

## Evaluating the trend of change in the mean onset age of menarche in Iranian girls

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### Abstract

**Introduction:** During puberty, the first menses or menarche, which is considered a special event, takes place. A study to determine the onset time of menses in girls in different regions of Iran, considering geographical specifications or local characteristics of each region, is essential. On the other hand, the changes of this important indicator over time, will show its probable trend and its study in different intervals will have a two-fold importance. This research has targeted this indicator's trend in the subjects born over a rather long period of time (50 years).

**Materials & Methods:** The data used in this research is from the data gathered for two national health and disease researches with 8220 and 10228 sample sizes including married women aged 15 to 49, from cities, towns and villages all over Iran, in the years 1990 and 1999 respectively. The means have been presented in the form of "Mean  $\pm$  SD" and for the analysis of the data, t-test, one-way ANOVA and Tukey Post Hoc were used while employing SPSS software (version 11). An alpha level of 0.05 was considered significant.

**Results:** The mean age for the first menses or menarche in the two studied periods of time (in the years 1990 and 1999) were  $13.86 \pm 1.51$  and  $13.65 \pm 1.47$  respectively, and in both periods the mean age at the first menses was significantly ( $p < 0.001$ ) less in urban areas compared to that of rural ones. With the passage of this 9-year period the mean age for the first menses has been reduced significantly ( $p < 0.001$ ) in both urban and rural areas, that is from 13.76 to 13.61 in urban areas and from 14.03 to 13.72 in rural areas. The analysis of age at the first menses according to the birth year (birth cohort) is indicative of a trend with a significant reduction in the age of menarche in those born during the decade 1936-1945 to those born during 1976-1985 and it has reached from  $14.3 \pm 1.59$  to  $13.57 \pm 1.34$ . This trend is seen in both urban and rural areas.

**Conclusion:** It seems that these changes are in concordance with the trend of economical improvement and nutritional status of people during those years. These findings are similar to other studies which demonstrate earlier maturation of girls by the betterment of socio-economical status.

**Key Words:** Menses, age at menarche, Iranian women.

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