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Determinants of Contraceptive Usage among Married Women in Shiraz, Iran

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ABSTRACT

Background & aim: Contraceptive usage is a central part of the quality of care in the provision of family services. Currently, this issue has gained much importance since the Iranian policy makers are changing their policies about family planning and contraceptives accessibility. Regarding this, the aim of this study was to determine the rate of contraceptive usage and the factors affecting contraceptive use among the married women of reproductive age in Shiraz County, Iran.

***Methods*:** This cross-sectional study was conducted on 626 married women of reproductive age (i.e., 15-49 years) living in Shiraz County (including Shiraz city and the rural areas) using the quantitative survey method. Sampling was performed using multi-stage cluster and purposive sampling techniques. The sample size was determined based on the Krejcie and Morgan's formula. The data were collected through a questionnaire filled out by some interviewers. Data analysis was performed both descriptively (i.e., frequency and percentage) and analytically (i.e., Chi-square and logistic regression tests) using the SPSS version 20.

***Results*:** According to the results of this study, the main predictors of contraceptive usage were couple agreement on contraception method, the number of actual births, women's authority, knowledge and positive attitude about contraceptives, and the number of desired children.

***Conclusion*:** Regarding the new population policies, the Iranian policy makers should be aware of the different aspects of family planning programs, particularly those targeting the contraceptive usage.

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Introduction

Contraceptives are devices or medications designed to prevent pregnancy by either suppressing ovulation or preventing the sperm from passing through the cervix (1). It is claimed that a woman's ability to space and limit her pregnancies has a direct impact on her health and children's health. Moreover, the contraceptive usage has an important role in the decline of such problems as unintended pregnancy and abortion (2). As a result, contraceptive usage and reducing unmet need for family planning are central to the improvement of maternal health (UN Millennium Development Goal 5) (3).

Therefore, the international human rights law underscores the facilitation of access to family planning services as one of the basic human rights. The World Health Organization has also identified family planning as one of the six fundamental health interventions needed to achieve safe motherhood. Moreover, the United Nations Children's Fund has considered the family planning as one of the seven strategies for child survival (4).

Despite the importance of family planning and

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contraceptive usage and the global awareness of its importance, there are still many obstacles in the full implementation of such programs worldwide (5). In 2010, 146 million women within the age range of 15-49 years, who were married or in a relationship, had an 'unmet' need for family planning around the world. The absolute number of the married women who either use contraceptives or have an unmet need for family planning is projected to grow from 900 million (876-922 million) in 2010 to 962 million (927-992 million) in 2015 (6).

Iran has one of the most successful family planning programs in the developing world with a 64% decline in total fertility rate between 1986 and 2000 (7). Furthermore, this country has the highest rate of contraceptive usage among the Muslim countries, and this rate is comparable with those of such developed countries as France and Germany (7, 8). Moreover, free family planning services were accessible throughout the country until 2013; however, the unmet need for modern contraceptive methods was estimated as 17.4%. In other words, a considerable percentage of Iranian females are at the risk of unintended pregnancy (9).

The modern contraceptive devices, such as condom and intrauterine device (IUD), are highly accessible throughout the private and public centers in both urban and rural areas of Iran. Nonetheless, it is not clear why the usage rate of some modern methods, such as condom, has dropped from 14% in 1976 to 9.3 % in 2000. On the other hand, the traditional methods are reported to have a relatively high usage. Accordingly, the high use of traditional contraceptive methods among the highly educated women in big cities and some regions having a very low fertility level, such as Gilan and Tehran, has resulted in unintended pregnancies. The increase in the numbers of unintended pregnancies in areas with low fertility level has created a strong demand for abortion.

In case the abortion is illegal or highly restricted, the women opt for unsafe procedures. According to the statistics published by Iran's Ministry of Health, approximately 250,000 and 6,000 illegal and legal abortions occur every year, respectively (3). This issue has gained more importance in the current situation, where the government is changing its population and family planning policies to increase the country's fertility rate. Obviously, any variation in population policy can lead to many changes in population issues.

Regarding this, conducting new studies to observe changes has great importance in policy making. With this background in mind, the aim of this study was to determine the usage rate of different contraceptive methods and the factors affecting contraceptive usage among the married women of productive age in Shiraz County, Iran.

