Rider Assist Technologies: Popular Types, Motivations for Use, and Information Sources Consulted by Users

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Background

- Advance driver assist systems (ADAS) were only available in luxury cars. They are now, however, making their way into most car models, but not into motorcycles.
- The lack of safety systems in motorcycles is now beginning to receive attention.
- These Intelligent Transport Systems (ITS) are meant to increase traffic safety, but very few have been made specifically for motorcycles (Ambak, Aliq, & Ismail, 2009) though they could easily be adapted, e.g., adaptive cruise control, traction warning, weather warnings, curve speed warnings, active headlights, night vision, emergency brake indicators, and driver fatigue monitoring.
- With motorcycles being the most common and popular transportation source in most Asian countries, it is very important to protect the rider (Ambak et al., 2009).

Method

- Participants completed the study on Amazon's® Mechanical Turk ® (MTurk) platform by completing the online survey and were paid $0.25.
- Participants responses' were not considered for analysis if they did not report owning a motorcycle from a list of modes of transportation, if they were not a current rider, and if they completed the survey in under four minutes.

Results

- A total of 540 participants completed the online survey.
- After cleaning and screening, 175 respondents met the inclusion criteria (Mean age = 31.2 years, n = 63 Female, n = 108 Male, n = 4 did not report).

Results Cont’d

- Participants reported owning a motorcycle most commonly for both leisure and commuting (n = 77) followed by leisure only (n = 68), commute only (n = 27) and other (n = 3) and that they do the majority of their riding on urban city roads (n = 58), followed by country roads (n = 48), highway (n = 37) and suburban roads (n = 31).
- For those respondents who own a motorcycle with advanced technologies, the primary reason for usage was improved safety (n = 91) followed by aiding riding capabilities (n = 33) and improving riding comfort (n = 22).
- In regard to learning how to use these advanced technologies, the internet and YouTube was the most frequently reported method (n = 91), followed by friends and family (n = 68), self-taught (n = 48), manufacturer learning course (n = 25), the dealership (n = 22), and newspapers/magazines (n = 18).

Discussion

- Prior research shows that owners of advanced in-vehicle technology learn about their systems from other sources rather than authoritative sources.
- Our findings show that motorcycle riders also rely on informal sources to learn about their rider assist technologies.
- Motorcycle riders are more susceptible to critical injuries when involved in an accident or collision so it should remain a priority of the manufacturers.

Future Research

- In the Fall of 2019 we plan to run the study again on MTurk, but with tighter participation restrictions.
- A screener survey will be used to ensure participants are motorcycle owners.
- Participants must have completed 100 Human intelligence Tasks (HITS) or more and have a 98% approval rating or higher.

*References available upon request.*