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Fertility, Marriage, and Family Planning in Iran: Implications for Future Policy

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Abstract: The Islamic Republic of Iran has experienced a remarkable demographic transition over the last three decades. As a result of social, demographic and economic changes, Iran's fertility declined from 7.0 births per woman in 1980 to around 1.8 to 2.0 in 2011 based on our estimation (McDonald *et al.* 2015). The initial rise and rapid fall of fertility accompanied by a decline of child mortality led to a post-revolutionary youth bulge in the age distribution that will lead to rapid ageing in the longer-term future. Others have argued that Iran's fertility has fallen to much lower levels – as low as 1.5 births per woman (eg. Erfani 2013). Such low estimates led to the Government of Iran adopting a pronatalist policy with the aim of increasing fertility, although the components of the policy are still under discussion. Different views have been expressed on the role of family planning and other programs in meeting population policy goals in Iran in the future with some advocating the discontinuation of government assistance to family planning. This paper aims to review the trends and levels of fertility, marriage, and family planning and their implications for policy. Using various datasets and detailed parity-based measures of fertility, the dynamics of fertility regulation practiced by Iranian couples are investigated. Our findings suggest that contraceptive use stabilized before 2000 and postponement of the first child and wide birth intervals are the main contributors to the level of fertility. Therefore, instead of discontinuation of the family planning program, policy to sustain fertility at its present level or a little higher needs to focus upon improving the economic circumstances of young people so that they are able to make less constrained choices about family formation than is the case at present.

Keywords: Family Planning, Population Policy, Iran

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Introduction

The Islamic Republic of Iran has experienced profound demographic changes during the past three decades. The total fertility rate (TFR) fell from 7.0 children in 1981 to replacement-level (2.1 children) in 2001 (Abbasi-Shavazi *et al.*, 2009) and, by our estimation, remained between 1.8 to 2.0 children in the subsequent decade (McDonald *et al.* 2015). Our research published in 2015 but publicised in Iran in November 2013 was conducted following concerns about the possibility of persistent very low fertility in the country. Relying on some local estimates and on

the (since revised) low-fertility scenario of the 2010 United Nations population projections which had fertility in Iran falling to the impossibly low level of 0.8 births per woman by 2025-2030, extreme views arose about future negative population growth. Iran's population was projected to decline to 32 million in 100 years (Mahmoudi 2013, Moshfegh *et al.* 2012). In addition, using cross-sectional studies based on non-representative sample surveys in certain regions of the country and some aggregate data from the Civil Registration Organisation, generalisations have been made of an increase in the number of "childless", and "infertile" couples in Iran (Vahidi *et al.* 2006).

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It was claimed, for example, that around 20 per cent of couples had primary infertility (Akhoondi *et al.* 2013). This, in turn, has given rise to misperceptions regarding past, present, and future trends of population, and has created anxiety among the authorities about the future of Iran's population. As a result, quick-fix plans and short term solutions were proposed to resolve the presumed critical population conditions including discontinuation of the family planning program and priority in employment being given to married men over single men and all women.

To promote the development of a comprehensive population policy in the light of this debate, in May 2014, the Supreme Leader of the Islamic Republic of Iran, Ayatollah Ali Khamenei, issued a Statement on General Population Policies (Population Council, 2014: 573-575; McDonald *et al.* 2015). This population policy guideline recognises population as a multi-faceted issue and the need for evidence-based, long term, and comprehensive policies. The guideline is comprised of several objectives such as achieving a fertility rate at or above replacement level, facilitating and promoting family formation and childbearing, providing proper means to help mothers especially during pregnancy and breastfeeding, consolidating the basis and stability of the family, promoting and establishing the Islamic-Iranian lifestyle, promoting life expectancy, and providing family health and nutrition. The objectives also include promotion of the culture of respecting and endearing the elderly and providing the necessary conditions for taking care of them at home, empowering the working age population through cultural reforms, reinforcing and adapting disciplinary systems and public training as well as spatial and geographical distribution of population corresponding to ecological capacity. The policy guidelines also refer to managing migration, motivating Iranians living abroad to return and/or to invest inside Iran, constantly observing the qualitative and quantitative aspects of population policies by providing the proper mechanisms and local factors of human development. However, despite all the attention paid to population issues, there is a lack of a single comprehensive document about the population situation in Iran. In order to design a practical and successful population policy, it is important to examine the current and future levels of fertility as well as the patterns of contraceptive dynamics in Iran.

