

## **Tehran Survey of Fertility, 2009**

A Study on the Reproductive Behavior of Married Women in Tehran:  
Trends, Correlates, & Policy Challenges

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The Tehran Survey of Fertility, 2009 (TSF-2009) has been conducted by Dr. Amir Erfani, Assistant Professor of Demography at Sociology Department of Nipissing University, Canada.

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## SUMMARY OF FINDINGS

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The Tehran Survey of Fertility, 2009 (TSF-2009) is a representative sample survey designed to provide information on levels and trends and correlates of fertility, family planning, and induced abortion in the city of Tehran, the national capital. Survey results are presented at and can be generalized to the overall population of married women aged 15-49 residing in the 22 residential districts of the city of Tehran.

The funding for the TSF-2009 was provided largely by the Population Studies and Research Center in Asia and Pacific (PSRC), affiliated to the Iran Ministry of Science, Research and Technology, and partly by a Start-Up Research Grant from Nipissing University in Canada.

Dr. Amir Erfani carried out the TSF-2009 with the support of PSRC. TSF-2009 is the most recent demographic survey conducted similar to the worldwide Demographic and Health Surveys (DHS).

The survey fielded during the four weeks of August 2009. Interviews were completed with 2934 married women at reproductive ages (15-49) living in 22 residential districts of the city of Tehran. Married women at ages 15-49 who were living with their husbands in the household, as their permanent residence, were eligible for the survey.

### **CHARACTERISTICS OF RESPONDENTS**

A quarter of women interviewed in the TSF-2009 were less than 30 years of age, and more than half of women married after age 19 in Tehran. Sixty-four percent of married women in Tehran graduated at least from high school, and the percentage of literate married women is 98 percent. Twenty-six percent of married women have some college or university education. While the majority of women (84 percent) were unemployed, 16 percent of women in the reproductive age groups were working at the time of interview. Ethnically, 51 and 31 percent of women in Tehran are Fars and Turk, respectively, and the large proportion of women live in the central or southern districts of Tehran.

### **FERTILITY BEHAVIOR**

#### **Levels and Trends**

The findings of the TSF-2009 indicate that if a woman was to maintain the current fertility rates throughout her reproductive years, she would be expected to have 1.56 children on

the average by the end of her reproductive years. Although, women in Tehran still experience their prime reproductive years during their twenties, the TSF-2009 points out a change in the age pattern of fertility that is observed for Tehran. The prime reproductive years in Tehran have slightly shifted from the early 25s in 2000 to the late 25s or early 30s in 2009. This shows that age patterns of fertility are changing in Tehran, due to postponements in childbearing towards later ages.

On the average a woman in Tehran has given birth to 1.89 children. Out of that number, 1.85 children are still alive, indicating that 2 percent of the children ever born to the TSF-2009 respondents have died. Women age 45-49, who are approaching the end of their childbearing period, have had an average of 3.10 births.

### **Proximate determinants of fertility: levels & trends**

A theoretically maximum of 15.3 children per woman, in the presence of the inhibiting effects of the fertility-inhibiting effects of the four proximate variables including proportions married, contraception, abortion and postpartum infecundability, falls to almost one and half children in Tehran. While 69 percent of the combined inhibiting effects of these proximate determinants on the total fertility rate in Tehran is accounted for by the use of contraception, the marital age structure, postpartum infecundability (5.0%) and abortion are responsible for 23, 5, and 3 percent of the reduction in the total fecundity rate, respectively. This means that the current below-replacement fertility rate in Tehran is mainly attributed to an extensive deliberate marital fertility control among women in their early and middle reproductive ages. Little significant changes are observed in the relative contributions of the proximate determinants of fertility from 2000 to 2009.

### **Birth Intervals: timing of successive births**

On average, women in Tehran space their first and second births respectively by almost two and five years, but space their third births by about 14 years suggesting that the majority of women in Tehran have decided to stop childbearing after achieving two children. Women in 2009 space their second and third births 27 and 98 months longer respectively, compared with their counterparts living in Tehran in 2000. However, the length of the first birth interval declined by 6 months from 2000 to 2009.

For all three birth intervals, a woman's education and employment are significantly associated with longer birth interval. Use of a contraceptive method before pregnancy of the child is significantly associated with later timing and thus a lower risk of first, second, and third births. However, the effect of modern contraceptive methods on lengthening the transition time to the second and, specially, the third births is much greater than the effect of traditional methods.

The death of at least one of a woman's preceding children significantly reduced the transition time to the second and third births. Women with two girls than at least one boy have 15 percent shorter transition times to the third births, while the first child has no significant effect on the timing of the second birth, suggesting the existence of a son preference at the third birth.

## **FAMILY PLANNING**

### **Levels and Trends**

Overall, 85 percent of currently married women are using contraception, with 54 percent depending on modern methods and 31 percent using traditional methods. Condom is the most widely used modern method (16 percent) followed by the IUD (13 percent) and female sterilization (11 percent). Withdrawal continues to be the most widely used traditional method. Thirty percent of currently married women report current use of withdrawal.

Contraceptive use in Tehran increased from 78 percent in 2000 to 85 percent in 2009. The use of modern methods also increases by 4 percent during this period. With respect to specific methods, use of condoms and withdrawal all rose respectively by 10 and 3 percent, while use of female and male sterilization remained almost at the same level, but IUD and the pill use dropped off respectively by 2 and 3 percent over this period.

