

# GENDER-BASED APPROACH IN FAMILY PLANNING IN PRACTICES IN TURKEY'S MOST FERTILE PROVINCE: SECONDARY ANALYSIS OF MIX METHOD TWO STUDIES

Fatma Koruk<sup>1</sup>, Kafiye Eroğlu<sup>2</sup>, İbrahim Koruk<sup>3</sup>

<sup>1</sup> Department of Nursing, Faculty of Health Sciences, Harran University, Sanliurfa, Turkey

<sup>2</sup> School of Nursing, Koç University, Istanbul, Turkey

<sup>3</sup> Department of Public Health, Faculty of Medicine, Harran University, Sanliurfa, Turkey

ORCID: F.K. 0000-0003-2984-3776; K.E. 0000-0002-8177-7211; İ.K. 0000-0001-9564-2214

**Corresponding author:** Fatma Koruk, **E-mail:** fgozukara18@gmail.com

**Received:** 01.08.2022; **Accepted:** 05.01.2023; **Available Online Date:** 31.05.2023

©Copyright 2021 by Dokuz Eylül University, Institute of Health Sciences - Available online at <https://dergipark.org.tr/en/pub/jbachs>

**Cite this article as:** Koruk F, Eroğlu K, Koruk İ. Gender-based Approach in Family Planning in Practices in Turkey's Most Fertile Province: Secondary Analysis of Mix Method Two Studies. J Basic Clin Health Sci 2023; 7: 644-651.

## ABSTRACT

**Purpose:** To determine the gender-based family planning approaches in the province in Turkey with the highest fertility rate.

**Material and Methods:** This study was carried out with the secondary analysis of the quantitative data on family planning from two different studies that the researchers conducted with in the same region, the same method and close to each other.

**Results:** In total, 56.7% of the women stated that they used any available family planning method, whereas 80.4% chose the method with their spouse. According to their responses, family planning methods used by women were intrauterine devices (41.2%) and withdrawal (28.9%). Furthermore, 10.5% of the men reported using any available family planning method, whereas 91.0% used the method decided by their spouse. According to the responses obtained from the male participants, the family planning methods used were pills (45.5%), intrauterine devices (18.2%), and male condom (18.2%). Women with a higher age, duration of marriage and the average number of living children had higher levels of using FP methods; The level of using FP method is lower in men who have not completed any education level, perceive their income level as "good", have health insurance, and men with a higher average age.

**Conclusion:** The study outcomes revealed that there was gender-based differences between women and men about the use of FP methods; furthermore, men took less responsibility for using FP methods and women-specific methods are generally used.

**Keywords:** Family planning, gender, men, Turkey, women.

## INTRODUCTION

Maternal and infant mortality rates are still high in developing countries owing to the presence of high fertility rates, risky pregnancies, and complicated deliveries. According to the World Health Organization, 810 women die every day and 295 000 women every year due to pregnancy and childbirth. In 2017, it is stated that the maternal mortality rate

was as high as 462 per 100.000 live births in developing countries and 11 per 100.000 live births in developed countries (1). In Turkey, the maternal mortality rate was 13.6 per 100.000 live births, which was marginally higher than that in developed countries (2).

To reduce the maternal mortality rate, it is imperative to provide uninterrupted and qualified services for all

women in need of family planning (FP), prenatal care, safe delivery, and postnatal care. Globally, the FP needs of approximately 214 million women of reproductive age are currently unmet (3). However, the use of modern FP methods in many parts of the world is not at a desired level. According to the latest estimates, the usage of modern FP methods by married women (age, 15–49 years) in developing countries has increased from 55.0% to 57.1% between 2000 and 2019. Reasons for this gradual increase include limitations in method diversity, lack of access, fear of side effects, inadequate service quality, negative impact of religion and culture, and gender-based obstacles (3).

Men have the potential to facilitate and hindrance the use of contraceptive methods to a considerable degree. Therefore, the lack of participation by men is an important factor responsible for obstructing the increase in the usage of FP methods (4). In many countries, FP services are traditionally perceived and offered as a service for women. Although most of the men in developing countries accept that FP is the mutual responsibility of couples, they do not actively contribute in selecting the pertinent contraception method with their partners (5,6). Certain cultural components of the traditional Turkish family structures prevent the spread of awareness related to the use of FP methods and services. And also, as in all other matters, the authoritarian and patriarchal structure in domestic relations requires the approval of the men to use the relevant FP method (7).