The aim of this paper is to review the level of fertility in conjunction with marriage and contraceptive use, and consider the implications of these trends for

proposed policy changes in Iran. In particular, the paper addresses such questions as: What are the recent levels and patterns of fertility? What is the role of marriage in fertility and childbearing in Iran? What is the pattern of contraceptive methods used by Iranian couples, and what role would the family planning program and its discontinuation play in sustaining fertility at or a little above replacement level?

Data and Methods

Using the decennial censuses since 1986, the *own-children* method has been applied to estimate annual fertility levels since 1980. The own-children method is a reverse-survival technique for estimating fertility levels for the years prior to a census or household survey. Enumerated children are first matched to mothers within the household. The ages of the matched children are then used to estimate numbers of births by age of mother in previous years. Reverse survival is similarly used to estimate numbers of women by age in previous years. After some adjustments are made for mis-enumeration and unmatched children, age-specific fertility rates are calculated by dividing the number of reverse-survived births by the number of reverse-survived women (Abbasi-Shavazi 1997, Cho, Grabill and Bogue 1970; Retherford, Cho and Kim 1984).

Age-specific fertility rates (and their sum, the total fertility rate) use age as a controlling or standardising factor because the age structure of the population changes from year to year. However, age is not the only structural feature of a population that may influence the number of births in a given year. The other important structural features are the distribution of women according to the number of children that they have already, that is, their parity, and the time since the most recent birth. The *synthetic parity progression* model provides an alternative to the conventional age-based approach to assessing the impact of changes in the timing of fertility on period fertility. In this model, the controls used are not age but the number of children that a woman has already had in association with the time since the most recent birth (Feeney, 1983; Feeney and Yu, 1987; Ni Bhrolchain, 1987; Hinde, 1998, Chapter 9). Analysis by parity facilitates interpretation of fertility trends because people make their decisions about having a child on the basis of the number of children that they have already rather than

simply upon how old they are. A detailed description of synthetic and real parity progression ratios derived from the 2010 Iran DHS is available in the other papers published by the authors (Hosseini-Chavoshi *et al.* 2006; McDonald *et al.* 2015).

In this paper, measures of fertility using the own-children method and parity progression ratios applied to the Iranian censuses, as well as the 2000 and 2010 Iran Demographic and Health Surveys (DHS), are used to examine the trends of fertility and patterns of childbearing from 1980 to 2010.

Fertility trends, levels and patterns

The fertility transition in Iran passed through different phases from the 1960s to 2000. TFR decreased from around 7.7 in 1966 to around 6.5 in 1976 (Amani, 1996; Padidar Nia, 1977: 133-136). Then it rose again to 7.0 by the end of the 1970s and during the early years of the Islamic Revolution. Although no specific population policy was introduced after the revolution, the revolutionary government adopted a pronatalist approach. The legal minimum age at marriage for girls and boys was reduced, and the war with Iraq created a pronatalist atmosphere by which families were encouraged to have more children, and economic incentives were provided based on the family size. Despite this, the high fertility regime was short lived and fertility started to decline by the mid-1980s. TFR declined from 7.0 in 1980 to around 5.5 in 1988, but it fell sharply to around 2.8 by 1996, and reached replacement level by 2001 (Abbasi-Shavazi *et al.*, 2009). The decline of fertility during the 1990s coincided with the revival of the family planning program in post-revolutionary Iran. A comparison of the own-children estimates of fertility using the 2011 Census with the results of the parity progression ratios obtained from the 2010 Iran DHS in Figure 1 reveals that the reduction of fertility has slowed down and the TFR has been relatively stable around 1.8 to 2.0 children in the 2000s (McDonald *et al.* 2015).

Analysis of the age-specific fertility for the period 1976-2011 also indicates that Iranian women had a relatively early childbearing pattern in the first years after the 1979 revolution consistent with the pronatalist ideology adopted by the Government. This behaviour did not last long as fertility shifted to a somewhat later childbearing pattern. Furthermore,

the fall of fertility occurred concurrently in all age groups (Abbasi-Shavazi *et al.*, 2009).

