Perceived physical environmental factors related to walking and cycling for transport in rural and urban areas in the Netherlands

MASTERTHESIS PSYCHOLOGY

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Abstract

Background: The transport related physical activity levels of people have steadily declined, while the health benefits from active modes of transport are substantial. Coupled with the negative impact of high volumes of motorized transportation on environmental air quality, this has led to increased interest in understanding the determinants of transport related physical activity. The aim of this study was to investigate the association of the perceived physical environment with bicycling and walking for transport for different areas (rural, suburban and urban), in order to promote physical activity in a planned and systematic way.

Methods: Participants were surveyed by e-mail. The study included 803 inhabitants of the Netherlands, addressing walking and cycling behavior and associated perceived physical environmental, personal and social environmental factors. Logistic regression analyses were used to examine the associations between physical environmental variables and the two outcomes, stratified for perceived degree of urbanization. Furthermore it was investigated to what extent this relationship is moderated by age and gender.

Results: Respondents who averaged 42 years of age reported 170 min/week cycling and 93 min/week walking for transportation. Significantly more people in strong urban areas than in rural areas cycled a lot for transport purposes. No significant differences between location and walking for transport were found. Aesthetics was associated with higher levels of cycling for transport for people living in strong urban locations. Besides, functionality and safety appeared to be important influences of higher levels of cycling for people living in rural locations, in models that controlled for demographic variables, self efficacy and social support. No associations were found with walking for transport.

Conclusions*:* Different physical environmental variables were associated with cycling for transport, but not with walking for transport. These associations differed between people living in rural, suburban and strong urban settings. Enhancing these environmental attributes may be effective in promoting resident’s transport-related physical activity.

Keywords: Physical activity; Physical environment; Transportation; Rural; Urban; Walking; Bicycling; Netherlands

Introduction

The physical activity levels of populations of industrialized countries have steadily declined in the last three decades (World Health Organization, 2002). Our current environment tends to discourage physical activity: increased car ownership and improvements in roadway infrastructure for the purposes of automobile use have resulted in significant reductions in the frequency and length of active forms of transport (Cerin, Leslie & Owen, 2009). According to Susilo and Maat (2007), the trend from urbanization towards suburbanization also greatly affects the way people travel. The relocation of urban functions from city cores to suburban development nodes or city outskirts tends to be accompanied by a decline in cycling and walking.

Many journeys are short and cars, however, are the dominant mode of travel. More than 50 percent of car trips in Europe cover distances of less than five kilometers (Titze, Stronegger, Janschitz & Oja, 2008). Also in the Netherlands, cars are the dominant mode of travel for short distances. For more than 70 percent of all trips made by car, the distance is shorter than 3 km (RIVM,2009). These short trips could be walked or bicycled easily, thereby providing the recommended amount of daily physical activity (recent guidelines for physical activity recommend that adults accumulate, on most days, 30 minutes or more of moderate-intensity physical activity, in minimum bouts of around ten minutes (Jacobsen, Racioppi & Rutter, 2009). In the Netherlands, 44 percent of the population does not meet the Dutch standard for healthy physical activity (CBS,2008). So, by stimulating transport related physical activity a larger percentage of the Dutch population will reach this physical activity standard.

Yet physical inactivity is a major contributor to many of the leading causes of death, including obesity and chronic disease (Lorenc, Brunton, Oliver, Oliver & Oakley, 2008). The prevalence of overweight in the Netherlands is 53 percent for the Dutch male population and 42 percent for the Dutch female population, with a further respectively 11 and 12 percent reaching weights defined as obese (CBS, 2009).

Besides, the different significant health benefits of physical activity, encouraging active modes of transports will give considerable advantages for the environment. Switching from driving to walking or cycling is important for reducing $CO2$ emissions (Jacobsen et al., 2009). Especially these short distances by car are accountable for high fuel consumption and the dispersal of fines into the air. Exactly the dispersal of these short trips often takes place in the residential area. By this, the effect on the public health is large, because breathing in pollute fines is unhealthy. Considering the positive effects for the environment and public health it is very important to promote active ways of transport, like walking and cycling.

A better understanding of the relation between perceived environmental characteristics and walking and cycling would enable more successful interventions aimed at increasing physical activity. Social ecological models have increasingly been applied to understand the determinants of physical activity and inactivity (Pikora, Giles-Corti, Bull, Jamrozik & Donovan, 2003). Ecological models specify that physical environments, social environments and personal-level attributes may influence health behavior and physical activity. There is a growing body of evidence showing that characteristics of the physical environment have a significant influence on the active lifestyle choices of adults (Cerin, Leslie, du Toit, Owen & Frank, 2007; Duncan & Mummery, 2005; Giles-Corti., Kelty, Zubrick & Vallanueva, 2009; Humpel, Owen, Iverson, Leslie & Bauman, 2004). As Giles-Corti and Donovan (2002) state: 'the physical environment provides cues and opportunities for physical activity' (p.1794).

Physical activity takes place in different domains, which include household, transportation and leisure. Sugiyama, Leslie, Giles-Corti and Owen (2009) emphasize that different physical environment settings have different determinants and stress the importance of examining context specific behaviour measures and using context specific environmental attributes. Therefore, our primary interest is to determine the associations between physical environmental variables and walking and cycling for transport, while also considering personal (self efficacy) and social environmental factors (social influences).

The physical environmental features that emerge as important across multiple studies include 'safety', 'aesthetics' 'functionality' and 'destination' (Pikora et al., 2003). The safety feature reflects the need to provide safe physical environments for people and incorporates two elements of safety: personal safety (such as presence of lighting) and traffic safety (such as the availability of crossings). Weinstein, Feigley, Pullen, Mann and Redan (1999) found that people who perceive their neighbourhood as unsafe, are less physically active.

The aesthetic feature refers to a pleasant, relatively quiet, landscaped, well maintained environment where people will take pleasure (Pikora et al, 2003). Literature shows that people are inclined to undertake physical activity in aesthetically appealing (interesting and pleasing) environments (King, Stokols & Talen, 2002). Following Maas, Verheij, Spreeuwenberg and Groenwegen (2008), natural environments are perceived to be more aesthetically appealing than built-up environments.

The destination feature relates to the availability of community and commercial facilities in neighbourhoods. Where there are appropriate local destinations, there is an increased chance that people will walk. Relevant facilities in the neighbourhood include post boxes, parks, schools, shops and transport facilities such as bus stops and train stations. Access to destinations showed a positive correlation with walking for transport (Cerin et al., 2007).

Finally, the functional feature relates to the physical attributes of the street and path that reflect the fundamental structural aspects of the local environment. Factors that influence this feature include the directness of routes to destinations and path maintenance (Pikora et al., 2003).

The personal factor self efficacy is concerned with people's belief in their capabilities to perform a specific action required to attain a desired outcome (Conner & Norman, 2008). In this case, the belief in their capabilities to walk or cycle for transport. Past research has shown that self efficacy is a relevant and promising determinant of behaviour change related to the process of becoming and staying physically active (Stevens, Bakker-van Dijk, De Greef, Lemmink & Rispens, 2001; Troped, Saunders, Pate, Reininger & Addy, 2003; Duncan & Mummery, 2005).

Subjective norms and social support form the social environmental influences. Subjective norms can be divided in what significant others think the person should do and what significant others are perceived doing with respect to the behaviour in question (Ajzen, 2006). Social support takes the form of encouragement of others to try physical activity behavior. Social support has been found to have small to moderate effects on maintenance of physical activity (Sherwood & Jeffery, 2000).

Studies about the influence of the physical environment have largely occurred in urban settings. This while urban and rural physical environments are different. These differences often make findings obtained in urban settings invalid in rural settings (Moore, Jillcot, Shores, Evenson, Brownson & Novick, 2010). Troped et al. (2003) recommended as option for future research to identify shared and unique correlates of transportation physical activity in urban, suburban and rural settings. Therefore, this study distinguishes people who are living in rural, suburbanized and strong urbanized areas when investigating which factors influence transport related physical activity.

There are a number of urban residential characteristics of Europe. As a means of reducing energy consumption by transport many European cities have implemented measures to limit urban sprawl and promote the development of compact urban forms (Susilo & Maat, 2007). European cities tend to have a high density across space. What counts for Europe, counts even more for the Netherlands: the urban density across space is considerably higher than in the neighbouring countries. As a result, car ownership is lower in Europe than in US and more people use public transport and bicycles in Europe than in the US (Susilo & Maat, 2007). Especially in the Netherlands, there is a strong cycling culture: of the 16 million inhabitants more than 13 million people own a bicycle. The Netherlands has a high cycle-density and many cycle-tracks. Whereas in most countries the bike has a recreational function, the bicycle is pre-eminently a means of transport in the Netherlands.

This explorative study investigates the assumption that people in urban residents are more physical active for transport purposes than people living in rural residents. Work in the field of transportation has found people living in certain types of places walk more for travel (Forsyth, Oakes, Lee & Schmitz, 2009). Walking is more often seen as convenient in urban areas, and cycling in more rural areas (Lorenc et al., 2008).

Further, we investigate the assumption that different aspects of the physical environment are important for different urbanization settings. Since rural areas have low population density, there is higher likelihood that rural residents will live further from activity areas compared to people who live in strong urbanized locations. The high availability of facilities (e.g. shops and services) at walking and cycling distance in urban areas will encourage people to walk or cycle. On the other hand, urban areas are also often characterized by limited green space, which will not contribute to an interesting and pleasing physical environment that will encourage people to walk or cycle. In rural areas there is lots of green space, but people often have to use the car to visit facilities (Maas et al., 2008).

The aim of this study is to investigate whether there is an association between the physical environmental and the level of physical activity (i.e. both walking and cycling) analyzed for different perceived degrees of urbanization (i.e. rural, suburban and urban). Furthermore we investigate to what extent this relationship is moderated by age and gender. This paper focuses on transport-related physical activity, here defined as cycling and walking done to travel to and from work, to do errands, or to go from place to place (Cerin, Leslie & Owen, 2009). More specifically, the following research questions will be addressed:

1. Is there a difference in the level of cycling and/or walking for transport between people living in rural, suburban or urban environments?
2. To what extent is there an association between the perceived physical environment and cycling and walking for transport for people living in rural, suburban or urban environments?
3. What is the moderating role of age and gender in the influence of the perceived physical environment on walking and cycling for transport?

