

**Continuing Use of Withdrawal
as a Contraceptive Method in Iran**

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Abstract

Since its establishment in 1989, the family planning program of Iran has taken great strides in raising contraceptive prevalence rate and reducing fertility. The most recent national survey conducted in 2000 indicated a contraceptive prevalence rate of 74 and a TFR of 2.0 for the country as whole. This paper reviews the latest data on the extent of use of withdrawal by Iranian couples and identifies the social and demographic characteristics of women relying on this method. It is shown that women using this traditional method are more likely to be urban, come from the more developed provinces, and have higher levels of education. The experience of unintended pregnancy among withdrawal user is not more than the women who use modern contraceptives such as the pill.

Key Words: Iran, Family Planning, Contraceptive Use, Withdrawal,

Résumé

Depuis sa création en 1989, le programme de planification familiale en Iran a réussi à mettre en hausse la prévalence des contraceptifs et à réduire le taux de fécondité. La dernière enquête nationale conduite en l'an 2000 indique un taux de prévalence des contraceptifs à 74 et un ISF (indice synthétique de fécondité) de 2.0 dans tout le pays. Cet article révisé les dernières données sur l'étendue de la méthode du retrait chez les couples iraniens et identifie les caractéristiques sociales et démographiques des femmes qui se fient à cette méthode. Il est démontré que les femmes qui se servent de cette méthode traditionnelle ont tendance à être urbaines, issues de provinces plus développées et ont un niveau d'étude plutôt élevé. Les incidences de grossesses non désirées chez les femmes qui se servent de la méthode du retrait ne sont pas plus élevées que pour celles qui se servent de méthodes contraceptives plus modernes telles que la pilule.

Mots-clés: Iran, Family Planning, Contraceptive Use, Withdrawal,

Introduction

Withdrawal or coitus interruptus is one of the oldest methods of contraception which would seem to have been known and used by couples in many societies throughout the recorded history of mankind (Himes, 1936; Santow, 1993, 1995; Rogow and Horowitz, 1995). It has well recorded history in the Islamic world where discussions of the use of this method (referred to as *azl*) can be traced back to the time of Prophet Mohammad (Musallam, 1983; Omran, 1992). In addition to repeated references to its wide use by Islamic jurists and physicians writing in Arabic, philosophical and medical texts written by Iranian physicians in Persian bear witness to the widespread practice of the method in this part of the Islamic world (Elgood, 1949). In fact, AlGhazali's famous book Alchemy of Happiness "Kimyaye Saadat" includes one of the most detailed and best argued discussions on contraception in general and coitus interruptus ("*azl*") in particular written by classic Islamic thinkers on the subject (Mehryar, 2005).

The tradition and use of withdrawal goes beyond the Islamic world. The most recent data presented in Table 1 shows the prevalence rate of this method in a large number of countries. There are a number of countries including Iran in the West and Central Asia that have 10 percent and higher withdrawal users among married women in the age groups 15-49. Compared with the world estimates of 3 percent of married women in age group 15-19, Iran has a high rate of withdrawal users.

In Iran until mid 1950s when population and family planning became matters of national concern and public discourse, the method would seem to have been practiced widely by couples. In 1967 the first national family planning program was established. By 1978 when the Islamic revolution succeeded, the program had managed to cover just over a third (37 percent) of eligible couples, most of them living in urban areas (Aghajanian and Mehryar, 1999). The local surveys carried out in early 1970s (Gillespie, et al, 1972) showed that almost one third of couples using contraceptives were relying on withdrawal. During the first decade after the revolution (1979-1988) the family planning program was suspended and government policy stressed early marriage and reproduction as basic Islamic values. Nevertheless, the Ministry of Health continued to offer such contraceptives as pills, IUDs, and condoms through its Maternal and Child Health clinics. In addition motivated couples were able to

obtain contraceptives from the private health sector. Condoms were in fact easily available through drug stores or even major supermarkets. These services were however far from sufficient to meet the needs of all couples. Thus we speculate that coitus interruptus must have played a major role during this

period. The aim of this descriptive paper is to review the available data on the use of withdrawal as a contraceptive method in Iran and to document the share of this method in the contraceptive mix of Iranian couples.

