



thehealthyneighbourhood

A growing social problem

Overweight and obesity represent a growing problem in Dutch society. People who are overweight or obese have an increased risk of developing serious health complaints. The problem can be addressed from two angles: by encouraging healthier eating habits, and by encouraging people to take more exercise. Adequate physical activity in daily life will do much to prevent overweight and other chronic conditions. It is thought that the immediate residential environment has an important part to play here, provided it offers adequate opportunities for physical activity.

This theory prompted the EMGO Institute (part of the VU University Medical Center, Amsterdam), de Architecten Cie. and VU Amsterdam's SPINlab to conduct a joint research project examining the effects of the residential environment on the day-to-day physical activity of local residents. The study was undertaken between mid-2005 and late 2006, and was funded by the Foundation for the Promotion of Public Health (Fonds OGZ).



de Punt



de Punt



SuHa-buurt

Main conclusions

The study set out to monitor patterns of physical activity among residents of four Amsterdam neighbourhoods. These districts show marked differences in urban planning design, although they are similar in terms of the (lower) socio-economic status of the residents.

The results of the study indicate a clear difference between the patterns of everyday physical activity in a 'traditional' inner-city neighbourhood such as the Boerhaavebuurt and those of the post-war neighbourhoods of Osdorp (on the western fringe of the city). The residents of the traditional neighbourhoods appear to walk and cycle more than their counterparts in the post-war districts.

The Van der Pekbuurt, designed along the lines of a 'garden suburb' occupies an interesting position between the two extremes. The differences in activity patterns are reflected by a difference in average BMI (Body Mass Index, a measure of fatness). In those neighbourhoods in which residents engage in greater activity, the number of people with (serious) overweight is smaller. We hypothesize that the differences in activity patterns and the related BMI values are partly the consequence of the urban planning design of the districts examined.



