Non-Chronological Age Factors and Self-perceived Driving Abilities: A Survey Study of Autonomous Vehicle Acceptance

Gaojian Huang¹, Ya-Hsin Hung², Robert W. Proctor², and Brandon J. Pitts³
¹Department of Industrial and Systems Engineering, San Jose State University
²Department of Psychological Sciences, Purdue University
³School of Industrial Engineering, Purdue University

Adults age 65 years and older have become the fastest-growing age group worldwide. Many older individuals experience difficulties in performing common activities of daily living, such as driving. Autonomous vehicle (AV) technologies may enable older adults to maintain their mobility and independence. However, some studies suggest that older adults have lower AV acceptance than do younger adults, but most have not considered how inter-individual differences moderate this relation. Thus, the goal of this study was to determine how non-chronological age factors and self-perceived driving abilities influence acceptance of AVs across generations. An online survey was conducted using Amazon Mechanical Turk (MTurk). A total of 450 valid responses were analyzed across three age groups: 142 younger adults (ages 18 – 40), 113 middle-aged adults (ages 41 – 64), and 195 older adults (ages 65 – 79). Overall, younger age, higher educational attainment, perception of social support, and lower self-perceived driving abilities were associated with higher AV acceptance. Findings can inform theories and models on technology acceptance.

Keywords: Older adults; Autonomous vehicles; Non-chronological age; Self-perceived driving abilities; Crowdsourcing