

Satisfaction with transport and enjoyment of the commute by commuting mode in inner Sydney

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Abstract

Issue addressed: Travel satisfaction has become an increasingly popular construct for the assessment and monitoring of transport systems and services. However, satisfaction may not adequately assess emotion or mood towards walking and cycling, especially when infrastructure is biased towards motor vehicle modes. In this exploratory study we sought to examine the associations of both satisfaction with transport and enjoyment from the commute to work or study by commute mode in an Australian inner city context where transport mode choices are readily available.

Methods: As part of the Sydney Transport and Health Study, 675 baseline study participants (2013) were invited to complete an online questionnaire in September/October 2014 and 512 did so (76% response rate). Participants who did not travel to work were removed from analyses, giving complete data for 473. Participants provided data on usual travel mode to work or study, satisfaction with transport, enjoyment from their commute, and demographics and neighbourhood factors.

Results: The main mode of travel to work or study in this inner city sample was public transport (41%), followed by motor vehicle (27%), walking (21%) and cycling (10%). Most participants were satisfied with their transport (82%), with little variation by mode. Walkers (49%) and cyclists (52%) reported far higher levels of enjoyment from their commute than car drivers (14%) or public transport users (10%), with an adjusted odds ratio of 6.18 (95% confidence interval 3.10–12.29, $P < 0.001$) for walking and an adjusted odds ratio of 6.15 (95% confidence interval 2.68–14.08, $P < 0.001$) for cycling.

Conclusions: People who walked or cycled to work or study in inner Sydney reported higher levels of enjoyment from their commute compared with those who drove. This suggests enjoyment may be another benefit of active travel.

So what? Focusing on ‘enjoyment’ associated with walking or cycling to work may be a positive motivator to encourage active travel.

Received 21 May 2015, accepted 15 October 2015, published online 10 December 2015

Introduction

Travel satisfaction has become an increasingly popular construct for the performance assessment and monitoring of transport systems and services. However, the possible benefits attained by walking and cycling may not be adequately assessed by a measure of transport satisfaction, especially when infrastructure is biased towards motor vehicle modes.

Advocates of active travel highlight the physical and psychological health benefits of walking or cycling,¹ and active travellers report the emotive aspect of enjoyment from their active commuting.² However, transport cycling in Australia is widely considered to be dangerous, and many would find it stressful.³ Several dimensions of commuting influence perceived stress, such as impedance (caused by traffic congestion), and control over and predictability of commuting.⁴

Inactivity associated with motor vehicle travel has been linked to the risk of being overweight or obese,⁵ and motor vehicle commuters report higher levels of stress compared with active travel modes.⁶ However, there are benefits and disadvantages associated with each travel mode, and in many cities people still chose to drive to work and presumably derive some satisfaction or enjoyment from it (e.g. alone or ‘me’ time, listening to radio/music, smoking).⁷

Where work destinations are within walking distance, many commuters value the ability to walk to work. For example, the mixed land use zoning of the inner city of Sydney, Australia means it has the highest walk commute mode across metropolitan Sydney.⁸ For most commuters internationally, accessing public transport provides some walking or cycling opportunities, but it is factors such as crowding, reliability, waiting time, connectivity and

amenity that are the main determinants of satisfaction with public transport.⁹

The daily commute to work is generally considered a necessary function, rather than something to look forward to. Therefore, satisfaction with transport is the more commonly used metric to evaluate transport performance and new transport initiatives.^{9,10} However, measures of 'satisfaction' with transport may not adequately address situations where multiple transport modes are available and there is inherent self-selection bias – the majority of commuters are generally satisfied with their choice of transport mode where a choice exists. Also, a focus on satisfaction may underestimate or under-value the mental health benefits attained from active travel.¹¹ Despite the potential stress involved in walking or cycling in an urban environment, enjoyment may be higher among active travel modes compared with driving or public transport where mode choice exists.

In this exploratory study we sought to examine the associations of both satisfaction with transport and self-reported enjoyment from the commute to work or study, with commute mode in an Australian inner city context where transport mode choices are readily available.

Methods

As part of the Sydney Transport and Health Study,¹² 675 baseline study participants (from 2013 survey, aged 18–59, without a disability and who had ever ridden a bicycle) were invited to complete an online questionnaire in September/October 2014, 12 months after baseline data collection. Respondents were recruited to the baseline survey through multiple channels including random dial digit telephone calls to local residents, online panels and community advertising. Three-quarters of participants ($n=512$) agreed to be re-interviewed, a 76% participation rate. After removing 39 participants who did not travel to work (and therefore could not comment on their experience of the commute), complete data were available for 473 participants.¹² Ethics approval was provided by the University of Sydney Human Ethics Committee.

