

# Investigating the Frequency of Contraceptive Methods and Multiple Different Factors Influencing the Choice among Women in Tehran, Iran

Fatemeh Karami (PhD)<sup>1\*</sup>, Fatemeh Gholami (MSc)<sup>2</sup>, Asemeh Ghasemi (PhD)<sup>3</sup>

<sup>1</sup> Assistant Professor, Department of Medical Genetics, Applied Biophotonics Research Center, Science and Research Branch, Islamic Azad University, Tehran, Iran

<sup>2</sup> Graduated, Department of Women's Studies, Science and Research Branch, Islamic Azad University, Tehran, Iran

<sup>3</sup> Assistant Professor, Department of Women's Studies, Science and Research Branch, Islamic Azad University, Tehran, Iran

ARTICLE INFO	ABSTRACT
<p><i>Article type:</i> Original article</p>	<p><b>Background &amp; aim:</b> Family planning has pivotal role in the improvement of various aspects of community health. Owing to the incomplete previously performed studies, the present work was aimed to determine the frequency of contraception methods and the key selection factors among the women residing in Tehran.</p>
<p><i>Article History:</i> Received: 19-Mar-2021 Accepted: 31-Aug-2021</p>	<p><b>Methods:</b> An analytical and observational cross-sectional study was performed on 395 women (18-40 years old) whom were referred to multiple private clinics in three strict of Tehran determined through clustering sampling, during January to July 2019. A questionnaire including 24 questions was filled for all the participants. The questions were designed to determine the type of contraception and multiple influencing factors of selection including demographic characteristics, attitude of women and their husbands, social, economic and cultural factors. Obtained data were analyzed using SPSS software (version 22).</p>
<p><i>Key words:</i> Contraception Family planning Reproductive Ages Tehran</p>	<p><b>Results:</b> Frequency of the different contraceptive methods was meaningfully different among women with various age categories (<math>p=0.01</math>). The overall rate of using contraception was 75.2% and traditional methods were the most prevalent contraception (55.9%). Housing location was meaningfully associated with no contraception (<math>P=0.04</math>), and except for withdrawal, house size (<math>P&lt;0.0001</math>) and family income (<math>P=0.007</math>) were significantly associated with the type of contraception. Moreover, it was shown that the attitude of women and their husbands plus to the number of children significantly affected the contraception choice (<math>P&lt;0.0001</math>).</p> <p><b>Conclusion:</b> High prevalence of withdrawal method even among highly educated women is relying on the demand for education programs, especially among couples who are seeking the least successful contraceptive methods.</p>

► Please cite this paper as:

Karami F, Gholami F, Ghasemi A. Investigating the Frequency of Contraceptive Methods and Multiple Different Factors Influencing the Choice among Women in Tehran, Iran. Journal of Midwifery and Reproductive Health. 2021; 9(4): 3017-3022. DOI: 10.22038/jmrh.2021.56487.1686

## Introduction

One of the major strategies to decrease the overall maternal and neonatal mortality and morbidity and thereby improving the general community health is family planning. In developing countries with increasing rates of live birth and deliveries as well as illegal abortion, selection of the successful contraception tools is necessary. There is an urgent demand for

contraception owing to the recent trend in most families to have only one child and premarital sexual relationships, especially among young women.

In spite of extensive education and free informative programs, there are still many various socioeconomic and cultural factors that can restrain choosing the most efficient

\* Corresponding author: Fatemeh Karami, Assistant Professor, Department of Medical Genetics, Applied Biophotonics Research Center, Science and Research Branch, Islamic Azad University, Tehran, Iran. Tel: 989122973882; Email: fatemeh.karami@srbiau.ac.ir

contraception. Iran has been introduced as one of the most successful countries in family planning at least among Muslim populations, withdrawal with the least efficiency has been determined as the most prevalent contraception. Unsuitable selection of contraceptive methods has resulted in a high frequency of illegal abortion and its consequent complications as well as infertility. Moreover, owing to the recent economic sanctions and government policy regarding increasing fertility and population, modern contraception methods are expensive and sometimes inaccessible. Determination of the most important factors influencing the choice of contraception, therefore, can have crucial effects on the augmentation of family planning and decreasing the rate of unintended pregnancy.

