An Analysis of the Relationship between Drivers' Behavior Types and Law Violations in Traffic Accident

- Accident Statistical Analysis by Drivers' Behavior Types and Law Violations -

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The number of traffic fatalities in Japan in 2020 was 2,839, which was less than 3,000. However, the percentage of elderly driver license holders continues to increase. Therefore, it is expected that the number of traffic accidents involving elderly drivers will increase in the future. Recently, there are increasing opinions that elderly people should return their driver's licenses. On the other hand, it is not always a wise idea for the elderly to lose the opportunity to travel in local areas where public transportation is inconvenient. In other words, it is important to consider countermeasures that enable the elderly to drive a vehicle safely without losing the opportunity to move, by taking safety countermeasures such as equipping vehicles with driving support technology that supports elderly drivers. In considering an effective driving support system, it is also important to understand the characteristics of traffic accidents from statistical analysis of accident data. Statistical data of traffic accidents that occurred in Japan are stored in the Institute for Traffic Accident Research and Data Analysis (ITARDA). By using traffic accident statistical data, stored in ITARDA, it is possible to analyze various items such as the type of accident, the type of responsible vehicles, driver behavior types, and law violations. In this report, the author focused on the relationship between driver behavior types and law violations, and analyzed vehicle to pedestrian collision statistical data stored in ITARDA. The distribution of law violations differs depending on driver behavior types. Then, in all type of behaviors in this study, it was confirmed that there was a difference in the fatal or serious rate in various type of law violations between drivers under the 65 y/o and drivers over the 65 y/o.
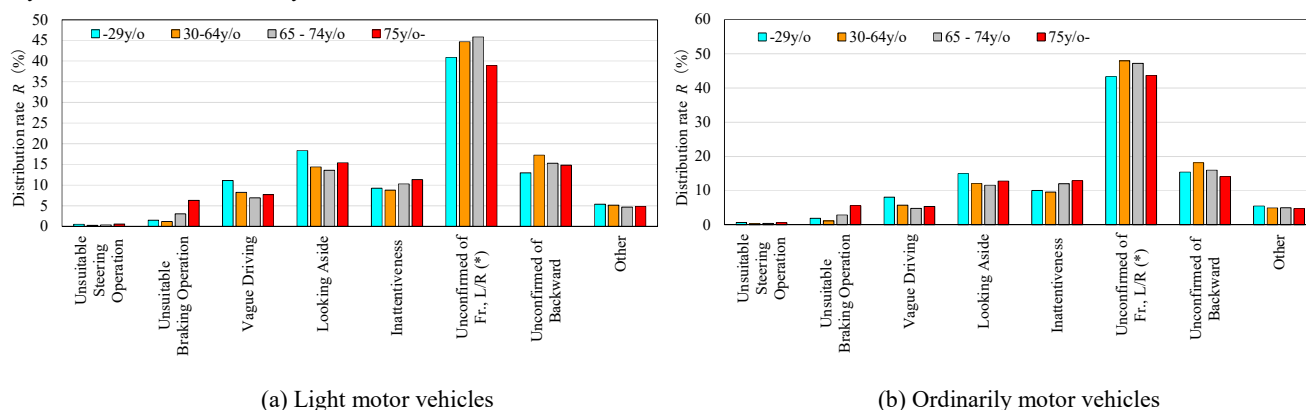

(a) Light motor vehicles   (b) Ordinarily motor vehicles

Fig.1 Distribution rate of law violations by drivers' age group
(＊Unconfirmed Fr. L/R ：Unconfirmed Frontwards, Left or Right)

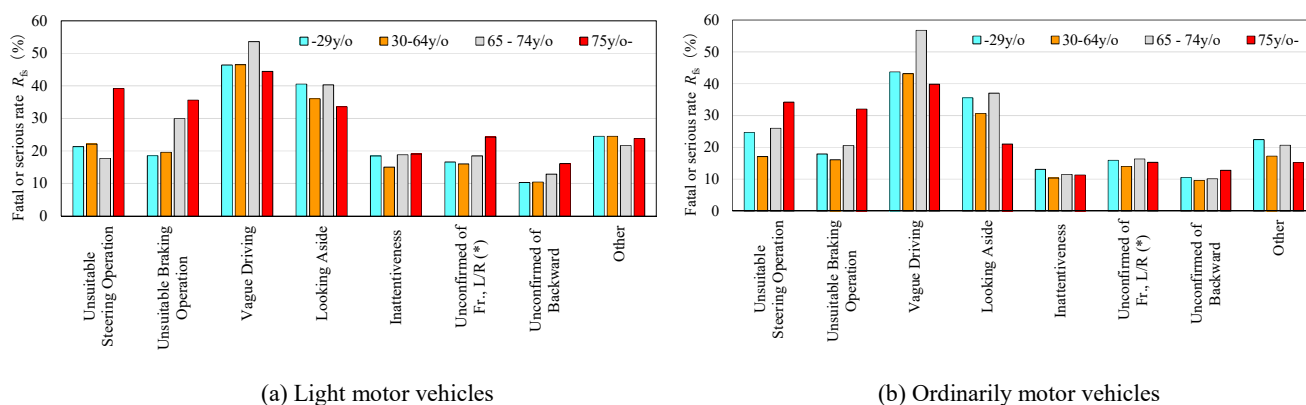(a) Light motor vehicles   (b) Ordinarily motor vehicles

Fig.2 Fatal or serious rate by law violations by drivers' age group
(＊Unconfirmed Fr. L/R ：Unconfirmed Frontwards, Left or Right)