Respondents were asked about their usual travel mode to work or study,¹³ how much enjoyment they got from their commute to work or study (this was not asked at baseline) which was then dichotomised to a moderate/great deal/extreme amount or none at all/small amount, physical activity (minutes) over the previous week, plus demographic information. Participants were also asked how satisfied they were with their transport, using one of the items from the Australian version of the World Health Organization Quality of Life (WHOQOL-BREF, the abbreviated version of the WHOQOL-100).¹⁴ This variable was dichotomised (satisfied or very satisfied as one category, with very dissatisfied, fairly dissatisfied or neither satisfied nor dissatisfied grouped in another category).

Univariate logistic regression was used to examine the associations of usual travel mode, demographic variables and possible confounding variables with satisfaction with transport and enjoyment of the commute. Two multivariate logistic regression models were used to investigate the association of usual travel mode to work with self-reported enjoyment or satisfaction with transport, adjusting for age, sex, education and income. Stata version 13.1 was used for all analyses.¹⁵ As other variables may impact upon enjoyment of the commute, we also included in the models: minutes of physical activity, reporting feeling rushed or pressured and perception that their neighbourhood is more pleasant compared with 12 months ago.^{4,16}

Results

The main mode of travel to work or study in this inner city area sample was public transport (41%), motor vehicle (27%), walking (21%) and cycling (10%). Most participants were satisfied with their transport (82%), with little variation by mode other than for public transport, which recorded the lowest overall levels of satisfaction (see Table 1). Being older than 25 years and earning over \$80 000 per annum was associated with higher levels of satisfaction with their commute mode.

Walkers (49%) and cyclists (52%) reported far higher levels of enjoyment from their commute than car drivers (14%) or public transport users (10%), with an adjusted odds ratio of 6.18 (95% confidence interval 3.10–12.29, $P<0.001$) for walking and an adjusted odds ratio of 6.15 (95% confidence interval 2.68–14.08, $P<0.001$) for cycling compared with car/public transport as the reference category (see Table 2). The only other variables significantly associated with enjoyment from their commute was tertiary or higher education (adjusted odds ratio of 2.33, 95% confidence interval 1.15–4.74, $P=0.019$), and the perception that the neighbourhood is more pleasant compared with 12 months ago with an adjusted odds ratio of 1.86 (95% confidence interval 1.11–3.09, $P=0.017$).

Discussion

Most participants were satisfied with their usual travel mode to work or study, possibly reflecting the multiple travel choices available to commuters in inner Sydney and acceptance of the travel choices made. Walking and cycling to work or study was significantly more likely to be reported as enjoyable compared with driving or using public transport.

The findings for cycling was unexpected, given that Sydney is usually considered something of a hostile environment for cycling.¹⁷ However, it is consistent with a recent study from the United States that modelled time use data and reported that cyclists had the most positive emotional experience during commuting.¹¹ Creating more opportunities for walking or cycling is likely to make the journey to work or study more enjoyable for those commuters who take up the opportunity.

Table 1. Characteristics of survey respondents and factors associated with satisfaction with transport for their commute to work or study in inner Sydney

N, number of participants; OR, odds Ratio; AOR, adjusted odds ratio (adjusted for all other variables in the table); CI, confidence interval

| | N | Satisfied (%) | OR | AOR | AOR 95% CI |
|---------------------------------------|-----|---------------|------|------|------------|
| Travel mode: | | | | | |
| Car | 129 | 84.5 | 1.00 | 1.00 | |
| Public transport | 193 | 78.2 | 0.66 | 0.75 | 0.39–1.44 |
| Bicycle | 48 | 85.4 | 1.07 | 0.98 | 0.36–2.69 |
| Walking | 101 | 83.2 | 0.91 | 1.04 | 0.47–2.27 |
| Age: | | | | | |
| 18–24 | 57 | 66.7 | 1.00 | 1.00 | |
| 25–34 | 107 | 80.4 | 2.05 | 3.14 | 1.40–7.06 |
| 35–44 | 115 | 84.4 | 2.69 | 2.76 | 1.26–6.03 |
| 45–55 | 194 | 85.1 | 2.84 | 2.93 | 1.37–6.27 |
| Sex: | | | | | |
| Female | 288 | 81.6 | 1.00 | 1.00 | |
| Male | 185 | 81.6 | 1.00 | 0.82 | 0.48–1.41 |
| Education: | | | | | |
| Less than tertiary | 118 | 81.4 | 1.00 | 1.00 | |
| Tertiary or higher | 354 | 81.6 | 1.02 | 0.77 | 0.41–1.44 |
| Income: | | | | | |
| Less than A\$80 000 | 120 | 72.5 | 1.00 | 1.00 | |
| A\$80 000 or more | 300 | 85.0 | 2.14 | 1.90 | 1.09–3.31 |
| Physical activity: | | | | | |
| <150 min | 83 | 78.3 | 1.00 | | |
| 150 min or more | 390 | 82.3 | 1.29 | 1.33 | 0.69–2.60 |
| Feeling rushed: | | | | | |
| Never/sometimes | 244 | 84.0 | 1.00 | 1.00 | |
| Often/always | 229 | 79.0 | 0.72 | 0.68 | 0.40–1.16 |
| Perception of pleasant neighbourhood: | | | | | |
| Strongly disagree/disagree/not sure | 293 | 79.2 | 1.00 | 1.00 | |
| Agree/strongly agree | 180 | 85.6 | 1.56 | 1.31 | 0.75–2.26 |