Owing to the importance of fertility history, income, education and job, age, and some of the other demographic characteristics of women and their husbands on contraception choice, the present study was conducted to determine those factors among Tehranian women in a preliminary multicentric cross-sectional study.

## Materials and Methods

Three strict of Tehran was selected through clustering sampling with different socioeconomic and cultural backgrounds including the strict of 1, 8, and 16. Based on the Cochran formula and considering the error rate of 5%, 400 married women aged 18-40 years old were included in the current cross-sectional study. They were randomly recruited to the multiple private gynecologic clinics and offices, during the interval January to July 2019. All the participated women have filled the consent form according to the protocol of the Ethical Review Board of Tehran University of Medical Sciences (ir.tums.rec.1394.553). Data was collected using a researcher-made and pretested questionnaire via the 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, attitudes of women and their husbands, cultural factors, demographic characteristics of enrolled samples, and the number of unwanted pregnancies which may affect the selection, according to the EQUATOR site (<http://www.equator-network>

.org). The questionnaires in which > 2 questions were unanswered have been excluded from the study. In addition, the pregnant, divorcees, and widowed individuals in addition to the women with no contraception were excluded from the study. Reliability of the questionnaire was determined using Cronbach's Alpha test and the reliability coefficient of 0.7 was considered as an acceptable value. The validity of the questionnaire was determined through content validity and giving feedback from a panel of academic experts in the relevant field research and it was then redrafted based on the obtained comments.

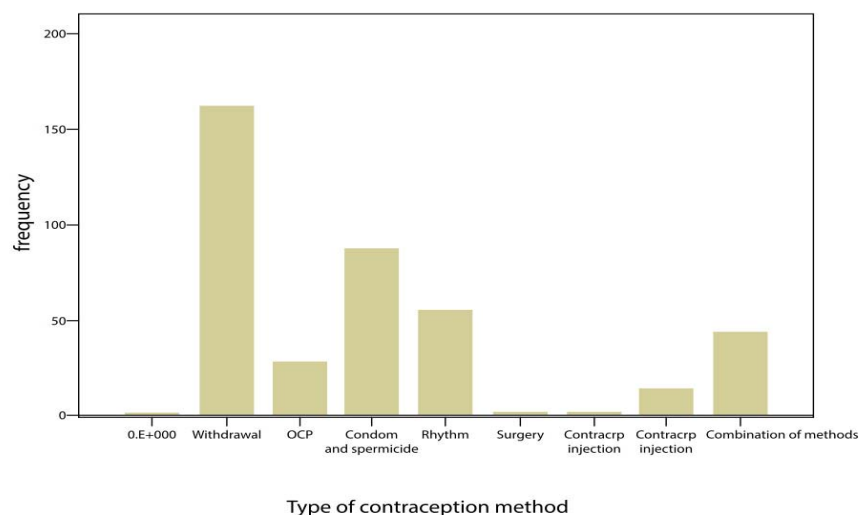
Descriptive analysis was performed to determine the frequency and percentage of the contraceptive methods. Chi-square and logistic regression tests were used to assess the association between any contraceptive methods and different socioeconomic, demographic, and cultural factors. The association was considered significant when the p-value was less than 0.05. All the statistical analysis was carried out in SPSS software version 22.0 (SPSS Inc., IL, USA).

## Results

Statistical analysis was performed on 395 questionnaires due to excluding five incomplete five questionnaires. The mean age of participants was  $30.75 \pm 8.00$  years old and there was no meaningful correlation between the age and contraceptive tools. More than 97% of the participants were familiar with various types of contraception and there was no significant association between the familiarity and contraception selection, as well. Fortythree (10.8%) participants were simultaneously using multiple contraceptions. Academic sources (28.1%) and a combination of multiple methods (26.9%), were the most frequent ways of introducing women to different contraceptive methods. Among economic factors, there was a significant association between the location of the house and the type of contraception as the women residing in the low economic levels strict were tending to have no contraceptive tools ( $P=0.04$ ). Moreover, the size of the house and family income were significantly associated with the type of contraception excluding withdrawal, as well ( $P= <0.0001$  and  $P=0.007$ , respectively). The withdrawal was the most frequent type of contraception followed by condom (and

spermicide) and calendar rhythm method (Figure 1), and it had similar distribution among women with different socioeconomic status and age ranges. Moreover, it was found that using of

the withdrawal method has been insignificantly increased in women older than 37 years old (P=0.06).