In Turkey, it is particularly important to have children for lineage continuity, especially in the culture of the Eastern regions. The province where the study was conducted, i.e., Şanlıurfa, has the highest fertility rate (total fertility rate, 3.89) in Turkey, and it is a province where maternal–infant mortality rates have consistently been high (8). In a region with a high fertility rate, conducting studies on factors that will affect the access and provision of FP services and planning appropriate interventions will make a significant contribution to protecting maternal–infant health.

This study aims to determine the gender-based family planning (FP) approaches in the province in Turkey with the highest fertility rate.

## **MATERIAL AND METHODS**

### **Study Type**

This is a cross-sectional study.

### **Study Population and Sample**

Based on data of the Turkish Statistical Institute Population Registration System, the study population included 206.118 women aged 15–49 years and 246.653 men of reproductive age, who reside in the city center of Şanlıurfa (9).

The research was carried out with the secondary analysis of the quantitative data on family planning from two different studies (references will be added after article acceptance) that the researchers conducted with in the same region, the same method and close to each other. In the previous two studies, the use of family planning method was used only as a prevalence and other details were not included. In this study, descriptive statistics about FP were used. The data of 382 individuals, 172 married women and 210 married men, who were expected to use the method, were included in the study.

### **Data Collection**

The data were collected through face-to-face interviews and using the Data Collection Form developed by the researchers. In this study, variables related to socio-demographic characteristics of the men and women (age, educational background, employment status, age of spouse, educational background of spouse, working status of spouse, language most spoken, income status, health insurance, family type, and duration of marriage) and characteristics of the FP methods used (method use status, method used, reason for choosing the method used, reason to not use a method, person who decided the method, and state of getting information about the method) were included.

### **Evaluation of Data**

The data were analyzed using the IBM Statistical Package for Social Sciences (SPSS) for Windows 26.0 statistical package program (IBM, Armonk, NY, USA). Descriptive statistics, chi-square, and t test from univariate analysis methods were used for data evaluation. Fisher's exact test was used when chi-square assumptions are not satisfied. Statistical alpha level  $p < 0.05$  was considered significant.

### **Ethical Dimension of the Study**

Ethical approval was obtained from the Ethics Committee of Koç University (Decision number 2016.004.IRB3.003, dated 27.01.2016; dated 27.07.2016 and numbered 2016.157.IRB3.088) for both studies whose data were used. Verbal consent

**Table 1.** Distribution of Some Socio-Demographic Characteristics of Women and Men by FP Method Use

	FP Method Use													
	Women <sup>§</sup>						Men							
	Using		Not using		% <sup>**</sup>	X <sup>2</sup>	P	Using		Not using		% <sup>**</sup>	X <sup>2</sup>	P
Number	% <sup>*</sup>	Number	% <sup>*</sup>	Number				% <sup>*</sup>	Number	% <sup>*</sup>				
<b>Educational Background</b>														
No education <sup>§§</sup>	37	67.3	18	32.7	32.2	3.73	0.15	0	0.0	63	100.0	30.0	<b>13.2</b>	<b>0.001</b>
Primary school	26	53.1	23	46.9	28.7			14	19.2	59	80.8	34.8		
Secondary school and above	34	50.7	33	49.3	39.2			8	10.8	66	89.5	35.2		
<b>Spoken Language</b>														
Turkish	69	59.5	47	40.5	68.0	2.61	0.27	16	12.5	112	87.5	61.0	1.57	0.45
Kurdish	19	57.6	14	42.4	19.2			4	6.6	57	93.4	29.0		
Arabic	9	40.9	13	59.1	12.8			2	9.5	19	90.5	10.0		
<b>Employment Status</b>														
Working	25	56.8	19	43.2	26.2	1.00	0.56	19	10.2	168	89.8	89.0	***	0.71
Not working	72	56.7	55	43.3	73.8			3	13.0	20	87.0	11.0		
<b>Perceived Income Status</b>														
Good	14	48.3	15	51.7	17.4	1.22	0.54	4	4.7	82	95.3	40.9	<b>6.40</b>	<b>0.04</b>
Middle	66	59.5	45	40.5	64.5			15	13.5	96	86.5	52.9		
Bad	17	54.8	14	45.2	18.0			3	23.1	10	76.9	6.2		
<b>Health Insurance</b>														
Yes	73	56.6	56	43.4	75.6	1.00	0.54	14	8.2	156	91.8	81.0	***	<b>0.04</b>
No	24	57.1	18	42.9	24.4			8	20.0	32	80.0	19.0		
<b>Educational Background of the Spouse</b>														
No education	9	69.2	4	30.8	7.6	1.03	0.59	7	6.5	100	93.5	51.0	4.15	0.12
Primary school	27	58.7	19	41.3	27.1			11	16.2	57	83.8	32.3		
Secondary school and above	61	55.0	50	45.0	65.3			4	11.4	31	88.6	16.7		
<b>Employment Status of the Spouse</b>														
Working	90	58.4	64	41.6	92.3	1.22	0.13	2	18.2	9	81.8	5.2	***	0.32
Not working	5	38.5	8	61.5	7.7			20	10.1	179	89.9	94.8		