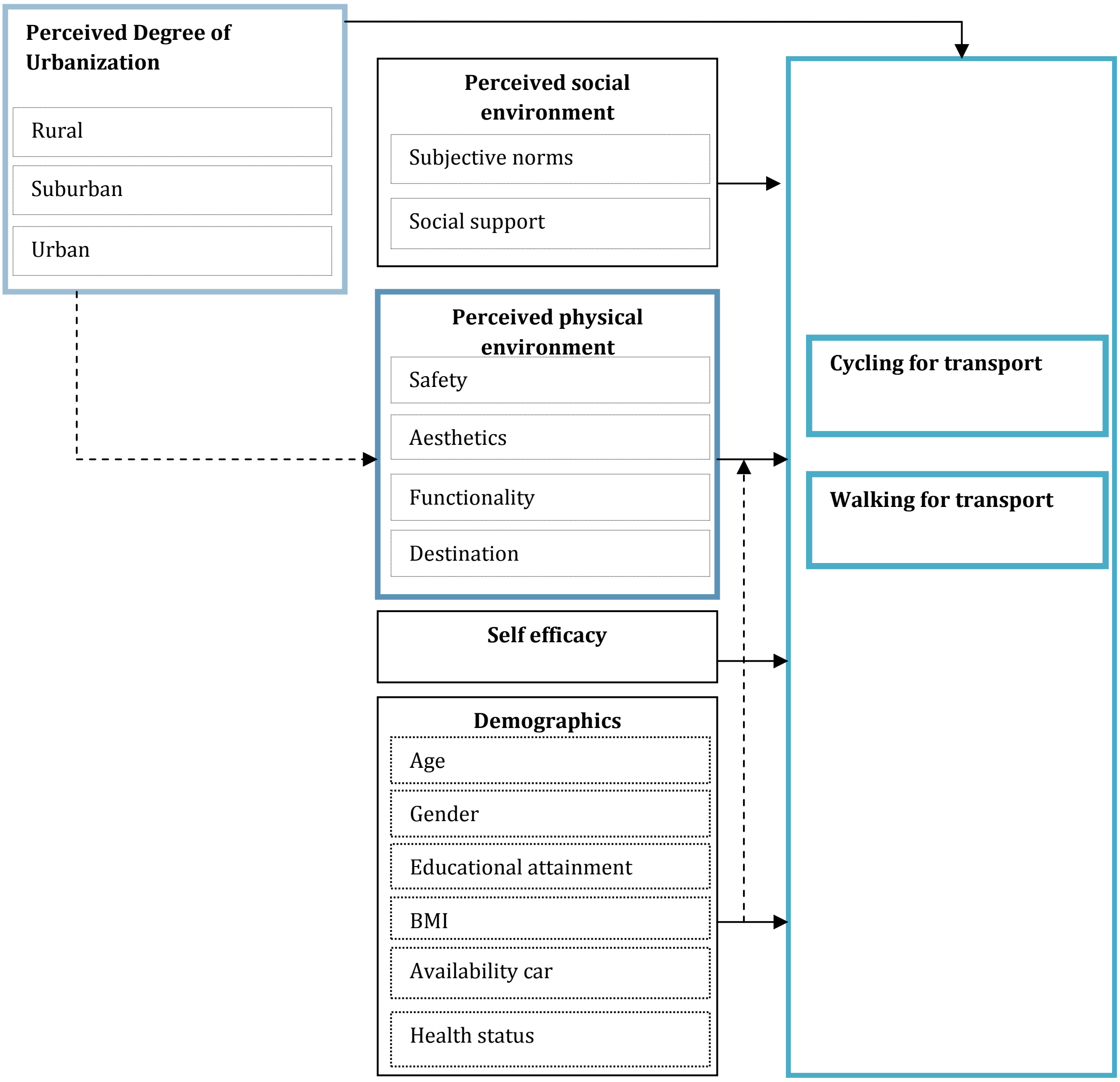
Methods

Study design and participants

A cross sectional survey of Dutch inhabitants aged 17-80 was conducted between August and September 2010. An e-mail with an URL to the webquestionnaire, was sent to different persons. At the same time we asked the potential respondents to send the e-mail through to other potential participants. A lottery-based incentive was provided. 1137 people opened the questionnaire, of whom 803 completed the whole questionnaire (70.6 percent). Of these 803 respondents, 694 respondents walk and cycle, 23 respondents only walk, 64 respondents only cycle and 22 respondents never walk or cycle (of which three persons due health problems) for transport purposes. We used the data of the 694 respondents who both cycle and walk for transport for our analysis. The time it took to fill out all the questions was approximately fifteen minutes.

Figure 1

Conceptual model



Study Measures

Perceived physical environmental, perceived social environmental, personal and demographic data were examined as potential correlates of transportation related physical activity (i.e. walking and cycling) (see figure 1). The selection of these variables was based on scientific literature about ecological framework, behaviour change models, the physical activity determinants literature and the 'Neighborhood Environment Walkability Scale' (Saelens, Sallis, Black & Chen, 2003). Our primary interest was to determine the associations between physical environmental variables and physical activity (i.e. walking and cycling), while also considering perceived social environmental, personal and demographic factors and whether these possible relations differ for people living in urban areas compared to people living in rural areas.

Dependent variables (outcome measures)

Participants reported which destinations they had visited in the past seven days from a list of ten common destinations. These were: 'school', 'work', 'shops and services', 'bus/train stop', 'family or friends', 'restaurant or café', 'park', 'gym or sport facilities', 'health institutions' or 'other'. Participants reported by each visited destination their travel mode (walking, cycling or using any other kind of vehicle) and how many minutes the trip took to reach that particular destination. We computed the minutes walking and we computed the minutes cycling separately. The outcome variables of the study were the total weekly minutes of cycling for transport and the total weekly minutes of walking for transport. Since the distributions of the variables were highly skewed, they were dichotomized using median split for analyses (see appendix B).

Independent variables

Demographic characteristics

The survey included questions on age, gender, educational attainment, perceived general health, height, weight, availability of bicycle, availability of car and postal code. We categorized the level of educational attainment from nine categories into three categories (low, moderate and high) based on the International Standard Classification of Education (ISCED, Verweij, 2008).

Perceived general health was self-rated by respondents by replying to the following statement: in general, would you say that your health is: …. They could respond by one of the following categories: bad, moderate, average, good, very good.

Combining the height and weight, we generated a BMI index for each respondent. We also included a dummy variable, indicating whether or not respondents had overweight (BMI > 25). We checked the normality distribution of the independent variables: the significant values in the Kolmogorov-Smirnov test indicates a deviation from normality of the independent variables (see appendix C).

Perceived physical environmental attributes

Nineteen items were used to assess the perceived environment for cycling and nineteen items were used to assess the perceived environment for walking. Based on Pikora et al. (2003), these nineteen items represented four different categories: 'safety', 'aesthetics', 'functionality' and 'destination' and provided the conceptual framework for the perceived physical environment. The items were assessed on a seven point Likert Scale ranging from 1 (strongly disagree) to 7 (strongly agree). See appendix A for a full list of items.

The four factors of the perceived physical environment are formative constructs; the items of the construct do not necessarily coincide. Instead, together they make up the construct. Therefore, it is not relevant to check its reliability (Hair, Black, Babin, Anderson & Taham, 2006).

Self efficacy

Self-efficacy for performing transport related cycling was assessed with four items using a seven point Likert scale from 'very difficult' to 'very easy'. Respondents were required to rate how easy or difficult it is for them to cycle for transport to their most visited destination 'even when the weather is bad', 'when it is very hot outside', 'when you are tired' and 'when you feel you don't have time'. The Cronbach's alpha for these four items was .81; indicating a high level of internal consistency. The participants also rated the same items for walking for transport to their most visited walk destination. The Cronbach's alpha for the four items 'self efficacy walking' was .88, indicating also a high level of internal consistency.

Social influences

Respondents were asked to rate on a seven point Likert scale (strongly disagree – strongly agree) the following five items: 'My friends, family and/or colleagues think that I should cycle', 'It is expected of me that I cycle', 'My family, friends and/or colleagues frequently use the cycle for transportation', 'Many people like me cycle to such a destination' and 'My family, friends and/or colleagues encourage me to use the bicycle to go to this destination'. The same items were also used for walking. The Cronbach's alpha for the five items 'social influences cycling' was .81. The Cronbach's alpha for the 'social influences walking' was .88. They both indicate a high level of internal consistency.

Degree of urbanization

This study distinguished between people who are living in rural, suburban and urban areas in investigating whether perceived physical environmental factors influence transport related physical activity. We assessed the degree of urbanization on two ways. First on a subjective manner, by asking how respondents would classify their own neighborhood: rural, suburbanized or urbanized. Second on an objective manner, based on the number of addresses per square km by checking the postal code of the respondents. This is measured at municipal level (rural: <1000 addresses per square km, suburban: 1000-15000 addresses per square km and urban environment: >1500 addresses per square km). This indicator is widely used in the Netherlands (Maas et al., 2008).

Data analysis

Analyses were carried out using SPSS 15.0 software. Descriptive statistics were used to summarize characteristics of the respondents and to summarize both the independent variables and the two physical activity outcomes. Items in each factor were averaged to provide a total score for each independent variable. This method facilitated comparison across the categories, with all having a final score from one till seven (see table 3).

For the bivariate analyses, the scores on perceived physical environment perceived social influences and self efficacy were transformed into categorical variables with three levels: low (a less positive perception of the environment); moderate; or high (a positive perception of the environment). The cutoff point used for these levels were those that most closely approximated the tertiles of the distribution. The outcome measures (cycling and walking) were dichotomized at the median split and analyzed separately. By using bivariate analyses we could discover possible curvilinear relationships.

Pearson's correlations were used to analyze the associations between the different constructs. We conducted also analyses with Spearman correlations because there was an indication that the variables deviated from normality.

Anova analyses were used to find out whether there was a significant difference between the average distance to the most accessed walking and cycling destination for people living in rural, suburban or urban areas. Further we conducted an anova analysis to find out whether there was a difference in total cycling and walking minutes and perceived degree of urbanization.

The bivariate relationships ($\chi 2$) between the perceived physical environmental, perceived social environmental, personal and demographic variables and walking and cycling were analyzed. All variables with p-values less than .25 in the bivariate $\chi 2$ analysis were entered into logistic regression analyses. The reason for carrying out a logistic regression was that it is robust against violations of normality and violations of the equal variance-covariance across groups (Hair et al., 2006, p.275).

In the models for cycling for transport purposes, we controlled for age, gender, perceived health status and the availability of a car. Additionally, in the models for walking for transport purposes, we controlled for age, educational attainment, perceived health status and the availability of a car.

As we think that the association between perceived physical environment and walking and cycling for transport differs for people living in rural, suburban and urban environments, all models were stratified by the perceived degree of urbanization, by means of the split file method. In the logistic regression analyses we first entered the socio-demographic variables, followed by the perceived physical environmental variables and third the two variables 'self efficacy' and 'social influences'. Furthermore, Baranowski, Cullen, Nicklas, Thomson and Baranowski (2003) suggested that as human behaviour is very complex, the presence of interaction terms seems be likely and these terms should be sought. So we tested for interaction effects between the perceived physical environment and the demographic variables age and gender.

To minimize the impact of one respondent or a small group of respondents on our results, we checked for outliers for the two physical activity outcomes. We exclude eleven respondents who are more than 1000 minutes per week physically active for transport purposes.

Results

Degree of urbanization

This study distinguishes people who are living in rural, suburban and urban areas. When respondents are classified based on the number of households per square kilometers (objective classification), 162 respondents (19%) live in a rural environment (<1000 addresses per square km), 227 respondents (27%) in a suburban environment (1000-15000 addresses per square km) and 448 respondents (54%) live in a strong urban environment (>1500 addresses per square km). When classifying the respondents based on how they perceive their own neighbourhood; 233 people (31%) live in a rural environment, 242 people (29%) live in a suburban environment and 331 (40%) live in a urban environment (see table 1).

Considering these differences, respondents perceive themselves as more often living in a rural or suburban setting while the objective method classifies them more often as a resident of a strong urban environment. As reference in this study, we use the subjective perceive degree of urbanization because we expect that the subjective classification is more sensitive and so more valid.

Table 1
Respondents (N) classified (Subjective and Objective) as living in Rural, Suburban or Urban areas.

Subjective Objective	Rural (N)	Suburban (N)	Urban (N)	Total (N)	Percentage (%)
Rural (N)	131	19	12	162	19%
Suburban (N)	95	109	23	227	27%
Urban (N)	38	114	296	448	54%
Total (N)	264	242	331	837	(100)
(%)	31%	29%	40%	(100)	

Accessed destinations

The most frequently accessed destinations by bicycle are place of work (31%), shops/services (30%), family, friends (8%), sport clubs (8%), train / bus station (7%), school (6%), cafés/restaurants (3%), park (2%) and other destinations (4%). The average cycling distance is 4.0 km (Standard deviation (SD) = 4.9 km).

The most frequently accessed walking destinations are shops/services (42%), park (14%), family, friends (12%), train/bus station (11%), school (3%), cafés/ restaurants (2%), work (2%), sport clubs (2%), health institutions (1%) and other destinations (11%). The average walking distance is 1.3 km (SD = 1.7 km).

For rural and suburban residents, the most frequently accessed destinations for walking as well as cycling are shops and services. For residents in an urban area the most frequently accessed destination by bicycle is work. Shops and services are the most accessed walking destinations (see appendix D).

