

Infertility in Turkey: Evidence from Turkey Demographic and Health Surveys 1993-2013

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SHORT ABSTRACT

Reproductive health is a priority global health area. The target for MDG 5B is to provide universal access to reproductive health by 2015. One of the indicators for monitoring progress in reaching this target is the inability to conceive after a prolonged period. This is a critical but much neglected aspect of reproductive health issues. The inability to have children affects couples worldwide and causes emotional and psychological distress in both men and women. Turkey is a country that lays emphasis on the issue of infertility, especially after experiencing dramatic fertility decline in the last decades. This study aims to understand infertility trends in Turkey by using the different approaches, namely DHS approach (among married women aged 15-49 and 25-49), constructed approach (among all women), and current duration approach (among all women). Furthermore, the determinants of infertility based on constructed approach were also investigated with logistic regression models in the study. The data comes from the 1993, 1998, 2003, 2008 and 2013 demographic and health surveys. The findings put forward that the prevalence of infertility derived from DHS approach have increased in the period of 1993-2003 (from 1.9 percent to 2.4 percent), and then have decreased significantly in the period of 2003-2013 (from 2.4 percent to 2.0 percent). This decrease observed during 2003-2013 period appears to be related with the increase in the use of assisted reproductive techniques such as invitro fertilization, intrauterine insemination and intracytoplasmic sperm injection from 1.9 percent to 4.1 percent in Turkey. On the other hand, both of the incidences of infertility-constructed approach and infertility-current duration approach have also declined in 2003-2008 period, respectively (from 22.6 percent to 11.8 percent and from 4.2 percent to 3.9 percent respectively). These declines are mainly originated from the improvements in the maternal healthcare services in Turkey. Preliminary findings of the logistic regression models pointed out that education of women and wealth index ($p<0.01$), health insurance and property ownership ($p<0.05$) are main determinants of infertility besides age, region, using assisted reproductive techniques and age at first marriage ($p<0.01$) and body mass index ($p<0.05$), in Turkey in the period of 2008-2013.

EXTENDED ABSTRACT

Introduction

Inability to bear children has important demographic and health effects on fertility and population growth. In relation to infertility, recent studies revealed that women who have never had a child are more likely to divorce or separate and childless women are more likely to have been married more than once. Studies used comparable data shows that infertility has declined in most countries in the last decades.

The main objectives of this study are:

- To determine infertility trends in Turkey by means of some indicators which is obtained from TDHS-1993, TDHS-1998, TDHS-2003, TDHS-2008 and THDS-2013 women data sets.
- To reveal main characteristics of women in Turkey who has inability to conceive after one year of exposure to the risk of pregnancy.
- To provide information to decision makers for policy choices at the national level.

Data and Methodology

The data comes from surveys conducted in Turkey which named 1993, 1998, 2003, 2008 and 2013 Turkey Demographic and Health Survey (TDHS). In the selection of the TDHS samples a weighted, multistage, stratified cluster sampling approach was used. Women aged 15-49 in the household who were identified as eligible women were interviewed. These women nationally representative sample to provide information on levels and trends on sterilization. Concerning with infertility and infecundity measures women are asked about their reproductive health and background information such as live births, their past and current use of contraception and marital status. As part of the questionnaire a month to month reproductive calendar was used in surveys. In this way, information collected about birth dates, pregnancies, non-live birth terminations and use of contraceptive methods of women interviewed. In this study, trends about sterility which is given in a descriptive manner will summarize change in infertility trends 1993-2013 period in Turkey. Comparable data about infertility and infecundity measures allows us to assess trends in that period in Turkey.

Definitions were used in descriptive analyses as follows:

- Infertility based on DHS approach is percentage of women who have been married for the past five years, who have not used contraception during the past five years, and who have not had any births.
- Infertility based on constructed approach is percentage of women who have been married for the past one year, who have not used contraception during the past one year, and who have not any pregnancy in the past one year.
- Infertility based on current duration approach is percentage of women who have at risk of pregnancy, trying to become pregnant and who have not any birth in the past three months or their partners did not have a vasectomy.

