

# Differences In Accelerometer-determined Sedentary Time And Physical Activity By Transportation-related Characteristics: 421 Board #272 May 27, 930 AM - 1100 AM

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**PURPOSE:** To describe accelerometer-determined sedentary time and physical activity in a diverse, community-based study sample and examine differences by selected transportation-related characteristics.

**METHODS:** Data for this cross-sectional analyses are from the ongoing, Houston Travel Related Activity in Neighborhoods (TRAIN) Study baseline assessment and included 111 participants (65.4% women; 38.8% White; aged 57.6±12.6 years) residing within a 3-mile buffer of new light rail transit lines opening in Houston, TX. All data were collected via U.S. Mail through October, 2014. Participants completed a comprehensive questionnaire and wore an ActiGraph wGT3X-BT accelerometer on their waist for seven consecutive days. Accelerometer data were downloaded and screened for non-wear. Average accelerometer counts were calculated as summed daily counts detected over wear periods. Time spent per day (min·d<sup>-1</sup>) in various intensities were determined using Freedson cutpoints. Wilcoxon Rank Sum or Chi Square tests were used to examine differences in accelerometer derived estimates by transportation-related characteristics.

**RESULTS:** A majority of participants reported having a valid driver's license (73.0%) and owning a motorized vehicle (77.5%). Owning an adult-sized bicycle was reported by 46.5%, and 47.8% reported primarily using public transportation. Over half (50.5%) also met physical activity guidelines. Participants with a motorized vehicle had significantly higher average accelerometer counts (median: 241.8 vs. 187.4 ct·min·d<sup>-1</sup>; p=0.03) and accumulated (median: 30.9 vs. 17.0 min·d<sup>-1</sup>; p=0.003) and bouts MVPA (median: 1.7 vs. 0 min·d<sup>-1</sup>; p=0.007) compared to those who did not. They were also more likely to meet physical activity guidelines (p=0.0005). There were no significant differences in accelerometer estimates by driver's license status, adult-sized bicycles in the household, or public transport as primary transportation mode.

**CONCLUSIONS:** Findings suggest that presence of a motorized vehicle in the household is associated with higher physical activity volume and time spent in MVPA. Future studies should explore the potential modifying role of household income on the association between motorized vehicle ownership and physical activity.

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