Is hazard perception ability culturally specific? A cross-cultural comparison between China, Spain and the UK.

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Abstract

Hazard perception refers to a driver’s ability to spot hazards on the road in time to make a safe manoeuvre to avoid collision. Such a test is now part of the formal licencing procedure in the UK and in parts of Australia. But can such tests be successfully exported to other countries to reduce traffic fatalities?

The aim of this project is to study whether hazard perception skill is culturally specific by comparing UK, Spanish and Chinese drivers across clips filmed in all three countries. Data collection was set-up in the respective countries in collaboration with the University of Granada (Spain) and Tsinghua University (China). Participants had to watch 30 video clips filmed from the driver’s perspective (10 filmed in each of the three countries). Two variants of the test were created: a typical hazard perception test (with full clips requiring speeded responses to hazards), and a hazard prediction task (or ‘What Happens Next?’ task), where the film ends immediately prior to the hazard onset. This latter test removes the confound of individual hazard thresholds, as participants could successfully report ‘what happens next’ without judging whether it posed a hazard to them. All videos contained a variety of hazardous situations (or precursors to hazards) reflecting the particular driving environment of each country.

Three hundred participants across the 3 countries were tested, evenly divided between learner and experienced drivers. The differences between the culturally-specific tests in their ability to discriminate between driver groups will be discussed in regards to the potential for employing hazard perception testing in diverse geographical locations and cultures.