Prevalence of Infertility

The findings illustrates that infertility derived from DHS approach have increased from 1993 to 2003, but have decreased 1.0 percent during 2003-2008. In addition to these infertility measures infertility based on constructed approach and current duration approach varies between 26.9-11.8 and 7.6-3.9 in 1993-2013 respectively (see Table 1). This significant decrease in given trends is explainable with improvements in the maternal health services during that period.

Table 1: Trends in infertility measurements, TDHS, 1993, 1998, 2003, 2008 and 2013

	TDHS 1993	TDHS 1998	TDHS 2003	TDHS 2008	TDHS 2013
<i>Trends in infertility measurements</i>					
Infertility-DHS approach (25-49)	1.9	2.2	2.4	1.4	2.0
Infertility-constructed approach (15-49)	26.9	16.9	22.6	20.6	11.8
Infertility-current duration approach (15-49)	7.6	3.9	4.2	4.4	3.9

Table 2: Trends in some indicators related to fertility and reproductive health, TDHS, 1993, 1998, 2003, 2008 and 2013

	TDHS 1993	TDHS 1998	TDHS 2003	TDHS 2008	TDHS 2013
<i>Total Fertility Rate (15-49)</i>					
	2.73	2.61	2.22	2.15	2.26
<i>Current Use of Contraception</i>					
	62.6	63.9	71.0	73.0	73.5
<i>Assisted Reproductive Techniques</i>					
Ever used reproductive techniques to get pregnant				2.5	4.2
Ever get pregnant by using reproductive techniques				76.9	66.1
<i>Maternal Health Services</i>					
Women received antenatal care from a skilled provider	62.3	67.5	81.2	92.0	97.0
Assistance during delivery	75.9	80.6	83.0	91.3	97.4
Place of delivery assistance-Health facility	59.6	72.5	78.2	89.7	97.2
Women received postnatal care after birth ¹				85.0	93.1
Children received postnatal care ¹				88.9	93.7

¹ Includes women who received a checkup after 41 days.

Note: Information by assisted reproductive techniques and postnatal care of women is only available since 2008.

While evaluating the trends in infertility, improvements in maternal health services and assisted reproductive health techniques should be take into consideration. Antenatal care includes the type of provider, frequency of visits, services of the antenatal care, the stage of pregnancy at the time of the first visit while assistance during delivery includes person assisting delivery and type and place of delivery. With respect to postnatal care, women whose last live birth occurred in the past five years preceding the survey were asked questions about postnatal checkup for mother and newborn.

When compared to the results of demographic and health survey conducted in 2008, there are considerable improvements in assisted reproductive health techniques. As shown in Table 2,

ever used assisted reproductive techniques to get pregnant have increased from 2.5 percent to 4.2 percent within the five years period between the surveys. Among that women, ever get pregnant by using these techniques have decreased from 76.9 percent to 66.1 percent. On the other hand, 34.7 percent increase on received antenatal care, 37.6 percent increase on delivering in health facility, 21.5 percent increase on assistance during delivery were observed in 1993-2013 period. Table 2 also shows that 8.1 percent increase on postnatal care of women and 4.8 percent increase on postnatal care of newborn was observed during 2008-2013 period. Findings related reproductive health services and maternal health services shows that there are substantial improvements on health care in Turkey during 2008-2013 period and 1993-2013 period respectively.

Results of this study also demonstrates that education of women and wealth index ($p<0.01$), health insurance and property ownership ($p<0.05$) are main determinants of infertility in the period of 2008-2013, as well as age, region, using assisted reproductive techniques and age at first marriage ($p<0.01$) and body mass index ($p<0.05$), in Turkey in the period of 2008-2013.

Conclusion

Due to the high cultural premium placed on childbearing in the culture of Turkey, infertility often poses serious social problems for couples. However, women are often more severely affected than men, even when the infertility is due to a male factor, often leading to divorce, financial difficulties, self-blame, social ostracisation and sometimes physical abuse of women. In certain areas where motherhood defines an individual woman's social status, self-worth, and treatment in the community, the inability to produce offspring means a woman is not regarded as a proper woman. For all of these reasons, infertility should be one of the important segments of the reproductive health programs in Turkey.

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