Active transportation is beneficial for both human health & the environment. Biking is positioned to become a major form of active transportation given existing recreational use. Biking for outdoor recreation increased 63% from 1983 to 2009. Still, fewer than 1% of bike commuters were assessed regarding perceived bike safety, transportation attributes, & demographics. These areas were chosen based on past research & the opportunity to overcome differences in satisfaction & safety perceptions.

**Data collection**
- Mail survey to a random, representative sample of Minnesotans in 2011 using Dillman et al. (2009) technique
- 1750 returns from the Twin Cities metropolitan area with regional response rate of 43%

**Measurement**
- Transportation mode & outdoor biking within last 12 months
- Perceived bike safety & satisfaction with transportation attributes on 7-point Likert scales (See below for example)

**Analysis**
- Descriptive statistics & comparison using ANOVA & ANCOVA, controlling for commute distance

**Methods**

**Introduction & Purpose**

**Results: Commute choices**

Of the 1750 responses from metro area residents, 57% commuted to work. Among commuters:
- Majority male (67%), non-Hispanic (98%), & white (100%); average age 51
- Driving alone dominant transport option for work, shopping, & recreational trips, 5% of commuters commuted to work by bike 78% also drove alone to work.

**Results: Comparing commuters**

Controlling commute distance & perceptions
- No differences in safety perceptions
- No controls, cycling commuters > satisfied with commuting time (F-value=4.63, p-value=0.01) & > aware of air pollution issues in their community (F-value=3.46, p-value=0.03)
- Controlling for commute distance: commute time & air pollution no longer significant, bike commuters < satisfied with clearing sidewalks of snow & ice (F-value=3.31, p-value=.05)

**Results: Perceived safety & satisfaction with transportation attributes**

**Results: Bike culture & commuting**

- Twin Cities bike culture may provide a higher sense of safety for bicyclists & other drivers
- Changing people's perception of biking as not only a recreational activity, but also a commute mode, may be a useful strategy to promote active transport

**Discussion**

Overall summary
- Perceived bike safety & most transportation attributes did not significantly differ among groups, despite contrary findings in past literature
- Twin Cities bike culture may provide a higher sense of safety due to existing infrastructure
- The overall perception of commuting by bike might be a more important factor than perceived bike safety
- Changing people's perception of biking as not only a recreational activity, but also a commute mode, may be a useful strategy to promote active transport

Future Research
- Differentiate between biking purposes
- Experiments with controlled perceived bike safety

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