Materials and Methods

This cross-sectional study was conducted on the married women of reproductive age (i.e., 15-49 years) living in Shiraz County (i.e., Shiraz city and its surrounding rural areas). Based on the Krejcie and Morgan's formula (10), a sample size of 398 respondents was determined. Following Bryman and Bell (11), 700 questionnaires (i.e., 400 and 300 questionnaires in Shiraz city and rural areas, respectively) were distributed to avoid the sample attrition. However, only 626 questionnaires were included in the study since 74 questionnaires were incomplete.

The representative samples were taken from 20 regions of Shiraz city and five rural districts through multi-cluster sampling. It should be mentioned that the married women who were not living with their spouses three months prior to the data collection were excluded from the study. The data collection tool was a questionnaire filled out by some interviewers. The questionnaire consists of three parts including the items related to the socioeconomic and demographic information as well as contraceptive usage.

The validity of the questionnaire was determined using the content validity by sending the instrument to a panel of expert consisting of lecturers in the relevant academic field to get their feedbacks. Based on the recommendations of the academic experts, the survey instrument was redrafted. Accordingly, the intangible terms were rephrased, and ambiguous items were dropped.

The reliability of the subscales was evaluated

using Cronbach's alpha coefficient. According to Nunnaly (12), the reliability coefficient of 0.70 is an acceptable value; however, lower thresholds are sometimes used in the literature. Therefore, the Cronbach's alpha coefficient ≥ 0.70 suggested an acceptable reliability in this study. The questionnaire is rated on a Likert scale that measures women's authority in the family. The Cronbach's alpha for this item was 0.788 that was acceptable.

Data collection was performed by 10 trained and experienced interviewers. Due to the complex structure of the questionnaires, they were filled out by the interviewers. The data were collected on working days since most women were housewives, and they were mostly free during this time. In addition, to eliminate the influence of confounding variables on the data collection process, the interviews were conducted solely between the interviewers and the respondents.

Data analysis was performed descriptively (i.e., frequency and percentage) and analytically (i.e., Chi-square and logistic regression tests) using the SPSS version 20. The bivariate analysis was run before the logistic regression to compare the characteristics of the women actively using contraceptives and the nonusers. The differences in the current use of contraceptives between the two groups were reported using the Pearson's Chi-squared tests and two sample t-tests for the categorical and continuous variables, respectively. In case the number of the observations were less than five in any category of the nominal variables, the Fisher's exact test was performed.

The logistic regression allows the researchers to test the models to predict categorical outcomes with two or more categories. The predictors or independent variables can be either categorical or continuous, or a mix of both in one model (Pallant, 2005). Therefore, we used the logistic regression since the contraception usage was measured in the categorical level. The regression analysis was performed using dummy variables for categorical factors such as demographic data. Damodar (13) defined a dummy variable as one that takes the value of 0 or 1 to indicate the absence or presence of some categorical effects that might be expected to influence the outcome.

Results

Table 1 presents a summary of the demographic and socioeconomic characteristics of the respondents. According to the results, there was a significant difference between the rural and urban women in terms of the mean age (P=0.002). The mean ages of the respondents were 32.7±8.18 and 34.9±8.54 years for the urban and rural women respectively (age range: 15-49 years). In terms of the educational status, the findings demonstrated a significant difference between the females living in Shiraz city and those living in the surrounding rural areas (P=0.00). Accordingly, the percentage of areas (13%) than those living in Shiraz city

Table 1. Demographic and socioeconomic background of the respondents

Variables	Shiraz city (%)	Rural areas (%)
Age		
15-19	1.8	0.8
20-24	16.1	14.2
25-29	20.1	15.8
30-34	24.5	15.0
35-39	14.0	18.6
40-44	10.3	16.2
45-49	13.2	19.4
Total	100	100
Mean (year)	32.7	34.9
SD	8.18	8.54
Education level		
Illiterate	5	13
Elementary	5	35.2
Secondary	52	48.6
Tertiary	38	3.2
Total	100	100
Education level of husband		
Illiterate	2.4	11.3
Elementary	8.4	25.5
Secondary	52.2	56.2
Tertiary	36.9	6.9
Total	100	100
Job		
Housewife	78.4	94.3
Jobholder	21.6	5.6
Total	100	100
Monthly family income ($ US)		
<300	64.1	87.4
301-600	24.8	8.5
601-900	7.7	1.6
900<	3.4	2.4
Total	100	100

illiteracy was higher in the females of the rural (5%). Moreover, regarding the elementary and secondary education, the rural women were leading as compared to the women living in Shiraz city.