The positive health outcomes associated with active travel, both physical and psychological, are essentially a function of the benefits of physical activity.¹⁸ However, mental health benefits may be contributing to increased enjoyment of active travel. A Japanese study found better mental health was reported for those walking and cycling to work compared with driving after adjustment for physical activity levels.¹⁹ A qualitative study of older adults returning to cycling found many reported the ‘joy’ they experienced when cycling, which clearly is an aspect of enjoyment.²⁰

That perceptions of the pleasantness of the environment were associated with enjoyment of the commute is consistent with other research identifying that perceptions of environmental factors are positively associated with increased walking.¹⁶ Building pleasant and convenient active travel infrastructure is likely to encourage more active travel, but some disincentives to driving may still be required.

While highlighting the enjoyment associated with walking and cycling to work or study is potentially useful for active travel advocates, this study was limited by the cross-sectional nature of the survey. There is also the potential for bias due to the nature of

Table 2. Characteristics of survey respondents and factors associated with enjoyment from their commute to work or study in inner Sydney

N, number of participants; OR, odds ratio; AOR, adjusted odds ratio (adjusted for all other variables in the table); CI, confidence interval

| | N | Enjoyment (%) | OR | AOR | AOR 95% CI |
|---------------------------------------|-----|---------------|------|------|------------|
| Travel mode: | | | | | |
| Car | 129 | 14.0 | 1.00 | 1.00 | |
| Public transport | 193 | 10.4 | 0.71 | 0.80 | 0.38–1.70 |
| Bicycle | 48 | 52.1 | 6.70 | 6.16 | 2.65–14.30 |
| Walking | 101 | 49.5 | 6.05 | 6.05 | 2.98–12.27 |
| Age: | | | | | |
| 18–24 | 57 | 17.5 | 1.00 | 1.00 | |
| 25–34 | 107 | 24.3 | 1.51 | 1.28 | 0.51–3.23 |
| 35–44 | 115 | 22.6 | 1.37 | 1.03 | 0.40–2.66 |
| 45–55 | 194 | 26.3 | 1.68 | 1.34 | 0.55–3.31 |
| Sex: | | | | | |
| Female | 288 | 24.3 | 1.00 | 1.00 | |
| Male | 185 | 23.2 | 0.94 | 0.79 | 0.47–1.34 |
| Education: | | | | | |
| Less than tertiary | 118 | 13.6 | 1.00 | 1.00 | |
| Tertiary or higher | 354 | 27.1 | 2.37 | 2.33 | 1.15–4.74 |
| Income: | | | | | |
| Less than A\$80 000 | 120 | 20.0 | 1.00 | 1.00 | |
| A\$80 000 or more | 300 | 26.0 | 1.41 | 1.15 | 0.62–2.13 |
| Physical activity: | | | | | |
| <150 min | 83 | 16.9 | 1.00 | | |
| 150 min or more | 390 | 25.4 | 1.68 | 0.87 | 0.41–1.87 |
| Feeling rushed: | | | | | |
| Never/sometimes | 244 | 25.8 | 1.00 | 1.00 | |
| Often/always | 229 | 21.8 | 0.80 | 0.90 | 0.54–1.51 |
| Perception of pleasant neighbourhood: | | | | | |
| Strongly disagree/disagree/not sure | 293 | 20.1 | 1.00 | 1.00 | |
| Agree/strongly agree | 180 | 30.0 | 1.70 | 1.86 | 1.11–3.10 |

the sample, and potential confounding due to factors such as travel distance and/or time and travel route. It is possible that happier people chose to walk or cycle. The sample is also not a population sample, but drawn to meet the particular needs of a larger study. Further research is required into understanding why commuters rate their journeys in the ways they do and how the idea of ‘joy’ can be used to promote active travel.

Acknowledgement

The Sydney Transport and Health Study is funded by an Australian Research Council Linkage Grant.

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