Table 1
Countries with 10 Percent Contraceptive or High Withdrawal Rate
for Selected Countries: 2005

Country	Percent
Slovakia	32.1
Armenia	31.9
Albania	31.8
Azerbaijan	30.6
Romania	28.7
Bosnia-Herzegovina	26.9
Bahrain	26.3
Turkey	24.4
Ukraine	19.5
Italy	17.5
Iran	17.4
Mauritius	16.1
Japan	15.3
Moldova	13.9
Bulgaria	12.8
Lebanon	11.8
Serbia and Montenegro	11.3
Poland	11.1
Georgia	10.5
World weighted average	3.0

Method and Material

In 1976, the Statistical Center of Iran conducted the Iran Fertility Survey as part of the World Fertility Survey Program (Aghajanian, Gross, and Lewis, 1993). The tabulations from this survey provided the 1976 data used in this paper. From 1989 to 1997, the Ministry of Health and Medical education conducted KAP surveys using a large urban and rural sample of ever married women. The reported sample size for these surveys were 10,000 rural and 10,000 urban households in each year. The results from these surveys were presented annually in July when the department participated in World Population Day. We had access to published tables from these data for various years. These published results only show the rates but not the numbrs based on which the rates were calculated. The most recent data are from 2000 Demographic and Health Survey of Iran. Designed and implemented by Iranian experts, the Demographic and Health Survey of Iran (DHSI-2000) is the first effort to apply a locally adapted version of the internationally known DHS instrument to a large sample of households representing the urban and rural population of all provinces of the country. The DHSI-2000 is probably unique for its entire reliance on national expertise and advice in survey design, implementation, and coverage of a huge sample. A total of 114,000 households with a total population of about 475,000 were chosen in a way that it is possible to carry out separate analysis for the urban and rural areas of each of the 28 provinces of Iran as well as the Tehran Metropolitan Area. The financial support of the project by the UNFPA and UNICEF and their participation in the various stages of the survey contributed significantly to the quality of the project implementaton.

The DHSI-2000 was developed over a three year period. The Population and Family Health Department of the Ministry of Health and Medical Education (MOHME) was assigned the overall responsibility for the design and implementation of the survey. To ensure the technical quality of the survey and make its results acceptable to academic researchers as well as specialized agencies, a steering committee consisting of academic demographers, staff members from the Statistical Center of Iran as well as staff from the Civil Registration Organization, and researchers with long tracks of research and teaching on population and reproductive health, oversaw implementation of the project at various stages.

The sampling frame for the survey was based on the 1996 census. The availability of data for provincial level estimation of various indicators was carefully considered in the sampling process. The sample was designed to select 400 primary sampling units (200 urban and 200 rural) from each of the 28 provinces of the country. In Tehran province, 400 primary sampling units were selected from the urban and rural areas outside the Tehran Metropolitan Area.

Tehran Metropolitan Area was treated as a separate urban unit represented by an independently selected sample of 2000 households. The actual sample size achieved included 113,957 households (57,968 urban and 55,989 rural). The response rate was 97.5 percent in urban areas and 99.0 percent in rural areas. In addition to the heads of households (or another adult member of the household) who provided the household level information, a total of 91,604 ever married women of reproductive age were interviewed (46,916 urban and 44,688 rural). These women provided data on reproductive health and other issues concerning women and young children. For this paper some data come from the published tables of this survey (MOHME, 2003). We also requested some tabulations from the microdata file, for this paper.

Findings

Trends in the prevalence rate of withdrawal as a contraceptive method in Iran are reported in Table 2. The table shows the contraceptive prevalence rate measured as the percent of women who were not pregnant and used contraceptive at the time of survey. According to the Iran Fertility Survey, by 1976, that is a decade after the establishments of the pre-Revolutionary family planning program in 1967, only about a third of the eligible married couples were using any contraceptive. The rate was much higher (54 percent) in urban areas than the rural (20 percent)—at the time rural population counted for over half of the population of Iran. Close to one-fifth (17.3 percent) of urban and three percent of rural couples reported using withdrawal as their means of pregnancy prevention. It can be speculated that the high rate of withdrawal among urban population has been the mechanism behind observed difference between fertility level in urban and rural areas when public family planning programs did not existed.