We notice that when the perceived degree of urbanization increases, the cycling distance to the most frequently accessed destination also increases. Respondents living in rural environments cycled on average the fewest kilometers to their most visited destination (3,5 km), compared to suburban environments (average 3.9 km) and urban environments (average 4.5 km). This is however a non-significant difference ($F= 2,78$, $df = 2$, $p =.06$).

On the other hand, the walking distance to the most frequently accessed destination decreases when de degree of urbanization increases: respectively 1.6 km (rural), 1.4 km (suburban) and 1.1 km (urban). This is a significant difference ($F=5,943$, $df=2$, $p = 0,003$) (see appendix E).

Physical activity for transport

Table 2 shows mean minutes of walking and cycling for transport. On average, survey respondents report engaging in cycling for transport purposes 170 minutes ± 156 per week with a median value of 130. Besides they report engaging in walking for transport purposes 93 minutes ± 118 per week with a median value of 50.

A larger proportion of people living in urban environments are in the higher level group for cycling: 59.1% urban participants against 37.6% rural participants reporting a high level of transport related cycling

($\chi2$=24,20, *df*=2, p=.000). Participants living in strong urban locations (mean minutes =192) cycle significantly more minutes for transport than participants living in rural locations (mean minutes =145) (F=5,93, *df*=2, p=.003). We found no association between degree of urbanization and walking for transport (F= 0.198, *df*=2, p=.821) (see appendix F and G).

Those respondents reporting high values for aesthetics (57,8%; $\chi2$=9,69, *df*=2, p=.008) and those reporting a high self efficacy for cycling (59,7%, $\chi2$ =28,17, *df* =2, p=.000) cycle more minutes for transport purposes. Remarkably, those respondents reporting a lot of social influences cycle significant less for transport (54.7%, $\chi2$ =6.97, *df* =2, p=.031). Respondents who walk more minutes for transport are found among those with low values for safety (55,5%, $\chi2$=6,09, p=.048) (see appendix H).

Table 2
Mean, median and Standard Deviation (SD) of minutes cycling and walking for transportation for people in rural, suburban en urban environments.

	Total		Rural		Suburban		Urban	
	N	**Mean, median (SD)**	**N**	**Mean, median,(SD)**	**N**	**Mean, median, (SD)**	**N**	**Mean, median, (SD)**
Cycling for transport	734	170, 130, (156)	229	145, 80, (160)	202	163, 125, (128)	303	192, 165, (156)
Walking for transport	734	93, 50, (118)	229	89, 50, (118)	202	97, 50, (123)	303	92, 55, (116)

Demographic characteristics

Table 3 shows the descriptive characteristics of the respondents. The mean age of women in the sample is 37 (SD=13.6) and the mean age of men of the sample is 47 (SD=14.1). The participants are overall a relatively healthy group; 91 percent of the respondents define their health as good or very good. 99.5 percent of the respondents have a bicycle of which 1.6 percent has an electric bicycle.

There are no significant differences between age and transportation related physical activity (cycling: $\chi2$=8,34, *df*=6, p=.214; walking: $\chi2$=8,77, *df*=6, p=.187). Neither a significant association is found between BMI > 25 and cycling or walking for transport ($\chi2$ = 1,13, *df*=1, p=.288; $\chi2$=0,07, *df*=1, p=.788). A significant difference between men and women is found for cycling, but not for walking: the proportion of men (55.8%) who are in the higher level group for cycling are significant larger than the proportion women (45,1%, $\chi2$=7,84, *df*=1, p=.005). Significantly larger proportions of those cycling for transport are found among those who perceive their general health as very good (58,3 %, $\chi2$=11,14, *df*=3, p=.011) compared to people who perceived their general health as moderate. Besides, more people with a low education (64.2%) are in the higher level group for walking ($\chi2$=6,46, *df*=2, p=.040). Significantly larger proportions of those cycling and walking are found among those who never have the availability of a car (resp. 63,4%, $\chi2$=25,28, *df*=3, p=.000; 64,6%, $\chi2$=10,25, *df*=3, p=0.017) (see appendix I).

There are no significant gender differences for place of residence: as much men as women live in rural, suburban and urban environments ($\chi2$=0,46, *df*=2, p=.797). The proportion of participants with a high education living in a strong urban environment (46,5%) is significantly higher than for those with a low education(16.7%; $\chi2$=30,59, *df*=4, p=0.000). There is also an association between BMI > 25 and location (χ2=9,57, *df*=1, p=0.008). Respondents with a BMI higher than 25 (defined as overweight) lives more often in rural environments (45,8%) than urban environments (32.4%). Further, more young respondents (<30 years) live in an urban environment (56,8%) against 13.4% of older respondents (>60 years) (χ2=73,83, *df*=12 p=.000). Finally, there is a significant difference between availability of a car and perceived degree of urbanization (χ2 =82,98, *df*=6, p< 0,001): 77.8% of the rural residents always have a car available against 47.6% of the urban residents (see appendix J).

Table 3
Demographic characteristics respondents

	Rural		Suburban		Urban	
	N	**(%)**	**N**	**(%)**	**N**	**(%)**
Gender						
Female	115	(54)	104	(52)	154	(55)
Male	98	(46)	97	(48)	127	(45)
Age (yr)						
17 – 20	4	(2)	6	(3)	4	(1)
21 – 30	40	(19)	48	(24)	125	(45)
31 – 40	23	(11)	33	(16)	53	(19)
41 – 50	40	(19)	43	(21)	43	(15)
51 – 60	61	(29)	45	(22)	45	(16)
61 – 70	41	(19)	24	(12)	11	(4)
71 – 80	4	(2)	2	(1)	0	(0)
Education						
Low	27	(12)	18	(9)	9	(3)
Moderate	54	(23)	52	(25)	43	(14)
High	132	(56)	131	(64)	229	(75)
Body Mass Index						
≤ 25	110	(54)	119	(60)	184	(68)
≥25	93	(46)	78	(40)	88	(32)
Availability of a car						
Never	8	(3)	13	(6)	62	(20)
Sometimes	20	(9)	24	(12)	71	(23)
Regularly	24	(10)	26	(13)	28	(9)
Always	182	(78)	143	(70)	146	(48)
Availability of a bicycle						
Yes, normal	221	(94)	200	(97)	301	(98)
Yes, electric	5	(2)	3	(2)	1	(0)
Yes, both: normal & electric	7	(3)	2	(1)	3	(1)
No	1	(0)	1	(0)	2	(1)
Health Status						
Bad	0	(0)	0	(0)	0	(0)
Moderate	4	(2)	2	(1)	4	(1)
Average	24	(11)	18	(9)	12	(4)
Good	139	(65)	127	(63)	156	(56)
Very good	46	(22)	54	(27)	109	(39)

Perceived physical environment

Table 4 shows mean scores on perceived physical environmental categories. For cycling for transport we found for the different urbanization degrees significant differences in the mean scores aesthetics, destination and functionality. Participants living in rural areas report significantly more often a high value of aesthetics in their neighbourhood (41.6%) than participants living in urban locations (29.0%, χ2=16,38, *df*=4, p=.003). Besides, they report more often a low value of functionality (42.3%) in their neighbourhood than participants living in urban locations (31.5%, χ2=9,82, df=4, p=.044).

For walking for transport we found for the different urbanization degrees significant differences in the mean scores on safety, aesthetics, functionality and destination. Participants living in urbanized areas report significantly more often a high value of safety (38.2%) than participants living in rural areas (23.3%, $\chi 2$ = 18,55, *df*=4, p=.001). Besides, participants living in rural locations report significantly more often a high value of aesthetics in their neighbourhood (47,9%) than participants living in urban locations (23.3%, $\chi 2$ = 56,86, p = .000) and they also report more often a low value of functionality in their neighbourhood (43.2%) compared to participants living in a urban environment (26.6%, $\chi 2$ = 14,43, p = 0.001). Finally, respondents living in strongly urbanized environments report more often a high value of destinations (54,1%) compared to respondents living in a rural environment (19.2%, $\chi 2$ = 84,00, *df=4,* p=.000) (see Appendix K).

Table 4
Mean scores on physical environmental attribute categories (7 point Likert Scale: 1 low, 7 high). SD = standard deviation.

		Total		**Rural**		**Suburban**		**Urban**	
		N	Mean, (SD)	N	Mean, (SD)	N	Mean, (SD)	N	Mean, (SD)
Cycling for transport	Safety	669	4.97 (0.9)	209	4.96 (0.9)	188	4.93 (0.9)	272	5.01 (0.9)
	Aesthetics	703	4.47 (1.1)	219	4.73 (1.0)	201	4.41 (1.1)	283	4.30 (1.0)
	Destination	747	6.14 (1.2)	234	5.69 (1.4)	206	6.10 (1.2)	307	6.51 (1.0)
	Functionality	716	5.42 (1.0)	222	5.33 (1.1)	202	5.43 (1.0)	292	5.48 (0.9)
Walking for transport	Safety	663	5.20 (0.9)	206	5.12 (0.8)	182	5.02 (0.9)	275	5.37 (0.9)
	Aesthetics	703	4.27 (1.1)	219	4.69 (1.0)	201	4.27 (1.0)	283	3.93 (1.1)
	Destination	747	6.14 (1.2)	234	5.69 (1.4)	206	6.10 (1.2)	307	6.51 (1.0)
	Functionality	707	5.02 (1.2)	220	4.82 (1.4)	201	4.89 (1.1)	286	5.26 (1.0)

Results correlation analysis

Self efficacy significantly correlates with cycling for transport, for participants living in rural, suburban and urban environments (respectively: r=0.21, r=0.24 and r=0.21). Furthermore a positive correlation exists between aesthetics and cycling and walking for transport for people living in urban environments (r=.12, r=.12). The two dependent variables (walking and cycling for transport purposes) are correlated for people who live in a rural environment (r = .19), but not for people who live in suburban or urban environment. There are some significant correlations between the different independent variables. Although these correlations are significant, the correlations are weak (r<0.3). As mentioned before, the distributional assumptions are violated. So, we also checked the correlations with Spearman's Rho, but no significant different correlations existed (see appendix L and M).

Results of the logistic regression analyses

Cycling for transport not stratified for perceived degree of urbanization.

The results of the logistic regression analyses for cycling are shown in table 5. In this model we first entered the demographic variables (availability of a car, age, gender, perceived general health status and perceived degree of urbanization: step A). Secondly, we entered the perceived physical environmental variables (safety, aesthetics, functionality, destination: step B). Third, the social environmental variable (social influences) and personal variable (self efficacy) were entered (Step C).

Gender is found to be associated with cycling for transport. Women are less likely to cycle for transport than men. (Odds ratio (OR)=0.65, 95% confidence interval (CI)=0.46 – 0.93, p=.02). Besides, there is a significant positive association between age and cycling for transport. Older people are more likely to cycle (OR=1.03, CI=1.01-1.04, p=.001). Availability of a car demonstrate a negative relationship with cycling for transport purposes (OR=0.63, CI=0.52-0.75, p=.000). People who have always the availability of a car are less likely to cycle for transport than people who have never or sometimes a car available. The degree of urbanization is also associated with the likelihood of cycling for transport. People who live in a rural environment are significantly less likely to cycle for transport than people living in a suburban or urban environment (OR=1.54, CI=1.23-1.92, p=.000). These associations exist in all three steps (A,B,C). Besides, perceived general health shows a positive association with the dependent variable, but disappears when self efficacy and social influences are entered (step C).

Furthermore, people who report a high level of social influences are less likely to cycle for transport purposes. So, the more encouragement people receive the less likely they cycle. People who report a high level of self efficacy for cycling are more likely to cycle for transport. This means that people who have more confidence in cycling, are more likely to cycle for transport compared to people who are less confident in cycling. After adjusting for self efficacy and social influences (step C), safety shows a negative relation with cycling for transport. Respondents who perceive their environment as highly safe are less likely to cycle for transport (OR=0,95, CI=0.91-0.99, p=.013) (see appendix O). Finally, we tested of two moderators (age and gender) affected the strength of the relationship between the perceived physical environment variables and cycling for transportation. Age and gender didn't affect this relationship (see appendix Q).

