

How Media Reports Influence Drivers' Perception of Safety and Trust in Automated Vehicles in Urban Traffic

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BACKGROUND

Automated vehicles (AVs) are expected to **bring benefits** not only to their drivers [1], but also to traffic safety and the environment [2]. For this to happen, **drivers** must be willing to use automated vehicles which depends on whether they **perceive AVs to be safe and trust them** [3]. One source of **information that influences** how automated vehicles are viewed is **media coverage**, such as videos, newspaper or magazine articles. Media reports displaying the opportunities and risks of AVs in a neutral manner were shown to influence attributes like comfort and usability but not perceived safety or trust [4].



Aim of this study: Examine the impact of media reports (positive, negative, neutral) on perceived safety and trust in Level-3 AVs (1) directly after reading and (2) after experiencing an automated drive through urban traffic

METHOD

SAMPLE



- $N = 114$ (44 male, 69 female, 1 other)
- $n = 100$ included in data analysis
- $M = 28.8$ years ($SD = 12.4$; 18-62 years)
- Driver's license ownership: 100%
- Driving frequency: 60% drive at least 4x/week or daily
- Experience with automated driving: 18%

MEDIA REPORT



- Example: negative report

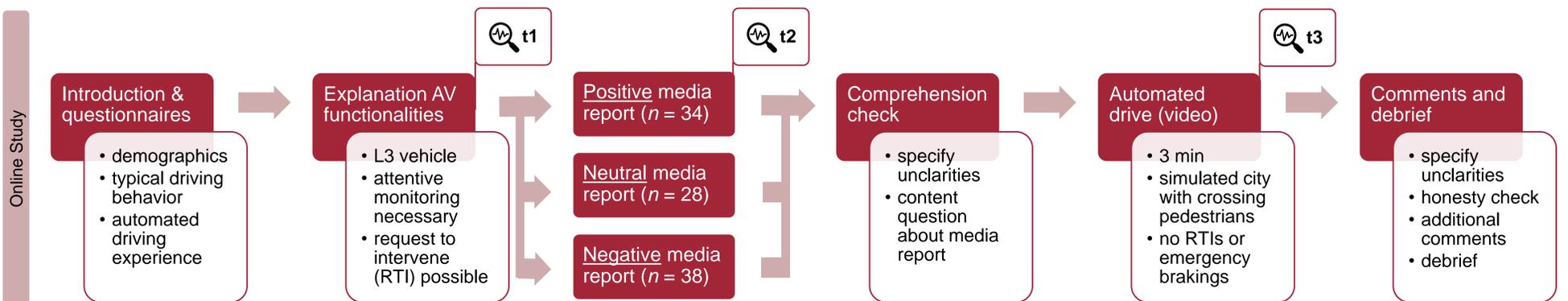
Pedestrian dies in crash with automated vehicle

Tempe/Phoenix - A pedestrian was fatally injured in a crash last night. The pedestrian was attempting to cross the street at a location without a crosswalk and was struck by an automated vehicle. Investigations to date show that the cause of the accident was probably a software error. The vehicle did not recognize the pedestrian due to poor lighting conditions, which is why it drove into the pedestrian without braking. The pedestrian succumbed to his serious injuries at the scene of the accident. It is still unclear whether the driver of the automated vehicle or the manufacturer will be held liable.

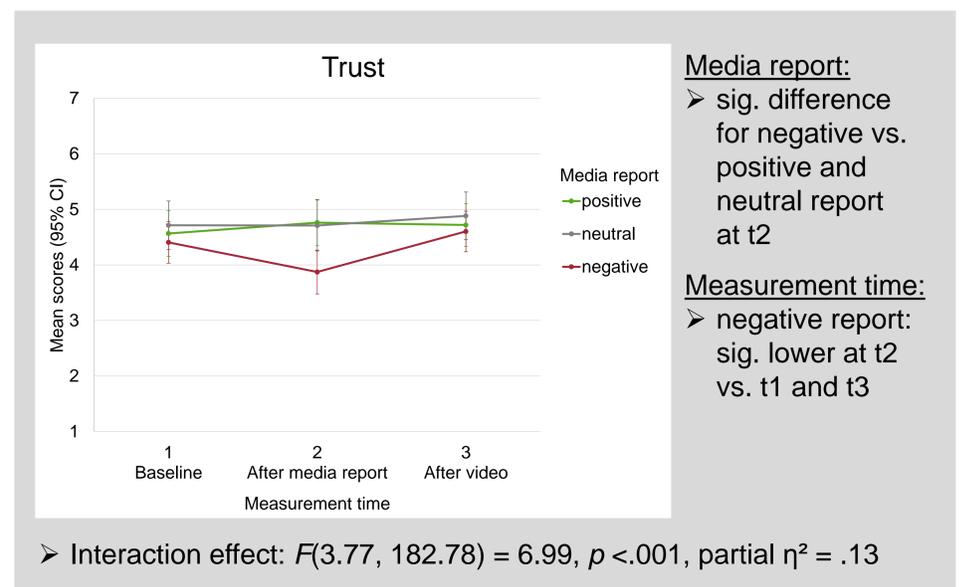
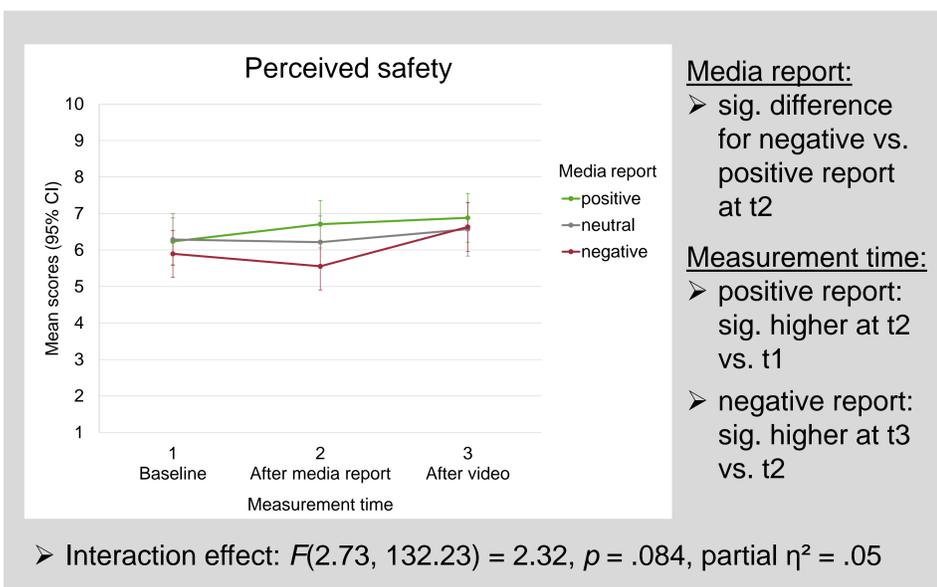
OUTCOMES



- Perceived safety
- Trust [5]
- Measured three times:
 - t1: baseline
 - t2: after media report
 - t3: after automated drive



RESULTS



DISCUSSION

Information from the media report significantly influenced trust and perceived safety. After reading the positive report, perceived safety increased compared to the baseline. After reading the negative report, trust was significantly lower compared to the baseline. However, after experiencing the automated ride trust recovered back to the initial level and perceived safety even increased. In line with previous research [3], the neutral media report had no impact on perceived safety and trust.

Further research is needed to examine whether prolonged media consumption, compared to reading one short newspaper article in this study, exacerbates or attenuates the results shown here. Moreover, since the automated drive was only experienced online, the findings need to be verified in a field study under real driving conditions.

LITERATURE

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