\*Percentage of rows, \*\* Percentage of columns, \*\*\* Fisher's Exact Test, § Individuals who did not answer all questions in the female group, §§ The group with significant difference.

was obtained from the men and women who agreed to participate in the study.

**RESULTS**

The mean age of the women and men was 32.2 ± 8.5 and 40.4 ± 12.0, respectively. In total, 32.2% women had had no formal education and 32.0% spoke a language other than Turkish at home. Only 26.2% of women were employed in an income generating job, 64.5% perceived their income level as “medium,” and 24.4% did not have health insurance. Furthermore, 65.3% of the spouses of the women had an educational background of secondary school and above and 92.3% worked in an income generating job. However, 30.0% of men had had no formal education and 39.0% spoke a language other than Turkish at home. In total, 89.0% of men worked in an income generating job, 52.9% perceived their income level as “medium,” and 19.0% did not have health insurance. Alternatively, 51.0% of the spouses of the men did not have any educational qualifications and 94.8% did not have an income generating job (Table 1).

The mean duration of marriage was 12.1 ± 9.4 years, and the mean number of living children was 3.1 ± 2.2 as reported by the women included in this study. The mean duration of marriage was 15.8 ± 12.4 years, and the mean number of living children was 3.1 ± 2.0 as reported by the men included in this study.

A total of 56.7% of the women reported that they used any of the available FP methods, among which the most used methods include are intrauterine devices (IUD, 41.2%) and withdrawal (28.9%). The desired FP method in 80.4% of the women was decided with their spouses. The most common reasons for

preferring the FP method used were satisfaction (56.2%) and suggestions by health personnel (19.3%), whereas most common reasons for not using FP methods were pregnancy (14.5%) and the desire to conceive (7.0%). A total of, 48.3% of the women had a history of using an FP method other than the FP method they currently use. Only 29.1% of the women reported that they had received training on FP methods, and the most common source of training was nurses/midwives (70.0%) (Table 3).

According to the socio-demographic characteristics of the women, there was no difference among them in terms of using FP methods (Table 1). However, women with a higher mean age (p=0.04), duration of marriage (p<0.001), and number of living children (p<0.001) used FP methods to a significantly higher degree (Table 2).

In total, 10.5% of the men reported that they used any of the FP methods available. Pill (45.5%), IUD (18.2%), and male condom (18.2%) were among the most used methods. Furthermore, 91.0% of the men stated that their spouse decided on the FP method used. The most common reasons for why the men did not use FP methods were that their spouse did not want them to use (40.7%) and that they desired to have a child (22.5%). Other than the FP methods they currently used, 86.4% of the men reported not using any other FP methods. Only 8.1% of the men reported that they had received training on FP methods, and the most common sources of training were nurses/midwives (47.0%) and doctors (41.2%) (Table 3).

The level of using FP method is lower in men who do not have any formal education (p=0.001), perceive their income level as "good" (p=0.04) and have health

**Table 2.** Distribution of Some Characteristics of Women and Men by FP Method Use

Characteristics	FP Method Use							
	Women				Men			
	Using	Not using	t	p	Using	Not using	t	p
Mean ± SD	Mean ± SD	Mean ± SD			Mean ± SD			
<b>Age</b>	33.3 ± 7.7	30.6 ± 9.3	<b>2.04</b>	<b>0.04</b>	34.5 ± 10.9	41.2 ± 11.9	<b>-2.48</b>	<b>0.01</b>
<b>Duration of Marriage</b>	14.3 ± 8.7	9.2 ± 9.6	<b>3.56</b>	<b>&lt;0.001</b>	14.2 ± 14.3	16.0 ± 12.2	-0.64	0.52
<b>Number of Children Living</b>	3.7 ± 2.0	2.3 ± 2.3	<b>4.37</b>	<b>&lt;0.001</b>	3.1 ± 1.9	3.1 ± 2.0	-0.14	0.88

insurance ( $p=0.04$ ), and men with a higher average age ( $p=0.01$ ), and this difference is statistically significant. However, there is no difference between use of FP method in men according to the most spoken language at home ( $p=0.45$ ), employment status ( $p=0.71$ ), education level of spouse ( $p=0.12$ ), working status of spouse ( $p=0.32$ ), duration of marriage and average number of living children (Table 1).

