The distribution of medical specialists in Golestan and Mazandaran Universities of Medical Sciences using Gini coefficient

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Abstract

**Background & Objective:** The fair distribution of medical specialists among the population of a country is one of the requirements for the public health. We aimed to investigating the distribution of medical specialists using Gini coefficient in all governmental hospitals in two medical universities of Golestan (15 hospitals) and Mazandaran (23 hospitals) provinces.

**Methods:** The present practical study was conducted using descriptive and analytical methods. The research data including the number of physicians, population and number of active beds in each city and province were obtained from the deputy of treatment of medical universities in each province. The Lorenz curve and the Gini coefficient were used to analyze the distribution of specialists using Excel software. T-test was used to compare the Gini coefficients between the two provinces. Multiple regression tests were performed using SPSS software version 16 to investigate the relationship between variables.

**Results:** The results showed that Gini coefficients on the basis of population in Mazandaran province were within optimum limit (less than 0.2). However, Gini coefficients on the basis of population in Golestan province were undesirable (more than 0.2) and there was also an inequality in the Gini coefficients based on the number of population between the two provinces of Golestan and Mazandaran (P=0.000, t=17.89).

**Conclusion:** According to the findings, the distribution of specialist physicians is desirable in Mazandaran province based on population. However, there was inequality in the distribution of specialist physicians in Golestan province. The accurate and fair estimation of the required human resources and the distribution on the basis of population and required indicators could lead to a reduction in the cost of treatment for families and better efficiency of health resources.

**Key words:** Specialist, fair distribution, Lorenz curve, Gini coefficient

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