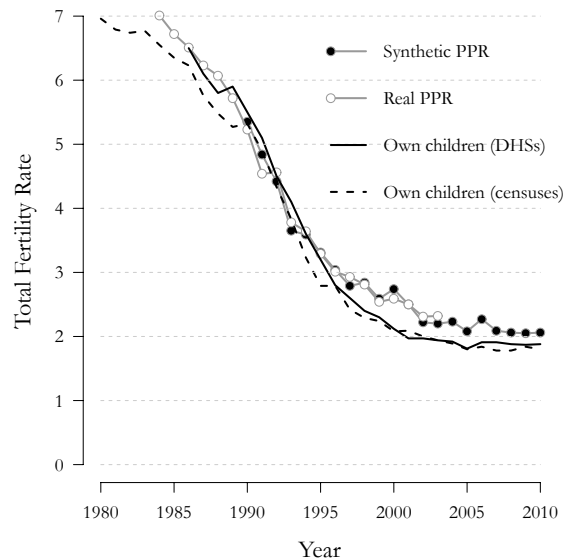


Figure 1: Trend of Total Fertility Rates using Own Children Method and Synthetic/Real Parity Progression Ratios (PPR) techniques, 1980-2010 (Data sources: The 2010 Iran MiDHS and 2000 Iran DHS and the 1986, 1996, 2006 and 2011 Censuses. See also, McDonald *et al.* 2015.)

Parity progression estimates of fertility

While a significant body of literature has addressed the fertility decline in Iran, most of these studies focus on fertility levels and trends using conventional age-based methods. Measuring fertility changes by parity enables us to explore women's decision making on childbearing because having an additional child is more associated with the number of children that a woman has already had, and the time elapsed since her last child, rather than only on her age. The decision to have a first child, however, will depend more on the age of the mother and the duration of the marriage.

The synthetic parity progression ratios calculated from the 2000 IDHS and the 2010 MiDHS are presented in Figure 2. The results show that the probability of having the first child was around 95 per cent for women married in 1980, but this probability declined slightly for married women during the 1990s and 2000s. Still, more than 93 per cent of Iranian women in recent marriage cohorts had their first child within four years after marriage. Similarly, close to 98 per cent of women progressed to the second birth during

the early to mid-1980s. However, the probability of having the second child decreased in the 1990s from 95 percent to less than 90 percent, and further to around 80 percent by the end of the 2000s. Progressions from the second birth to the third birth and from the third to fourth birth were different and sharply declined across time/cohorts. The probability of having the third birth declined from around 98 per cent in 1980 to around 60 per cent in 2000, and further declined during the 2000s reaching around 50 per cent of women who had their second child by 2009. The figures for the third to the fourth birth fell from around 98 per cent in 1980 to around 40 per cent in 2009. The results of the analysis also show slightly slower progression to the fourth child. However, the results confirm that the progressions to the 2nd, 3rd, and 4th child have been relatively stable during the second half of the 2000s.

Furthermore, a review of women’s birth histories (McDonald *et. al* 2015) also indicates that the overall parity distribution for the most recent synthetic cohort (2009) is still relatively wide. Among the 83 per cent of women who had at least one child, 20 per cent had

one child, 41 per cent two children, and 39 per cent had more than two children.

Overall, careful analysis of the patterns of childbearing through comparison of the TFRs derived from the own-children and parity progression ratio methods in recent years indicates that Iran’s fertility has remained around 1.8 to 2 children and there is no sign of very low fertility or a *fertility crisis* as of yet. However, to ensure that fertility does not decline to a lower level, it would be wise to design and implement evidence-based, effective, and sustainable policies. The following sections provide evidence in two main areas that should be considered as priorities for fertility policies: marriage and family planning programs.

The role of marriage on fertility decline

In any study of fertility, marital status and change in marriage patterns are important to the extent that they affect the three stages of reproduction:

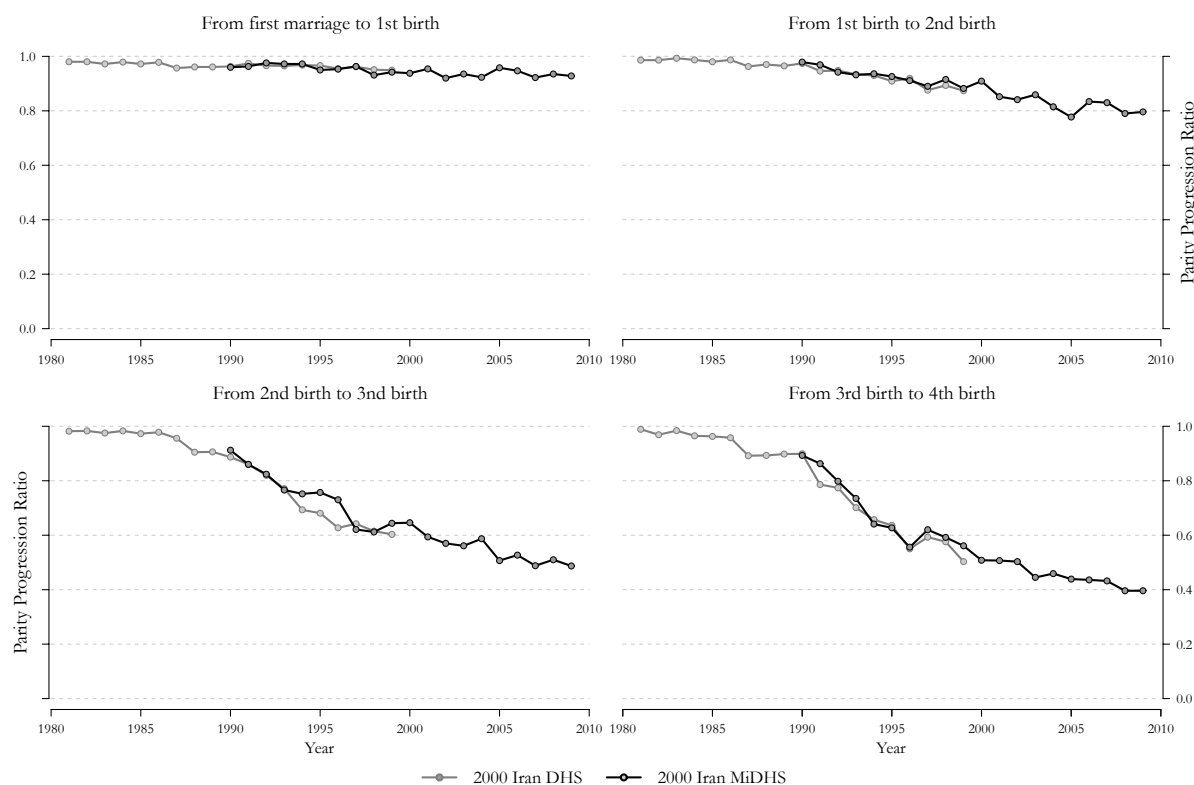


Figure 2: Synthetic Parity Progression Ratios, Iran, 1980-2010 (Data sources: The 2010 Iran MiDHS and 2000 Iran DHS. See McDonald *et al.* 2015.)

intercourse, conception and parturition. Childbearing in Iran occurs within marriage and ex-nuptial births are uncommon and illegal. Thus, change in age at marriage has considerable implications for fertility in that it shifts the age of the first birth and, accordingly, of all subsequent births. This can lead to a so-called ‘tempo’ effect where fertility falls in the short term as births are shifted to a future time. The increase in age at marriage has been an important factor in Southeast and East Asian countries where below-replacement level fertility has been attained (Jones 2007; Ogawa and Retherford, 1993; Ogawa, 2003). However, Asian countries with very low fertility have struggled to increase fertility by attempting to get people to marry earlier.

A profound change in the mean age at marriage has occurred in Iran over the last two decades. The majority of the change is concentrated in the years since the mid-1980s. Pronatalist ideology and encouragement of early marriage at the time of the Islamic Revolution kept age at first marriage constant during the first half of the 1980s. However, women’s mean age at marriage started to rise from the mid-1980s onwards. The female singulate mean age at marriage (SMAM) and age-specific proportions never married at the 1976, 1986, 1996 and 2006 Iranian Censuses were examined in an earlier study (Abbasi-Shavazi *et al.* 2009). The results showed that SMAM for Iran increased slightly from 19.7 in 1976 to 19.8 years in 1986, followed by a significant increase from 19.7 to 22.3 years between 1986 and 1996, and then to 23.4 years in 2011 (see Table 1). The proportion of women never married increased in all age groups from 1986 to 2006 before unexpectedly falling slightly to 2011. To 2006, the rises at age groups between 15 and 29 years was substantial. The change in mean age at marriage is consistent with the fertility transition over the last three decades. However, this does not necessarily mean that the rise in age at marriage caused the fertility decline. The main cause was the use of contraception in marriage, in other words, people decided to have fewer children and used contraception accordingly. They did not unintentionally end up with fewer children because they married later.

The proportion of women who marry eventually fell from about 96 per cent for the cohort born in 1966 to 90 percent for the cohort born in 1976 (Figure 3). It is difficult to be definitive about the future trend of marriage, but the rise in the synthetic proportion in the 2000s suggests that the proportion marrying for real cohorts will tend to stabilize at around 90 per cent

(McDonald *et al.* 2015), and this is also supported by the evidence that age at first marriage was slightly younger for the 1986 birth cohort compared with the 1981 cohort. A slightly earlier age at first marriage and relative constancy of the time between marriage and first birth are the central reasons that cross-sectional fertility in Iran did not fall in the 2000s (McDonald *et al.* 2015). It seems, therefore, that the traditional practice of relatively early marriage followed relatively quickly by first birth continues in Iran in response to family and social expectations.

