

Comparative Study of Reproductive Behaviors in Two Ethnicities of Fars and Turkmen in North Khorasan, Iran

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ABSTRACT

Background & aim: Cohesion and sense of ethnicity belonging can be effective in shaping reproductive behaviors. The aim of this study was to compare the reproductive behaviors in two ethnicities of Fars and Turkmen in North Khorasan, Iran.

Methods: This cross-sectional study was performed on 406 Fars and Turkmen women using a self-structured reproductive behavior questionnaire between April and September 2017. Content validity and reliability of the tool was confirmed with Cronbach's alpha of 0.75. Data was collected on a self-report basis and analyzed using SPSS software (version 21) and descriptive and analytical indices.

Results: Reproductive behaviors were significantly different between the two groups in terms of number of children ($P=0.001$), the timing of the first childbirth ($P=0.043$), interval between the first and second pregnancy ($P=0.002$), desire to re-childbearing ($P=0.002$), number of desired children ($P=0.025$), current method of contraception and decision to continue or terminate unwanted pregnancies ($P=0.074$). General linear test showed that with the introduction of demographic variables to measure the effect of the number of children in the analysis, the effect of ethnicity on the number of children was removed, but the variables of maternal age ($P=0.001$), husband's age ($P=0.001$), education of woman and husband ($P=0.001$) and the woman's job ($P=0.001$) remained as effective variables on the number of children.

Conclusion: Today, the value of childbearing has changed more than other family values. In order to achieve the targets of population policies, population policy-making must be based on economic, social, cultural and demographic realities of the societies.

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Introduction

Demographic transition and changes in the world show that low fertility is not a specific feature of rich western societies and is a global phenomenon (1-3). Today, in addition to biomedical issues, fertility is affected by social and cultural issues that lead to differential fertility in societies which are characterized by differences in the number of children,

differences in the couples' insights and awareness about childbearing (4-6). Among the factors influencing differential fertility in societies are religious differences between ethnic groups and the role of religion and religious doctrines (4, 6-8).

In the hypothesis of features and characteristics, the differences in fertility

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patterns are explained based on the differences in the economic and social characteristics of people with different religious orientations. In this approach, the role of religion on fertility is ineffective, but it is the economic and social characteristics of religious groups that lead to fertility changes and in a way the effect of religion on fertility in this approach is false. In the hypothesis of minority group, the minority group chooses more or less childbearing to leave the minority, and in the special theology hypothesis, those religious groups that have teachings on reproductive behavior such as abortion being forbidden and no use of contraceptive methods experience different fertility compared to other groups (9) and this is due to the link between religion and fertility behaviors (10).

Numerous studies have reported that the effect of religion on fertility depends on the specific characteristics and ideology hypothesis of Gold Schneider, and showed the role of social factors and the rational choice of individuals in this regard (14-14). There is a direct correlation between religious beliefs and the tendency to fertility (15). However, in the study of Kalantari in Tabriz, among the factors affecting childbearing, religious orientation has the highest impact on fertility behavior (13). The study of national and provincial trends of fertility shows that a special geographical pattern dominates fertility in Iran. So that the provinces of the border areas of the country have higher fertility compared to the provinces located in the central part of Iran, especially the provinces close to the capital, and in the border areas of Iran, the fertility of Sunni women is higher than Shiite women (6, 16).

Although the study by Abbasi (2006) showed convergence in the reproductive behavior of Kurdish and Turkish ethnic groups, however, ethnicity can affect women's reproductive behaviors, so that Baluch, Lor, Arab and Kurdish ethnic groups had high fertility, Fars and Turk ethnics had average fertility level and Mazandaran and Gilak experienced the lowest fertility level (1). Since reproductive behaviors are very important in reproductive health and consequently women's health, and Iran is a multi-ethnic, multi-religious society and has long been the habitat of different ethnic and

religious minorities (6,15) and differences are evident in the reproductive behaviors of different ethnic groups and religions (17) and since North Khorasan has the highest ethnic diversity in the provinces of Iran due to the high potential of this province regarding to ethnic and religious diversity, which are two important and influential factors on fertility (18), so that cohesion and sense of ethnic belonging on the one hand and religious differences and the role of religion and religious doctrines on the other hand are effective in shaping reproductive behaviors (16). Therefore, this study was performed to compare the reproductive behaviors of Fars and Turkmen ethnic groups in North Khorasan, Iran.

