

# Further report on the higher frequency of withdrawal as contraception among Iranian women: demand for more powerful education programs in health care systems

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## Research

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## Abstract

**Background:** Family planning has critical role in improvement of various aspects of community health. Owing to the limited and incomplete previously performed studies, the present work was conducted to determine the frequency of contraception methods and most important factors in selection of them among women of Tehran province.

**Methods:** The present assay was designed as analytical and observational cross-sectional study. A questionnaire including 24 questions was filled for 395 women (18-40 years old) referred to multiple private clinics in three selected strict of Tehran. Questions were designed in order to address the type of contraception method besides multiple social, economic and cultural factors which may affect the selection and demographic characteristics of enrolled samples.

**Results:** The frequency of the type of contraceptive methods was significantly different among women in different age categories ( $p\text{-value}=0.01$ ). Overall rate of using contraceptive methods was 75.2% while remaining of the participants believed in no need for contraception. The most prevalent contraceptive methods were traditional methods (55.9%), modern methods (29.1%), combination of methods (8.1%) and surgery methods (6.8%), respectively. Status of housing was the only factor among economic issues which was meaningfully associated with the selection of the method.

**Conclusion:** High prevalence of natural contraceptive methods even among highly educated women is relying on the demand for more education regarding the selection of best methods based on the background information, obstetrics history, age and economic status of women. Results of the present study can be implicated in further health programs to improve family planning.

## Introduction

Family planning is considered as an effective strategy in improving community health through decreasing maternal and children mortality and morbidity (1). It is included in United Nations children's fund and fundamental health interventions required to be performed for women's health. In developing countries with increasing rate of live birth and deliveries as well as abortion of unwanted pregnancies, selection of the most appropriate contraception tools can dramatically affect the community health score (2). In recent years by increasing the tendency of families to have lower number of children and illegal sexual relationship especially among young women, demand for contraception control is feeling more than ever.

Despite global education and free informative programs, there are many different socioeconomic and cultural factors which can interfere in the selection of the appropriate choice of contraception. Although, Iran was one of the most successful countries in family planning especially among Muslim communities, having no contraception or traditional methods as well as withdrawal is still one of the most acceptable method of choice among married and in relationship women (3). Improper selection of the most safe contraception tools has resulted to high frequency of criminal and illegal abortion and its health side

effects as well as infertility (4). In addition, recent economic sanctions and high price of modern tools and methods of contraception besides the government policy regarding increasing the fertility and population may have critical changes in the frequency of various tools and methods of contraception. Finding and evaluation of the most important factors influencing the choice of contraception can have detrimental effects on the family planning improvement and preventing of unintended pregnancies.

There are many reported factors which have been shown to be meaningfully associated with the choice of contraceptive tools including fertility history, income, education and job, age and some of other demographic characteristics of women and their husbands (5). The present study was conducted to determine the most important socioeconomic and cultural factors which may be the reason behind choosing methods of contraception. To the best of our knowledge, it is the primary multicenter study which was designed to determine the frequency and the reasons of choosing the contraceptive tools among married and in relationship women resident in Tehran.

## **Materials And Methods**

The present study was designed to be performed in three selected area of Tehran city. Four hundreds married women aged 18–40 years old whom were randomly recruited to multiple gynecologic clinics and offices during the period January to July 2019. All the enrolled women have filled the consent form according to 1964 Helsinki declaration and its later amendments or comparable ethical standards. Of note, considering the total number of women who are resident in selected three areas and are using contraception, studying > 290 samples is enough to reach confidence level of 90% and generalize the results to remaining of the population. Women whom were included in the study were in reproductive age and had at least one male partner. Data was gathered using a semi-structured and pretested questionnaire via interviewer-administered method and the questionnaire was included 24 questions (22 closed and 2 open questions). The questions were designed in order to address the type of contraception method in the last three months besides multiple socioeconomic, attitude of women and their husbands and cultural factors which may affect the selection and demographic characteristics of enrolled samples and number of unwanted pregnancies according to the EQUATOR site (<http://www.equator-network.org>). The questionnaires in which > 2 questions were unanswered have been excluded from the study. Reliability and validity of questionnaire were determined using Cronbach's Alpha test ( $\alpha = 0.86$ ) in SPSS software version 22.0 (SPSS Inc., IL, USA).

## **Results**

Five surveys were excluded from further analysis due to more than two questions have been unanswered and therefore the assay was performed on the remaining 395 questionnaires. The mean of age of participants was  $30.75 \pm 8.00$  years old and there was no significant correlation between age and type of contraception. More than 97% of the participants were familiar with various types of contraception and there was no meaningful correlation between this familiarity and selection the type of contraception, as well. Forty three (10.8%) participants were using of more than one contraception meanwhile. In spite no

meaningful correlation, academic sources (28.1%) and using of multiple methods (26.9%) were the most frequent ways of introducing women with contraceptive methods. Among economic factors, there was significant association between the location of house and the type of contraception as in low economic levels strict the resident women had more trend toward having no contraceptive tools (p-value: 0.04). Moreover, the size of house and family income were in significant association with the type of contraception except of withdrawal method, as well (p-value = < 0.0001 and p-value = 0.007, respectively). Withdrawal was the most frequent type of contraception followed by condom (and spermicide) and calendar rhythm method (Fig. 1). Withdrawal method demonstrated similar distribution among women with different socioeconomic status and age ranges. Moreover, it was found that using of withdrawal method has been insignificantly increased in women older than 37 years old (p-value = 0.06). Among women with higher number of offspring, intermittent methods as well as condom and spermicide were the most frequent type of contraceptive selection. Ninety one women (23.03%) had history of abortion (including criminal abortion) which was not in meaningful association with type of used contraception as well as history of unwanted pregnancy (p-value = 0.23).

