Risk Factors of Road Traffic Accidents Associated Mortality in Northern Iran; A Single Center Experience Utilizing Oaxaca Blinder Decomposition

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Abstract

Objectives: To investigate the differences in death after receiving emergency services in traffic accidents between urban and rural regions, and decompose factors of the gap in Langeroood, Northern Iran.

Methods: This cross-sectional study was conducted in Langrood, Northern Iran during a 1-year period from 2013 to 2014. The hospital data of traffic crashes were used. Data contained those patients who survived at the scene of accident. Injury severity score, time to admission, age, gender, season of crash and type of collision were variables used in this study. Oaxaca decomposition technique was used to show the amount of inequity. In addition, three regression models were used to show the reason of inequity.

Results: Overall 1520 patients with road traffic accidents were admitted to our center during the study period. The mean age of the patients was 35.45±17.9 years, and there were 1158 (76.1%) men among the victims. Motorbike accidents accounted for 869 (57.1%) injuries and 833 (54.8%) accidents occurred in rural regions. The in-hospital mortality rate was 60 (3.9%). The results of this study showed that 95% of inequity came from factors used in this study and 2.04% disadvantages were for rural crashes. Severity of crash and time to admission had relationship with death, while the effects of time to admission was higher in rural region and severity of the accident had more effect on mortality in urban regions in comparison with rural ones.
**Conclusion:** The high rate of fatal accidents could be decreased by deleting the gap of access to health care services between urban and rural regions. This study suggested that more efforts of health system are needed to reduce the gap.

**Keywords:** Urban; Rural; Road traffic death; Injury severity score; Iran.