**Figure 1.** Frequency of the different contraception among studied women

Among women with more children, intermittent methods, as well as the condom and spermicide, were the most frequent type of contraception. Ninety-one women (23.03%) had a history of abortion (including illicit abortion)

which was not in meaningful association with the type of contraception (P=0.23) as well as the history of unwanted pregnancy (P= 0.58) and educational level of women (P=0.08).

**Table 1.** Association of different socioeconomic, demographic and cultural factors on the choice of contraception

Independent factors	OR	95% CI	p-value
Location of house	1.93	1.23-3.03	0.004
Family income*	2.85	5.35-1.51	0.007
Size of house*	3.12	3.87-2.51	>0.0001
Women's job	1.12	1.51-0.83	0.45
Women' education	1.51	0.97-2.34	0.08
Women's age	1.03	1.40-0.75	0.85
Number of children	5.35	2.36-12.14	>0.0001
Average of marriage age	0.53	0.17-1.66	0.28
History of Abortion	0.40	0.08-1.82	0.23
History of unwanted pregnancy	1.77	0.34-9.26	0.58
Level of familiarity with contraception	1.61	0.77-3.32	0.22
Women's attitude	27.67	19.96-38.36	>0.0001
Husband's attitude	16.74	12.31-22.76	>0.0001

\*This association was found for all types of contraception except of withdrawal. OR: Odds ratio. CI: confidence interval

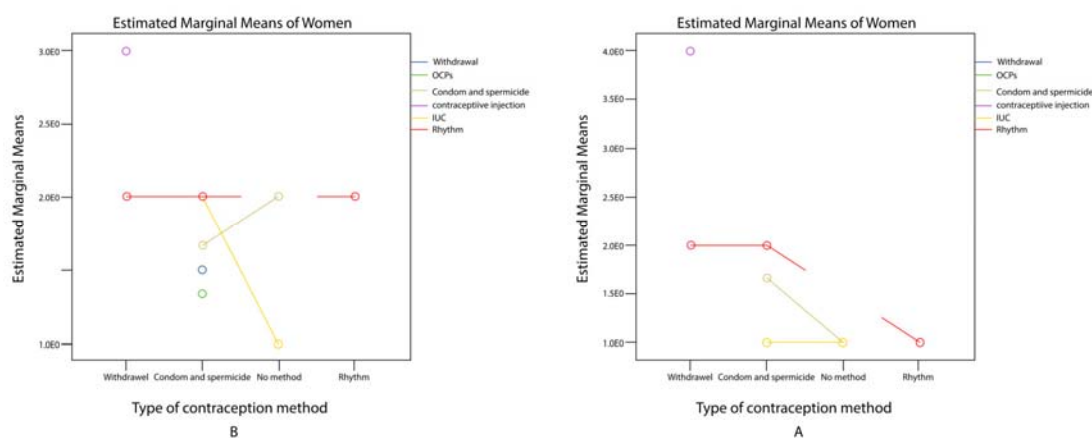


Figure 2. Effect of the women (B) and their husbands' attitudes (A) on the type of contraception

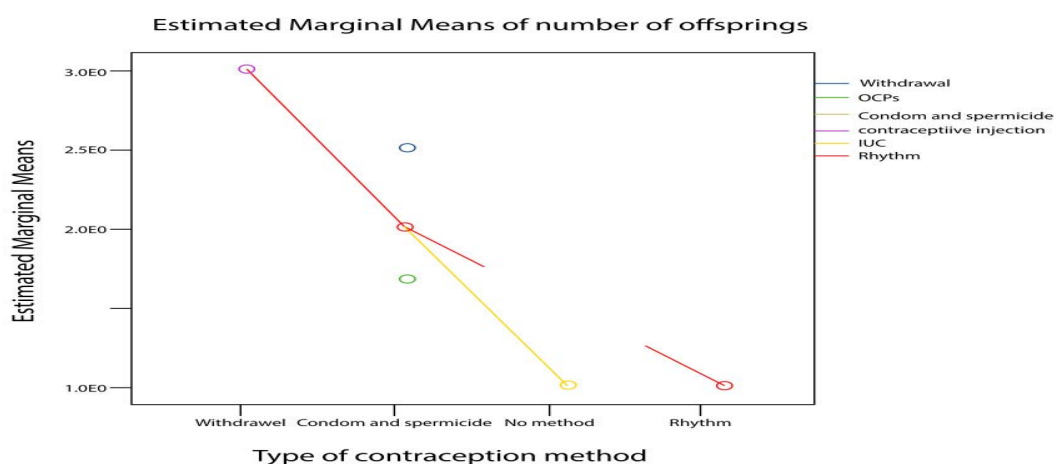


Figure 3. Effect of number of offspring on the type of contraception

Evaluation of the most important factor determining the type of contraception demonstrated that being user-friendly and specific job and the rest of them were housekeepers and, there was no meaningful association between the job and type of contraception (Table 1).