## DISCUSSION

In this study, the secondary analysis of data on FP methods reported in two prior studies containing similar data on men and women was used. Study outcomes revealed that the socio-demographic information given by the women for themselves, and their spouses was very similar to that provided by the men for themselves and their spouses. Particularly, the number of living children is nearly identical in both groups. Conversely, there were remarkable intergroup differences in terms of the answers provided on the use of FP methods.

Accurate comparison of the data was limited by the fact that only a small number of men stated that they used any FP method. Although the female and male populations herein live in the same region and community, female reports were more compatible with the literature, whereas the male reports were considerably different from that reported in the literature. This could be attributable to the inability of men to express themselves comfortably about reproductive health and sexual issues, or due to the lack of sufficient interest.

In total, 56.7% of women and only 10.5% of men stated that they used FP methods. Furthermore, there were great differences between the answers of men and women in terms of the details of the method used. This thought-provoking result may be due to the following reasons: men continue to not take responsibility for using FP method, men do not mutually share this responsibility with their wives, or women must hide the methods they use from their spouses. In Şanlıurfa, having many children is accepted as a social norm, which subsequently generates social pressure and teachings. For this reason, couples may attempt to hide the fact that they use an FP method from their surroundings and in some cases even from each other. As a matter of fact, Eroğlu et al. reported in their study performed in the same region that women secretly use the FP methods and hide this fact from their spouses (10).

The most used methods reported in this study were IUD, withdrawal, and tubal ligation for women and pills, IUD, and male condom for men. Notably, women reported that they preferred the withdrawal method with limited effectiveness twice as much as the tubal ligation method. According to the Turkey Population and Health Research 2018 (TPHR 2018), which represents the entirety of Turkey, the most used methods were withdrawal (20%), male condom (19%) and IUD (14%) (12). In the present study, approximately 60% of the FP methods used are female-specific methods. This suggests that men take less responsibility in selecting and using an FP method, or they leave the decision to their spouses because they do not want to be involved in the decision-making process. Similarly, although men are in a decision-making position on many issues in the family, they reportedly do not use these roles in to avoid being involved in the responsibility for selecting the FP method (13).

In the current study, women stated that they mostly decided with their spouses on the method they used, whereas men stated that their spouses were more decisive in this issue. This result supports the result of the TPHR 2018 survey (12); furthermore, it may also suggest that men take less responsibility by leaving the decision on selecting the FP method to women.

In the study, the most preferred reason among men and women as the reason for choosing the method is "prefer with the method used." The reasons for choosing a specific FP method differ in the literature. To illustrate, Amin (2012) reported that efficiency (30.5%) and ease of availability (18.1%) are frequently stated as the reasons considered while choosing the FP method (14). However, Amran et al. (2019) report low cost, did not any side effects, and ease of use (15). Therefore, these findings reveal the necessity of deciding on a specific FP method for each couple when receiving counseling on the FP methods.

Regarding the reasons for not using FP method, our results showed that men and women generally expressed similar reasons. One of the most common reasons for not using or stopping the use of a method was "desire of having a child". In the TPHR 2018 study, among the reasons for quitting a method of contraception, "desire of having conceive" (38%) was the most frequent reason (12). However, in our study, it is noteworthy that the answer of desire of having child and not wanting to use a method was higher in