Collinearity diagnostics did not suggest that the changes seen in this final model (step C) for environmental variables (from not statistically significant to significant) could be attributed to collinearity among these variables (see appendix N). The model explains only small portions of variance. However, the final model (step A,B,C) does meet the limits of an acceptable fit of .200 (Hair et al., 2006), with a pseudo R2 of .208. This indicates that other factors, which are not included in this model, influence the likelihood of cycling for transport purposes.

Cycling for transport stratified for perceived degree of urbanization - rural.

Two demographic variables, age and availability of a car, have a significant effect on cycling for transport for rural residents in all three steps (A,B,C). Age is positively associated with cycling for transport: older people are more likely to cycle (OR=1.044, CI=1.01-1.07, p=.002). The availability of a car shows a

negative relationship with cycling for transport (OR=0.48, CI=0.31-0.76, p=.002). Perceived general health is no longer statistically significant when the two variables social influences en self efficacy are entered (step C). A positive effect is found for the self efficacy (OR=1.124, CI=1.05-1.21, p=.002). So, people who have more confidence in cycling are more likely to cycle for transport compared to people who are less confident in cycling. Social influences shows a negative relation (OR=0.92, CI=0.87–0.97, p=.004). One physical environment variable, functionality, shows a positive significant effect: rural residents who perceive their environment as highly functional are more likely to cycle for transport (OR=1.136, CI=1.03-1.25, p=0.008). And one physical environment variable shows after adjusting for the variables self efficacy and social influences (step C) a significant effect: rural residents who perceive their environment as highly safe are less likely to cycle for transport purposes (OR=0.92, CI=0.86-1.0, p=0.036).
The model explains only small portions of variance. However, it does meet the limits of an acceptable fit of .200 (Hair et al., 2006), with a pseudo R2 of .28. This indicates that other factors, which are not included in this model, influence the likelihood of cycling for transport for people living in rural areas (see appendix P).

Cycling for transport stratified for perceived degree of urbanization - suburban.

Also for suburban residents, in all three steps (A,B,C) age is positively associated with cycling for transport (OR=1.027, CI=1.0-1.06, p=0.053). Gender and the availability of a car show a negative relationship. Women are less likely to cycle for transport purposes than women (OR = 0.42, CI = 0.21-0.86, p=0.017). People who always have a car available are less likely to cycle for transport than people who do not have a car at their disposal (OR = 0.57, CI = 0.38-0.85, p<0.05). Self efficacy shows a positive effect with cycling: the more confidence people have in cycling for transport the more likely they are going to cycle (OR=1.18, CI=1.05-1.19, p=.001). The logistic regression model for suburban residents found no perceived environmental attributes associated with cycling for transport.
The model explains only small portions of variance. However, it does meet the limits of an acceptable fit of .200 (Hair et al., 2006), with a pseudo R2 of .22. This indicates that other factors, which are not included in this model, influence the likelihood of cycling for transport for people living in suburbanized areas (see appendix P).

Cycling for transport stratified for perceived degree of urbanization - urban.

Gender and the availability of a car show a negative relationship with cycling for residents in urban environments in all three steps. Men are more likely to cycle for transport purposes (OR=0.54, CI=0.26-0.80, p= .006). People who always have a car available are less likely to cycle for transport than people who do not have a car at their disposal (OR=0.70, CI=0.55-0.90, p=.006). Besides, perceived general health shows a positive association with the dependent variable, but disappears when the variables self efficacy and social influences are entered (step C). One physical environment variable shows a significant effect: residents living in strong urbanized environments who report a high value of aesthetics are more likely to cycle for transport purposes (OR=1.07, CI=1.02-1.13, p=.012). Finally, a positive relationship is found for the self efficacy: people who report a high level of self efficacy are more likely to cycle for transport (OR=1.10, CI=1.04-1.16, p=.002).

The model explains only small portions of variance. It doesn't meet the limits of an acceptable fit of .200 (Hair et al., 2008), with a pseudo R2 of .192. But the logistic regression model reports still significance (χ2=41.04, *df*=10, p=.000) (See appendix P).

Table 5

Odds ratio's (95%CI) for environmental variables and likelihood of people being high cyclers.

	Total Odds ratio's (95% CI)	Rural Odds ratio's (95% CI)	Suburban Odds ratio's (95% CI)	Urban Odds ratio's (95% CI)
Gender	**0.65 (0.46-0.93)***	0.68 (0.33-1.42)	**0.42 (0.21-0.86)***	**0.45 (0.26-0.80)***
Age	**1.03 (1.01-1.04)****	**1.04 (1.02-1.07)***	**1.03 (1.00-1.06)***	1.01 (0.96-1.03)
Availability Car	**0.63 (0.52 – 0.75)****	**0.48 (0.31-0.76)***	**0.57 (0.38-0.85)***	**0.70 (0.55-0.90)***
Perceived degree of Urbanization	**1.54 (1.23 – 1.92)****	-	-	-
Perceived physical health	1.27 (0.96-1.69)	1.44 (0.81-2.55)	1.18 (0.69 – 2.04)	1,29 (0.81-2.06)
Aesthetics	1.03 (0.99 – 1.06)	0.98 (0.92-1.05)	1.03 (0.96 – 1.09)	**1.07 (1.02-1.13)***
Safety	**0.95 (0.92 – 0.99)***	**0.92 (0.86-1.00)***	0.93 (0.86 – 1.00)	0.98 (0.93-1.05)
Destination	0.99 (0.95 – 1.046)	0.95 (0.87 – 1.03)	1.08 (0.98-1.19)	0.92 (0.81-1.04)
Functionality	1.02 (0.98 – 1.07)	**1.14 (1.03-1.25)***	1.04 (0.95-1.15)	0.95 (0.88-1.02)
Self efficacy	**1.10 (1.07 – 1.14)****	**1.12 (1.05 – 1.21)***	**1.12 (1.05-1.19)****	**1.10 (1.04-1.16)***
Social influences	**0.97 (0.94 – 0.99)***	**0.92 (0.87 – 0.97)***	0.98 (0.93-1.03)	0.99 (0.94-1.04)
Nagelkerke's R2	.28	.28	.22	.19
÷2, p	110.99 (*df*=11) p=.000	45,41 (*df*=10), p=.000	33,80 (*df* =10), p=.000	41.04 (*df*=10), p=.000
N	655	202	185	268

****p* < .05**
*** *p* < .001**
CI = Confidence Interval

Walking for transport not stratified for perceived degree of urbanization.

The results of the logistic regression analyses for walking are shown in table 6. In this model we first entered the demographic variables (age, educational attainment, perceived degree of urbanization, perceived general health: step A). Secondly, we entered the perceived physical environmental variables (safety, aesthetics, functionality, destination: step B). Third, the social environmental variable (social influences) and personal variable (self efficacy) were entered (Step C).

Only two demographic variables show an association with walking for transport. Availability of car demonstrates a negative relationship with walking for transport purposes. So, people who always have a car available are less likely to walk for transport than people who do not have a car at their disposal (OR=0.80, CI=0.68-0.94, p=.008). Besides, there is a significant positive association between age and walking for transport: older people are more likely to walk (OR = 1.02, CI = 0.68-0.94, p <0.05). These associations exist in all three steps (A,B,C) None of the perceived physical environmental variables show an association with walking for transport (see appendix R).

Finally, we tested of two moderators (age and gender) affected the relationship between perceived physical environment variables and walking for transportation. Age and gender didn't affect this relationship (see appendix T).

These findings on walking for transport purposes need to be viewed with caution as the logistic regression model reports no significance ($\chi 2$ = 18,975, p= .062). Further, the independent variables explain together only 4% of the total variance. This does not meet the limits of an acceptable fit of .200 (Hair et al., 2008), with a pseudo R2 of 0.038.

Walking for transport stratified for perceived degree of urbanization

The logistic regression model founds that neither perceived environmental attributes nor location (rural, suburban, strong urban) are associated with walking for transport. So, the logistic regression analyses stratified for degree of urbanization found neither perceived environmental attributes nor social environmental, personal variables and demographic variables to be associated with walking for transport (see appendix S).

Table 6

Odds ratios (95%CI) for environmental variables and likelihood of people being high walkers

	Total	**Rural**	**Suburban**	**Urban**
	Odds ratio's (95% CI)	**Odds ratio's (95% CI)**	**Odds ratio's (95% CI)**	**Odds ratio's (95% CI)**
Age	**1.02 (1.00-1.03)***	1.02 (1.0-1.04)	1.02 (1.00-1.05)	1.01 (0.99-1,04)
Educational attainment	0.98 (0.75-1.23)	1.00 (0.65-1.53)	0.88 (0.53-1.46)	1.08 (0.64-1.82)
Availability of a car	**0.80 (0.68-0.94)***	0.83 (0.56-1.25)	0.67 (0.46-0.97)	0.85 (0.69-1.06)
Perceived degree of urbanization	0.81 (0.62-1.06)	-	-	-
Perceived physical health	1.04 (0.84-1.28)	0.80 (0.50-1.23)	0.92 (0.55-1.55)	0.69 (0.44-1.06)
Aesthetics	1.02 (0.98-1.05)	0.99 (0.93-1.06)	1.01 (0.94-1.07)	1.03 (0.99-1.09)
Safety	0.97 (0.94-1.01)	0.98 (0.91-1.06)	0.94 (0.88-1.02)	0.99 (0.93-1.05)
Destination	1.01 (0.97-1.06)	0.98 (0.90-1.05)	0.99 (0.92-1.06)	1.06 (0.96-1.17)
Functionality	0.77 (0.97-1.04)	1.01 (0.95-1.07)	0.99 (0.92-1.06)	1.03 (0.96-1.10)
Self efficacy	1.02 (.099-1.05)	1.05 (1.00-1.11)	1.03 (0.97-1.09)	0.99 (0.94-1.04)
Social influences	0.99 (0.97-1.02)	0.97 (0.93-1.01)	0.99 (0.95-1.03)	1.02 (0.98-1.06)
Nagelkerke's R2	0.04	.06	.07	.06
÷2, p	18.98 (*df*=11), p=.062	9.46 (*df*=10), p=.492	9.88 (*df*=10), p=.452	13,20 (*df*=10), p=.213
N	651	200	179	272

**** p < 0,05***
***** p < 0,001***
CI = Confidence Interval

Discussion

The present study addresses the physical activity level for transport purposes and the influence of the perceived physical environment on active modes of transport purposes in the Dutch population (17 years and older).

The reported amount of time spent on cycling and walking for transport purposes by the population in this study (respectively 170 minutes and 96 minutes weekly on average) is higher than other comparable studies. Troped et al. (2003) found that English adults spend on average 142 minutes on transport related physical activity (walking and cycling together) weekly. Van Dyck et al. (2010) conducted a study in a Belgian population and found on average of 154 minutes walking weekly, including walking for transportation ànd during leisure time. Humpel et al. (2004) looked at the walking minutes for transport, and reported an average amount of only 32 minutes of weekly walking to get to and from places by Australian participants aged > 40.

Participants in our study may have overestimated their total physical activity level. The self reported data might have been influenced by social desirability. Further, the questionnaire took place in the summer months. It is more likely that people walk or cycle more for transport in the summer than in the winter months, due to the better weather circumstances. Further, most respondents in this study had a good or very good physical general health status (91%) which could also explain the high physical activity level.

The first research question assessed the differences in reported amount of time spent on physical activity for transport purposes between people living in rural, suburban and strong urban settings. Significant more people in strong urban regions cycle more minutes per week for transport compared to people in rural areas. No significant differences exist for walking. This is partly in accordance with the study of Schutysern and Vienne (2004), where urban residents cycle, but also walk more for transport than people living in rural or suburban areas.

Ecological models of health behaviour suggest that different environmental attributes may be associated with different physical activity behaviours. The second research question assessed to what extent there is an association between the perceived physical environment and cycling for transport and between the perceived physical environment and walking for transport for people living in a rural, suburban and urban environment. To date the majority of studies focus on physical active behavior (walking and cycling together) or on walking for transport alone. Data focusing on the potential determinants of cycling for transportation are rather scarce.

