

# The epidemiology of primary infertility in the Islamic Republic of Iran in 2004-5

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## Abstract

**Introduction:** Infertility is a common problem around the world followed by psycho-social consequences. Determining the prevalence of infertility in society can assist health system decision-makers to plan the provision of health and medical services more precisely. This study was conducted in response to the question of the Iranian Scientific Association of Fertility-Infertility with the aim of determining the prevalence of life-time primary and current primary infertilities in the Islamic Republic of Iran.

**Materials & Methods:** This study was conducted by using a cross-sectional method on 12000 Iranian women aged 19-49 as the couples' representatives in 28 provinces of the country in 2004-2005. The sampling method was based on the systematic random selection of 400 thirty-household clusters with a proportionate probability to the size of the population of urban and rural areas of each province. The life-time primary infertility was defined based on one of the two scenarios that follow: The first scenario: 1) A safe contraceptive method has been used after marriage, 2) but the use of contraceptive has been discontinued after a while, 3) 12 months or more past the first discontinuation of the contraceptive method at the time of the study and 4) The case has not become pregnant within 12 months after discontinuation of the contraception method. The second scenario: 1) A safe contraception methods has not been used after marriage, 2) No conception was achieved within 12 months after marriage. The term current primary infertility was applied to a woman who had never been conceived up to the study, as well as being defined by one of the above definitions. Data analysis was conducted by using STATA 8.0 software while considering the concepts of descriptive statistics and computing the 95% confidence intervals. Lowess smoothing method was also used to smooth the scatter plot of the relationship between infertility and age at the time of the first marriage.

**Results:** In this study, 7350 urban and 4650 rural Iranian women, aged 19-49 in 28 provinces were interviewed. Among the 12000 interviewed subjects 630, (5.3%), cases were not eligible for the study and were left out of the study and the denominator of the primary infertility computation fraction. A history of life-time primary infertility was observed in 24.9% of the couples, (95% CI: 23.6-26.2%), as was the prevalence of current primary infertility in 3.4% of them, (95% CI: 3.0-3.8%). The trend of life-time primary infertility showed that the highest estimate was related to the lowest marriage age and the lowest prevalence was observed at the marriage age of 22 in 19% of the cases. This trend remained stable up to the age of 28 but it increased afterwards. The mean age of the subjects at the first marriage was  $18.1 \pm 3.8$  and a median of 18 years.

**Conclusion:** About one fourth of Iranian couples experience primary infertility in their lives and 3.4% of them have this problem at any time in their life. In interpreting the prevalence of life-time primary infertility and provision of its related health and medical services, paying attention to age at the time of marriage and couples' state of fertility is of importance.

**Key Words:** Infertility, Primary infertility, Life-time primary infertility, Current primary infertility, Iran.

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