

Case study: fertility decline in Iran

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Abstract Iran has experienced one of the most successful family planning programs in the developing world, with 64 percent decline in total fertility rate (TFR) between 1986 and 2000. This paper focuses on Iranians' unique experience with implementation of a national family planning program. Recognition of sensitive moral and ethical aspects of population issues resulted in successful collaboration of technical experts and religious leaders. Involvement of local health workers, women health volunteers and rural midwives led to great community participation. Demographic and Health Survey (DHS) data in 2000 indicated a TFR of 2.0 births per women and 74 percent contraceptive use among married women. This case study will help policy makers and researchers in Moslem countries and other developing countries with high fertility rate to consider a successful family program as a realistic concept with positive impacts on nation's health and human development.

Keywords Total fertility rate · Muslim country · Family planning

Introduction

Iran has experienced one of the fastest fertility reductions in the world. A fertility decline of more than 50% in a single decade is not only unique for a Muslim country but has never been recorded elsewhere. Examining the rationale and process behind Iran's population policy will provide valuable insights for policy makers in the developing world, especially the Middle East. This paper will review the historical context precluding the introduction of Iran's population policy, strategies of Iran's national family planning program and subsequent changes in total fertility and general well being of Iranian families.

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Background

According to 2006 census data, Iran has 70 million people in an area smaller than Mexico. Iran has the 20th largest population in the world and 61% of the population resides in urban areas (CIA, 2006). After its 1979 revolution, the theocratic Islamic Republic of Iran was established. Shortly thereafter, in 1980, the country was invaded by its western neighbor, Iraq. The newly established government, under strict economic sanctions and involved in a massive invasion on its western borders, faced a serious challenge with already limited economic resources. Proclaiming to be the “government of the oppressed,” the Islamic Republic prioritized meeting the most basic needs of the population and reaching the under privileged. The new constitution promised the provision of food, basic health care and universal access to primary education (see Box 1: article # 29–30). To achieve these goals, the annual budget of the Ministries of Health and Education was increased three-fold over the first 15 years after the revolution (Hoodfar & Assadpour, 2000).

Population explosion

In the early years after the revolution there were no official population policies in the government’s agenda. New leaders viewed any population program as a Western tool to dominate the “Third World” countries and reduce the number of Muslims. During the eight-year war with Iraq, the country was aiming for an “Army of 20 million.” Large families were a core revolutionary value; necessary to raise soldiers to defend the country. In addition to higher birth rates, an influx of refugee immigrants from neighboring countries contributed to a rapid rise in the population growth rate. Further, improved primary health care resulted in sharp declines in infant and maternal mortality rates between 1981 and 1986. Not surprisingly, census data from 1986 reported a 3.2% annual population growth rate and a 40% increase in population since 1976 (Roudi, 1999). A rapidly growing population, with more than half under the age of 20, and an increasing demand for food, education, housing and jobs posed an undeniable challenge for the government (Fig. 1).

Revival of a population policy

Persuaded by these alarming numbers, government officials in the Budgetary and Plan Organization and in the Ministry of Health took steps to slow further rapid population growth. Understanding the dangers of overpopulation, the experts started a national media campaign to educate the public, discussing costs and implications

Box 1 Article 29–30, Constitution of I.R. of Iran

Article 29: “It shall be the universal right of all to enjoy social security covering retirement, unemployment, ..., and health, medical treatment and care services through insurance, etc. The Government shall be required, according to law, to provide the aforesaid services and financial protection for every individual citizen of the country....”