The key finding of this study is that physical environmental factors are associated with cycling for transport, whereas physical environmental variables were not related to walking for transport. One perceived environmental variable (safety) showed a bivariate association with walking for transport, but in the logistic regression model with age, educational attainment, availability of a car, perceived physical general health, self efficacy and social influences included, this factor did not contribute significantly with walking for transport purposes. Neither for rural, nor for suburban and nor for residents living in strong urban environments. An explanation for this null finding could be that people doesn't consider walking as a means of transport. As mentioned before: whereas in most countries the bike has a recreational function, the bicycle is pre-eminently a means of transport in the Netherlands. Perhaps, people consider a bicycle as a substitute for a car, but they doesn't consider walking as an alternative for a car. In line with our findings for walking for transport purposes, Humpel et al. (2004) also concluded from their study that no association exists between perceived environmental attributes (accessibility of facilities for walking, aesthetics, safety, weather) or location (perceiving beach or lake within walking distance) and walking to get to and from places. Nevertheless, Giles-Corti & Donovan (2002) found that, after adjustment for demographic variables and motor vehicle ownership, perceiving sidewalks in the neighbourhood, having a shop with walking distance, and more traffic and busy roads were independently associated with walking for transport.

It is notable that there is even not a significant relation between self-efficacy and transport related walking, as self efficacy is documented as a consistent correlate of activity (Sallis & Owen, 2002). Duncan and Mummery (2005) argues that it is possible that self efficacy does not influence lower intensity activities such as walking as strongly as it does for higher intensity activities. This may explain its lack of association in the model examining walking.

In this study, in contrast to walking for transport, three physical environmental factors (functionality, aesthetics and safety) show statistically significant associations with cycling for transportation. These associations vary for rural, suburban and urban areas. For residents living in a suburban environment no physical environmental variables are associated with cycling for transport. However, for rural residents safety and functionality are associated with cycling. The functional aspect is positively associated with cycling for transportation: people who find that there is enough space for cycling, the cycling paves are well maintained, there are shortcuts compared with cars and there are different routes to take, are more likely to cycle for transport. This finding is congruent with a study of Titze et al (2008). In their study, bike lane connectivity ('there are bicycle tracks'; 'it is possible to take shortcuts with the bicycle compared to cars') was positively associated with cycling for transportation. The finding that the functional aspect is only of influence for cycling for transport for rural residents and not for suburban or urban residents could be explained by the fact that residents who live in suburban and urban areas perceive their environment as a highly functional area. This is plausible, because as mentioned before, The Netherlands have the most cycle tracks of the world, especially in more urbanized areas.

Paradoxically, we found for people living in a rural environment perceived safety was negatively related to cycling in our study. This counter intuitive relationship could be explained by the fact that those who spend more time cycling are more aware of a lack of safety (Duncan & Mummory, 2005). This negative association is in accordance with Humpel et al (2004). The fact that safety did not prove to be an important influence on cycling for transport for suburban and strong urban residents could be explained by the participants' perception of living in a low-crime area.

Our study indicates that for residents living in a strong urbanized environment, aesthetics are associated with cycling for transport. Those who perceived that they lived in areas with attractive natural and built features, free from litter with many trees, gardens and green spaces, were more likely to cycle to get to and from places. This is consistent with previous studies that show the relevance of aesthetically pleasing environments and physical activity levels. The fact that aesthetics did not prove to be an important influence on cycling for transport for rural and suburban residents could be explained by the participants' perception of living all in a highly aesthetical appealing environment. It is possible that there was insufficient variability in perceived environmental characteristics to detect associations with transport related physical activity.

The third and last research question assessed the moderating role of age and gender in the influence of the perceived physical environment on walking and cycling for transport. Both age and gender didn't affect the (strength of) the relationship between these independent variables and cycling or walking for transport. In contrast to our study, gender affected the strength of the relationship between the perceived physical environment variables and cycling in the study of Titze et al. (2008).

Although not the main focus of this study, gender was significantly associated with cycling for residents living in suburbanized and urbanized areas. The finding that a greater proportion of men than women were physically active for transport is consistent with other studies (Booth, Owen, Bauman, Clavisi & Leslie, 2000). This suggests that a stronger emphasis on the needs and interest of women in physical activity promotion strategies is appropriate. Further, significant positive association of age with cycling for transport was found as well for rural and suburban residents. It may be that older people perceived cycling as a more appropriate means of transport. Having high self efficacy was strongly associated with cycling for transport purposes for people in all types of environment (rural, suburban and strong urban). Research suggests that self efficacy is important in the initiation and maintenance of physical activity (Booth et al., 2000; Conner & Norman, 2008). Finally, it is notable that we found a small but significant negative relationship between social influences and cycling for transport for rural residents. This association is puzzling because in contrast to our finding, results from Titze et al. (2008) showed that social support/modeling was positively related with cycling for transport. Similarly, social support from friends and modeling was positively associated with active transport in a study among Portuguese and Belgian students (De Bourdeaudhuij, Teixeira, Cardon & Deforche, 2005). It may be that there is some capitalization on chance, due to multiple testing. Further studies are needed to clarify this issue.

There are several limitations in the present study. First, this study's cross-sectional design allowed us to determine whether environmental factors were correlated with activity, but could not be used to demonstrate that these factors were determinants of transportation activity (i.e. had a causal relationship). But consistent associations in this and other studies, implies the possibility of a causal relationship.

Second, we used a self report measure for physical activity which is the most commonly used measure for assessing physical activity (Maas et al., 2008). Using a self-report measure for physical activity has the advantage that it is easy to administer and generally acceptable to participants, and can measure a wide range of values. Yet, self report measures have the disadvantage of incomplete recall and exaggeration of the amount of activity (due social desirability). In this study we have tried to minimize the disadvantage of incomplete recall by not simply asking the general amount of minutes that people walk and cycle for transport purposes. The respondents reported (from a list of ten) the destinations they had visited per day in the last week, how many minutes the trip took and the transport mode to reach this destination. Besides, it will not likely that people living in rural environments will exaggerate more or less than people living in more urbanized environments. So, there will be no bias with relation to degree of urbanization.

Finally, compared to the Dutch population, the sample was more highly educated. Moreover, the Netherlands have high cycling rates relative to many other countries. These issues may limit the generalizability of our findings to Netherland and other European countries. On the other hand this study may provide insights to support cycling in other countries.

The strength of the current study is that it focused on cycling and separately examined walking as active modes of transport. The reason for this is that different types of active travel behaviours likely have different determinants, requiring distinct explanatory models (Giles-Corti, Timperio, Bull & Pikora, 2005).

Although the perceived environment had a small, yet significant association with cycling for transport a recommendation for future studies is the use of both self report as well as objective measurement of the physical environment. This way, one will be able to analyze whether perceived or objective measures has the greatest influence of walking and cycling for transportation. The inclusion of objective measures in future studies would have the advantage of using concrete and absolute measures of the environment, which could help establish a direct link between physical activity and interventions in the physical environment to support active living (Lin & Moudon, 2010).

Finally, in order to be able to identify factors of causality, the use of a longitudinal design would be recommended.

Conclusion

This study indicates that the physical environment can act as a facilitator for a more active lifestyle among its residents. Although small, the associations identified in this study do add to the body of data on the influence of perceived environmental attributes on cycling. The differences for rural, suburban and strong urban residences emphasize that different aspect of the environment may be of differing importance for different settings. Further this study indicates that different types of physical activity (i.e. walking and cycling) have different determinants. Promoting a more active lifestyle by improving the physical environment (safety, aesthetics and functionality) is the key message of this study.

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Appendixes

MASTERTHESIS PSYCHOLOGY

M. Bourgondiën MSc.
Studentnumber: 0220795

Nijmegen, January 2011

Supervisors TNO:	mw. dr. M. de Goede mw. drs. T. Hof
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UNIVERSITY OF TWENTE.

Content:

Appendix A Web-survey

Dear participant,

This questionnaire is about walking and cycling for transport purposes. You can think about walking and cycling to go to stores, your work or to visit your family or friends, for example.

This research is conducted in cooperation with TNO and the Twente University. We are interested in the factors which influence walking an cycling to get from place to place.

The survey takes about twenty minutes. Please fill in the answers as honest and completely as possible: there are no good or wrong answers. Your individual responses will be treated completely confidentially and anonymously. By filling out the survey you will be entered into a drawing to win one of the five 50 euro gift cheques.

Thank you for participating.

The following questions are about your direct neighborhood. This means the surrounding within 5 km from your home. Please circle the answer that best applies to you.

1. What is your postal code? ☐☐☐☐☐☐

2. How would you define your neighbourhood?
Non urban – slightly urban – moderately urban – highly urban – very highly urban
☐ ☐ ☐ ☐ ☐

3. I can do most of my shopping at local stores (< 5 km)
Strongly disagree –disagree – slightly disagree – neutral – slightly agree – agree – strongly agree
☐ ☐ ☐ ☐ ☐ ☐ ☐

4. There are many places to go within easy walking or cycling distance of my home (< 5 km)
Strongly disagree –disagree – slightly disagree – neutral – slightly agree – agree – strongly agree
☐ ☐ ☐ ☐ ☐ ☐ ☐

5. It is easy to walk to a transit stop (bus, train, tram) from my home
Strongly disagree –disagree – slightly disagree – neutral – slightly agree – agree – strongly agree
☐ ☐ ☐ ☐ ☐ ☐ ☐

Please circle the answer that best applies to you.

6. Are you physically able to cycle for 15 minutes?
Yes ☐
No ☐

7. Are you physically able to walk for 15 minutes?
Yes ☐
No ☐

8. Do you own a bicycle? (Availability of a bicycle for trips in the city?)
Yes, a 'normal' bicycle ☐
Yes, an electric bicycle ☐
Yes both, a normal and an electric bicycle ☐
No ☐

9. Do you own a car? (Availability of a car for trips in the city)

Never ☐
Sometimes ☐
Regular ☐
Always ☐

10. Do you ever walk or cycle to reach a destination? You can think to get from house to the supermarket, your work or to visit family and friends.

Yes ☐
No ☐

Which destinations did you visit last week?* Please indicate your destinations per day.
* when your walk and cycle behavior deviates from the normal behavior (i.e. through illness or holiday), please take a normal weak to answer the questions below.

11. Which destination(s) did you visit last Monday?
(When visit no destination, please click the button 'further')

School ☐
Work ☐
Stores / facilities (i.e. supermarket, hairdresser) ☐
Train / bus stop ☐
Family / friends / neighbors ☐
Hotel / restaurant / café / place of entertainment ☐
Park ☐
Gym or fitness facilities (i.e. tennis court, swimming pool) ☐
Health institutes (i.e. general practice, pharmacy/drugstore, hospital) ☐

12. A. How much time did you spend on walking from place to place on Monday (in minutes)? ______

B. How much time did you spend to bicycle from place to place on Monday (in minutes)? ______

C: How much time did you spend traveling in a train, bus, car, tram or other kind of vehicle on Monday (in minutes)? ______

13. Which destination(s) did you visit last Tuesday?
When visit no destination, please click the button 'further'.

School ☐
Work ☐
Stores / facilities (i.e. supermarket, hairdresser) ☐
Train / busstop ☐
Family / friends / neighbors ☐
Hotel / restaurant / café / place of entertainment ☐
Park ☐
Gym or fitness facilities (i.e. tennis court, swimmingpool) ☐
Health institutes (i.e. general practice, pharmacy/drugstore, hospital) ☐

14. A. How much time did you spend on walking from place to place Tuesday (in minutes)? ______
B. How much time did you spend to bicycle from place to place Tuesday (in minutes)? ______
C: How much time did you spend traveling in a train, bus, car, tram or other kind of (motor) vehicle Tuesday (in minutes)? ______

15. Which destination(s) did you visit last Wednesday?
When visit no destination, please click the button 'further'.

- *School* ☐
- *Work* ☐
- *Stores / facilities (i.e. supermarket, hairdresser)* ☐
- *Train / busstop* ☐
- *Family / friends / neighbors* ☐
- *Hotel / restaurant / café / place of entertainment* ☐
- *Park* ☐
- *Gym or fitness facilities (i.e. tennis court, swimmingpool)* ☐
- *Health institutes (i.e. general practice, pharmacy/drugstore, hospital)* ☐

16. A. How much time did you spend on walking from place to place Wednesday (in minutes)?
B. How much time did you spend to bicycle from place to place Wednesday (in minutes)?
C: How much time did you spend traveling in a train, bus, car, tram or other kind of (motor) vehicle Wednesday (in minutes)?