**Table 3:** Distribution of the Characteristics of FP Method Use Among Women and Men

Characteristics	Women*		Men *	
	Number	%	Number	%
<b>FP Method Use</b>				
Using	97	56.7	22	10.5
IUD	40	41.2	4	18.2
Tubal ligation	12	12.4	-	-
Male condom	11	11.3	4	18.2
Pill	6	6.2	10	45.5
Needle	-	-	1	4.5
Withdrawal	28	28.9	3	13.6
Not using	74	43.3	188	89.5
<b>The FP Method Used Decided By</b>				
Mutually	78	80.4	1	4.5
Alone	9	9.3	1	4.5
Only the spouse	10	10.3	20	91.0
<b>Reason for Prefer the Method Used</b>				
Spouse's decision	3	3.0	2	9.0
Satisfaction	55	56.2	16	72.8
Ability to hide from spouse	1	1.0	-	-
Medical staff recommendation	15	19.3	-	-
No answer	24	24.5	4	18.2
<b>Reasons for Not Using FP Method</b>				
Pregnancy/Spouse being pregnant	25	14.5	21	11.2
Desire to conceive	12	7.0	42	22.5
Spouse does not want	10	5.8	76	40.7
The person's own refusal	-	-	76	4.3
Being in menopause/Spouse being in menopause	10	5.8	18	9.6
Breastfeeding/Spouse breastfeeding	7	4.1	1	0.5
Health problems	5	2.9	-	-
Considering the methods as unhealthy	1	0.6	-	-
Reluctance to explain	-	-	21	11.2
<b>FP Method Previously Used</b>				
Yes	58	48.3	3	13.6
No	62	51.7	19	86.4
<b>Previous Training About FP Methods</b>				
Yes	50	29.1	17	8.1
From nurses/midwives	35	70.0	8	47.0
From doctors	11	22.0	7	41.2
From teachers	2	4.0	-	-
From pharmacists	-	-	1	5.9
From the internet	2	4.0	-	-
Not remembered	1	2.0	1	5.9
No	122	70.9	193	91.9

\* Individuals who did not answer all questions in both the female group and the male group.

men than in women. This could be attributed to the unwillingness of men to answer this issue, which they perceive as protecting their privacy.

Majority of the women included in this study were part of a group who were poorly educated and were not employed but rate their economic level as was considered "medium." This result is consistent with the Southeastern Anatolia Region data of the TPHP 2018 survey. Conversely, the group of men included in the study had a relatively higher education level and a higher rate of having an income generating job, as across the globe and Turkey. Certain socio-demographic characteristics, especially educational background, reportedly affect the use of FP method (16-18). In this study, the educational and income levels of men affected the usage of FP method. However, it is important to note that socio-demographic findings of women did not make any difference in terms of the FP method used. Like the literature, while the level of education in males increases, the level of FP use also increases; Unlike the literature, the level of FP usage decreased as the income level increased. It is thought that the tendency of low-income individuals to prefer FP use has increased due to the increase in the cost of childcare such as nutrition, education, and health services. This result may be important in terms of showing that the preferences have started to change. However, this result needs to be supported by other studies. Considering the fact that nearly one third of the women included in this study did not have any educational qualifications and the majority of the others have a low level of education, it can be inferred that the absence of educational qualifications does not have a positive effect on FP use.

In this study, it was observed increase in age, duration of marriage, and number of children resulted in a proportional increase in the degree to which FP methods were used. Considering the mean number of living children noted in this study, it is a probable that women attempt to limit their fertility as they reach the desired number of children. Several studies in the literature reported that as the age of women increases, their level of using FP method increases (19-21).

### Strengths and Limitations

In Turkey, marriage is the beginning of the period when it is socially acceptable to become sexually active and conceive children. For this reason, since it was thought that unmarried individuals could not/may

not answer the questions about FP method use, only the data of married women and men were included in the study.

### CONCLUSION

In conclusion, there were gender-based differences between women and men with regard to the use of FP methods; furthermore, men took less responsibility for using FP methods and women-specific methods are generally used. In line with these findings, It is recommended to carry out studies in which gender attitudes are measured and monitored in the use of family planning methods, and qualitative studies that investigate the attitudes and barriers of men regarding their participation in family planning are recommended.

**Acknowledgement:** The authors thank Enago – <https://www.enago.com.tr/ceviri/> for their assistance in manuscript translation and editing.

**Author contributions:** FK: Conception, design, literature review, data collection, data processing, writing, critical review KE: Design, data collection, literature review, critical review İK: Analysis-interpretation, critical review and editing.

**Conflict of interests:** No potential conflict of interest was reported by the author(s).

**Ethical approval:** Ethical approval was obtained from the Ethics Committee of Koç University (decision number 2016.004.IRB3.003, dated 27.01.2016; dated 27.07.2016 and numbered 2016.157.IRB3.088) for both studies whose data were used.

