

Predictors of Permanent Childlessness Among Married Women in Iran With Emphasis On Household Characteristics (Using Microdata Sample of The 2016 National Census)

Serajeddin Mahmoudiani (✉ serajmahmoudiani@gmail.com)

Shiraz University

Research Article

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Abstract

Background: Dramatic changes in the demographic behaviors of Iranian women have led to declining fertility after the mid-1980s. Childlessness is an important and growing issue and has increasingly become the focus of problem by Iranian population policy makers.

Methods: Research method is secondary data analysis. Using the census micro-data of population and housing in 2016 an attempt was made to investigate the prevalence and predictors of childlessness among the married women aged 40-49. The data related to 85799 married women aged 40-49 were analyzed.

Results: Logistic regression analysis indicated that the probability of Childlessness for the women with university degree, immigrant as well as employed women is more likely than other their counterparts. Also, the findings suggested that the odds of being childless for the women who are living an apartment as well as those who are resident in a personal housing is less likely than counterparts. With increasing household area, the probability of being childless for women decreases.

Conclusion: The government planning and policy making related to reducing the proportion of childlessness should be aimed at improving household circumstances especially in the field of their housing.

Introduction

One key dimension of fertility changes during the century is the change in the proportion childless [1] in the most countries of the world, so that some studies [2-4] have mentioned that the prevalence of childlessness has increased enormously in many of countries. Childlessness is governed both by attitudes as well as demographic determinants. Although individuals with certain socioeconomic characteristics may prefer to remain childless, their reasons for such a behavior goes beyond basic individual demographic variables [5] and we argue that it occurs due to interplay between factors associated with household and individual socioeconomic correlates. Attitudes towards childlessness have varied both between cultures and over time. Women who purposely remained childless were commonly viewed as selfish and socially irresponsible [6]. Generally, childlessness can be considered as a result of infertility, voluntary childlessness, circumstantial childlessness or delayed childbearing also known as temporary childlessness [7]. An important issue in defining childlessness is that many people's perceptions of childlessness as choice or circumstance is complex, subjective and multidimensional [8]. Briefly, there are two major theoretical categories for explanation of the causes of fertility change. The first one is generally known as demographic transition theory which emphasizes the structural or socioeconomic conditions. Meanwhile, an alternative perspective is ideational theory which emphasizes the cultural variables. Based on the above theory and empirical evidence, a socioeconomic theory of fertility is best framed in terms of both structural and individual factors [9]. Educational attainment of women has significant effect on childlessness [1, 6, 10]. A study in Moscow indicated that childlessness

intentions are prevalent among well-educated individuals [7]. Higher educational attainment is associated with a greater acceptance of childlessness among European women [11-13]. Hayford (2013) is showed that the rising proportion of women with a college degree explain a substantial amount of the increase in childless women in the United States [14]. A study in Australian context [15] suggested that women with tertiary education and those women who working in prestigious occupations have the highest rates of childlessness. Gobbi (2011) in his study showed that shocks in the labor market that increase the labor opportunity of mothers can be at the origin of the fluctuations both in childlessness and in average fertility in the United States [16]. A research in Italy [17] found out that the great recession had a negative effect on childlessness as well as educated women have slightly postponed first births during the crisis. Kneale & Joshi, (2008) in their study estimated that about a quarter of 1970 born graduate British women will remain childless and founded out that most striking postponement of childbearing occurring among graduate men and women [18]. Another study in United States [19] indicated that 2.5 percent of women were childless because of poverty and 8.1 percent because of high opportunity cost of childrearing. Based on previous studies [20-22] Special attention is paid to education, place of residence, employment status and geographic mobility as factors correlated to childlessness. There is no evident relation between women's employment status and childlessness in Spain [23]. The result of a study [24] showed that with age, childlessness decreases markedly. Similar results were obtained in a Canadian context [25]. Pals and Waren (2013) have showed that for U.S. women, the main motivation for choosing childlessness has been higher education and economic independence [26].

Women's fertility behavior in Iran has been the focus of considerable demographic attention in recent decades. Significant changes in the demographic behaviors of Iranian women have led to declining fertility and increasing childlessness. The changing fertility rate and some of the reasons for this change have been widely discussed in the demographic literature on Iran. Studies on Iranian women's fertility are pointed out that fertility is declined after mid-1985s [27-33]. Therefore, the supreme leader of Iran outlined general population policies with emphasis on childbearing and achieving fertility higher than replacement level in 2014. Although the fertility model transformation has gained ample attention in Iranian demographic studies, the phenomenon of childlessness has been largely ignored. For these reasons alone the continued investigation in Iran of fertility trends and its various parity outcomes is warranted. In this study we focus on Iran, a country where childlessness is a recent phenomenon, but also characterized by remarkable fertility decline, and severely hit by the economic downturn due to the types of sanctions over recent decade. Despite decline in the Iranian women's fertility, the cultural expectation to bear children has remained strong in Iranian society and motherhood is central to feminine identity. On the other words, the norms and social pressure continue to support childbearing and in opposite childlessness is not a cultural acceptable behavior. Childlessness among Iranian women has not been studied using variables related to household circumstances. Generally, research on childlessness and its determinants is relatively scant in Iran. In this paper, we assess the prevalence and predictors of childlessness among married women aged 40-49.