Table 1: SMAM and Percentage of never married women for selected age groups, Iran, 1976-2011 (Data source: 1976 to 2011 Iran censuses).

Year	SMAM	% Never married		
		15-19	20-24	25-29
1976	19.7	65.7	21.4	6.8
1986	19.8	66.5	20.4	9.4
1996	22.4	81.4	39.3	14.8
2006	23.3	83.1	49.7	24.1
2011	23.4	78.6	47.1	26.2

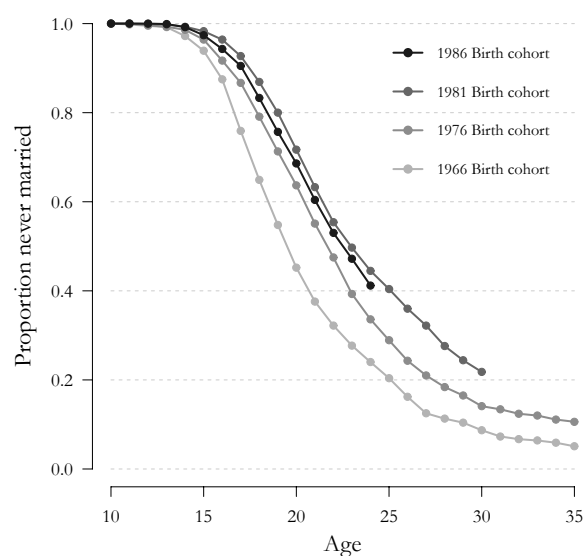


Figure 3: Proportion Never Married by Age, Real Birth Cohorts, Iran, selected birth cohorts (Data sources: The 2010 Iran MiDHS).

On the other hand, there is a large gap between the mean ages at first marriage for women with higher education level (finishing high school or tertiary education) as compared with lower levels of education.

With the advancement of women's education, the age at marriage for Iran as a whole may increase again. This would have at least a short-term, negative impact on fertility as both marriage and childbearing are postponed.

The role of contraceptive use on fertility decline

One of the reasons for the sharp fertility decline in Iran during the 1990s was the implementation of the family planning program. However, the success story of the program stems from the establishment of the health network system in the early 1980s by which deprived regions and rural areas benefited from infrastructure facilities as well as maternal and child health care (Salehi-Isfahani *et al.* 2010). This led to the decline of infant mortality rates and the subsequent decrease in the demand for children. The rise of women's education, rapid urbanization and changing lifestyle also affected the demand for children. Additionally, economic insecurity and increasing living expenses and housing costs plus the increased availability of family planning services led to a fall of fertility during the period 1985-2000. Evidence from several cross-sectional surveys conducted by the Ministry of Health revealed that the contraceptive prevalence rate in Iran increased during the late 1980s and early 1990s, but has fluctuated around 56 percent since the mid-1990s.

The evidence suggests a direct relationship between a woman's age and her decision to use a

certain method of birth control. The findings of the 2010 IDHS indicate that contraceptive use increases with the woman's age, and is also influenced by her actual and desired number of children. The lowest rate of contraceptive use is observed among married women under 20 years of age. This patterns shifts towards safer and reversible methods among women 20-29 years of age. For instance, the use of IUDs, injections, and/or the pill is highest among women aged 25-29. This suggests that the majority of Iranian women under 30 years of age use contraceptives for birth control and spacing, while women who are 30 years of age or older, tend to stop their childbearing by using long term and permanent methods of contraception (Table 2).

The prevalence of long term methods such as sterilisation among women aged 15-29 is very low. Sterilisation is mostly seen among those who already have their desired number of children and are over 30 years of age. Also, higher rates of reliance on such permanent methods as tubal ligation among older women particularly in rural areas are due to them having higher numbers of children. It is interesting to note that a significant percentage of women in urban areas preferred traditional methods (mostly the withdrawal method known as coitus interruptus) in order to plan their childbearing, and surprisingly had lower fertility rates than women in rural areas. In other words, couples' intention to plan their fertility is as effective as the accessibility to family planning services in reducing or increasing fertility. As indicated earlier, the findings presented

Table 2. Contraceptive use prevalence (%) by age and area of residence, Iran, (Data source: the 2010 MiDHS)

