

# Continuation and Discontinuation Reasons of LD Contraceptives among Iranian Women

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## Abstract

**Objectives:** Oral Contraceptive Pills (OCPs) are one of the most important and efficient methods of contraception, although their efficacy depends on correct and continual use. Women who discontinue to use OCPs, almost use a less effective method of contraception or do not replace use of OCPs with another method which results in unwanted pregnancy. Therefore, this study was carried out to determine the Continuation and Discontinuation Reasons of LD Contraceptives among Iranian Women.

**Materials and Methods:** This cohort study was conducted from 2003 to 2006. Samples were 462 women presenting to one of 13 randomly selected health centers at Tabriz, a metropolis in the northwest of Iran. For data analyses inferential statistical tests were used.

**Results:** In this study duration of OCPs usage rate of 1, 6, 12, 18, 24, 36, 48, and 54 months were as 88.96, 58.01, 44.59, 37.59, 30.52, 19.06, 9.99, and 2.78% respectively. The most common reasons for discontinuation were anger (35.5%), nausea (16.2%), and trend to pregnancy (22%). The relations was significant between continuation and variables including: use of OCPs as first method, having a strong information source, satisfaction of method ( $p=0.000$ ), women ( $p=0.0096$ ) & husbands' job ( $p=0.032$ ) and their literacy level ( $p=0.0155$ ).

**Conclusion:** Some demographic factors had influence on the continued use of OCPs. Positive effects of the user's satisfaction and their level of education on continuation, requires more counseling policies of health for women especially during their first months of using OCPs.

**Keywords:** Continuation and Discontinuation of LD, Iranian Women, Oral Contraceptive Pills (OCPs), Reasons, Side Effects

## Introduction

Low dose (LD) Oral contraceptive Pills (OCPs) are one of the most effective methods of contraception (1). However, the success rate of each contraceptive method depends not only on its efficacy but also on its correct and continued use (2,3). In Iran OCP is the most common method of pregnancy prevention and the prevalence of OCPs continuation use is estimated to be 25% (4). Yet, ministry of health believes this range should be increased or at least to be maintained at the current level (5). Thus, health authorities should consider any barriers of using OCPs. Ministry of health reports that almost 35% of users usually discontinue the pill after 12 months of start (6).

Results of the two most recent demographic and health surveys in Armenia, Bangladesh, Colombia, the Dominican Republic, Egypt, Indonesia, Kenya, and Zimbabwe showed that contraceptive discontinuation in the first year of use is common (18 to 63% across countries), and that the majority of these discontinuations are among women who are still in need of contraception: between 12 and 47% of women stop using contraception within one year even though they do not want to become pregnant (7). According to the WHO report (1996), 22% of users of reversible contraception in developing

countries discontinue its use before the first year: 11% because of method failure and 11% because of anxiety and a lack of trust in the efficacy of contraceptive method (8). Perhaps similar to other societies, Iranian women also discontinue using OCPs due to their side effects. The reasons were grouped into the following four categories: 1) reported failure (i.e. the respondent became pregnant while using the method); 2) desire to become pregnant; 3) no further need (i.e. sexual abstinence due to illness or marital dissolution); and 4) method-related reasons. This final category includes reasons that imply some degree of dissatisfaction with the method, such as side-effects, health concerns and medical advice, problems of access and availability, desire to switch to a permanent method, inconvenience of use and cost (9). Common reason for discontinuation of OCPs and injectable contraceptives was changing the method (10).

The study by Shakerinejad *et al.* showed that most women who used contraceptive pills faced several side effects. Women also reported that mood change was the most important side effects that they have experienced during pill use (11). Menstrual disorders, dizziness, nervous and mental disorders, abdominal pain, weight gain, headache and vomiting have been reported as

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other reasons of discontinuation (11,12). Unfortunately, the women discontinuing OCPs almost substitute a less reliable contraceptive method or no method at all (13,14). Fear of side effects and previous negative experiences were common reasons for contraceptive nonuse. Among 794 women potentially at risk of unintended pregnancy, 56.0% said that OCPs were medically safe for them. Reasons given for OCPs being unsafe were related to fears of side effects and prior negative experiences rather than true contraindications (15). Because of high efficacy of current OCPs, different reasons for its continuation and discontinuation in different countries, researcher conducted this study in order to promote the quality of family planning in Tabriz, Iran.