### **Differential in use**

The use of contraceptive methods varies by age. Current use of any method is lower among currently married women age 15-19 (83 percent), 20-24 and 25-29 (81 percent), rising to as high as 90 percent among currently married women in the 35-39 and 40-44 age groups, and then dropping to 76 percent among currently married women age 45-49. Withdrawal is used by relatively equal proportions of women in different age groups, with a slightly greater use among women in the 20-24 and 30-34 (36 percent). Moreover, the highest levels of condom use (from

20 to 24 percent) are found among women in 15-29 age group, while the highest level of IUD use is observed among women age 25-39. The levels of female and male sterilization are the highest among women in the 45-49 age group. Contraceptive use is also associated with the number of living children a woman has. Sixty five percent of currently married women with no children use family planning for postponing purposes. Use levels increase to 91 percent for women with two children, and then drop off to 87 percent for women with three or more children.

The highest levels of condom use are found among women who have no or one child (20 percent), have a postsecondary education (25 percent), are employed (21 percent), are in the fourth income quartile (17 percent), and are ethnically Gilak or Mazandarani (19 percent). Similarly, women from Gilak and Mazandarani ethnic group have the highest level of withdrawal use (34 percent).

### **Levels and Trends of unintended pregnancies**

The reported levels of unwanted and mistimed pregnancies among pregnant women have declined from 16 and 18 percent in 2000 to 9 and 11 percent in 2009, respectively. Correspondingly, wanted pregnancies have increased from 64 to 79 percent of the current pregnancies of respondents.

Though the levels of unwanted births have declined over the past years, abortion ratios have been increasing. This clearly suggests that the commonly used measures of unintended pregnancy usually ignore the unintended pregnancies terminated by abortion.

### **Contraceptive behavior and unintended pregnancy**

The levels of unwanted and mistimed births vary significantly according to the selected demographic, socioeconomic variables and contraceptive behavior before or at the time women became pregnant with the last child.

A half of women with three or more living children reported their last birth as unwanted, and 27 percent of those who gave birth to their last child at age 30 or above reported their last child as unwanted. While the third birth most often is reported as unwanted, the highest level of mistimed pregnancies was found among women whose last birth was their second pregnancy. The level of unwanted births was two times higher among unemployed rather than employed

women. In addition, the level of unwanted births decreases with rising levels of education, from 31 percent among women with no or primary schooling to 9 percent among those with a post-secondary education. Women living in the southern districts of Tehran have the highest level of unwanted births (23 percent).

Among women who discontinued their contraception before the conception of their last child only 12 percent reported the birth as unintended (5 percent mistimed, and 7 percent unwanted). However, for those respondents whose contraceptive method failed and hence led to their last birth, it was not surprising that 36 percent reported the birth as mistimed, while 53 percent reported the birth as unwanted. Finally, among respondents who did not use any form of contraception prior to and at the time they conceived, 17 and 18 percent reported their last births as mistimed and unwanted, respectively. These findings clearly suggest that the majority of unwanted births in Tehran are largely due to contraceptive failures and partly related to not using any method before and at the time of conception.

## **INDUCED ABORTION**

### **Overall abortion levels**

The lifetime abortion rate in Tehran is estimated to be one per six married women of reproductive age, and about 9 percent of pregnancies end in abortions. The mean age of women at abortion is 33.5 years. Given the fact that about 6 abortions are obtained annually by 1000 married women aged 20-49 living in the city of Tehran and 2,098,790 married women aged 20-49 enumerated in 2006 for the city of Tehran (Statistical Centre of Iran, 2006), annually, 11,543 abortions are estimated to be obtained by married women of the reproductive age in Tehran.

The estimated age-specific abortion rates indicate that the incidence of abortions among women living in the city of Tehran begins at the age of 20 and reaches its peak between the ages of 30-34, and thereafter it decreases. The abortion rates are highest among women in their mid 30s, followed by the second largest rate belonging to women aged 35-39.

### **Correlates of the incidence of abortion**

The decision of a woman for undergoing an abortion is associated with a number of demographic and socioeconomic characteristics. Women's age at abortion has been increasing

monotonically from the age of 23 before 1990 to 29 in 1992-99 and to 32 years in 2005-09. The estimated abortion ratios by age at abortion range from 3.8 abortions per 100 pregnancies among women aged 25-29 to 20 abortions per 100 pregnancies among women aged 35 and older. In Tehran, the highest proportion of pregnancies that end in abortions is found among women aged 35 and older.

The probability of abortion is higher among women who are less religious, wealthier, employed, and among those who are childless or have two children. Findings suggest the existence of a male imposition in seeking an abortion.

### **Reasons for Abortion**

Reasons for abortions indicate that 84 percent of abortions in the city of Tehran are most likely illegal, and birth spacing and limiting are the main reasons for seeking abortions. In addition, about 7 percent of abortions were obtained for 'postponing childbearing', largely among those women whose pregnancies took place prior or during engagement, wherein couples were not officially married and they were not ready to begin their new common life.

Poverty and economic difficulties, hindering to afford to properly care for a child, and spousal relationship problems, including divorce, separation, or a partner's drug addiction, were the most important reasons given for obtaining 21 percent of all abortions in the five years preceding the survey.

Risk to maternal health, fetal defects and vaginal bleeding during a pregnancy were respectively the main reasons for seeking 35 percent of abortions in five years prior to the interview.

### **Contraceptive and Abortion**

Overall, 84 percent of abortions resulted from contraceptive method failures, and women who obtained the other 16 percent of abortions were not using any contraceptive method when they became pregnant. About two-third of aborted pregnancies resulted from failures in withdrawal, the pill, and condoms.