Additionally, there was a considerable difference between the urban (38%) and rural (3.2%) females regarding the tertiary education. Husband's education level was also considered as an important variable in the fertility and family planning studies. The results indicated a significant difference between the men living in Shiraz city and rural areas regarding the education level (P=0.00). In addition to the overall education level, the higher education level was also more frequent in Shiraz city than that in the surrounding rural areas. This is evident from the fact that about 37% of the respondents' husbands in Shiraz city possessed tertiary education, whereas this rate was only 7.0% in the rural areas. In addition, the percentage of illiteracy was higher among the males living in the rural areas (11.3%) than those living in Shiraz city (2.4%).

The employment status was an index of the economic status. The results indicated that the percentage of the employed women (21.6%) was higher in Shiraz city than that in the rural areas (5.6%). In terms of the family income, as another index of economic status, there was a significant difference between the participants living in Shiraz city and those living in the rural areas (P=0.00). Accordingly, the monthly income of 64.1% and 87% of the urban and rural families was under $300, respectively. Nevertheless, there was a difference between the urban and rural areas in terms of the income level of $301-600 per month. In this regard, about 24% and 8% of the families living in Shiraz city and rural areas earned between $301 and 600 per month, respectively.

Table 2 compares the urban women with their rural counterparts in Shiraz County in terms of the kind of contraceptive method they used. As can be seen, 71.2 % and 66.0 % of the women in Shiraz city and rural areas used the modern contraceptive methods, respectively. Considering the traditional contraceptive methods, no difference was observed between the respondents of Shiraz city and rural areas (about 20.0% for both). Nonetheless, the percentage of the women who did not use any contraceptive method was higher among the rural women (12.5%) as compared to that in the urban women (8.7%). Therefore, this group had a high probability of pregnancy.

The pills, withdrawal, and condom were the most popular contraceptive methods both in rural areas and Shiraz city. Among the traditional contraceptive methods, the withdrawal was the most prevalent method, which had a slightly higher rate in the rural couples (22%) in comparison with that in the urban ones (20%). In addition, contraceptive pill was the most popular modern method among the women of Shiraz city and rural areas. However, the rate of using the pill was higher among the rural women (37.0%) than that in the urban women (44.0%).

The second popular modern method was condom. The rate of condom usage was higher in Shiraz city (17.0%) than that in the rural areas (7.0%). In terms of other modern methods, such as contraceptive implant and injection, the findings demonstrated that the prevalence of these methods was higher among the women in rural areas as compared to those in Shiraz city.

The demographic factors can affect the contraceptive usage. Accordingly, the age was one of the most important factors that could affect the contraceptive usage. According to Table 3, the women with the age group of 30-34 years (76.9%) had the highest rate of using modern contraceptives. On the other hand, the lowest rate

Table 2. Methods of contraception

Variables	Shiraz city (%)	Rural areas (%)
Methods of contraception		
Modern	71.2	66
Traditional	20.1	21.5
No method	8.7	12.5
Types of contraceptive method		
Male condom	17.9	6.9
Female condom	1.6	0.0
Withdrawal	19.8	21.5
Male sterilization	1.3	1.2
Female sterilization	4.5	3.2
Injection	0.5	3.2
Intrauterine device	6.6	4.5
Implants	1.8	2.4
Rhythm method	0.3	0.0
Method mix	2.2	2
Others	0.5	0.0
No method	6.6	10.5

