Would you transport your children in an autonomous vehicle?

Participants' willingness to use a driverless car to transport children without an adult in the car

Discussion

Participants reported an overall hesitance or unwillingness to transport children in AVs unaccompanied.

Women were the most reluctant out of all demographic groups.

Parents were significantly more reluctant than non-parents.

Socioeconomic factors did not influence willingness to transport children in AVs.

Most car feature groups were ranked “Important to Have” or “Required” for an AV that transports children unaccompanied.

Emergency safety features ranked most important for child transport, followed by child restraint + control of the child + the vehicle.

Methods

Participants

1,335 valid responses
42% male 58% female
18-82 years old (mean age 37)
61% parents of children under 15 years

Questionnaire

• Qualtrics survey hosted on Amazon Mechanical Turk
• Questions about participant + child demographics, willingness to use AVs to transport children unaccompanied, preferences + opinions of specific car features

Overall Findings

Willingness by demographic

Socioeconomic Factors

There were no significant effects for income, race, or education level on willingness to transport children unaccompanied in AVs.

Parents vs Non-Parents

Females vs Males

Emergency Features

• No significant difference between parents vs non-parents (p = .59)
• More important to females than males (p = .003)
• More important to parents vs non-parents with female children than to parents with male children (p = .052)

Child Restraint Features

• No significant difference between parents vs non-parents (p = .59)
• More important to females than males (p < .0001)
• More important to parents vs non-parents with female children than to parents with male children (p = .002)

Operation of + Access to Vehicle

• No significant difference between parents vs non-parents (p = .563)
• More important to females than males (p < .0001)
• More important to participants with female children than to participants with male children (p = .002)

GPS + Vehicle Location

• No significant difference between parents vs non-parents (p = .74)
• More important to females than males (p < .0001)
• More important to participants with female children than to participants with male children (p = .002)

Auditory Feedback of Child

• More important to parents than non-parents (p < .0001)
• More important to females than males (p < .0001)
• No significant difference (p = .087)

Visual Feedback of Child

• More important to parents than non-parents (p < .0001)
• More important to females than males (p < .0001)
• No significant difference (p = .69)

Miscellaneous: A/C, Windows, TV, Car Gauges

• More important to parents than non-parents (p = .004)
• More important to females than males (p < .0001)
• No significant difference (p = .61)

Overall willingness

7% Would definitely
51% Might
42% Would never

Comparison

Parents vs Non-Parents

Females vs Males

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