Moreover, the attitudes of the women and their husbands have been shown to be significantly associated with the type of contraception ( $P < 0.0001$ ) (Figure 2). The Least significant difference (LSD) test demonstrated that the number of offspring had a significant effect on the selection of contraceptive methods ( $P < 0.0001$ ) (Figure 3).

availability of the methods was the most frequent cause of selection (33.2%). Among the studied women, 220 persons had a

### Discussion

Herein, withdrawal was found as the most frequent method of contraception among Tehran women regardless of socioeconomic status, age, and educational level. Except for a few studies, it is in line with the findings of the same studies around the world. Owing to the high rate of user error, it is considered an ineffective method associated with more frequency of unintended pregnancy (about 27% in the initial year). Some ideal features of withdrawal such as being free, easy to use, and no need for medical care and

advice have been described as the most important factors behind the selection of it as contraception which are in line with our findings. Given that the last review on the role of education in the selection of the right contraception resulted in a positive conclusion, designing education activities by health care providers may affect the frequency of less effective contraception as well as withdrawal.

Economic factors, including the size of the house, number of children, and attitudes of the women and their husbands were found to be significantly associated with the choice of contraception. Frost JJ, et al have shown that the selection of contraception was associated with socioeconomic factors among American peoples which is in line with our finding concerning economic factors. Palamuleni ME, et al, Kahraman K, et al and Hossain MB, et al have found the same results respecting the association between contraception choice and the number of children among married women living in Malawi (South Africa), Turkey, and Bangladesh, respectively. The higher number of youngsters women hopefully tend to possess long-lasting and more potent contraception. Osmani Ak, et al have found that the type of contraception was changed in different age ranges and economic status among Afghani women as older women had more tendency to have contraception. However, herein, using contraception methods was less frequent among women <20 years old and >40 years old. Owing to the higher rate of criminal abortion among younger women urgent education program is needed to prevent consequent fertility problems.

The attitude of women and their husbands was also significantly associated with the type of contraception in the present study. It was notable that the attitude of men toward contraception tools, in particular, among condom/spermicide and withdrawal users was significantly more than women. To the best of our knowledge, this is the primary study that has investigated the role of both women and their husbands' attitudes on contraception. Consistent with our findings, Bani et al, have found the significant role of the attitude and awareness of Iranian men in the selection of contraception. It is insisting on the urgent attention to educate and make familiar

the Iranian men with the efficiency of different types of contraception.

Assessment of only married women may be the major limitation of the present study and, investigation of the same assay in single sexually active, divorced, and widowed women is warranted to be considered in further studies.

## Conclusion

Taken together, to the best of our knowledge, this is the primary Iranian report on finding the correlation between socioeconomic, demographic, and attitudes of women and their husbands on contraceptive use. Owing to the importance of economic factors as the most important determinant of contraception among the selected regions of Tehran, the government support should be sized to afford the most efficient contraception methods as much as possible.

## Acknowledgements

We have no one to acknowledge of him/her.

## Conflicts of interest

Authors declared no conflicts of interest.

