Survey on the Effectiveness of Safety Belt Reminder System

Japan
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1. Objectives

◆ In Japan, it has been mandatory since March 2005 to equip the driver’s seat of passenger cars with the safety belt reminder system (SBR) (mandatory for new-model vehicles since September 2005).

◆ To confirm the effect, following survey has been conducted.

➢ The rate of safety belt use with / without SBR
➢ How and when SBR is activated
➢ Positive and negative evaluations of its functions
➢ Passenger seat SBR effect for future reference
2. Method of Survey

- The 6448 vehicles driver’s use/non-use of safety belt was visually checked at parking lot entrances of “road station of arterial roads (speed limit 60 km/h)” and “shopping mall”.  
- Passenger cars were selected with / without SBR equipped.  
- 268 SBR-equipped vehicles users were interviewed.
With SBR

Without SBR
4. How and when SBR is activated

- Most of activate condition was in short term such as “delay of buckling-up” and “Short distance”.

- 65.3% trip time was within 30 min.

**Conditions of SBR Activation**

- Delay of buckling-up: 50.2%
- In parking lot/property: 24.7%
- Being parked or reversing: 8.5%
- Short-distance: 5.4%
- Forgotten: 4.9%
- Unbuckled too early: 2.7%
- Always kept unused: 1.8%
- Other: 1.8%

**Trip Time Distribution**

- 30.6% trips are within 15 minutes or less
- 34.7% trips are between 16-30 minutes
- 22.0% trips are between 31-60 minutes
- 6.7% trips are between 61-90 minutes
- 4.5% trips are between 91-120 minutes
- 1.5% trips are 121 minutes or more
5. Positive and negative evaluations of its functions

- Approx. 84% of the users answered that the SBR audible warning was useful.

- 74.6% users answered “No request” for SBR function.

![Effectiveness of SBR Audible Warning](chart)

![Request for SBR function](chart)
6. Passenger seat SBR effect for future reference

- 2443 (38%) vehicles had passenger occupants. 116 (4.7%) vehicles were equipped with passenger seat SBR.
- The Safety belt use with SBR vehicle was +11.0% (95.7% ← 84.7%) higher than without vehicles.
- 11.2 % was activated by “Luggage on the seat”.

**Rate of Safety Belt Use by with / Without passenger’s seat SBR**

**Conditions of Passenger's Seat SBR Activation**

- Delay of buckling-up: 62.5%
- In parking lot/property: 3.3%
- Short-distance/unused: 0.7%
- Forgotten: 15.1%
- Unbuckled too early: 2.6%
- Always kept unused: 3.3%
- Luggage on the seat: 11.2%
- Action in a moving vehicle: 1.3%
7. Summary

- The rate of the driver’s safety belt use with SBR vehicles were +7.2% higher than without vehicles. Therefore, **SBR is very effective to increase the driver’s safety belt use.**

- SBR was activated mostly in short term such as delay of buckling-up or short distance driving. Therefore, **Short term deactivation could considerably reduce the effective.**

- With regard to the reference investigation of passenger seat SBR, it was also effective, however, there was still a issue of caused by putting luggage and seating frequency. Therefore, **further discussions for technical requirement and effectiveness study are necessary.**