Introduction: As we enter the 21\textsuperscript{st} century one of the major changes in the population of Turkey has started to realize in terms of the distribution of the age groups of the population. The continuing regression in the fertility rate due to the demographic transition has had an impact not only on slowing down the rate of population growth but has had an impact on the age structure of the population as well. With the contribution of the increase in the average life expectancy a rapid ageing trend has started in the population of Turkey.

Justification: This study has focused on the spatial distribution of the median age of the population according to districts. The objective of the study was to carry out a spatial analysis in terms of the median age distribution for the remaining time frame of the 21\textsuperscript{st} century. In addition to the different profile of the median age distribution in the country the study will reveal the fertility which affects the change in the median age of the population as well as the places of migration.

Data and Method: The data for the distribution of the age groups of the population used in the study were obtained from ADNKS (for 2012) as districts separated into rural and urban populations. The data for fertility which have an impact on the distribution of the age groups of the population and the data for migration (for 2012) were obtained from TUIK according to districts. Thematic maps were generated in terms of main age groups and the median age distribution with the database established according to districts. Subsequently the median age distribution was analyzed with spatial and statistical methods.

Findings: The fact that the median age value in the population of Turkey which was 19.9 in 1980 had risen to 30.1 in 2012 shows that the population had started to exhibit an aging trend in the recent past. The total fertility rate which was 3.41 in 1980 declined to 2.08 in 2012 which has been effective in the increase of the median age. In addition more youth are migrating from rural areas and that has been a factor in increasing the median age of the rural population (31.2) in comparison with the urban population (29.8). In addition to displaying the affiliation of the fertility rate and median age of migration as a multiple R value which was 0.85, Least Squares Method regression model explained 72% ($R^2$ 0.72) of the change in median age while Geographically Weighted Regression analysis which took spatial differences into consideration explained 90% ($R^2$ 0.90) of the change in the fertility and migration rates.

Fertility rate and migration are demographic processes which have an impact on the age structure of the population and they have shaped the distribution of the median age in Turkey on a district and province/regional scale. As a matter of fact the median age value in the eastern part of East Anatolian Region as
well as Southeast Anatolian Region are below the country’s median numbers and these regions have the youngest population whereas in the other parts of the country the increased median age value indicates the presence of a more aged population.

**Conclusion:** Subject to the demographic transition and spatial distribution of migration the spatial distribution of the aging trend of the population of *Turkey* displays regional differences. The change in fertility rates in particular and regional differences has shaped the distribution of median age.