## References

1. Schreiber CATraxler S. State of family planning. *Clinical Obstetrics and Gynecology*. 2015; 58 (2): 392-408.
2. Cleland J, Conde-Agudelo A, Peterson H, Ross JT, Tsui A. Contraception and health. *Lancet*. 2012; 380 (9837): 149-156.
3. Farahani FK, Shah I, Cleland JM, Mohammadi MR. Adolescent males and young females in tehran: differing perspectives, behaviors and needs for reproductive health and implications for gender sensitive interventions. *Journal of Reproduction and Infertility*. 2012; 13 (2): 101-110.
4. Yousefi M, Poorolajal J, Cheraghi Z. Reasons Behind the Tendency Toward the Only Child in Iranian Families: A Conventional Content Analysis Study. *Shiraz E-Medical Journal*. 2019; 20(8): e82916.
5. Mwaikambo L, Speizer Is Fau - Schurmann A, Schurmann A Fau - Morgan G, Morgan G Fau - Fikree F. What works in family planning interventions: a systematic review. *Studies in Family Planning*. 2021; 42 (2): 67-82.
6. Erfani ASHojaei J. Shifts in Contraceptive Use in the City of Tehran, Iran: 2000-2014. *Avicenna Journal of Nursing and Midwifery Care*. 2020; 28 (1): 57-66.
7. Omani-Samani R, Ranjbaran M, Mohammadi M,

- Esmailzadeh A, Sepidarkish M, Maroufizadeh S. et al. Impact of Unintended Pregnancy on Maternal and Neonatal Outcomes. *Journal of Obstetrics and Gynecology of India*. 2019; 69 (2): 136-141.
8. Mardi A, Ebadi A, Shahbazi S, Esmaelzade Saeieh S, Behboodi Moghadam Z. Factors influencing the use of contraceptives through the lens of teenage women: a qualitative study in Iran. *BMC Public Health*. 2018; 18 (1): 202.
  9. Ahirwar RK, Kumar S, Gupta S, Niranjana A, Prajapati KR, Rawal S. A study to assess the socio-demographic factor and knowledge, attitude, and practice of family planning methods in Lohpeeta migrants tribe located in Shivpuri central India. *Journal of Family Medicine and Primary Care*. 2021; 10(3): 1308.
  10. Hossain MB, Khan MHR, Ababneh F, Shaw JEH. Identifying factors influencing contraceptive use in Bangladesh: evidence from BDHS 2014 data. *BMC Public Health*. 2018; 18(1): 192.
  11. Ekhtiari A, Amirkhani Z, Esfahani A, Bayesh S, Najibpour RS, Saghafi M. Survey of Knowledge and Attitude Toward Emergency Contraceptive Method Among Married Women in Reproductive Age Group. *Jundishapur Journal of Health Sciences* 2018; 10(1): e57700.
  12. Asadisarvestani K, Khoo SL, Malek NM, Yasin SMAhmadi A. Determinants of Contraceptive Usage among Married Women in Shiraz, Iran. *Journal of Midwifery and Reproductive Health* 2017; 5 (4): 1041-1052.
  13. Ehsanpour S, Mohammadifard M, Shahidi S, Nekouyi NS. A comparative study on attitude of contraceptive methods users towards common contraceptive methods. *Iranian Journal of Nursing and Midwifery Research*. 2010; 15 (Suppl 1): 363-370.
  14. Rahnama P, Hidarnia A, Amin Shokravi F, Kazemnejad A, Ghazanfari Z, Montazeri A. Withdrawal users' experiences of and attitudes to contraceptive methods: a study from Eastern district of Tehran, Iran. *BMC Public Health*. 2010; 10(1): 779.
  15. Frost JJ, Darroch JE. Factors associated with contraceptive choice and inconsistent method use, United States, 2004. *Perspectives on sexual and reproductive health*. 2008; 40(2): 94-104.
  16. Palamuleni ME. Socio-economic and demographic factors affecting contraceptive use in Malawi. *African Journal of Reproductive Health*. 2013; 17(3): 91-104.
  17. Kahraman K, Göç G, Taşkın S, Haznedar P, Karagözlü S, Kale B. et al. Factors influencing the contraceptive method choice: a university hospital experience. *Journal Of The Turkish-German Gynecological Association*. 2012; 13(2): 102-105.
  18. Osmani AK, Reyer JA, Osmani AR, Hamajima N. Factors influencing contraceptive use among women in Afghanistan: secondary analysis of Afghanistan Health Survey 2012. *Nagoya journal of medical science*. 2015; 77(4): 551-561.
  19. MacQuarrie K. Unmet need for family planning among young women: Levels and trends. *DHS Compreports no34*. Rockville; 2014.
  20. Bani S, Hosseini K, Hasanpour S, Valizadeh S, Abedi P. Awareness, Attitude and Participation Rate of Men in Family Planning Programs in Iran. *International Journal of Women's Health and Reproduction Sciences*. 2014; 2(1): 217-225.