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| **Title of Research Presentation** How access to public transport and walkability at homes and schools affect active travel |
| **Background/Objectives**Physical activity is known to have a strong link with good health. An increase in physical activity can lead to lower risk of health issues such as diabetes. However, physical activity levels amongst youth decline as automobiles become more accessible to the general population. I aim to assess the association between the built environment, public transport access and **Methods**Individual and household data extracted from the Victorian Integrated Survey of Travel and Activity (VISTA) was used to examine the association between access to public transport, built environment and active travel in survey respondents 12 to 18 years of age in Melbourne, Australia using a cross-sectional study design. Public transport access was estimated from the Spatial Network Analysis for Multi-modal Urban Transport Systems (SNAMUTS). Walkability was estimated by local living index comprising of residential density, land use mix, and street connectivity. Two outcomes were investigated, whether active travel was used as the main mode of transportation, and whether 20 minutes active travel was accumulated.**Results**Univariate models suggested the likelihood of taking active travel was higher where there was some transport access compared to no access at schools (IRR=1.60, 95%CI=1.08, 2.38), whereas youth attending schools with average transport access had lower odds of active travel (IRR=0.62, 95%CI=0.40, 0.97). Adolescents attending schools in highly walkable areas were more likely to use an active mode of transport compared to students from schools with poorer walkability (IRR=1.51, 95% CI=1.04, 2.20). There was no evidence of an association between the exposures and the likelihood of active travel in fully adjusted models. When accumulating 20 minutes of active travel, transport access at schools (IRR=1.35; 95% CI =1.13 to 1.61 for average access and IRR =1.63; 95% CI = 1.30, 2.05 for high access), at homes (IRR=1.55; 95% CI=1.29, 1.86), and high walkability at schools (IRR=1.26; 95% CI=1.07,1.49) was significant in the adjusted model.**Discussion**There were three major findings of this study: 1. The relative importance of estimating public transport access in predicting active travel in adolescents. 2. The relative significance the school environment in estimating active travel. 3. Outlining the synergistic effects of walkability and public transport on adolescent transport choice.**Keywords**Adolescents, Active Travel, School Commute, Public Transport, Walkability, Household Travel Survey |