Table 3. Contraceptive usage in relation to demographic factors

Variables	Modern methods	Traditional methods	Non-use	Chi-square	P- value
Age group					
15-19	55.6	33.3	11.1		
20-24	62.5	35.4	2.1		
25-29	71.3	18.3	10.4		
30-34	76.9	12.3	10.8	30.61	0.002
35-39	72.7	16.2	11.1		
40-44	70.9	17.7	11.4		
45-49	59.2	25.5	15.3		
Ethnicity					
Fars	68.2	21.3	10.4		
Turk	71.3	22.2	6.5	13.51	0.036
Lor	70.0	15.0	15.0		
Others	75.0	10.7	14.3		
Education level					
Illiterate	68.6	19.6	11.8		
Elementary	67.0	24.5	8.5	6.90	0.547
Secondary	70.7	18.3	11.0		
Tertiary	67.8	23.0	9.2		
Family income ($ US)					
<300	69.1	20.9	10.0		
301-600	68.7	19.1	12.2	37.09	0.913
601-900	72.7	18.2	9.1		
900<	68.4	26.3	5.3		

of modern contraceptive usage was related to the women with the age group of 15-19 years (55.6%). With respect to the traditional contraceptive methods, the women with the age groups of 20-24 (35.4%) and 15-19 (33.2%) years had the highest rate of traditional contraceptive usage. Those with the age range of 30-34 (12.3%) years had the lowest rate in this regard.

The results of the Chi-square test demonstrated a significant association between the age and type of contraception method (P<0.05). Furthermore, as indicated in Table 1, there was a significant association between the ethnicity and type of contraceptive method (P<0.05). However, more than 66.0% of the women from each ethnic group used modern contraceptives.

The majority of the women in Shiraz County selected the modern contraceptives, regardless of their education level. In addition, there was no difference among the respondents with different education level regarding the rate of traditional contraceptive methods. In other words, there was no significant association between the respondents' education level and type of contraceptive method (P>0.05). With respect to the family income, the findings demonstrated no significant association between the income and type of contraceptive method (P>0.05). In contrast, the findings showed that the highest rate of traditional contraceptive usage was related to the women with the family income of above $900.

Religion can affect the contraceptive usage; however, as demonstrated in Table 4, only 10.0% and 13.0% of the women in Shiraz city and rural areas, respectively, believed that the use of contraception was against the religious teachings. Moreover, the results of the Chi-square test demonstrated no significant association between the respondents' religious beliefs about contraceptive usage and their residential place (P>0.05).

With respect to the negative reputation of the contraceptive method side effects, 43.7% and 20.6% of the rural and urban women believed that the use of contraceptives would lead to sterilization, respectively. In addition, 34.8% and 26.4% of the rural and urban women believed that the use of birth control pills would decline libido in women, respectively. Moreover, more than 80% of the women in Shiraz city and rural areas thought that the use of birth control pills could cause skin blemishes, obesity, and neurasthenia. In addition,

Table 4. Women's perceptions about contraceptives

Shiraz city*	Answer (%)	Rural areas*	Answer (%)	Chi-square value	P-value
Use of contraception is contrary to the religious orders					
Yes	10.0	Yes	13.0		
No	90.0	No	87.0	2.33	0.312
Total	100	Total	100		
Use of contraceptives leads to sterilization					
Yes	20.6	Yes	43.7		
No	79.4	No	56.3	50.7	0.000
Total	100	Total	100		
Pills create hair on the body					
Yes	68.9	Yes	61.1		
No	30.2	No	38.9	63.3	0.000
Total	100	Total	100		
Use of birth control pills declines libido in women					
Yes	26.4	Yes	34.8		
No	73.6	No	65.2	26.7	0.000
Total	100	Total	100		
Use of birth control pills can cause skin blemishes					
Yes	89.5	Yes	84.6		
No	10.5	No	15.4	6.62	0.005
Total	100	Total	100		
Use of birth control pills can cause obesity					
Yes	85.1	Yes	80.4		
No	14.9	No	19.6	23.4	0.006
Total	100	Total	100		
Use of birth control pills can lead to neurasthenia					
Yes	81.8	Yes	87.4		
No	18.2	No	12.6	9.89	0.007
Total	100	Total	100		

the results of the Chi-square test revealed a significant association between the residential place and women's perceptions about different side effects of contraceptives (P<0.05).

Table 5 summarizes and compares the respondents' knowledge of contraceptive methods in Shiraz city and rural areas. According to the results, 81.5% and 60% of the urban and rural women knew that the females might become pregnant during their first sexual intercourse, respectively. In addition, a considerable percentage of the women both in Shiraz city and rural areas had enough information about male condom and vasectomy.