17. Which destination(s) did you visit last Thursday?
When visit no destination, please click the button 'further'.

- *School* ☐
- *Work* ☐
- *Stores / facilities (i.e. supermarket, hairdresser)* ☐
- *Train / busstop* ☐
- *Family / friends / neighbors* ☐
- *Hotel / restaurant / café / place of entertainment* ☐
- *Park* ☐
- *Gym or fitness facilities (i.e. tennis court, swimmingpool)* ☐
- *Health institutes (i.e. general practice, pharmacy/drugstore, hospital)* ☐

18. A. How much time did you spend on walking from place to place Thursday (in minutes)?
B. How much time did you spend to bicycle from place to place Thursday (in minutes)?
C: How much time did you spend travelling in a train, bus, car, tram or other kind of (motor) vehicle Thursday (in minutes)?

19. Which destination(s) did you visit last Friday?
When visit no destination, please click the button 'further'.

- *School* ☐
- *Work* ☐
- *Stores / facilities (i.e. supermarket, hairdresser)* ☐
- *Train / busstop* ☐
- *Family / friends / neighbors* ☐
- *Hotel / restaurant / café / place of entertainment* ☐
- *Park* ☐
- *Gym or fitness facilities (i.e. tennis court, swimmingpool)* ☐
- *Health institutes (i.e. general practice, pharmacy/drugstore, hospital)* ☐

20. A. How much time did you spend on walking from place to place Friday (in minutes)?
B. How much time did you spend to bicycle from place to place Friday (in minutes)?
C: How much time did you spend traveling in a train, bus, car, tram or other kind of (motor) vehicle Friday (in minutes)?

21. Which destination(s) did you visit last Saturday?
When visit no destination, please click the button 'further'.

School	☐
Work	☐
Stores / facilities (i.e. supermarket, hairdresser)	☐
Train / busstop	☐
Family / friends / neighbors	☐
Hotel / restaurant / café / place of entertainment	☐
Park	☐
Gym or fitness facilities (i.e. tennis court, swimmingpool)	☐
Health institutes (i.e. general practice, pharmacy/drugstore, hospital)	☐

22. A. How much time did you spend on walking from place to place Saturday (in minutes)? ____
B. How much time did you spend to bicycle from place to place Saturday (in minutes)? ____
C: How much time did you spend traveling in a train, bus, car, tram or other kind of (motor) vehicle Saturday (in minutes)? ____

23. Which destination(s) did you visit last Sunday?
When visit no destination, please click the button 'further'.

School	☐
Work	☐
Stores / facilities (i.e. supermarket, hairdresser)	☐
Train / busstop	☐
Family / friends / neighbors	☐
Hotel / restaurant / café / place of entertainment	☐
Park	☐
Gym or fitness facilities (i.e. tennis court, swimmingpool)	☐
Health institutes (i.e. general practice, pharmacy/drugstore, hospital)	☐

24. A. How much time did you spend on walking from place to place Sunday (in minutes)? ____
B. How much time did you spend to bicycle from place to place Sunday (in minutes)? ____
C: How much time did you spend traveling in a train, bus, car, tram or other kind of (motor) vehicle Sunday (in minutes)? ____

The most visited destination within your own neighbourhood.

25. To which destination within your own neighbourhood you cycle most often? (one answer possible). Please circle the category to which this destination belongs.

School	☐
Work	☐
Shop / service	☐
Train / bus station	☐
Family / friends	☐
Cafés / restaurants	☐
Park	☐
Sport clubs	☐
Health institution	☐
Other desintation	☐
No any destination: I don't cycle (within my neighborhood)	☐

26. To which destination within your own neighbourhood you walk most often? (one answer possible). Please circle the category to which this destination belongs.

- School ☐
- Work ☐
- Shop / service ☐
- Train / bus station ☐
- Family / friends ☐
- Cafés / restaurants ☐
- Park ☐
- Sport clubs ☐
- Health institution ☐
- Other desintation ☐
- No any destination: I don't cycle (within my neighborhood) ☐

We are going to look to your most frequently accessed destination by bicycle.
You reported that … is the destination to which you most often cycle. Keep this destination in mind for the following questions.

27. What is the distance in meters from your home to this destination? (1 km = 1000 meter)

☐☐☐☐☐☐

Please circle the answer that best applies to you. How easy or difficult is it for you to cycle to this destination even when…

28. The weather is bad

Very difficult - difficult – slightly difficult – neutral – slightly easy – easy – very easy

☐ ☐ ☐ ☐ ☐ ☐ ☐

29. It is very hot outside

Very difficult - difficult – slightly difficult – neutral – slightly easy – easy – very easy

☐ ☐ ☐ ☐ ☐ ☐ ☐

30. You are tired

Very difficult - difficult – slightly difficult – neutral – slightly easy – easy – very easy

☐ ☐ ☐ ☐ ☐ ☐ ☐

31. You feel you don't have time

Very difficult - difficult – slightly difficult – neutral – slightly easy – easy – very easy

☐ ☐ ☐ ☐ ☐ ☐ ☐

Please circle the answer that best applies to you. Keep the destination in mind to which you most often cycle.

32. My family, friends and / or colleagues think that I should cycle to this destination

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

33. It is expected of me that I cycle to this destination

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

34. My family, friends and / or colleagues frequently use cycling for transportation to visit such a destination

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

35. Many people like me cycle to such a destination
Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree
☐ ☐ ☐ ☐ ☐ ☐ ☐

36. My family, friends and / or colleagues encourage me to use the bicycle to this destination
Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree
☐ ☐ ☐ ☐ ☐ ☐ ☐

Please circle the answer that best applies to you. Think about your trip to the destination which you have indicated before. If you bicycle to the destination, how well would the description fit?

37. There is enough space for cycling on the route
Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree
☐ ☐ ☐ ☐ ☐ ☐ ☐

38. It is possible to take shortcuts with the bicycle compared to cars
Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree
☐ ☐ ☐ ☐ ☐ ☐ ☐

39. The places where I cycle along the route are well maintained (paved, even, and not a lot of cracks)
Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree
☐ ☐ ☐ ☐ ☐ ☐ ☐

40. There are many different routes I can take (I have not to go the same way each time)
Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree
☐ ☐ ☐ ☐ ☐ ☐ ☐

Please circle the answer that best applies to you. Think about your trip to the destination which you have indicated before. If you bicycle to the destination, how well would the description fit?

41. I am satisfied with the parking facilities for the bike by this destination
Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree
☐ ☐ ☐ ☐ ☐ ☐ ☐

42. Finding a parking place for a car is difficult
Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree
☐ ☐ ☐ ☐ ☐ ☐ ☐

We are going to look to your most frequently accessed destination by bicycle.
You reported that … is the destination to which you most often walk. Keep this destination in mind for the following questions.

43. What is the distance in meters from your home to this destination? (1 km = 1000 meter)
☐☐☐☐☐☐

Please circle the answer that best applies to you. How easy or difficult is it for you to walk to this destination even when…

44. The weather is bad

Very difficult - difficult – slightly difficult – neutral – slightly easy – easy – very easy

☐ ☐ ☐ ☐ ☐ ☐ ☐

45. It is very hot outside

Very difficult - difficult – slightly difficult – neutral – slightly easy – easy – very easy

☐ ☐ ☐ ☐ ☐ ☐ ☐

46. You are tired

Very difficult - difficult – slightly difficult – neutral – slightly easy – easy – very easy

☐ ☐ ☐ ☐ ☐ ☐ ☐

47. You feel you don't have enough time

Very difficult - difficult – slightly difficult – neutral – slightly easy – easy – very easy

☐ ☐ ☐ ☐ ☐ ☐ ☐

Please circle the answer that best applies to you. Keep the destination in mind to which you most often walk.

48. My family, friends and / or colleagues think that I should walk to this destination

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

49. It is expected of me that I walk to this destination

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

50. My family, friends and / or colleagues frequently walk for transportation to visit such a destination

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

51. Many people like me walk to such a destination

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

52. My family, friends and / or colleagues encourage me to walk to this destination

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

Please circle the answer that best applies to you. Think about your trip to the destination which you have indicated before. If you walk to the destination, how well would the description fit?

53. There is enough space for walking on the route

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

54. It is possible to take shortcuts walking compared to cars

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

55. The sidewalks along the route are well maintained (paved, even, and not a lot of cracks)

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

56. There are many different routes I can take (I have not to go the same way each time)

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

57. I am satisfied with the parking facilities for the bike by this destination

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

58. Finding a parking place for a car is difficult

Strongly agree – agree – slightly agree – neutral – slightly disagree – disagree – strongly disagree

☐ ☐ ☐ ☐ ☐ ☐ ☐

Please circle the answer that best applies to you, for the cycle destination as well for your walk destination.

59. There are a lot of trees, gardens, green spaces or parks along the route

	Strongly agree	agree	slightly agree	neutral	slightly disagree	disagree	strongly disagree
'Cycledestionation'	☐	☐	☐	☐	☐	☐	☐
'Walkdestination'	☐	☐	☐	☐	☐	☐	☐

60. There is a lot of litter on the streets along the route

	Strongly agree	agree	slightly agree	neutral	slightly disagree	disagree	strongly disagree
'Cycledestionation'	☐	☐	☐	☐	☐	☐	☐
'Walkdestination'	☐	☐	☐	☐	☐	☐	☐

61. There are attractive buildings / homes along the route

	Strongly agree	agree	slightly agree	neutral	slightly disagree	disagree	strongly disagree
'Cycledestionation'	☐	☐	☐	☐	☐	☐	☐
'Walkdestination'	☐	☐	☐	☐	☐	☐	☐

62. There are not many interesting things to look at while walking or cycling to the destination

	Strongly agree	agree	slightly agree	neutral	slightly disagree	disagree	strongly disagree
'Cycledestionation'	☐	☐	☐	☐	☐	☐	☐
'Walkdestination'	☐	☐	☐	☐	☐	☐	☐

63. There are many attractive natural sights in my neighborhood (such as landscaping, views)

	Strongly agree	agree	slightly agree	neutral	slightly disagree	disagree	strongly disagree
'Cycledestionation'	☐	☐	☐	☐	☐	☐	☐
'Walkdestination'	☐	☐	☐	☐	☐	☐	☐

Please circle the answer that best applies to you, for the cycle destination as well for your walk destination.

64. Most drivers exceed the posted speed limits while driving in my neighborhood

	Strongly agree	*agree*	*slightly agree*	*neutral*	*slightly disagree*	*disagree*	*strongly disagree*
'Cycledestination'	☐	☐	☐	☐	☐	☐	☐
'Walkdestination'	☐	☐	☐	☐	☐	☐	☐

65. Crossing busy roads is a big problem along the route

	Strongly agree	*agree*	*slightly agree*	*neutral*	*slightly disagree*	*disagree*	*strongly disagree*
'Cycledestination'	☐	☐	☐	☐	☐	☐	☐
'Walkdestination'	☐	☐	☐	☐	☐	☐	☐

66. There is so much traffic along the route that it makes it difficult or unpleasant to walk or cycle

	Strongly agree	*agree*	*slightly agree*	*neutral*	*slightly disagree*	*disagree*	*strongly disagree*
'Cycledestination'	☐	☐	☐	☐	☐	☐	☐
'Walkdestination'	☐	☐	☐	☐	☐	☐	☐

67. The streets along the route are well lit at night

	Strongly agree	*agree*	*slightly agree*	*neutral*	*slightly disagree*	*disagree*	*strongly disagree*
'Cycledestination'	☐	☐	☐	☐	☐	☐	☐
'Walkdestination'	☐	☐	☐	☐	☐	☐	☐

68. Overall, I feel safe when walking/ cycling along the route

	Strongly agree	*agree*	*slightly agree*	*neutral*	*slightly disagree*	*disagree*	*strongly disagree*
'Cycledestination'	☐	☐	☐	☐	☐	☐	☐
'Walkdestination'	☐	☐	☐	☐	☐	☐	☐

Finally, some questions about your demographic features. Please circle the answer that best applies to you.