Among studied women, 220 persons had a specific job and the rest of them were housekeeper and, there was no meaningful association between the job and type of contraception (p-value = 0.45) as well as education (p-value = 0.08). In assessment of the most important factor determining the type of contraception, user-friendly and availability of the method was the most frequent cause of selection (33.2%). Attitudes of women and their husbands have been shown to be significantly associated with the type of used contraception (p-value < 0.0001) (Fig. 2). LDSt test demonstrated that the number of offspring had significant effect on the selection of contraceptive methods (p-value < 0.0001) (Fig. 3).

## Discussion

Herein, it was found that the withdrawal method is the most frequent way of contraception among the studied population regardless of socioeconomic status, age and education level. It is in line with this evidence that except of a few studies (6), withdrawal has been introduced as the most frequent traditional contraceptive method worldwide including Iranian population. Owing to the high rate of user error, it is considered as ineffective method associated with high rate of unwanted pregnancy (up to 27% in the first year) (7) (8). It was previously reported that easy to use, low expense and no need to medical care and advice are the most important factors behind selection of withdrawal as method of contraception (9). Given that last review on the role of education in selection of right contraception demonstrated positive effect, providing educational program by health care centers may decrease the frequency of traditional methods as well as withdrawal.

Economic factor including measurement of house, number of children and attitudes of women and their husbands were meaningfully associated with the choice of contraception. Frost JJ et al in the study on American population demonstrated that contraceptive choice was associated with socioeconomic factors which is in line with our finding regarding economic factors (10). Regarding number of offspring, Palamuleni ME et al. ,Kahraman K et al and Hossain MB et al have shown the same results as the present

study among married women living in Malawi (South Africa), Turkey and Bangladesh, respectively (11–13). Women with higher number of children hopefully tend to have long lasting and more powerful method of contraception. Osmani Ak et al. have found that the contraception choice not only was associated with economic factor among Afghani women but also affected by the age range in order that the use of contraception was increased in higher ages (14). However, in the present study, it was shown that in spite of no meaningful association with age, using of contraception methods was lower among women less than 20 years old and higher than 40 years old. It is relying on the importance of education among lower aged women as the rate of induced criminal abortion has been reported to be higher in younger women considering their fertility potential (15).

Although it was not significantly associated with unwanted pregnancies and frequency of abortion, attitude of women and their husband beside economic status had shown meaningful effects on the type of contraception methods selected by women in the present study. It was notable that the attitude of husbands toward contraception methods especially among condom/spermicide and withdrawal users was meaningfully more than women. To the best of our knowledge, this is the first study which have investigated the role of both women and their husbands' attitudes on contraception. Rahnama et al. have investigated the correlation between the attitudes of Iranian women who have selected the withdrawal on the contraception methods. They have shown that cheapness, easy to access and fewer drawbacks are the main reasons behind selecting of this method as contraception which is in line with our finding that being user-friendly and accessibility are the main factors affected the choice of contraception (9). Bani et al. have demonstrated that the attitude and awareness of Iranian men toward contraceptive methods had significant effect on the final choice which is consistent with our finding (16). However, Ehsanpour et al have shown that most of the their studied Iranian population had semi-desirable attitude toward withdrawal method which is in contradictory of our results (8). It is insisting on this fact that besides women, the Iranian men had critical need to be educated regarding the effectiveness of different contraception. Further studies, therefore, required to determine the attitudes of husbands toward contraception use following comprehensive education programs.

## Conclusions

Taken together, to the best of our knowledge, this is the primary Iranian focus on finding the correlation between socioeconomic, demographic and attitudes of women and their husbands on the contraceptive use. Owing to the importance of economic factors as the most important determinant of contraceptive use among studied selected regions of Tehran, following confirmation of results in much larger sample size, the government support should be sized to remove economic obstacles against selecting the most effective method as much as possible.

## Declarations

- **Ethics approval and consent to participate:** All the enrolled women have filled the consent form according to 1964 Helsinki declaration and its later amendments or comparable ethical standards

and approval of ethical committee of Islamic Azad University, Science and Research Branch.

- **Consent for publication:** Not applicable
- **Availability of data and materials:** All data generated or analyzed during this study are included in this published article [and its supplementary information files].
- **Competing interests:** The authors declare that they have no competing interests
- **Funding:** Not applicable
- **Authors' contributions:** FK was the supervisor of the project and defined the title of project and analyzed the obtained data. She also wrote and finally revised the manuscript. FG has performed the data collection and filled the questionnaires. AG was the advisor of the project and qualified the questionnaires.
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## Figures



**Figure 1**



**Figure 2**



**Figure 3**