Materials and Methods

This study is part of a large mixed method study focused on the effect of religion on the reproductive behaviors of Fars and Turkmen ethnic groups in North Khorasan, Iran, under ethical code of IR. SBM U.P HAR MAC Y.RE C. 1398.207, issued by Shahid Beheshti University of Medical Sciences, Tehran, Iran, which was performed on married women of childbearing age (15-49 years old) between April and September 2017. At 95% confidence level and test power 80% and according to the correlation coefficient between the main variables of the last study conducted on reproductive behaviors in 2015 by Behmanesh (4), the sample size of 200 people was calculated for each religious ethnic group, and a total of 406 people were considered.

The method of self-structured questionnaire developing was deductive through reviewing the texts and combining the questions of the questionnaires related to reproductive behaviors including the Reproductive Changes Questionnaire in Iran (1), Behmanesh Reproductive Behavior Questionnaire (4) and Women's Reproduction Questionnaire 2010 (18). Face validity was reviewed and confirmed by 20 women and content validity was reviewed and confirmed by 20 experts from different academic fields and the fields related to reproductive health. The reliability of the tools was confirmed with Cronbach's alpha 0.75.

To collect data, the researchers obtained permission and attended the health centers or clinics, and informed consent was obtained from

all eligible women (willingness to voluntarily participate in the study and not to develop a specific disease or mental disability which cannot answer the questions). The relevant questionnaire was completed on a self-report basis or through interview. Individuals and families were reassured about the confidentiality of information (the researchers who were fluent in local languages were used to help how to complete the questionnaire).

Data were analyzed using SPSS21 software, and descriptive and analytical statistics, independent t-test, Chi-square test and general linear model test. $P < 0.005$ was considered statistically significant.

Results

Women from two ethnic groups of Fars ($n=209$) and Turkmen ($n=197$) participated in this study.

Table 1. Frequency distribution of demographic variables in Fars and Turkmen groups

Variable	Fars Mean±SD	Turkmen Mean±SD	P-value*
Woman's age (year)	31.04(7.8)	29.6(7.03)	<0.001
Husband's age (year)	37.47(11.8)	32.04(8.26)	<0.001
Age of marriage (year)	20.33(4.2)	19.32(7.3)	<0.001
Duration of marriage (year)	11. (8.07)	10.2(8.03)	<0.001
Number of unwanted pregnancies (N)	1.2(0.97)	1.7(0.46)	<0.001
* independent-samples t-test			
Variable	Fars N (%)	Turkmen N (%)	P-value*
Weman's education			
Illiterate	5(2.4)	42(21.6)	0.001
Elementary	9(4.1)	98(49.7)	
High school	13(6.2)	20(10.2)	
Diploma	62(29.3)	26(13.4)	
College	120(58)	10(5.1)	
Total	209(100)	197(100)	
Weman's job			
Housewife	119(57)	128(62.2)	0.007
Employed	90(43)	69(37.8)	
Total	209(100)	197(100)	
Husbands' education			
Illiterate	6(2.9)	21(10.7)	0.001
Elementary	10(4.8)	58(29.4)	
High school	20(9.9)	41(21)	
Diploma	69(33.1)	56(28.5)	
College	104(50.4)	21(10.2)	
Total	209(100)	197(100)	
Husbands' job			
Employee	112(53.5)	12(6)	0.001
Free	96(46.5)	185(93)	
Total	209(100)	197(100)	
Economic status			
Less than enough	44(21.1)	76(38.6)	0.001
Enough	156(74.6)	114(57.9)	
More than enough	9(4.3)	7(3.5)	
Total	209(100)	197(100)	
Residence place			
City	193(92.4)	67(34)	0.001
Village	16(7.6)	130(66)	
Total	209(100)	197(100)	

* Chi-Square Test

Comparison of mean age of woman's age and husband's age showed that Turkmen ethnicity was younger than Fars ethnicity in terms of woman's age and husband's age and had a statistically significant difference ($P < 0.001$). In terms of education level, the highest education of Fars ethnicity was university (58%) and the highest education of Turkmen ethnicity was elementary (49.7%), which had a significant difference; the same situation was observed for

the education level of husbands in the two groups ($p=0.001$).

In terms of residence place, Fars ethnicity with the highest frequency (92.4%) lived in the city and Turkmen women with the highest frequency (66%) lived in the village ($p=0.001$). Other information about the demographic characteristics and marriage in the two ethnic groups is given below (Table 1).