The contraceptive pill was the most popular modern method among the women in Shiraz County. However, only 59.0% and 74.1% of the women in Shiraz city and rural areas knew that the concomitant use of some drugs like antibiotics could reduce the effect of birth control pills, respectively. This finding can be considered as one of the reasons of this method failure.

Furthermore, regarding the use of IUD, only 53.0% and 43.1% of the women in Shiraz city and rural areas know that another contraception method could be used up to one month after the IUD insertion, respectively. Finally, 45.0% and 60% of the urban and rural women believed that the chance of pregnancy during menstruation was zero, respectively. Furthermore, the results of the Chi-square test demonstrated that there was a significant sociation between the residential place and women's knowledge about contraceptives (P<0.05).

Based on the results of the logistic regression, six variables had significant influence on contraceptive usage (Table 6). The results of the study were analyzed in terms of odds ratio with a 95% confidence interval. Various tools were utilized to

Table 5. Respondents' knowledge about contraceptives

Shiraz city*	Answer (%)	Rural areas*	Answer (%)	Chi-square value	P-value
During the first sexual intercourse, women may get pregnant					
Yes	81.5	Yes	60.3		
No	18.5	No	39.7	98.33	0.000
Total	100	Total	100		
Condom is 97% effective, if used correctly					
Yes	68.6	Yes	59.1		
No	31.4	No	40.9	3.52	0.040
Total	100	Total	100		
People of any age can use condom and it does not have special side effects					
Yes	78.9	Yes	75.3		
No	21.1	No	24.7	8.66	0.002
Total	100	Total	100		
Use of condom is effective in preventing sexually transmitted diseases					
Yes	85.8	Yes	64.4		
No	14.2	No	35.6	24.17	0.000
Total	100	Total	100		
Condom cannot be used more than one time					
Yes	85.2	Yes	74.1		
No	14.8	No	25.9	52.08	0.000
Total	100	Total	100		
After vasectomy, the chance of pregnancy is zero					
Yes	62.2	Yes	69.6		
No	37.8	No	30.4	42.49	0.004
Total	100	Total	100		
Vasectomy is a simple surgery and takes less than 20 min					
Yes	74.7	Yes	51.8		
No	25.8	No	48.2	12.76	0.000
Total	100	Total	100		
Vasectomy is much more easy and convenient in comparison to tubectomy					
Yes	75.7	Yes	63.6		
No	24.3	No	36.4	50.9	0.000
Total	100	Total	100		
Concomitant use of some drugs like antibiotics can reduce the effect of birth control pills					
Yes	59.1	Yes	74.1		
No	40.9	No	25.9	12.75	0.000
Total	100	Total	100		
Another contraception can be used until one month after the insertion of intrauterine device					
Yes	53.0	Yes	42.9		
No	47	No	57.1	3.86	0.031
Total	100	Total	100		
The chance of pregnancy during menstruation is zero					
Yes	44.9	Yes	60.3		
No	55.1	No	39.7	68.3	0.000
Total	100	Total	100		

assess the fits of the estimated models, including such goodness of fit tests as the Hosmer and Lemeshow (H-L) test and goodness-of-fit measures (e.g. Cox-Snell R-squared and Nagelkerke R-squared). The results of the H-L goodness-of-fit tests were greater than 0.05 in the model. As a result, the model was well-fitting, and its prediction was not significantly different from the observed values (14).

In order to estimate the percentage of explaining systematic variance for this model, other goodness-of-fit measures were also

Table 6. Predictors of contraceptive usage

Predictors	B	S.E.	Wald	df	Sig	Exp (B)
Couple agreement on contraception method	0.980	0.194	25.6	1	0.000	2.66
Number of actual childbirths	0.275	0.092	5.41	1	0.044	0.760
Woman's authority	0.157	0.068	5.31	1	0.021	0.726
Knowledge about contraception	0.079	0.039	4.04	1	0.044	1.08
Positive attitude about contraception	0.044	0.024	4.02	1	0.000	0.952
Desired number of children	-0.039	0.066	0.084	1	0.045	0.981
Constant	-1.081	1.299	0.69	1	0.405	0.339
Cox and Snell R^2=0.108						
Nagelkerke R^2=0.151						
Hosmer and Lemeshow test; Sig=0.054						

conducted. Both the Cox-Snell R- squared and Nagelkerke R-squared measures generated an explained systematic variance ranging from 10.8% to 15.1%, respectively, for the first model. It can be observed that the agreement of couples on the contraceptive methods (B=0.980, Wald=25.5, P<0.05) was one of the predictors of contraceptive usage. Another predictor was the number of actual birth that had a significant and positive influence on the contraceptive usage (B=0.275, Wald=4.04, P<0.05).