Area	Age	All methods	Sterilization		Modern methods				Traditional methods
			Female	Male	IUD	DMPA	Pill	Condom	
Rural	15-19	32.3	0.0	0.0	2.7	1.2	15.9	3.4	9.1
	20-24	55.3	0.4	0.2	8.0	5.2	26.4	4.1	11.0
	25-29	68.1	5.1	0.6	9.0	6.9	29.5	5.0	12.0
	30-49	75.7	32.2	2.1	3.9	5.8	18.7	2.8	10.1
Urban	15-19	41.5	0.1	0.0	5.5	0.7	13.1	6.1	16.0
	20-24	64.4	0.3	0.5	12.6	1.7	19.7	7.0	22.6
	25-29	77.9	3.0	1.3	15.6	2.1	23.4	8.1	24.4
	30-49	83.3	25.5	5.1	8.1	1.1	14.2	7.1	22.1
Total	15-19	37.4	0.1	0.0	4.2	0.9	14.4	4.9	12.9
	20-24	60.9	0.3	0.4	10.8	3.1	22.3	5.9	18.1
	25-29	74.3	3.7	1.0	13.2	3.8	25.6	7.0	20.0
	30-49	80.7	27.8	4.1	6.7	2.7	15.7	5.7	18.1

in Table 2 show how cautious Iranian couples are in planning their childbearing. It suggests that a policy responsive to the needs and desires of Iranian couples should continue to provide family planning services, particularly for young couples.

A mixed analysis of contraceptive use in relation to parity progression presents a precise picture of the way in which fertility has declined during the last two decades. The pattern of adoption and usage of contraception before starting childbearing is an important phenomenon linked to the social-economic improvement in women's status. Overall, around one-quarter of Iranian women used contraception before their first pregnancy within the first year of marriage, and mostly within the first three months of marriage before their first pregnancy (Abbasi-Shavazi *et al.* 2009). These women had mainly used a traditional method followed by the condom and the pill. The reason for using withdrawal and condoms may be the couples' desire to postpone the first child, while wishing to avoid any side effects from using modern methods. In general, living in an urban area, younger marriage cohorts, and a higher level of education all

contribute significantly to the higher probabilities of adopting contraception.

The pattern of contraceptive use after the first child is different. Not only is the progression to birth much longer, but contraceptive use patterns also indicate a considerably higher usage of more effective modern methods. It seems that once the first child is born, families are satisfied because the couple has fulfilled their familial and societal role of having a child, and proved their fecundity. Subsequently then, couples are able to exercise their own control over childbearing. Again, women's education seems to be a powerful determinant for postponement of the second child and onwards where contraceptive practice is involved.

The upper panel of Figure 4 shows a considerable differential for progression from the first to the second birth when contraceptive use is involved. In addition, among the three categories, the slowest progression is observed for women with the highest level of education, and the quickest progression is observed for women with the lowest level of education (illiterate and primary education). In contrast to the