Table 2. Comparison of reproductive behaviors in Fars and Turkmen groups

Variable	Fars Mean (SD)	Turkmen Mean (SD)	P-value*
Number of children	3.05 (1.1)	4.13(1.3)	<0.001
Best time of birth interval between the first and second pregnancy (year)	2.03(0.99)	1.6(1.05)	0.043
	5.18(3.61)	2.5(1.63)	0.002
* independent-samples t-test			
Variable	Fars N (%)	Turkmen N (%)	P-value*
tendency for re-childbearing			
Yes	82(39.2)	110(55.8)	0.002
No	122(58.2)	68(34.5)	
Don't know	5(2.3)	19(9.2)	
Total	209(100)	197(100)	
Current number of children			
Any	15(7.2)	18(9.2)	0.025
One child	24(11.7)	7(3.6)	
Two children	114(54.1)	62(31.1)	
Three children	41(19.6)	53(27.1)	
Four children and more	15(7.2)	57(29.1)	
Total	209(100)	197(100)	
Current contraceptive method			
Pill	52(26.8)	51(26.1)	<0.001
Condom	28(13.4)	62(31.8)	
IUD	34(16.3)	18(6.2)	
Interrupted sexual intercourse	3(1.4)	14(7.2)	
Permanent	17(8.2)	12(6.2)	
More than one method	47(22.5)	34(17.4)	
No one	8(3.8)	2(0.5)	
Total	209(100)	197(100)	
Deciding to continue or terminate an unwanted pregnancy			
Abortion	18(26.8)	3(1.5)	0.074
I don't care to abort	6(2.9)	1(0.5)	
My husband's view	35(16.8)	23(11.7)	
I continue to pregnancy	149(71.7)	168(86.2)	
Total	209(100)	197(100)	

*Chi-Square Test

Regarding the number of children, the results of independent t-test showed that Turkmen women have significantly more children than Fars group ($P < 0.001$). The best time of birth of the first child ($p = 0.002$) and the interval between the first and second pregnancy ($p = 0.043$) were higher in Fars ethnicity Turkmen ethnicity. There was a statistically significant difference between the two ethnic groups in the desired number of children ($p = 0.025$) and tendency for re-childbearing ($p = 0.002$).

Regarding the use of contraceptive methods, the frequency of using contraceptive methods in Fars ethnicity included pill, condom, IUD, ampoule, permanent and natural methods, respectively. In Turkmen ethnicity, the frequency of using contraceptives were condom, pill, IUD, intermittent, permanent, and ampoule, respectively ($p < 0.001$). In the case of failure of contraceptive methods, Fars ethnicity (8.6%) and Turkmen (1.5%) selected abortion option ($p = 0.074$) (Table 2).

Table 3. The relationship between the number of children and the variables under study

Variable	B	t	p
Ethnicity	-0.004	-0.177	0.859
Woman's age	0.048	7.573	0.001
Husband's age	0.039	6.095	0.002
Woman's education	-0.144	-7.598	0.001
Husband's education	-0.125	-7.458	0.001
Woman's job	0.098	-4.039	<0.001
Husband's job	0.090	0.85	0.547
Place of residence	0.096	0.847	0.397
Age of marriage	0.036	7.098	0.061
Duration of marriage	0.068	0.35	0.125
Number of unwanted pregnancies	0.033	3/947	0.345
Economic status	0.085	2/127	0.758

One of the important indicators of reproductive behavior is the number of children. The general linear model was used to investigate the exact effect of ethnicity variable on the number of children. So that with the entry of variables which had significant differences between the two ethnicities (woman and husband's age, woman and husband's education, woman and husband's job, income, place of residence, economic status, age of marriage, time interval of the date of marriage and unwanted pregnancy), general linear test showed that with the entry of demographic variables to measure the effect of the number of children in the analysis, the effect of ethnicity on the number of children was removed, but the variables of mother's age ($p=0.001$), husband's age ($p=0.001$), woman and husband's education ($p=0.001$) and woman and husband's job ($p=0.001$) remained as effective variables on the number of children (Table 3).

Discussion

The findings showed that although the reproductive behaviors were different between

the two ethnic groups of Fars and Turkmen in North Khorasan, but in the final analysis, the effect of ethnicity on reproductive behavior is removed and ethnicity acts as a secondary element in explaining childbearing patterns. Regarding the patterns of childbearing in different religions and ethnicities, the results of studies are almost consistent. So that in the present study in the two groups, the highest tendency to childbearing is toward two children, the above results are in line with the results of the study by Foroutan (2014) in the two communities of Gonbad and North Khorasan. In his study, as in the results of the present study, in both groups, the highest tendency to childbearing is focused on two children, and the pattern of single child and no child is not acceptable in these two societies. Although he reported in his study that the pattern of having more than four children in the Shiite group of Gonbad is more than same religious group in North Khorasan, but in the present study, the pattern of four or more children in the Sunni group of North Khorasan was more than same

religious group in Gonbad. Perhaps the tendency to have many children is more influenced by their place of residence and social socialization than by their religious affiliation. As reported in two studies, religion acts as a secondary element in explaining patterns of childbearing (19).