Data And Method

Research method is secondary data analysis. Data used in this paper were derived from the census micro-data of population and housing in 2016. In general, the statistical center of Iran provides access to 2% of the 2016 census micro-data. The household questionnaire collects data on the characteristics of the household. The census questionnaire relating to household characteristics includes a total of 483385 households and the questionnaire relating to individual characteristics consists of 1579435 individuals. The above two data-sets can be combined with each other by Household ID filed. Given the results of the 2016 census, the statistical population comprises 16082956 married women aged 40-49 and a total of 85799 of them were examined. It should be noted that first of all, the data were checked and the missing data were deleted from the dataset. Childlessness is the dependent variable and age, place of residence, educational status, employment status, migration status as well as current status of studying are the independent variables associated with the women's individual characteristics. Age is an interval variable, Place of residence, employment status, current status of studying as well as migration status are nominal variables with urban/rural, employed/housewife, student/non-student and immigrant/non-immigrant categories, respectively. Also, the type of place, the type of place ownership and household count living in the place are the factors related to the women's household circumstances. For analyzing the data, we use the chi-square test as well as the logistic regression model in SPSS.

Results

Table 1 summarizes the individual characteristics of the sample. About 4% of the married women are childless. About 53% of the sample are aged 40-44 while the rest have 45-49 years old. About 23% of the women are living in rural areas while other women live in urban areas. Also, about 16% of the sample is illiterate and the rest are literate. About 31% of the Iranian married women have primary education, 16% of them have secondary education, 23% of them have high school education and the other women have a university degree. About 13% of the studied women are employed and other counterparts are housewife. About, 4% of the sample is immigrant. 1.4% of the women are currently studying. About 36% of the women are belong to households living in an apartment as well as about 70% of the sample have a personal housing. About 3.6% of the studied women live in a place with two households and more.

Table 1 Distribution of The Women by Individual and Household Characteristics

Variables		Frequency	Percent
Age Groups (Year)	40-44	45769	53.3
	45-49	40030	46.7
Place of Residence	Urban	65935	76.8
	Rural	19864	23.2
Migration Status	Nonimmigrant	82677	96.4
	Immigrant	3122	3.6
Education Status	Illiterate	13809	16.1
	Primary	26657	31.1
	Secondary	13595	15.8
	High school/Diploma	19810	23.1
	University degree	11928	13.9
Employment Status	Employed	11075	12.9
	Housewife	74724	87.1
Current Status of Studying	Student	1165	1.4
	Non-Student	84634	98.6
Childless	No	82074	95.7
	Yes	3725	4.3
The Type of Residence Place	Apartment	31256	36.4
	Non- Apartment	54543	63.6
The Type of Place Ownership	Personal	60414	70.4
	Rented	20030	23.3
	Other	5355	6.2
Household Count in the Place	A household	82701	96.4
	Two households and more	3098	3.6

The table 2 presents the results of chi-square statistic as a two-variable test. we used the chi-square test to analyze the relationship of the independent variables and childlessness. The findings show that high educational level increases the proportion of childlessness remarkably. The immigrant and employed women have a higher childlessness percent than nonimmigrant and housewife women, respectively.

Those the women who their household have a personal housing experience the lower childlessness than their counterparts who are in a rented or other housing.

Table 2 Distribution of Childlessness among the Women by Individual and Household Characteristics

Variables		Childless		N
		No	Yes	
Education Status (%)	Illiterate	94.7	5.3	13809
	Primary	95.8	4.2	26657
	Secondary	96.6	3.4	13595
	High school/Diploma	96.0	4.0	19810
	University Degree	94.8	5.2	11928
$\chi^2 = 85.800^*$				
Age Groups (%)	40-44	95.5	4.5	45769
	45-49	95.9	4.1	40030
$\chi^2 = 7.202^*$				
Migration Status (%)	Non-Immigrant	95.7	4.3	82677
	Immigrant	93.4	6.6	3122
$\chi^2 = 39733.071^*$				
Employment Status (%)	Employed	94.7	5.3	11075
	Housewife	95.8	4.2	74724
$\chi^2 = 30.855^*$				
Place of Residence (%)	Urban	95.7	4.3	65935
	Rural	95.4	4.6	19864
$\chi^2 = 3.725$				
Current Status of Studying (%)	Student	94.5	5.5	1165
	Non-Student	95.7	4.3	84634
$\chi^2 = 3.77$				
The Type of Residence Place (%)	Apartment	95.7	4.3	31256
	Non-Apartment	95.6	4.4	54543
$\chi^2 = 0.757$				
The Type of Place Ownership (%)	Personal	96.1	3.9	60414
	Rented	94.8	5.2	20030
	Other	94.1	5.9	5355
$\chi^2 = 96.974^*$				
Household Count in the Place (%)	A household	95.7	4.3	82701
	Two households and more	95.8	4.2	3098
$\chi^2 = 0.163$				