69. What is your gender?

Male ☐

Female ☐

70. What is your age? ______

71. What is your residence? ______

72. What is your heighest completed education?

- Geen opleiding ☐
- Lager onderwijs ☐
- Middelbaar algemeen voortgezet onderwijs (MAVO/VMBO) ☐
- Hoger algemeen voortgezet onderwijs (HAVO) ☐
- Voorbereidend Wetenschappelijk Onderwijs (VWO) ☐
- Lager beroepsonderwijs (LBO) ☐
- Middelbaar beroepsonderwijs (MBO) ☐
- Hoger Beroepsonderwijs (HBO) ☐

Univeristy ☐

Other, namely ▭

73. In general, my state of health is:

Bad ☐

Moderate ☐

Average ☐

Good ☐

Very good ☐

74. What is your weight (kilograms?) ▭

75. What is your length (in centimeters)? ▭

76. In general, how many days per week are you at least 30 minutes physical active? Physical active means at least the same effort as walk at a stiff pace or stiff cycling. ▭

77. Do you have any remarks? Please fill in:

▭

▭

▭

Thanks for your participation

This is the end of the questionnaire. We would like to thank you for your participation.

Please fill in your e-mail address when you would like to have a chance of winning one of the five cheques to the value of 50 euro. The anonymity will be guaranteed.

E-mail address:

▭

Appendix B Normalities dependent variable

Cycling

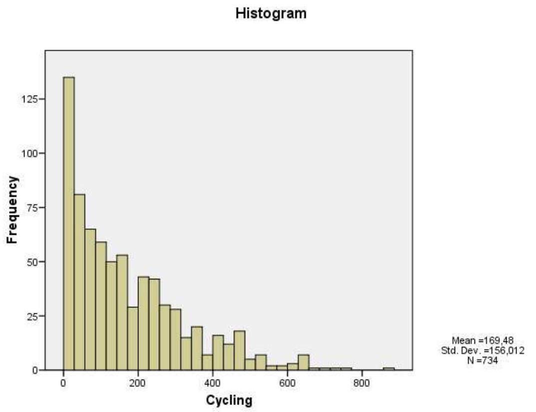
Descriptive Statistics

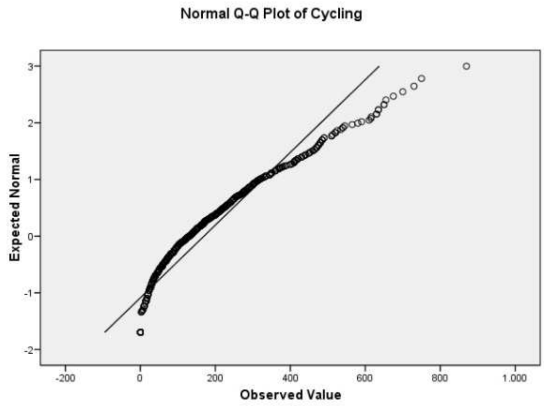
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Cycling	734	1,177	,090	1,178	,180
Valid N (listwise)	734				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Cycling	,139	734	,000	,890	734	,000

a Lilliefors Significance Correction





Walking

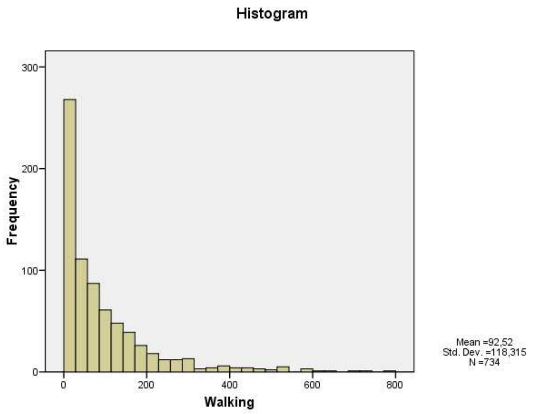
Descriptive Statistics

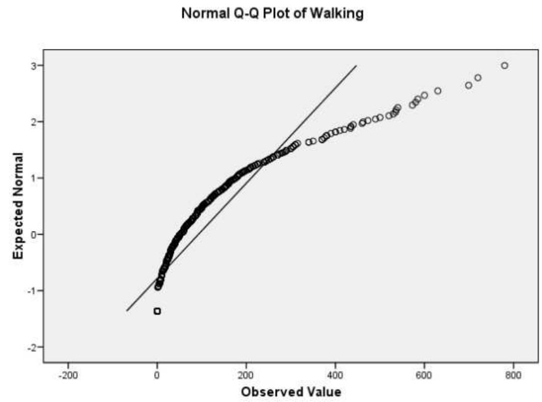
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Walking	734	2,311	,090	6,560	,180
Valid N (listwise)	734				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Walking	,217	734	,000	,743	734	,000

a Lilliefors Significance Correction





Appendix C Normalities independent variable

<u>Cycling</u>:

Self efficacy cycling

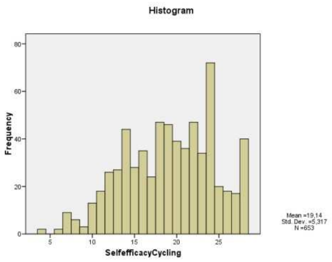
Descriptive Statistics

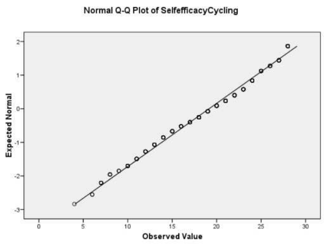
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Self efficacy cycling	739	-,269	,090	-,603	,180
Valid N (listwise)	739				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Self efficacy cycling	,086	739	,000	,975	739	,000

a Lilliefors Significance Correction





Social influences cycling

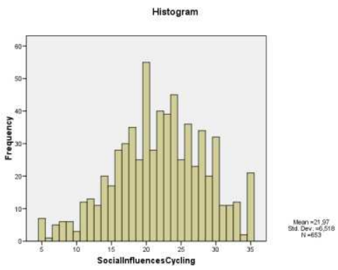
Descriptive Statistics

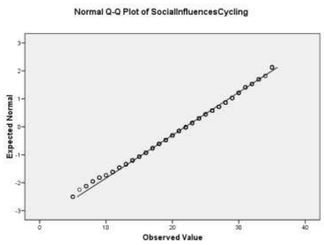
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Social influences cycling	720	-,178	,091	-,299	,182
Valid N (listwise)	720				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Social influences cycling	,046	720	,001	,989	720	,000

a Lilliefors Significance Correction





Safety cycling

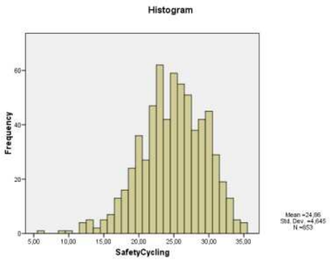
Descriptive Statistics

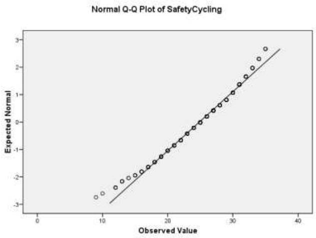
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Safety cycling	669	-,419	,094	,269	,189
Valid N (listwise)	669				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Safety cycling	,063	669	,000	,984	669	,000

a Lilliefors Significance Correction





Aesthetics cycling

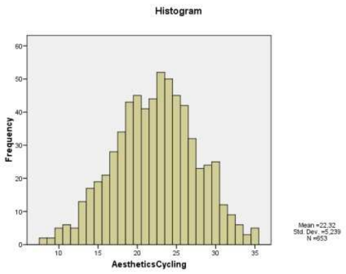
Descriptive Statistics

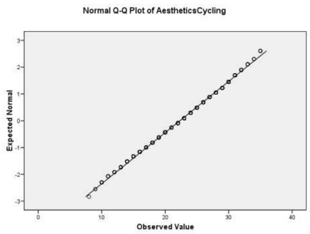
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Aesthetics cycling	703	-,141	,092	-,222	,184
Valid N (listwise)	703				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Aesthetics cycling	,057	703	,000	,994	703	,005

a Lilliefors Significance Correction





Functionality cycling

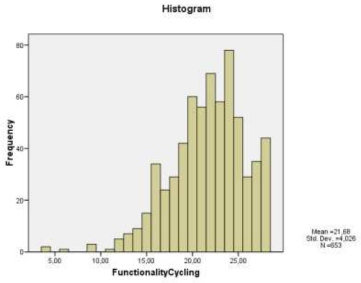
Descriptive Statistics

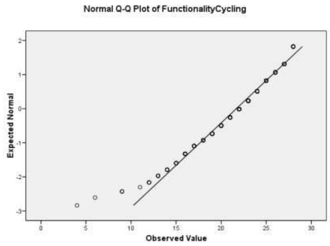
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Functionality cycling	716	-,721	,091	,881	,182
Valid N (listwise)	716				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Functionality cycling	,094	716	,000	,959	716	,000

a Lilliefors Significance Correction





WALKING:

Self efficacy walking

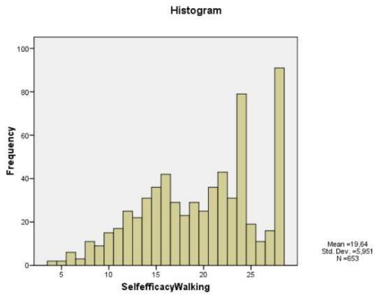
Descriptive Statistics

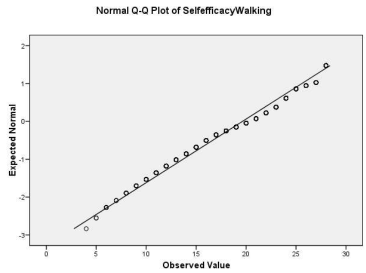
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Self efficacy walking	709	-,303	,092	-,859	,183
Valid N (listwise)	709				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Self efficacy walking	,102	709	,000	,952	709	,000

a Lilliefors Significance Correction





Social influences walking

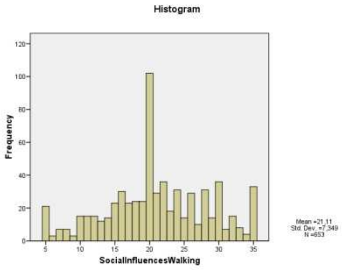
Descriptive Statistics

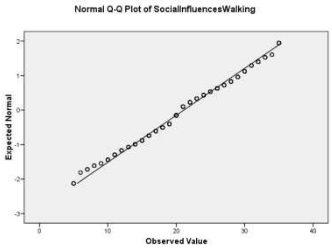
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Social influences walking	707	-,098	,092	-,428	,184
Valid N (listwise)	707				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Social influences walking	,080	707	,000	,978	707	,000

a Lilliefors Significance Correction





Safety walking

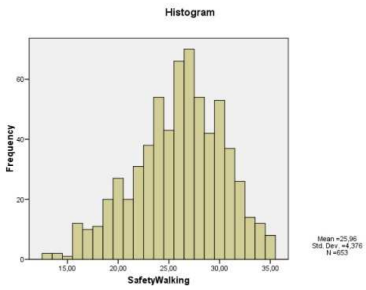
Descriptive Statistics

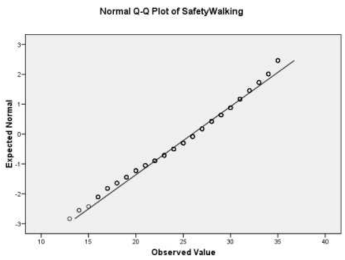
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Safety walking	663	-,349	,095	-,234	,190
Valid N (listwise)	663				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Safety walking	,089	663	,000	,983	663	,000