Article 30 – “The Government shall be required to provide free education and training for the entire nation”

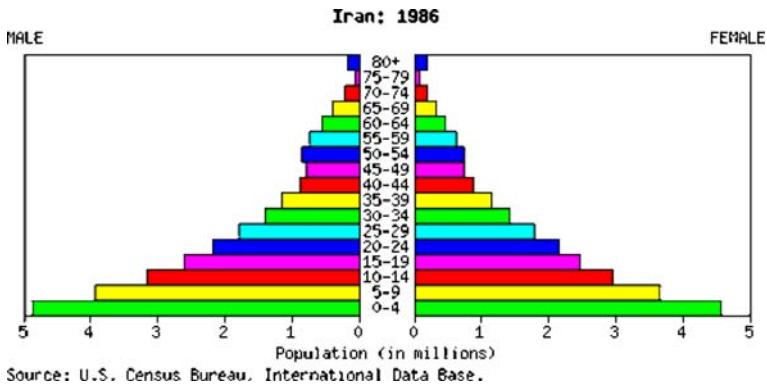


Fig. 1 Population pyramid, 1986

of an expanding young population and the urgent need for a population policy. Economists and health experts also held closed meetings with government and religious leaders to discuss the moral and ethical aspects of population issues and family planning. In 1988, a seminar on Population and Development was held in the most sacred city in the country, Mashad. Technical experts, scholars, and religious leaders gathered to discuss the negative impacts of population growth on the national economy and people's welfare (Hoodfar & Assadpour, 2000). Following the Mashad conference, similar meetings were held and a national family planning program was officially re-established in 1989.

As a result, population concerns were fully integrated into the government's development plans for the next decade. When the government prepared the first "National Five Year Socioeconomic Development Plan" in 1989, implementation of a fertility regulation policy was proposed. One of the objectives of the plan was to reduce the rate of natural population growth from 3.2 to 2.2% per year and to achieve a total fertility rate (TFR) of 3.5 births per woman by 2009 (Ministry of Health and Medical Education, UNFPA, 1998). However, the above goals were achieved much faster than expected, reaching a population growth rate of 2.3% and a TFR of 3.6 in 1993. Nevertheless, the interaction between population, sustainable development and economic growth remained on the agenda of the second "National Five Year Socioeconomic Development Plan" (1994–1998), which aimed to further reduce the population growth rate to 1.5% per year and the TFR to 2.5 by 1998 (Ministry of Health and Medical Education, UNFPA, 1998).

Strategies to reduce fertility

Fertility reduction in Iran was unique in the speed of its decline. Several key strategies contributed to rapid fertility decline: involvement of religious leaders; the model of service delivery, including the role of women; and public education campaigns. Further, population and family planning were cornerstones of national development programs and involved the active education of program planners in every government and non-governmental agency.

Involvement of religious leaders

Shortly after the revolution, the Ministry of Health obtained permission from Imam Khomeini and several other eminent Ayatollahs to promote contraceptives for couples who did not wish to have more children. Thus, the Ministry of Health was able to continue supplying contraceptives through public health clinics despite an inactive population program. Following the Mashad conference, Imam Khomeini's decree (*fatwa*) that contraception was permissible was reiterated and Iran's high judicial council made a public announcement that male sterilization is not against Islamic law (Hoodfar & Assadpour, 2000). This endorsement facilitated a national male sterilization campaign in public health clinics. Cooperation between policy makers and religious authorities yielded highly dedicated and trusted advocates among community leaders and low-level clergies who were instrumental in removing the barrier between program planners and the community—particularly in rural areas. Furthermore, to ensure a self-sustaining program and steady supply, oral contraceptives were manufactured nationally and the government established their own condom factory, which is unique in the region (Roudi, 1999).

Model of service delivery

The Primary Health Care (PHC) network was initially designed in 1985 to facilitate a more equitable delivery of basic health care services by the Ministry of Health and Medical Education (MOHME) (Ministry of Health and Medical Education, UNFPA, 1998). The health care system was built around a network of rural “health houses”, rural and urban health centers, and district hospitals. The MOHME is in charge of policy making and planning at the national level. At the provincial level, the district health network operates under the auspices of the universities of Medical Sciences. The MOHME integrated family planning services into the existing PHC network at the district health network level, resulting in the successful expansion of population and family planning services.