The KAP survey conducted by the MOHME in 1989, shortly before the revival of the family planning program, revealed a surprisingly high rate of withdrawal as a method of contraceptive among urban and rural couples. The survey revealed a significant rise in the proportion of couples relying on withdrawal method during the period 1976 to 1989. The rise in use of this contraceptive method was from 17.3 percent to 27 percent in urban areas and from 3.1 percent to 8 percent in rural areas. The increasing trend in the rate of withdrawal slowed down as official national family planning intensified and choice of contraceptive methods expanded during 1990s. However, by 2000 the prevalence rate of withdrawal among women currently married, 15 to 49 years old, was 21 percent in urban areas and 10 percent in rural areas.

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Table 2. Contraceptive Prevalence Rate Among Currently Married Women in Iran, 1976-2000

Year	Urban		Rural		Total	
	All Methods	Withdrawal	All Methods	Withdrawal	All Methods	Withdrawal
1976	53.9	17.3	19.9	3.1	37	13
1989	64.1	27.1	31.1	8.1	49	19
1992	74.1	27.1	51.5	10.4	64.6	20
1994	77.9	25.2	59.3	10.2	72.3	28.1
1996	80.7	24.2	70.1	9.6	74.2	17.5
2000	77.4	21.7	67.2	9.7	73.8	17.8
		Number		Number		Number
		2322		1926		4248
		4908		4067		8975
		NA		NA		NA
		NA		NA		NA
		NA		NA		NA
		33964		28204		NA

Source: Aghajanian, 1995 (for 1976 data); Ministry of Health and Medical Education, 1989, 1994, 1992, 1996, 2000
 NA: The base numbers for currently married women and not pregnant were not available for 1992 through 1996.
 The original sample for each KAP survey included 10,000 households in rural and 10,000 households in urban areas.

The role of withdrawal as a method of contraceptive is much more impressive when considered in the context of contraceptive mix. Table 3 shows the share of withdrawal in contraceptive mix in rural and urban Iran. According to the 2000 Survey, 28 percent of the contraceptive users in urban areas reported withdrawal as their method of current use. In rural areas the rate was about 15 percent. In looking at the trend in the mix of contraceptive use it is obvious that whenever the government sponsored family planning program and distribution of modern contraceptives were weak, the share of withdrawal in the contraceptive mix has been increasing. For example, during the 1980s over two fifths (42.3 percent) of urban couples using any method were relying on withdrawal. These figures might be taken as an indication of the high demand for family planning and the important role played by withdrawal during the period when other methods were not readily available.

The data presented in Tables 2 and 3 indicate that withdrawal method is definitely an urban method. As expected a high correlation between the percent of urban population in a province and the percent of withdrawal users among couples using contraceptives, was observed ($r = .90$, $df = 16$, $p < .01$). Similarly the higher the percentage of women with higher education, the higher the rate of withdraw users in the province ($r = .60$, $df = 16$, $p < .01$). A number of other provincial development indicators such as female literacy rate, infant mortality, and human development index showed the same strong and significant correlation with withdrawal rate across the provinces—correlations are not shown here to avoid redundancy.

Table 3
Urban and Rural Proportional Distribution
of Contraceptive Withdrawal in Iran: 1976-2000

Year	Urban %	Rural %	Total %
1976	32.1	15.5	35.1
1989	42.3	25.8	38.5
1992	36.4	20.2	31.0
1994	32.3	17.2	38.9
1996	30.0	13.3	23.6
2000	28.0	14.4	24.1

Source: See Table 2.