The study by Abbasi et al. (2003) also showed the difference in fertility tendencies in different provinces and Shiite and Sunni Muslim ethnic groups in Iran. Thus, the majority of participants in their study were residents of the border areas of Iran and Sunni Muslims and the fertility rate was higher in Sunni religious groups (1); while the study of Behmanesh (2015) and Soroush (2011) in Shiraz have shown the greatest tendency to have one child. Although the religion has not been considered in their study, they have reported the impact of place of residence and socialization (20).

Fertility differences in the two ethnic groups of North Khorasan can be mentioned in several issues. The first reason may be considered in marriage patterns as a precondition for childbearing. So that the age of marriage was lower in Turkmen men and women in the present study. The average age of marriage in Fars women is 20.33 years and in Turkmen women is 19.3 years which is much lower than the average age of marriage in the whole society of Iran. According to the latest published statistics on the age of marriage in Iran, now the average age of marriage for men is 27 years and women 25 years. Marriage age plays an important role in female fertility. Since the length of a woman's fertility period is identified from 15 to 49 years, therefore, lower age of marriage increases the duration of childbearing, which in turn increases the chances of having children (21).

Perhaps the low age of marriage in North Khorasan is one of the reasons wthat, despite concerns about the declining fertility rate in many parts of the country to less than the replacement level in recent years, the population growth situation in North Khorasan, unlike many provinces of the country, is acceptable. According to the statistics, North Khorasan province has the annual growth rate of 90,867,727 people and has a household dimension of 3.6 and the average annual growth is 1.35%, which is slightly higher than the

average population growth of the country which is 1.29 (19). The World Fertility Survey (WFS) in 40 developing countries showed that maternal age at marriage and maternal age at birth of the first child, the interval between consecutive births (distance) are of the main and important factors on the total number of children which a woman gives birth (25).

Low age of marriage and its positive effect on fertility as prerequisite patterns of childbearing in North Khorasan was confirmed by Foroutan (2016). So that in his study on childbearing tendencies in Bojnourd and Gonbad Kavous, it is shown that although the average age of marriage in both communities is 18 to 24 years, but evaluation of marriage patterns by religious groups showed that the Sunni population are more tendency to the marriage of girls at a younger age compared to Shiite population, and this pattern is more evident in the city of Bojnourd than Gonbad Kavous (22).

Another issue in the fertility differences of the religious-ethnic group of the present study depends on the level of education. In the present study, the highest level of education in men and women was related to the Fars ethnicity and the lowest level of education was related to the Turkmen ethnicity. Numerous studies, including Eider (2011), Hosseinzadeh (2009), Wolfgang (2010), Grispan (2009), and Edo Tol (2012) have pointed to the inverse relationship between childbearing and increased level of education. So that by increasing the women's level of education and increasing their knowledge about the issues of society and at the same time by replacing traditional roles with modern roles, educated women have a more appropriate social status and in such situation, they try to improve their position by reducing childbearing (8, 23-26).

Low level of education and higher fertility of the Sunni Turkmen group in North Khorasan can be justified based on this approach. Another factor determining the differences in fertility in the two religious ethnic groups of North Khorasan depends on the attitude of Shiite and Sunni groups toward marriage, as the most important priority for women's lives, so that in traditional communities and rural areas with indigenous culture, high fertility has special value in popular belief (27), and in the Turkmen

ethnic religious group of the present study that the norms of traditional society are dominant, the priority of a woman's roles indirectly include wife, motherhood and having high fertility and even purposeful childbearing and boy child preference. As a rule, to achieve the above goals, marriage is the most important priority for women in this society. This finding is consistent with the results of the study by Foroutan in North Khorasan. So that the study by Foroutan on the status of education and its impact on childbearing in the two religious communities of North Khorasan and Gonbad Kavous reported that in North Khorasan, the Sunni population pays more attention to marriage as the most important priority for women's lives than the Shiite population. While in Gonbad Kavous population, there is opposite situation and they consider education as the most important priority in women's lives, which shows the difference in the attitude of each of these religious groups towards marriage. Of course, this difference and attitude gap is more prominent and significant in the Sunni population of North Khorasan (22). In the Soroush's study, there is a negative relationship between all aspects of religiosity and the number of years of education (28).

