

## Crash Statistics Comparison for Riyadh, Eastern Province, and Qaseem for 2016 and 2017

**Authors :** Hassan M. Al-Ahmadi

**Abstract :** The fatality index (deaths/100 K population) due to road traffic accidents in the Kingdom of Saudi Arabia (KSA) is over 25, according to the World Health Organization Statistics (WHO) statistics, which is much higher than in the neighboring Arab regions. The KSA has implemented measures to mitigate traffic accidents by enforcing road safety regulations. As a result, there has been a slight decline in the frequency of road traffic accidents within the Kingdom. This study was based on the variations in the accidents for three provinces of KSA, i.e., Riyadh, Eastern Province (EP), & Qaseem, for 2016 and 2017 using ANOVA method. Data appropriateness for the ANOVA method was confirmed by the normality and the randomness of residuals. Additionally, the half-normal plot was used to identify the significant terms for the ANOVA analysis. The analysis revealed that the accidents in the EP were significantly higher than in the other two provinces during the analysis period. The monthly variation showed a spike in the accidents from month 7th to 9th month in the EP region and a slight drop in the accidents in the Qaseem and the Riyadh region during the same period, which was attributed to the increased leisure travels from the other regions to the EP. Furthermore, most of the accidents were found to occur in the age group of 18+ and 30+, and also the major reduction of accidents in 2017 as compared to 2016 was found to have occurred in the same group. These findings can be beneficial for developing strategies to further reduce the number of accidents.

**Keywords :** fatality index, emergency, road traffic accident, safety, leisure travels

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