### Material and Methods

This cohort study was conducted on women presenting to 13 randomly selected health centers at Tabriz. The sample were selected by randomization and calculated by following formula:  $n = t^2pq/d^2$  as 36 cases for each center. Variables "p" and "q" were achieved by preliminary assessment. The continuation rate in preliminary assessment was 50%. The data were collected by checklist and a questionnaire. The checklist included the questions about the personal and social characteristics extracted from the women's records. The questionnaire included questions about the reasons of OCPs discontinuation, and completed during an interview process. The interview was performed by a phone call or through a face-to-face contact. The collected data were analyzed by SPSS 12 statistical software. The researcher used ratio estimation to determine the reasons of discontinuation. The researcher used life table to determine duration of OCPs continuation. The Gohan statistical test was used to assess relationship between personal and social characteristics with continued use of OCPs.

### Results

Personal and social characteristics showed that the majority of cases (52.2%) belong to the 20-25 age groups. The average age of the women was  $24.28 \pm 4.65$  years. The average age of husbands was  $28.85 \pm 5.2$  years. The marriage age was usually (49.4%) under 20 years. The average age of marriage was  $20.91 \pm 3.77$  years. The common time of beginning to use OCPs was 1-5 years after marriage (70.3%), with the mean time of  $3.63 \pm 3.37$  years after marriage. In this study duration of OCPs usage rate of 1, 6, 12, 18, 24, 36, 48, and 54 months were as 88.96, 58.01, 44.59, 37.59, 30.52, 19.06, 9.99, and 2.78% respectively (Table 1). The most common reasons for discontinuation were anger (35.5%), nausea (16.2%), and trend to pregnancy (22%). Only a few number (5.4%) used OCPs more than 10 years after marriage. The (34.8%) of them were educated under the national diploma level, and only 9.3% had higher level of educational qualification. The (29.4%) of their husbands were educated under the national diploma level, and 13.6% had higher level of educational qualification. The majority of women (81.8%)

**Table 1.** The duration of OCPs usage among women in this study

Duration of OCP use	Number	Percent
1 month	411	88.96
6 months	268	58.01
12 months	206	44.59
18 months	166	37.59
24 months	119	30.52
36 months	50	19.06
48 months	15	9.99

were housewives and only 7.8% of them were employees. The majority of their husbands (58.2%) were working in private sector of economy. To determine the relationship between personal and social characters and continued use of OCPs, the Gohan statistical test was used. There was no significant relationship between woman's age ( $p=0.4291$ ), the age of husband ( $p=0.8488$ ), her age at marriage ( $p=0.0945$ ), The duration of the marriage before using OCPs ( $p=0.8849$ ), the number of children ( $p=0.7074$ ), the sex of children ( $p=0.7527$ ), history of abortion ( $p=0.3974$ ), literacy level ( $p=0.058$ ), incentive and aims to use OCPs ( $p=0.5026$ ), recommenders of OCPs use ( $p=0.1291$ ), reason for choice of OCPs ( $p=0.2848$ ), and the prior method of contraception ( $p=0.867$ ) with continued use of OCPs. However, the relationship was significant between women's job ( $p=0.0096$ ), her husband's job ( $p=0.032$ ), the literacy level of husbands ( $p=0.0155$ ), satisfaction ( $p=0.000$ ), and women's information source ( $p=0.003$ ) and continued use of OCPs. There was also a significant relationship between the use of OCPs as the first method of contraception and the discontinuation use of OCPs ( $p=0.000$ ). The continuation was more when the OCPs were not the first method of contraception.

As shown in Table 2, the most important reasons of OCP discontinuation were anger (35.5%), nausea (16.2%), and wanted children (22%). Menstrual disorders were responsible for only 6.4% and 3.2% of users for being pregnant in spite of OCPs use as reasons for discontinuation of OCPs.

### Discussion

The study by Westhoff which comprised 1716 women aged <25 years showed that nearly 60% of subjects discontinued the OCPs by 6 months (16). Khan's study in Bangladesh showed a 6-month continuation rate of approximately 57% (12). Their results were compatible with ours. Sanders study in the USA found that 67% of oral contraceptive pills users continued using pills 6 months after the start (17) and in Grady study in United States, the continued use of OCPs after one year was about 74% (18). The nine-month continuation rate for young Australian women was high (19). Their results were higher than ours were. The differences may be due to different reasons of discontinuation in those studies. The researcher could not find any new study to define the duration of OCPs continuation for 2, 3 and 4 years. The Zibner's study in an urban clinic of a large Midwestern city of United States showed that, the rate of continued use of OCPs after one, two and three years were 12, 2,

