from Isfahan University of Medical Sciences, the researchers referred to selected health care centers of Isfahan to complete the questionnaire. When a woman referred to a center, she was provided with services by the staff that helped her in selecting one of the contraceptive methods. Then, if they fulfilled the inclusion criteria, the indi-

viduals were placed in one of the three groups. Afterward, the first part of the questionnaire was completed by the participants and their next referral date was determined. For three months, the Cyclofem group received monthly injections, members of the DMPA group were injected once every three months, and the LD group consumed the medicine daily. Subsequently, the information related to satisfaction from the used method was collected through interviews performed by the researchers. SPSS version 15 was employed for data analysis using descriptive and inferential statistics (Fisher’s exact, chi-square, ANOVA, and LSD tests).

Results

The study results showed that most of the subjects (57.3%) were 25-34 years old. The majority of the participants were housewives (76.7%) and had a high school diploma (36%). Moreover, 38% of the women had two children and those who had more children preferred to use Cyclofem injections.

In addition, the highest and lowest mean

satisfaction scores were related to Cyclofem (192.2) and DMPA (188.1), respectively. Based on ANOVA test, there was no significant difference between the three groups in terms of total satisfaction score ($p = 0.75$) (Table 1).

Acceptance and continuation of the method (80%) and side effects (69.8%) had the highest and lowest percentage of satisfaction among the participants, respectively. Mean satisfaction score in areas of ease of use/appropriateness, interference in menstruation pattern, acceptance and continuation of method had significant differences in the three groups ($p < 0.001$). In addition, according to LSD test, LD method had a significant difference with the two other methods in ease of use/appropriateness and acceptance and continuation of the method ($p < 0.001$). However, there was no significant difference between Cyclofem and DMPA methods. According to ANOVA test, there were no significant differences in areas of effects on lifestyle ($p = 0.49$), confidence to method ($p = 0.73$), side-effects ($p = 0.47$), concerns about future pregnancy ($p = 0.19$) and total satisfaction ($p = 0.58$) (Table 2).

Table 1. Comparing mean satisfaction total score in the study subjects of the three groups.

Group	Mean	Range	SD	P	F
LD	191.2	95-245	28.7	0.75	0.56
Cyclofem	192.2	116-242	29.8		
DMPA	188.1	125-241	26		
Total	190.5	95-245	28		

Table 2. Comparing mean score of satisfaction factors in the three groups.

	LD		Cyclofem		DMPA		P	F
	Mean	SD	Mean	SD	Mean	SD		
Ease of use	18.3	3.3	20.7	2.4	20.6	2.7	< 0.001	12
Effects on lifestyle	32.4	6.1	31	6.1	31.9	5.5	0.49	0.72
Interference with menstruation	19.3	3	17.5	4.2	14.8	5.2	< 0.001	14.2
Acceptance and continuation	18.3	3	20.5	2.5	20.4	2.5	< 0.001	10.8
Confidence to the method	37.4	6.3	37.7	6.8	36.7	6.1	0.73	0.32
Side effects	43.2	9.4	41.2	10.1	41.3	7.4	0.47	0.76
Concerns about future pregnancy	4.4	1.4	4.9	1.1	4.7	1.2	0.19	1.29
Total satisfaction	18	4.4	18.6	3.8	17.7	4.6	0.58	0.74

Discussion

This study found the highest and lowest mean satisfaction scores related to Cyclofem and DMPA, respectively. In Indonesia, Affandi (2006) showed that women were more satisfied with combined injections than progesterone injections alone.²¹ Moreover, Ruminjo et al. (2005) indicated that although Depo-Provera is highly efficient, long-acting, and easy to use and does not interfere sexual relationships, it can cause some changes in menstrual bleeding patterns such as amenorrhea, spotting and prolonged bleedings and might also delay the return to productivity and therefore limit satisfaction and acceptance particularly among young couples with lower number of child.⁸ On the other hand, given that age of individuals is one of the variables affecting the method they select, and that usually long-term methods are used by older women,²² it is reasonable that most LD, Cyclofem and DMPA users in this study belonged to the 25-34 age group.

The difference between satisfaction score in ease of use/appropriateness was significant. In a similar study by Colwell, there was a significant correlation between ease of use and appropriateness of using time among the three mentioned methods which led to a conclusion that ease of use had an effective role in satisfaction rate in women.²³

Our study was in agreement with previous studies such as the study conducted by Mohammadi Fard (2009) in which mean attitude score toward LD, as one of the satisfaction dimensions, was significantly different from other groups.²⁴

We found that satisfaction of individuals in terms of interference in menstrual pattern was different in the three methods. Simbar et al. (2007) showed a difference between the two groups in terms of number of menstrual bleeding and spotting days in the first and second trimester after using the methods.¹²

Moreover, we observed a significant difference in satisfaction in the domain of acceptance

and continuation. Hosseini et al. (2008) suggested that non-acceptance and non-continuation of oral contraceptive pills (OCPs) were due to disease, bleeding, and spotting. They also indicated diseases as the reason for DMPA discontinuation.²⁵

Our results also indicated that mean satisfaction scores of effects on lifestyle, confidence, side effects, concerns about future pregnancy and total satisfaction had no significant differences in the three groups. Freeman (2004) showed that many of women in demographic groups used non-daily hormonal contraceptives among which Depo-Provera shots had the highest efficiency rate.²⁶ Aktun et al. (2005) reported that the most common side effects in DMPA users were menstrual disorders, weight gain, and headache.²⁷ Wellings et al. (2007) found similar results.²⁸ Aladag et al. found satisfaction as one of the most important factors affecting contraceptive selection and its continuation. They also mentioned that satisfaction from a method is often influenced by frequency of side effects and the outcomes on individuals' health.¹⁷ The results of the present study were in accordance with the abovementioned studies.

Individuals' needs, expectations, using or not using a method and satisfaction are influenced by many factors such as knowledge, lifestyle, age, religion, understanding of the individual and others, and anxiety and concerns. Therefore, the results of this study were given to related authorities to enhance the satisfaction of users and design interventions to increase proper acceptance of the methods. They can also be useful in solving some probable problems related to hormonal contraceptives and lead to promotion of methods with high satisfaction.

The authors declare no conflict of interest in this study.

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