The district hospital accepts referral cases from rural and urban health centers. Each rural health center covers up to five “health houses” and has a physician, several health technicians and administrators. The health house is the most peripheral unit in the network, covering one or several satellite villages with an average of 1,500 people. Each health house is staffed by a male and a female villager known as a *Behvarz*. Young *Behvarzes* are trained for two years in the *Behvarz* training center. *Behvarzes* work full time and receive a government salary. They create a file for each family in their service area, conduct a census at the beginning of each year, and actively reach out to the community and provide follow-up services using the health house's motorbike. Their principal duty is the provision of PHC services to the population under coverage, including antenatal care, immunizations, nutrition, diagnosis and treatment of diarrhea and upper respiratory infections, environmental health, and reproductive health—including family planning. By 1998, nearly 85% of the rural population had access to PHC services through 15,000 health houses and rural health centers (Ministry of Health

and Medical Education, UNFPA, 1998). All PHC services, including family planning, are provided free of charge and without prescription.

Involvement of women

In 1990, to further promote community participation, the Ministry of Health started the Women Health Volunteer (WHV) initiative. It began with only 200 volunteers in poor, densely populated urban areas, but it has since expanded nationwide. Each WHV covers 50 households, attends weekly training sessions, provides health education and active follow-up to household members under coverage, and updates demographic information. In return, these housewives receive regular health education on various topics and gain self-confidence and respect within their own community as a socially active woman.

Another important measure taken by the government to promote family planning and reproductive health services in rural areas was to involve the services of rural midwives (RMWs). In collaboration with UNFPA, the Ministry of Health has trained over 5,000 RMWs who act as family planning advocates in their villages. Recruited among young rural women, RMWs receive six months of training and provide service as midwives in their home village. They have proved to be very effective in reducing maternal and child mortality and increasing contraceptive prevalence rates (Ministry of Health and Medical Education, UNFPA, 1998).

Public education campaigns

A major part of the program was to educate youth and families about population growth and family planning using print media, TV, radio, schools, military programs and even mosques. In the educational materials and media campaigns, men and women are encouraged to use family planning to reduce poverty and enhance access to health and education for the next generation. To capture the youth when most of them become sexually active, results of the laboratory tests required for marriage registration are not released until the couple attend mandatory pre-marriage counseling. In these sessions—which vary from place to place—one topic is universal: contraceptive methods for both men and women (Family Planning Association of Iran, 2002). Additionally, education on population issues is now incorporated into all levels of the education system and other areas with potentially young audiences.

Core concepts of the Iranian family planning program are providing couples the freedom to choose among a wide range of contraceptive methods without coercion, while respecting cultural and religious values (Ministry of Health and Medical Education, UNFPA, 1998; Department of Public Health Bureau of Population and Family Planning, 2000); spacing pregnancies by three to four years; limiting the family-size to three children; and preventing high risk pregnancies of women under 18 or over 35 years of age. The program also promotes breast feeding, has established baby-friendly hospitals and cut the importation of baby formula. Free voluntary sterilization is provided to couples after screening for inclusion criteria: three or more children and the mother's age over 30 years old.

Impact on health and development indicators

Fertility decline in Iran was largely a product of changes in marriage patterns and increases in contraceptive use. In the years following the Islamic revolution, a traditional view of women as both a wife and mother prevailed. However, despite advocacy for early marriage, the average age of first marriage for women increased from 19.7 in 1976 to 23.4 in 2001 (MDGR Group, 2004). Delayed marriage and decreased fertility followed an expanded education campaign which allowed the majority of girls and women from traditional and conservative families to continue their education in segregated schools while dressed according to Islamic dress code. More Iranian women are now enrolled in university than men, with the female to male ratio in the universities reported as 110 to 100 in 2002 (MDGR Group, 2004). In addition, while adult literacy rates have increased overall, women's literacy rates have outpaced those of men.