**Table 2.** Identifies reasons of discontinuation of OCPs

Reason	Number (%)	Reason	Number (%)
Anger	134 (35.5)	Weight gain	49 (13)
Depression	25 (6.6)	Low quality of OCPs providers services	1 (0.3)
Fear and anxiety about complications	47 (12.5)	Inadequate education about OCPs use	1 (0.3)
Headache	46 (12.2)	Wanted children	83 (22)
Nausea	61 (16.2)	lack of trust to OCPs efficacy	3 (0.8)
Vertigo	30 (8)	Mental exhaustion	10 (2.7)
Sense of asphyxia	5 (1.3)	Palpitation	25 (6.9)
Breast tenderness	4 (1.1)	Hypertension	8 (2.2)
Increased vaginal discharge	3 (0.8)	Gastritis	12 (3.31)
Acne	43 (11.4)	Weight loss	10 (2.7)
Documented occurrence of DM, CAD, Varicose	1 (0.3)	Menstrual disorders	24(6.4)

and 0-1, respectively (20). Our results were higher than Zingers' study. The differences may be due to time of studies. Waugh indicates that roughly 4-10% of the female population who choose to use OCPs will experience negative mood side effects (21). It is shown that negative mood side effects, specifically depression, irritability and increased levels of anxiety are most commonly cited reasons for women discontinue using OCPs. A study from UK showed that the incidence of depression and mood changes among the pill users was about 30% (22). These results are compatible with ours. Results from Iran suggest that barriers to use of OCP include health concerns, fear of side effects, misinformation lack of confidence and sexual dissatisfaction that are similar to our results (23). In a large trial of continuous oral contraceptives, 396 patients (18.5%) withdrew due to bothersome uterine bleeding, making this the most common reason to withdraw from the study (24). In this study menstrual disorders were responsible for only 6.4% of OCP discontinuation. The differences may be due to different methodology of studies. In Zibner's study reason of discontinuation use of OCPs was related to women's age (20). Colli's study in New Zealand among 20-39 years old women showed the following reasons of discontinuation: Patient's desire to conceive (13.1%), vasectomy (3.6%), TL (2.1%), menstrual disorders (4.7%), weight gain (2.5%), headache (3.8%) and pregnancy (2.5%). Patient's desire to conceive, vasectomy, menstrual disorders and headache were the most common reasons. These results are compatible with ours (13). Khan's another study in Bangladesh showed that 47% of the women who discontinued within 6 months reported the experience of side-effects as the main reason for OCPs discontinuation. Of all cases, 24% wanted more children and 2.5% became pregnant during OCPs use. These results are compatible with ours. The present study showed that there was no significant relationship between women's age, the age of husband, age at marriage and continued use of OCPs. The relationship was not significant between the numbers of children, the literacy level of women, and the duration of marriage with the continuation of OCPs. Also, this study indicated that the continuation rate is increased with the number of children. The present study showed a significant relationship between the husband & women's job, and husband literacy level with OCPs continuation. Khan found significant relationship between husband's job

and continuation rate. Khan's study also showed significant relationship between the use of OCPs as the first method of contraception and the discontinued use of OCPs. Other demographic factors affecting continuation in their study were women's age and the number of living children. However, women's age and the number of children were not significant factors in our study. Almost little side-effects occurring at the early months of using OCPs could cause women's disappointment leading to discontinuation of OCPs (25). The side-effects at Khan's study were dizziness (57.4%), weakness (28.6%), nausea (23.4%), abdominal pain (2.4%), and irregular menstruation (1.7%). Of all cases, 21.3% wanted children, 52.8% discontinued due to side-effects, and 2.7% became pregnant (12). There was a significant relationship between the use of OCPs as the first method of contraception and discontinuation of OCPs use in some cases when OCPs was not the first method, there was greater continuation rate. This was probably due to the women's disappointment from previously used contraceptive methods. Also those who desire to use OCPs as the first method of contraception were probably hopeful due to its higher efficacy compared with other methods. Another study conducted by Alihonou study in Benin showed that discontinuation rate was high among young women choosing OCPs as the first contraceptive method. Age was associated with the probability of abounding oral contraception. One explanation might be the irregularity of sexual intercourse among young unmarried women. There was no significant difference in discontinuation of contraceptive method according to the level of education (26). In this study the relationship was significant between women's information source ( $p=0.003$ ) and continued use of OCPs. This item was not studied by others.

### Conclusion

These results emphasis on family planning educators to apply counseling policies, especially during the first months of OCPs use. The women should be informed about negligible side-effects and how to manage to reduce these side-effects before beginning to use the OCPs. Lack of adequate information about advantages and disadvantages of OCPs is an important factor for discontinuations. So, detailed education by health care providers could increase the continuation rate and decrease their side-effects as well as the efficacy of the contraceptive methods.

### Ethical issues

The ethics committee of Tabriz University of Medical Sciences approved the study. All participants gave informed oral consent.

### Conflict of interests

Authors declare that there are no any conflict of interests.

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