In other words, when the couples get their desired number of children, they are more interested to use contraceptives. Women's authority was another predictor that had a positive relationship with the contraceptive usage (B=0.157, Wald=5.31, P<0.05). Additionally, the knowledge (B=0.082, Wald=4.29, P<0.05) and positive attitude (B=0.049, Wald=4.12, P<0.05) about contraceptives were the predictors of contraceptive usage, respectively. Furthermore, the findings illustrated that the number of desired children had a negative and significant effect on the contraceptive usage (B=-0.035, Wald=0.084, P<0.05).

Discussion

As the findings of the present study indicated, the birth control pills, withdrawal, and male condom were the most popular conceptive methods in Shiraz County. Among the traditional methods, withdrawal was the most prevalent one. Statistically, withdrawal is the most widely used traditional conceptive method around the world as a temporary measure. The Western countries underwent the demographic transition using the withdrawal method and induced abortion as key determining elements (15) as with the Islamic societies (16). The withdrawal method is also thought to play a similar role in fertility-inhibition in the current fertility transition in the Islamic Republic of Iran (17).

In general, withdrawal is entirely dependent upon the male partner. With perfect use, the withdrawal method can be as effective as most hormonal-free barrier methods. According to the previous studies, 4.0% of the females using this method can certainly expect an unintended pregnancy within the first year of use. However, this method has a very high probability of user error with an unintended pregnancy rate of 27.0% in the first year (18). Additionally, it is believed that withdrawal is not an effective method since it does not allow for female reproductive control and is prone to user error (19).

According to the literature, such factors as free procedure, no need for a physician's order, low side effects, no health concerns, lack of trust to other methods, comfortable usage, fear of infertility caused by other contraceptive methods, and the reluctance of husbands to use other methods are the key reasons for choosing this method (20, 21). Regarding the modern contraceptive methods, the birth control pill was the most popular method among the women of Shiraz County. Accordingly, the rate of using the pill in Shiraz County was near to that of the developed countries, including Belgium, France, and Germany (22).

However, in terms of condom, the issue was different. Although condom can play a vital role in decreasing the rate of unplanned pregnancies and sexually transmitted infections, its usage rate in Shiraz County was low even in comparison with some Asian countries. For

example, statistics demonstrated that the total percentages of using condom in Hong Kong and Japan were 46% and 41%, respectively. However, the rate of condom usage was better in the area under investigation, compared to other Middle East countries such as Azerbaijan (2.2%), Qatar (2.9%), and Yemen (0.4%) (22).

The descriptive analysis of the demographic factors revealed that the lowest rate of modern contraceptive usage was related to the women within the age range of 15-19 years. Therefore, the family planning services should pay more attention to this age group. Regarding the ethnicity, there was no difference between various ethnic groups in terms of the contraceptive usage. It can be said that all women, regardless of their ethnic group, are exposed to information about contraceptives through several sources, such as formal education system, family planning service centers, and mass media.

Furthermore, contraceptive devices, such as condom and pill, are equally accessible for all women both in governmental family planning service centers (for free) and private health centers. All these factors can contribute to the low influence of ethnicity on contraceptive usage. As the findings demonstrated, the prevalence of traditional contraceptives among the women with tertiary education was similar to that of the women with elementary education. This is in line with the findings of a study conducted by Erfani in Iran (23).

Furthermore, the women with the highest family income were found to have the highest rate of using traditional contraceptive methods. These findings are not in agreement with the results of Erfani (23) reporting that the probability of withdrawal usage was higher among the poor birth limiters in Turkey. In addition, it is documented that the couples may tend to use non-reliable methods such as natural birth control methods due to the lack of knowledge about the modern contraceptives (24-26).