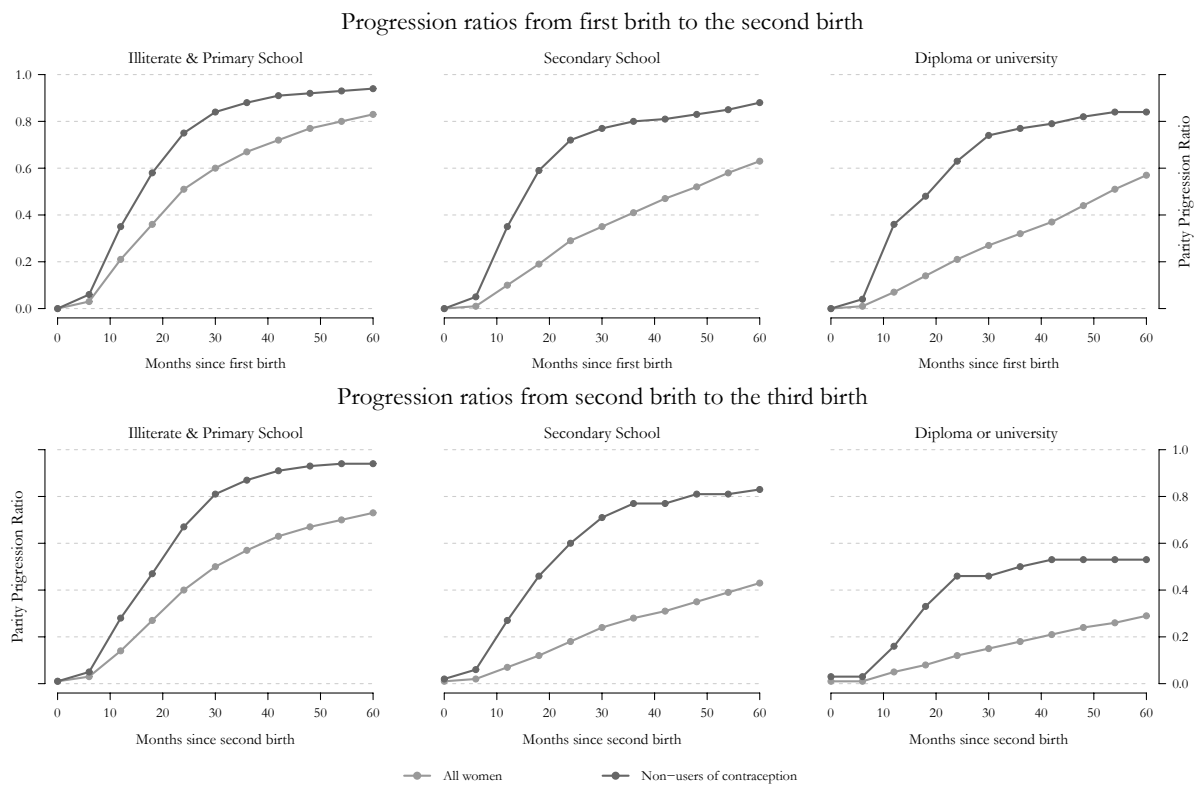


Figure 4: Proportion of progressing from the first to the second birth, and from the second to the third birth by education level, all women versus non-users of contraception, Iran, 2005 (Data source: Hosseini-Chavoshi, *et al.* 2007.)

pattern observed among non-users of contraception for progression to the second birth, there are much more significant differences for movement to the third birth according to the level of education of women. Again the slowest progression from the second to third birth is observed among women with the highest level of education as only 33 per cent of these women progressed to their third birth within two years after their second birth. This ratio increases to 45 per cent within three years, and stabilizes at around 50 per cent after five years. Despite not using any contraception, 50 per cent of these women have not had a third birth within five years. It is notable that more than 80 per cent of women with an education lower than tertiary level had their third birth within five years. This pattern of progression among women with lower education is about what would be expected with a normal exposure to the risk of pregnancy. Thus the low progression for those with a high education suggests the possibility of termination or intentional miscarriage as a back-up for avoiding a third birth.

The opponents of the family planning program argue that the continuation of the program will lead to further fertility decline, and thus, in order to increase fertility, the program should be discontinued. A few parliamentarians even proposed to set up punishments for those who provide male and female sterilization services, but the proposal was not ratified (Parliament of the Islamic Republic of Iran, 2013). Based on this argument, the previous government limited the services that were freely available to families particularly in rural and disadvantaged areas. The discontinuation and limitation of the family planning services have had some negative health consequences for women, including unwanted pregnancies (Hosseini-Chavoshi and Abbasi-Shavazi, 2015). Unpublished statistics suggest that maternal mortality has risen over the past three years (from 291 in 2013 to 320 cases in 2015).

Instead of eliminating the family planning program, revision of the program with the aim of improving the well-being of families and society should be taken into consideration. More than two-thirds of Iranian women do not wish to have another child once they pass the age of 35. Indeed, the reproductive lifespan of Iranian women has been reduced. Recent studies (McDonald *et al.*, 2015) have shown that there was an age gap of 18 years between the first and last child for mothers who had married in the 1960s while those who married in the 1990s devote only 8 or 9 years of their life to childbearing.

Indeed, by providing appropriate family planning services and correct information, it would be more possible to motivate couples to have more children and provide them with proper choices to plan their childbearing with logical birth spacing between their desired numbers of children. Moreover, providing family planning services is necessary for more than one third of women who already have three or more children with no intention to have additional children. Many women prefer to control or even terminate their fertility in their late 30s, and their need for family planning cannot be ignored. Finally, discontinuation of these services will have such consequences as unwanted pregnancies and illegal abortion, the negative consequences of which on women's health as well as the society should not be overlooked.