Another factor in fertility differences is their traditional texture and residence place. There is a statistically significant difference between the Turkmen and other ethnic groups in this study. The Turkmen of North Khorasan are the ethnic-religious minority and because of the factors such as cultural conditions, social environment and early marriage, and weak biological foundations are often placed in the second and third classes of the society, so most of them live in villages. Perhaps one of the reasons for the high fertility and low level of education depends on their place of residence (29). The relationship between household residence and high fertility has been shown in the studies of Shahbazian (2013), Hosseinzadeh (2009), Mansourian and Khoshnevis (2009), Zang and Xiangyang (2008) (8, 14, 30, 31).

In the study of Shahbazian, in line with the results of the present study, the mean number of deliveries more than third is higher in women living in rural areas (31). Although the studies of Paydarfar (2010) and Hajian (2008) did not

show a relationship between rural residence and high fertility (32, 33). The studies of Aref and Hosseinzadeh showed a negative correlation between the degree of urbanization and education level of women with fertility (8, 34). Another factor in fertility differences in the present study is differences in contraceptive methods. So that in Fars ethnic group, the frequency of using contraceptive methods was pill, condom, IUD and ampoule, permanent and natural methods, respectively, and in the Turkmen ethnic group, the frequency of using contraceptives was condom, pill, IUD, interrupted, permanent, and ampoules, respectively. The lowest frequency of use of permanent methods and long methods has been reported in the Turkmen ethnic group.

The four leaders of Sunni jurisprudence, although they consider dismissal or permanent methods of contraception permissible, but say that hatred has a purgatory and it is better to avoid it (35). The above factor may be one of the main components in using less contraceptive methods, especially permanent methods in the Sunni group. Another factor influencing the use of contraceptive methods is the level of education. So the studies of Afkhamzadeh (2012) and Agram Well (1999) reported a significant relationship between couples' education and the type of contraceptive method (36, 37). In the present study, despite the high number of unwanted pregnancies and spontaneous abortions in Turkmen group, they have the least desire to abortion in such situation. Destiny and the prevalence of such beliefs that "God sends blessings to a house with many children, whoever gives teeth, gives bread, the birth of a child depends on God's will and providence" is associated with increasing women's fertility ideals and is more common in Turkmen women of the present study.

The study of Darahki (2014) and Hosseini (2013) showed a direct and significant relationship between destiny and reproductive behavior. Their study showed that the intensity of these beliefs is much stronger in unemployed women than working women (2, 38). Their results confirm that the findings of the present studies are in line with similar studies. Although the results showed that the fertility tendency of religious-ethnic groups in North Khorasan are

influenced by a set of economic and social conditions (such as illiteracy, ruralization, barriers to access methods of birth control, traditional lifestyle and purposeful sexual preference) rather their religious affiliation. These results were confirmed by the study of Foroutan (2014) and Mahmoudiani (2011) (3, 22).

In the study of Foroutan, in both Gonbad and North Khorasan societies, Phi Kramer index confirms no significant relationship between the religious affiliations of the two Shiite and Sunni groups and their fertility tendencies. According to the results of Mahmoud's study, although religion has a direct effect on fertility, ie the level of fertility in Sunni cities is higher than Shiite cities, but this difference is not significant and its impact factor is 0.12, which is very small and individual variables such as education level, employment status and place of residence have the greatest impact on fertility (3). The results of multivariate analyzes of Soroush's study (2011) also show that religiosity has a small share (only 1.4% of variance) in determining the number of children, while education explains more than 40% of the variance related to the number of children (28).

The results of the studies by Abbasi Shavazi (2006) and Hosseini (2011) are also consistent with the above problem, but multivariate analyzes of Mahmoudian's study (2010) and Saeedi Madani's study (2016) showed that by controlling all variables, the role of religion in reproductive behavior remains significant. However, a combination of cultural, socio-economic and demographic characteristics has a more decisive role in explaining the fertility of Sunni women compared to Shiite women (3, 15). According to the results of the present study and similar studies, the above factors play a much more important role in determining fertility behaviors of religious-ethnic groups, and religious affiliations act as a secondary element in explaining patterns of childbearing.

Conclusion

Studies have shown that socio-economic structure, social characteristics and intermediate factors are more effective factors in determining the reproductive behaviors, and also the views and theoretical patterns and consequently the reproductive behaviors of

women and families have undergone fundamental changes; therefore according to population programs in order to reach an appropriate solution in population policies, it is necessary to identify the factors affecting women's behaviors, ideals, and desires to have children, and consider them in population policies. Adoption of any practical plan in the field of fertility must be based on the economic, social, cultural and demographic realities of the societies.

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Conflicts of interest

Authors declared no conflicts of interest.

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