Health and the city: The impact of urban environment on physically active modes of travelling

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From the Editors

Welcome to the first edition of the 2010 Time Use in Australia and Europe Bulletin. This annual publication profiles the work being undertaken by time use researchers in Europe and Australia and aims to share information to the wider time use group and broader community.

This editions brings you research across two Dutch universities (Eindhoven & Utrecht) focusing on health outcomes of active travel modes and time spent with children by working parents. Similarly there is also a focus from Germany’s Leuphana University looking at time and income poverty and job satisfaction with working hours. Finally we focus on the results from the latest time use survey in Austria and look at a snapshot of all the work being undertaken in Australia.

We hope you enjoy the publication, and encourage you to join the mailing list to ensure that you receive future editions.

Your comments and feedback are always welcome.

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Health and the city: the impact of urban environment on physically active modes of travelling

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One of the major problems in public health, not just in the Netherlands, but worldwide, is overweight and obesity. In the Netherlands, the proportion of adults that are overweight has increased from a third to a half over the last 25 years. Ten per cent of overweight persons are obese. To obtain more insights into the influence of urban environment variables on choice of physical activities, the authors recently carried out a study comparing 40 neighborhoods identified by the Dutch national government as those neighborhoods that suffer most from problems of low livability, to other selected neighborhoods that are comparable in terms of socio-demographic variables but do not suffer from these problems.

Table 1: Average daily travel time (minutes) of individuals in selected neighborhoods, The Netherlands

<table>
<thead>
<tr>
<th>Neighborhood spatial structure</th>
<th>Travel time Walking</th>
<th>Travel time Biking</th>
<th>Total travel time active modes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid structure</td>
<td>8.32</td>
<td>9.98</td>
<td>18.31</td>
</tr>
<tr>
<td>No grid structure</td>
<td>9.93</td>
<td>8.33</td>
<td>18.26</td>
</tr>
</tbody>
</table>

Studies on the influence of spatial variables generally use characteristics of both individuals and neighborhoods. The authors used so-called multilevel analysis. This is an advanced form of standard multiple regression analysis, where the hierarchical structure of the data is taken into account. Using trip-diary data of a large sample of individuals, the factors influencing travel time by active modes, such as walking and biking, for conducting daily activities were analysed. Table 1 shows average walking and biking times for different types of neighborhood in terms of spatial structure.

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The Multi-level analysis revealed that there is one spatial variable in particular that, according to what could be expected, has a significant positive influence; that is, urban density. With an increase of urban density, the travel time by bike increases as well as the total time travelled by bike or on foot. In terms of neighborhood characteristics, mixed land-use, degeneration, safety and rating of green have an influence. Average ratings of social cohesion and health also appear to have a positive impact.

Analysis of personal characteristics shows that these characteristics have impacts that are in line with expectations. Persons from multiple person households (with or without children) are less physically active than persons from single-person households or from single-parent households with children. Also education level has a positive impact on walking, biking and total time of walking and biking. Finally, car possession appears to have a negative influence on walking: the more cars available in the household the less walking takes place.

To what extent and in what way, then, can urban policies promote physical active modes of travelling and contribute positively to public health? The results of the study suggest that all in all the influence of spatial variables is limited. However, quality of green, social cohesion, mixed land-use and safety are variables that may provide a key.

The Australian Time Users Research group – Looking for members from Europe…

Formed in 2008 the aim of the group was to encourage and support the time use research in Australia. The group is comprised of members from various state and federal departments and institutes and members from the higher education field.

In 2011 we would like to actively expand our membership to Europe as well. This would involve emailing us your name, institution and past & current time use projects. The aim would be to raise the profile of time use research in Europe and, explore policy directions for future research collaboration.