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Table 4 is based on tabulation of the individual level data from IDHS 2000 and it shows the rate of withdraw users among various groups of married women 15-49 years old in urban and rural areas. The individual level data presented in Table 4 reveals the pattern observed at the macro level. The rate of withdrawal use is higher among the more educated women. The relationship between age of marriage and withdrawal use is positive. The higher the age of marriage is, the higher the rate of using withdrawal. On the other hand older women report a lower rate of using withdrawal.

When the share of withdrawal in the contraceptive mix is as high as the level observed in Iran, a very important concern is the contribution of the method to unwanted pregnancies. To examine this issue we calculated the distribution of women who reported being pregnant at the time of survey, by their contraceptive status at the time of pregnancy. This analysis was only related to the women who said they were using some type of contraceptive when the pregnancy happened. Table 5 shows the distribution of these women by the type of contraceptive they were using.

In urban areas the failure rate of withdrawal is about 2 percent higher than the failure rate for the pill. In rural areas, the failure rate of pill is much higher than the failure rate of withdrawal. Overall these data does not show that in Iran, the failure rate of withdrawal is higher than the failure rate of the pill which is the most popular method of contraception. It seems that couples who use the withdrawal method are very much committed to prevention than the pill users, especially in the rural areas.

Discussion

Despite the historical roots of withdrawal in the Islamic culture, the method does not seem to enjoy wide popularity in contemporary Muslim majority countries of North Africa, Middle East, and Asia. Azerbaijan, Bahrain, Turkey, Iran and Lebanon are the only five out of 26 Muslim majority countries of North Africa and Asia with substantially high withdrawal use rate. The continuing use of withdrawal as one of the main form of traditional contraceptives by a large proportion of Iranian couples is worth attention on several grounds. First, the method is being used despite the easy availability of a wide mix of modern methods offered freely by the national family planning program. A perusal of the evidence on regional and urban-rural variations in withdrawal rate clearly indicate that the continued use of this method is by no

Table 4
Withdrawal Prevalence Rate by Socio-demographic Characteristics
among Currently Married Women who were not Pregnant in Iran: 2000

Variables	Prevalence Rate*			
	Urban	Numbers	Rural	Numbers
Age				
15-19	38.5	1021	25.1	1168
20-24	28.2	4289	17.1	3987
25-29	26.1	6350	14.3	5401
30-34	24.1	6950	11.4	5398
35+	21.7	15340	9.7	12225
Age at Marriage				
19 or less	23.1	23777	13.1	21897
20-24	29.2	8143	14.9	5174
25+	36.1	2044	15.1	1103
Education				
None	11.9	27322	6.9	12402
Some primary	22.5	10909	15.8	10868
Some secondary	28.7	6149	24.2	2863
High School Diploma	34.3	7840	35.5	1640
Some college	35.3	2417	29.1	212
Migration status				
None Migrant	23.9	29217	11.9	28018
Provincial migrants	32.5	1759	21.4	666
Other migrants	23.7	2912	17.7	60
Total number**	33964		28203	

*Prevalence rate is measured by percent of women in each category of the variable, reporting using withdrawal contraceptive.

** Number of women 15-49 who were married and were not pregnant at the time of the interview.

The sum in each variable does not add up to total due to missing cases in the independent variable.

Source: Tabulation from the micro data of IDHS 2000

Table 5
Distribution of Women with Unintended Pregnancy
by Contraceptive in Iran: 2000

Year	Urban	Rural	Total
Pill	36.6	58.1	47.7
Condom	13.3	8.0	10.6
Withdrawal	38.5	21.9	29.9
Other Methods	11.6	12.0	11.8
Number	571	611	1181

Chi-square test statistically significant at .001

Source: Requested tabulation from the micro data of IDHS 2000.

means due to lack of access to information about, and supplies of more modern methods. On the contrary, better educated, urban and more prosperous regions and couples are very much overrepresented among the users of this method. The regional pattern of withdrawal rate, based on provincial data, suggest that cultural differences may be as important as differences in socioeconomic development in determining the use of this method of family planning. In Iran the provinces with the highest withdrawal rates are mainly concentrated in north central areas.

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