**Funding:** This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

**Peer-review:** Externally peer-reviewed.

### REFERENCES

1. World Health Organization (WHO). Maternal Mortality, <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality/>;2019 (accessed Apr 17, 2021).
2. The Ministry of Health of Turkey. Health Statistics Yearbook 2018, <https://dosyasb.saglik.gov.tr/Eklenti/36164,siy2018en2pdf.pdf?0/>;2019 (accessed Apr 16, 2021).
3. World Health Organization (WHO). Family planning/contraception methods, <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception/>;2020 (accessed Apr 17, 2021).
4. Packer CA, Rastagar SH, Chen M, Bernholc A, Hemat S, Seddiqi S, et al. Factors associated with reported modern contraceptive use among married men in Afghanistan. *Reproductive Health*, 2020;17,1-11.

5. Adelekan A, Omoregie P, Edoni E. Male involvement in family planning: challenges and way forward. *International Journal of Population Research* 2014;2014:1-9.9.
6. Ankomah A, Anyanti J, Adebayo S, Giwa A. Barriers to contraceptive use among married young adults in Nigeria: a qualitative study. *International Journal of Tropical Disease & Health* 2013;3(3):267–82.
7. Depe Y, Erenel A Ş. Determination of men's views and behaviours about family planning. *C.U. Hemşirelik Yüksekokulu Dergisi* 2006;10(3):29-36.
8. Turkish Statistical Enstitute (TUIK). Press Release, Birth Statistics, 2019. [https://data.tuik.gov.tr/Bulten/Index?p=Dogum-Istatistikleri-2019-33706 /;2020](https://data.tuik.gov.tr/Bulten/Index?p=Dogum-Istatistikleri-2019-33706) (accessed Apr 16, 2021).
9. Turkish Statistical Institute. Address Based Population Registration System Results. [https://www.tuik.gov.tr/tr/ /;2014](https://www.tuik.gov.tr/tr/) (accessed Apr 17, 2021).
10. Eroğlu K, Koruk F, Koruk İ, Çelik K, Güner P, Kılıçlı A. Women's reproductive behaviour and perspectives on fertility, and their modifying factors, in a Turkish province with a high fertility rate. *The European Journal of Contraception & Reproductive Health Care* 2021;26(2):139-147.
11. Koruk F, Eroğlu K, Koruk İ, Çelik K, Güner P. Married men's perspectives and reproductive behaviors on fertility in the province with the highest fertility rate in Turkey: A mix method study. *Nobel Medicus* 2022; 18 (2): 89-98.
12. Hacettepe University Institute of Population Studies. Turkey Demographic and Health Survey 2018. Ankara, Turkey: Publication No: IPS-HU.19.02.2019;45-88.
13. Nte AR., Odu N, Enyindah CE. Male involvement in family planning: women's perception. *Nigerian Journal of Clinical Practice* 2009;12(3):306-310.
14. Amin R. Choice of contraceptive method among females attending family planning center in Hayat Abad Medical Complex, Peshawar. *J Pak Med Assoc*, 2012;62(10):1023-1028.
15. Amran Y, Nasir NM, Dini Dachlia FY, Utomo B, Ariawan I, Damayanti R. Perceptions of contraception and patterns of switching contraceptive methods among family-planning acceptors in West Nusa Tenggara, Indonesia. *Journal of Preventive Medicine and Public Health* 2019;52(4):258-264.
16. Mukhopadhyay P, Chaudhuri RN, Paul B. Hospital-based perinatal outcomes and complications in teenage pregnancy in India. *Journal Health Population Nutrition* 2020;28(5):494–500.
17. Mutihir JT, Eko P. Stillbirths at the Jos University Teaching Hospital: incidence, risk, and etiological factors. *Nigerian Journal of Clinical Practice* 2011;14(1):14–18. <https://www.ncbi.nlm.nih.gov/pubmed/21493985>.
18. Chen CW, Tsai CY, Sung FC, et al. Adverse birth outcomes among pregnancies of teen mothers: age specific analysis of national data in Taiwan. *Child: Care, Health and Development* 2010;36(2):232-40.
19. Nouhjah S, Amiri E, Khodai A, Yazdanpanah A, Baghu MN. Popular contraceptive methods in women aged 35 years and older attending health centers of 4 cities in Khuzestan province, Iran. *Iranian Red Crescent Medical Journal*, 2013;15(10):e4414.
20. Çalikoğlu EO, Yerli EB, Kavuncuoğlu D, Yılmaz S, Koşan Z, Aras A. Use of family planning methods and influencing factors among women in Erzurum. *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research* 2018;24:5027-5034.
21. Weaver EH, Frankenberg E, Fried BJ, Thomas D, Wheeler SB, Paul JE. Effect of village midwife program on contraceptive prevalence and method choice in Indonesia. *Stud Fam Plann*, 2013; 44(4): 389–409.