As family planning became increasingly accessible, the gap in the TFR between rural and urban areas fell from 3.6 in 1977 to 0.6 in 2000 (Ministry of Health and Medical Education, UNFPA, 1998; Department of Public Health Bureau of Population and Family Planning, 2000). According to the Iranian Demographic and Health Survey (Department of Public Health Bureau of Population and Family Planning, 2000), 74% of married women use some kind of contraceptive—a rate comparable to that of developed nations—and 56% use modern contraceptive methods. The most popular method is oral contraceptive pills, followed by tubal ligation, intrauterine devices and condoms. The public sector is still the point of delivery of most contraceptive methods through the PHC network, which provides family planning services to 67% of the urban and 91% of the rural populations (Department of Public Health Bureau of Population and Family Planning, 2000). It is noteworthy that the rapid drop in the fertility rate was also concurrent with remarkable decreases in infant, child and maternal mortality rates—a result of increased maternal and child care (Fig. 2).

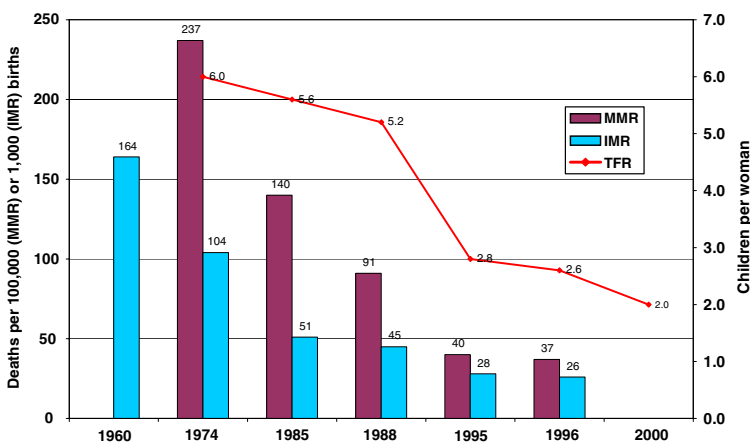


Fig. 2 Trends in maternal mortality per 100,000 (MMR), infant mortality per 1,000 (IMR), and total fertility rate (TFR) in Iran, 1960–2000 (Ministry of Health and Medical Education, UNFPA, 1998; Department of Public Health Bureau of Population and Family Planning, 2000)

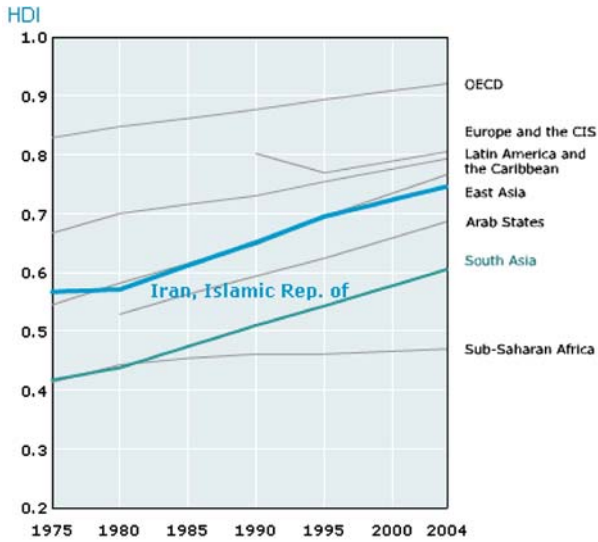


Fig. 3 Human development index trend. Source: Human Development Report, UNDP (2006)

The availability and use of family planning in Iran played an essential role in the achievement of developmental goals as reflected in the Human Development Index (HDI). The HDI value is calculated based on the combination of three measurable dimensions of human development: life expectancy, literacy, and income. As shown in Figure 3, the HDI in Iran has been increasing rapidly in the past two decades parallel to the rest of the world, reaching the level of developed countries (UNDP, 2006).

Conclusion

Iran has achieved one of the most successful family planning programs in the world. Despite economic and political hardships, the newly established government recognized the risks of a ballooning population and prioritized the implementation of a national population policy. Full support of religious and community leaders, a well established primary health care infrastructure and intelligent resource allocation resulted in a rapid decline in fertility and population growth. This trend has had positive impacts on women's health, education, and human development, and will help preserve natural resources for future generations.

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