The findings of this study revealed that a considerable percentage of women did not have enough information about different contraceptive methods even about the most popular ones. In addition, many of the respondents acknowledged that they were worried about the side effects of the modern contraceptive methods. The women's decision about the use, non-use, or discontinuation of contraceptives can be affected by their perceptions of contraceptive risks and benefits (23).

Easterlin (24) also believed that the women's perceptions about the costs of contraceptives may prevent them from using these methods. The psychological costs of fertility regulation through contraceptives include the non-conformity with religious and moral beliefs, social disapprovals and fear of sanctions, the discomfort associated with these methods, fear of health problems and contraceptive side effects, shyness of gynecological examination, anxiety over contraceptive failure, etc.

The results of the logistic regression showed that the possibility of contraceptive usage was higher among the couples who had an agreement on the contraceptive method than those who did not have such an agreement. This finding is similar to those of other studies that found a positive relationship between the couple agreement and contraceptive usage (27, 28). The number of actual births was another predictor of contraceptive usage. In other words, when couples get the number of their desired children, they are more interested to use the contraceptives.

Furthermore, the findings showed that the woman's authority that is linked with their power to make decisions was one of the important variables affecting the contraceptive usage. The demographic transition and modernization process in Iran has changed the position of women both within the family and in society, and the women living in Shiraz County are not the exception (29). Furthermore, it should be mentioned that there is a mutual relationship between the women authority and contraceptive usage. In other words, the woman's authority can influence the contraceptive usage, and the contraceptive usage can positively affect the woman's authority.

As mentioned by Hijazi (30), increasing the use of the modern contraceptive methods would help increase the women's educational and employment opportunities and improve their economic and social status and authority. In addition, the results indicated that the

knowledge and positive attitude about contraceptives were among the strongest predictors of contraceptive usage. The women who were more knowledgeable about the contraceptives and were less worried about their side effects were more likely to use the contraceptives.

These findings are also consistent with those of other studies (2, 31, 32). The number of desired children was another predictor that negatively influenced the contraceptive usage. It means that if women desire to have fewer children, their tendency to use contraception will be higher. Totally, the findings of this study demonstrated that the women's knowledge about the contraceptives, even about the most popular ones such as the pill, was not enough, and that there were rumors about the side effect of some modern contraceptive methods.

In addition, the women living in Shiraz were more worried about the side effects of the modern contraceptive methods than those living in the surrounding rural areas. The couples need sufficient and accurate knowledge for making decision leading to better results. Therefore, the family planning counselors should be aware of the women's educational needs and design the educational programs according to these needs. The reproductive health services should put more attention on the delivery of adequate and accurate information about contraceptives to improve the rate of the modern contraceptive usage among the women. Moreover, they should provide the couples with sufficient information on the possible side effects of each contraceptive method.

The strength of the current study was the comparison of urban and rural women in terms of the contraceptive usage. In addition, by focusing on women's perceptions about contraception, the findings of this study can help the health planners to improve the rate of modern contraceptive usage and reduce the unmet needs among different groups of participants. However, this study was also not without any limitations that may confine the generalization of the findings.

Firstly, the statistical society of this study was limited to Shiraz County, which is located in the southwest of the country. Shiraz County is one of the biggest counties in Iran; nonetheless, Iran is a big country consisting of different regions with various cultural, social, economic, and geographic situations. Regarding this, a comprehensive study is needed to consider all these differences. The second limitation of this study was that the data were collected only from the women.

Given the crucial role of the males in family planning, further studies should be conducted considering both males and females. Another limitation of this study was its method. The method of this study was quantitative, while the results of this study showed that investigating the contraceptive usage by using a mixed method (i.e., both quantitative and qualitative methods) can lead to more in-depth results.

Conclusion

In spite of Iran's success in family planning, the findings of this study demonstrated that the rate of unmet need and usage rate of traditional contraception methods is still relatively high in this country. In addition, there are some rumors and concerns about the modern contraceptive methods. Accordingly, regarding the new population policies, the Iranian policy makers should be aware of the different aspects of family planning programs, particularly those targeting the contraceptive usage.

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Conflicts of Interest

The authors declare no conflict of Interest.

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