*Significant (Level of 0.05)

The results of logistic regression analysis are shown in Table 3. Childlessness is a categorical variable with two categories (0. Having a child 1. Childless). Findings illustrate that with age, the probability of childlessness decreases. The probability of Childlessness for the women with university degree, exception of illiterate women, is higher than other women with non-academic education. Childlessness among immigrant women is more likely than non-immigrant women. The probability of childlessness in employed women is higher than housewife. The probability of childlessness for the women who are living an apartment is lower than those the women who live in a non-apartment housing. The odds of being childless for the women who are living a personal housing is less likely than those the women who are living in other types of housing. Findings also point out that with increasing house area, the probability of being childless decreases.

Table 3 Prediction of Childlessness among the Women Using Logistic Regression Model

		B	Sig.	Exp(B)
Age		-0.012	0.041	0.988
Education Status	Illiterate	0.039	0.569	1.040
	Primary	-0.203	0.001	0.816
	Secondary	-0.393	0.000	0.675
	High school/Diploma	-0.236	0.000	0.790
	University Degree (Reference)	-	-	-
Migration Status	Immigrant	0.377	0.000	1.458
	Non-Immigrant (Reference)	-	-	-
Employment Status	Housewife	-0.189	0.000	0.828
	Employed (Reference)	-	-	-
Place of Residence	Rural	0.063	0.159	1.065
	Urban (Reference)	-	-	-
Current Status of Studying	Non-Student	-0.139	0.298	0.870
	Student (Reference)	-	-	-
The Type of Residence Place	Non-Apartment	0.099	0.014	1.104
	Apartment (Reference)	-	-	-
The Type of Place Ownership	Personal	-0.408	0.000	0.665
	Rented	-0.117	0.080	0.889
	Other	-	-	-
Household Count in the Place		-0.043	0.496	0.958
House Area		-0.002	0.000	0.998
Chi-Square = 294.120		Sig. = 0.000		
Cox & Snell R Square = 0.003				
Nagelkerke R Square = 0.011				

Discussion

Iran has experienced a dramatic change in fertility rates over the last three decades. Today, the current and the future status of childlessness is one of the most important concerns relating to Iran's population. Women's Fertility is declined from mid-1985s onwards. The latest Iranian census of population and

housing was conducted in 2016 and its results suggested that fertility level in the country is still lower than replacement level. Decreasing fertility from about 7 birth per woman to about 2 during 1985-2016 has raised concerns about the future of Iran's population. Hence in the recent years the Government of Iran is planning to adopting a pronatalist policy with the aim of increasing fertility. Also, the supreme leader of Iran outlined general population policies with emphasis on childbearing and achieving fertility higher than replacement level. This study was focused on one key dimension of fertility change titled childlessness. The data were derived from the 2016 census micro-data of population and housing. The statistical population consists of all married women aged 40-49. The results indicated that exception of the place of residence, current status of studying and household count in the place variables, the other independent variables have a statistically significant relationship with childlessness variable. With age, the probability of childlessness decreases for the Iranian women. Similar results were obtained in other contexts [24, 25]. The findings pointed out that education is one key factor related to fertility behavior among women. The above result is consistent with previous findings ([1, 6, 7, 10, 11, 14] Miranti & et al 2009). Childlessness is generally more prevalent in migrant and employed women as well as women who are currently studying. Each of the above-mentioned obtained findings is consistent with the results of previous researches [20-22]. Although there is a considerable literature on childlessness in the world, in this study, in addition to women's characteristics, their household circumstances are also considered. The above point is distinctive aspect of this study to previous literature. The probability of childlessness for the women who are living a none-apartment is higher than those the women who live in an apartment housing. The odds of being childless for the women who were living a personal housing was less likely than their counterparts. Findings also suggested that increasing the household area will lead to decreasing the probability of being childless.

Continuation of the enhancement in university education and employment rate for the Iranian women could will be raised the probability of childlessness. Proper housing policies would be useful to reducing the childlessness among the women. Thus, the national housing policies with concentration in affordable housing supply may be reduce the proportion of childlessness in Iran. As a result, changes in housing market and women's social status explain the considerable amount of childlessness status in Iran. Social modernization variables (education and employment status) as one aspect of modernization [34] appear to be relatively more important in prediction of being childless than household circumstances. But planning and policy making related to reducing the childlessness is better to focus on the women's household conditions.

Declarations

Ethics approval and consent to participate

Permission was obtained to analyze this data from the statistical center of Iran. As this study is a secondary analysis of the statistical center of Iran, ethical approval and consents of participants to participate in the study was not applicable.

Consent for publication

Not applicable.

Availability of data and materials

The raw data used in this study can be accessed from the statistical center of Iran website:
<https://www.amar.org.ir/english>

Competing interests

The author declares no competing interest.

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Authors' Contributions

The author confirms sole responsibility for study conception and design, analysis and interpretation of results, and manuscript preparation.

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