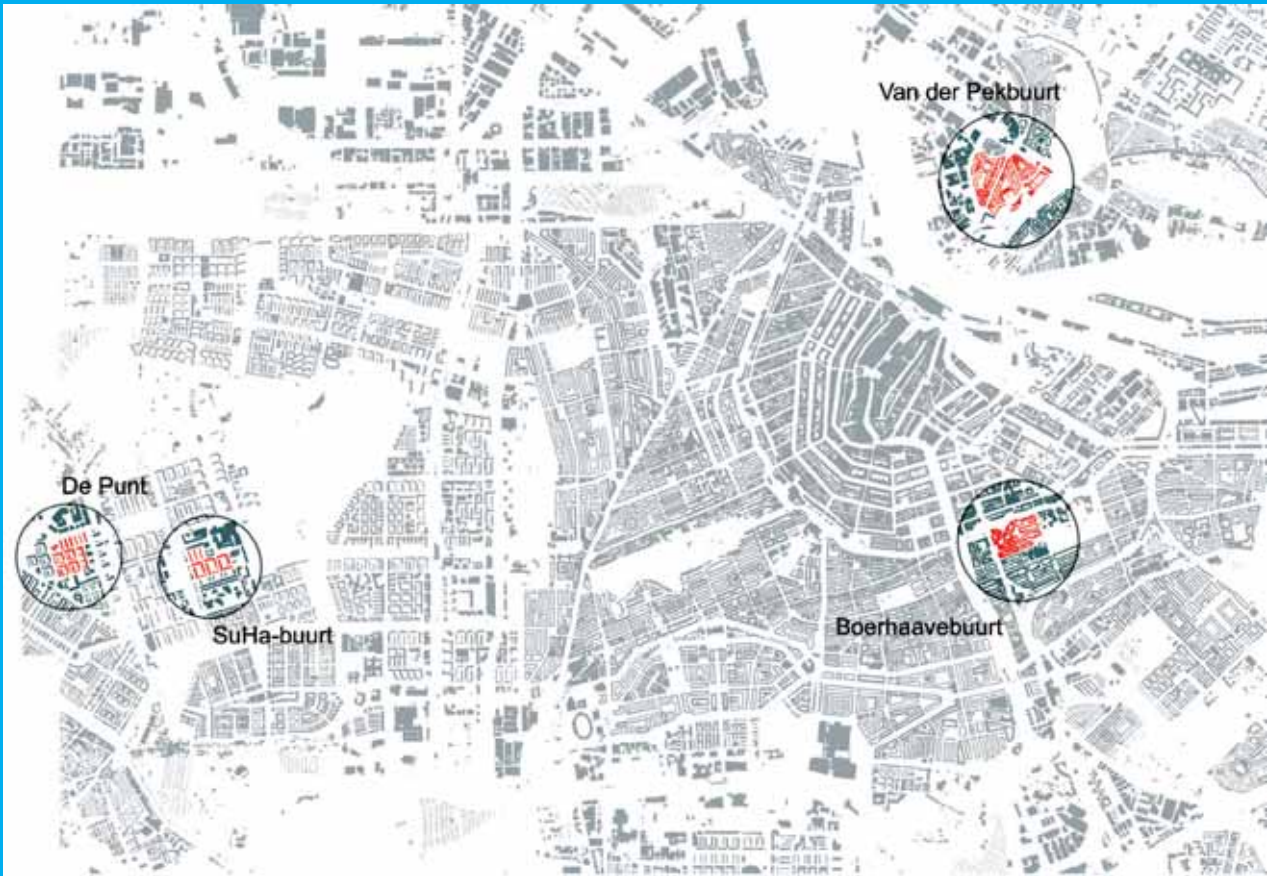
Van der Pekbuurt



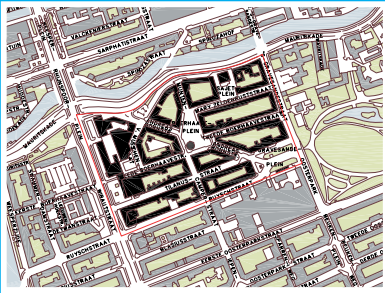
Van der Pekbuurt



Boerhaavebuurt



Boerhaavebuurt

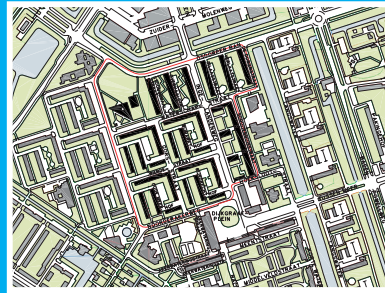


floor space index: 1.54

49% allocated
51% public

→ 1.5% green
→ 49.5% paved

de Punt

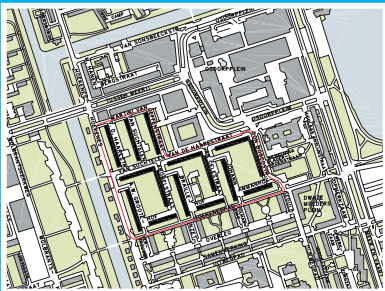


floor space index: 0.48

29% allocated
71% public

→ 25% green
→ 46% paved

SuHa-buurt

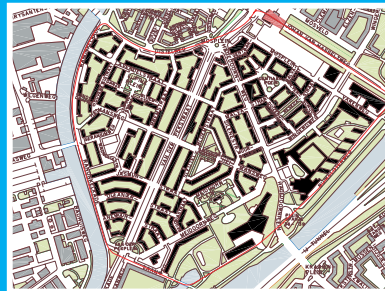


floor space index: 0.60

22% allocated
78% public

→ 37% green
→ 41% paved

Van der Pekbuurt



floor space index: 0.70

39% allocated
61% public

→ 13% green
→ 48% paved

Approach

This is the first large-scale study conducted in the Netherlands which examines the relationship between the physical characteristics of a neighbourhood and the patterns of physical activity undertaken by its residents. The multidisciplinary approach applied in the study has provided added value compared to research projects on the same topic conducted in other countries. Scientific insights have been directly linked to firm recommendations which urban planners and policy-makers will find useful.

The study applied a two-pronged approach. First, a questionnaire-based survey was conducted in the four neighbourhoods among a respondent group of 443 adults and 193 children. This served to establish the patterns of physical activity. The selected neighbourhoods are similar in terms of their demographics (average income, ethnic minority representation, etc.) but differ in terms of the form of the built environment (e.g. the proportion of greenery and the density of housing).

Respondents were asked to state how they usually reach a destination outside the immediate neighbourhood, how they do their (daily) shopping, how they travel to work, and how they travel to recreational facilities such as a park. They were also asked to rate a number of characteristics of their own neighbourhood, such as road safety, social safety, the provision of green amenities, and the general appearance and reputation of the residential environment.

Next, a spatial analysis of each neighbourhood was produced, based on the density of construction, the availability and location of amenities (with particular reference to retail outlets for daily shopping and parks). The quality of the access routes to these amenities was also taken into consideration, as were public transport services and parking facilities.

Boerhaavebuurt



de Punt



SuHa-buurt



Van der Pekbuurt



cycle
on foot

car
Public Transport



large supermarket



small shop

400 metres to large supermarket

The figure above shows how the results of the two analyses were combined to form an overall picture. The differences in the availability of shopping facilities and the accessibility of those facilities can be clearly seen. The vast majority of residents of the Boerhaavebuurt, the SuHa and De Punt have a supermarket within easy reach. Those in the Van der Pekbuurt, however, must often travel more than 400 metres to visit a supermarket. A notable finding is that almost all residents of the Boerhaavebuurt walk or cycle to do their regular grocery shopping, while those of De Punt will frequently take the car despite the relative proximity of a supermarket. The design and layout of the neighbourhood plays an important part here. Unlike residents of the Boerhaavebuurt, those living in De Punt can park on the street, immediately outside their homes.

The SuHa district also offers ample parking space, yet residents here usually choose to walk to the supermarket. It is so close at hand that taking the car would save very little time. It is interesting to note that a relatively high number of people in the Van der Pekbuurt walk or cycle to the shops, even though those shops are farther away. We explain the differences observed in terms of the following factors: the combination of functions at neighbourhood level, the routes to the shops ('cyclist-friendly' or 'motorist-friendly') and the parking facilities both in the residential environment and at the shops. In the case of children, other factors determine the level of physical activity in the neighbourhood. The more spacious layout of De Punt and the SuHa districts provides greater opportunity to play outdoors.

What next?

Such notable findings provide inspiration for further research. This should certainly include:

1. Qualitative research to gain a better understanding of people's motives: why do they opt for a particular form of transport, and what part does their perception of the spatial characteristics of the neighbourhood play in this decision?
2. Explicit attention to how residents combine visits to multiple destinations (the 'multi-purpose trips') and the patterns of physical activity outside the immediate neighbourhood.
3. Research in new districts in which the traditional inner-city planning concepts have been applied and elaborated (e.g. IJburg in Amsterdam), the new-style 'garden suburbs' and the districts in which parking facilities have been located at some distance from the homes.
4. Follow-up research into aspects which are specific to certain target groups and which influence the degree to which a neighbourhood may be regarded as 'activity-friendly'. The use of public space will clearly differ according to lifestyle and age group (children, adults, seniors, etc.).
5. Research into the effect of a new residential environment following relocation. A (longitudinal) study of this nature would provide hard evidence and further practical recommendations.

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