Discussion

Iran's fertility has declined to below replacement level and the population growth rate has also decreased to around 1.3 percent per annum in recent years. This calls for the revision of the post-revolutionary population policies. However, the new policies should be comprehensive and evidence-based to ensure their success and sustainability. Policies for increasing fertility from a very low level (i.e. less than 1.5 children) are different from those that are aimed at sustaining fertility at around replacement level. Our results confirmed that Iran's fertility was stable around 1.8 and 2.0 children in the decade to 2010. Analysis of birth histories and parity progression ratios also revealed that a vast majority of Iranian women (93 per cent) still have their first child within the first four years of marriage, and around 83 percent of those who have had their first child progress to the second child. The results also indicate that around one third of women have three children and more, another one-third have two children, and only one-third are either unmarried, childless or have a single child. This pattern suggests that fertility is not as low as some commentators have presented. Thus, maintaining fertility at its current level or a little higher seems an ideal option for Iran's population policy.

Supporting and facilitating marriage is a key factor in sustaining fertility at around replacement level. The Iranian post-revolutionary youth are finishing their university education and are seeking employment. Statistics show that around 25 per cent of young people (aged 15-29) who are mainly university graduates are unemployed (Sadeghi, 2012). There is a great potential

for employment growth in Iran given the entry to the work force ages of the very large young generation. In addition, women are more educated than the previous generations, and they aspire to be employed. Meeting the large demands of this young generation is not an easy task but this should be the priority of population policies in Iran. The government needs to seize the demographic dividend by promoting sustainable job opportunities. This would increase economic security among young people and improve the economic and living conditions of the society, and would in turn, sustain the rate of marriage and the current level of fertility.

Now, the question is whether the discontinuation of the family planning program, as suggested by some observers, would lead to higher fertility or not. Clearly, family planning programs were first designed and implemented to reduce fertility from high to low levels. However, once fertility reached replacement level in Iran, the level of contraceptive use levelled off. It seems contraception is being used effectively and accurately, and therefore, the impact of contraceptives on further fertility decline is minimal. Furthermore, today, the majority of Iranian couples access contraception through the private sector. The government program is used primarily by those in rural and remote areas where access to private supply is limited. In the end, it is not contraception that is the cause of low fertility; it is the desire of couples to limit the number of their children and evidence from other countries shows that, once this desire is well established, it does not reverse. Thus, dismantling the program would not lead to higher fertility. Instead, it would increase unwanted pregnancies and induced abortion especially among the more disadvantaged people. In fact, the family planning program should be modified to respond to the needs of married couples who aim to plan for their ideal family size by spacing their childbearing. In this way, women's health and rights are secured and family planning visits provide service providers an opportunity to promote the idea of avoiding very long birth intervals or early cessation of childbearing. Our results showed that the majority of women who use long-term methods of contraception are aged above 30 who have had their desired number of children. Providing services to women will help them to plan for their wanted children at the time they would like to have them based on their other family and life priorities. It will also reduce the number of unwanted pregnancies and consequent fertility terminations. With the shortening of the reproductive life-span of Iranian women, it is important to continue services for

married young couples as well as to those who would like to stop after they complete their childbearing.

The reproductive lifetime level of infertility in Iran is less than five percent (Moinifar, 2016). Our findings from synthetic parity progression ratios for a lifetime of ten years indicate that in 2009 about 16.7 percent of women in reproductive age remained childless; of which more than half (10.2 percent) had never married and only 6.5 percent had remained childless within 10 years since marriage (McDonald *et al.* 2015). The age-specific rate of first birth has shifted to somewhat older ages in recent years, but has not dropped in its level. With the constant trend of parity progression from marriage to the first birth, it is likely that childlessness will not rise in the future. Moreover, advancement and promotion of Assisted Reproductive Technologies (Abbasi-Shavazi *et al.* 2008; Inhorn and Tremayne, 2012) would provide assistance to potentially infertile couples to realize their fertility and childbearing ideals and needs.

Finally, population policies refer to a host of measures and strategies employed and executed by governments in order to improve the quality of life, development, improvement of population indices, and sustainability of population growth. The key to the success of such policies is a clear and precise understanding of the population situation, and in the comprehensiveness, multifaceted nature and sustainability of these policies. As Iran will experience a rapid ageing within the next three decades, comprehensive and well-designed policies are required to take into account the current young structure of the population and plan for a better, healthier, more active and successful ageing.

Success of any population policy rests on the dedication and involvement of governments and policy makers. Iran's post-revolutionary successful family planning program received full support of the government and the religious leaders. The recent statement by the Supreme Leader on population policy has provided the means for the implementation of a comprehensive and multifaceted plan. However, progression to the implementation of the policy should be assessed through research on population and development. A crucial point to consider is that the population policies are not summarized merely in increasing population, but various aspects of population including the quality of population. Current prospects for the Iranian economy post the nuclear agreement and the lifting of sanctions provide grounds for a better economy enabling the government to implement new population policies.

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