a Lilliefors Significance Correction





Aesthetics walking

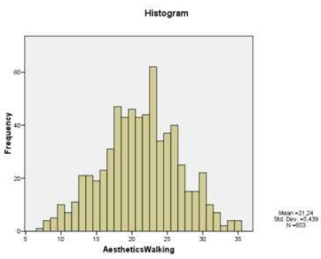
Descriptive Statistics

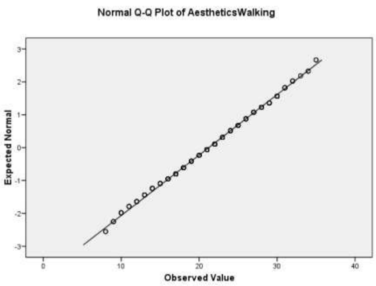
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Aesthetics walking	703	-,101	,092	-,228	,184
Valid N (listwise)	703				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Aesthetics walking	,050	703	,000	,994	703	,007

a Lilliefors Significance Correction





Functionality walking

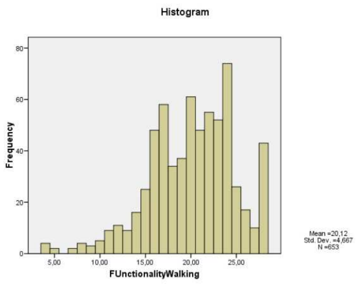
Descriptive Statistics

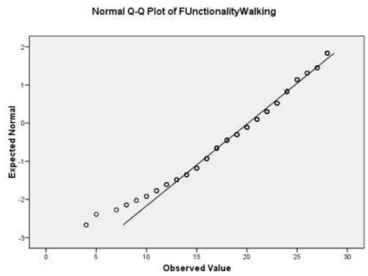
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
SchaalFunctionalWandelConceptM	707	-,579	,092	,470	,184
Valid N (listwise)	707				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Functionality walking	,081	707	,000	,968	707	,000

a Lilliefors Significance Correction





Destination

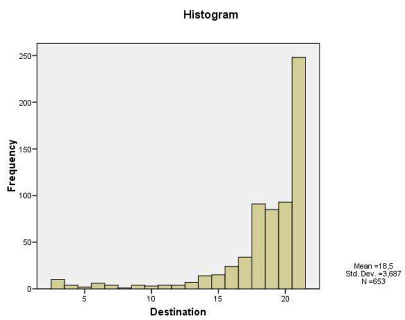
escriptive Statistics

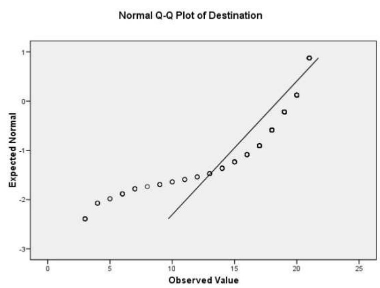
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Destination	747	-2,436	,089	6,246	,179
Valid N (listwise)	747				

Tests of Normality

	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Destination	,246	747	,000	,681	747	,000

a Lilliefors Significance Correction

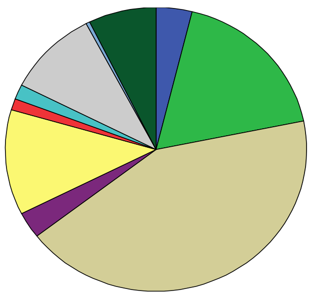




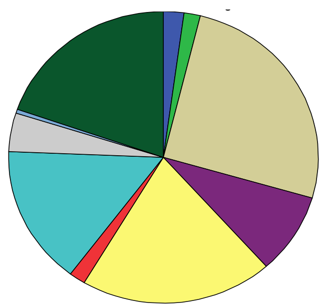
Appendix D Accessed Destinations

- School
- Work
- Shop/service
- Train / busstation
- Family / friends
- Café/ restaurant
- Park
- Sport club
- Health institution
- Other destination

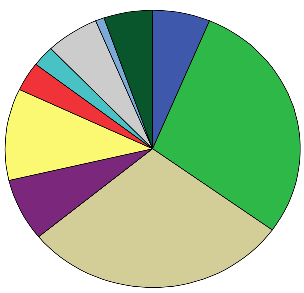
Rural cycle destinations:



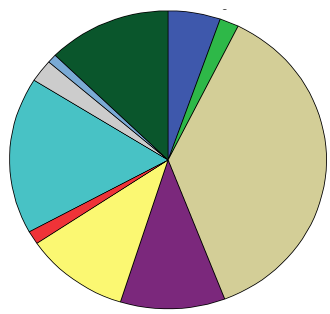
Rural walk destinations:



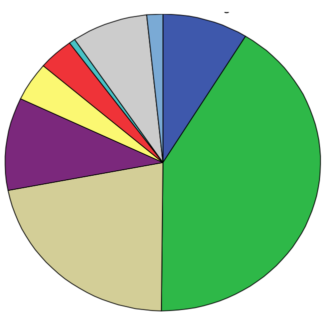
Suburban Cycle destination s:



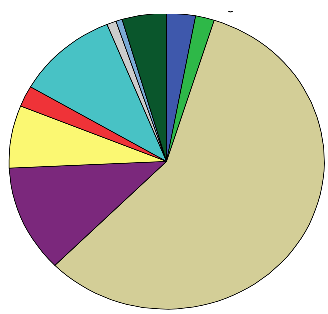
Suburban walk destinations:



Urban Cycle destinations:



Urban walk destinations:



Appendix E Anova analyses distance most accessed destinations

Cycling:

Distance most accessed cycle destination – perceived degree of urbanization (subjective)

ANOVA
Distance (in meters) to the most accessed (cycle) destination

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	136385723,544	2	68192861,772	2,778	,063
Within Groups	17946416493,236	731	24550501,359		
Total	18082802216,781	733			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Wat is de afstand in meters vanaf uw huis naar de bestemming: '[!Fietsbestemming!]'?(1 km = 1000 meter)
Bonferroni

(I) Perceived3categorieën	(J) Perceived3categorieën	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Rural	Between	-445,315	477,785	1,000	-1591,76	701,13
	Urban	-1012,793	433,629	,059	-2053,29	27,70
Between	Rural	445,315	477,785	1,000	-701,13	1591,76
	Urban	-567,478	450,367	,624	-1648,13	513,18
Urban	Rural	1012,793	433,629	,059	-27,70	2053,29
	Between	567,478	450,367	,624	-513,18	1648,13

Distance most accessed cycle destination – degree of urbanization (objective)

ANOVA
Distance (in meters) to the most accessed (cycle) destination

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	55504001,194	2	27752000,597	1,123	,326
Within Groups	18022153717,466	729	24721747,212		
Total	18077657718,660	731			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Wat is de afstand in meters vanaf uw huis naar de bestemming: '[!Fietsbestemming!]'?(1 km = 1000 meter)
Bonferroni

(I) 3 categorieën	(J) 3 categorieën	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Urban	Between	387,688	440,536	1,000	-669,38	1444,76
	Rural	695,592	494,171	,479	-490,18	1881,36
Between	Urban	-387,688	440,536	1,000	-1444,76	669,38
	Rural	307,904	564,666	1,000	-1047,02	1662,83
Rural	Urban	-695,592	494,171	,479	-1881,36	490,18
	Between	-307,904	564,666	1,000	-1662,83	1047,02

Walking:

Distance most accessed walk destination – perceived degree of urbanization

ANOVA
Distance (in meters) to the most accessed (walk) destination

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	32859077,641	2	16429538,820	5,943	,003
Within Groups	1929567078,522	698	2764422,749		
Total	1962426156,163	700			

Post hoc test

Multiple Comparisons

Dependent Variable: Wat is de afstand in meters vanaf uw huis naar de bestemming: '[!Wandelbestemming!]'? 1 km = 1000 meter
Bonferroni

(I) Perceived3categorieën	(J) Perceived3categorieën	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Rural	Between	225,792	163,621	,504	-166,86	618,44
	Urban	510,931*	149,571	,002	152,00	869,87
Between	Rural	-225,792	163,621	,504	-618,44	166,86
	Urban	285,139	153,833	,193	-84,03	654,30
Urban	Rural	-510,931*	149,571	,002	-869,87	-152,00
	Between	-285,139	153,833	,193	-654,30	84,03

*. The mean difference is significant at the .05 level.

Distance most accessed walk cycle destination – degree of urbanization (objective)

ANOVA
Distance (in meters) to the most accessed (walk) destination

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	20894343,069	2	10447171,535	3,772	,023
Within Groups	1927896204,238	696	2769965,811		
Total	1948790547,308	698			

Post hoc test

Multiple Comparisons

Dependent Variable: Wat is de afstand in meters vanaf uw huis naar de bestemming: '[!Wandelbestemming!]'? 1 km = 1000 meter
Bonferroni

(I) 3 categorieën	(J) 3 categorieën	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Urban	Between	-318,815	150,717	,104	-680,50	42,87
	Rural	-384,794	170,180	,072	-793,19	23,60
Between	Urban	318,815	150,717	,104	-42,87	680,50
	Rural	-65,979	194,222	1,000	-532,07	400,11
Rural	Urban	384,794	170,180	,072	-23,60	793,19
	Between	65,979	194,222	1,000	-400,11	532,07

Appendix F χ2 analyses Perceived degree of urbanization - Dependent variable

Cycling:

Cylcling * Perceived degree of urbanization

			Perceived3categorieën			Total
			Rural	Suburban	Urban	Rural
Cycling	Weinig	Count	143	103	124	370
		% within Perceived Degree of Urbanization	62,4%	51,0%	40,9%	50,4%
	Veel	Count	86	99	179	364
		% within Perceived Degree of Urbanization	37,6%	49,0%	59,1%	49,6%
Total		Count	229	202	303	734
		% within Perceived Degree of Urbanization	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24,203(a)	2	,000
Likelihood Ratio	24,407	2	,000
Linear-by-Linear Association	24,142	1	,000
N of Valid Cases	734		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 100,17.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,182	,000
	Cramer's V	,182	,000
N of Valid Cases		734	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Walking

Walking * Perceived degree of urbanization Crosstabulation

			Perceived degree of Urbanization			Total
			Rural	Suburban	Urban	Rural
Walking	Weinig	Count	118	103	150	371
		% within Perceived degree of urbanization	51,5%	51,0%	49,5%	50,5%
	Veel	Count	111	99	153	363
		% within Perceived degree of urbanization	48,5%	49,0%	50,5%	49,5%
Total		Count	229	202	303	734
		% within Perceived degree of urbanization	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,236[a]	2	,889
Likelihood Ratio	,236	2	,889
Linear-by-Linear Association	,222	1	,637
N of Valid Cases	734		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 99,90.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,018	,889
	Cramer's V	,018	,889
N of Valid Cases		734	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Appendix G Anova analyses Perceived degree of urbanization - Dependent variable

CYCLING:

ANOVA

Cycling

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	284926,466	2	142463,233	5,932	,003
Within Groups	17556166,498	731	24016,644		
Total	17841092,964	733			

Multiple Comparisons

Dependent Variable: Cycling
Bonferroni

(I) Perceived3categorieën	(J) Perceived3categorieën	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
		Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
Rural	Suburban	-17,881	14,959	,697	-53,77	18,01
	Urban	-45,911(*)	13,570	,002	-78,47	-13,35
Suburban	Rural	17,881	14,959	,697	-18,01	53,77
	Urban	-28,031	14,077	,140	-61,81	5,75
Urban	Rural	45,911(*)	13,570	,002	13,35	78,47
	Suburban	28,031	14,077	,140	-5,75	61,81

* The mean difference is significant at the .05 level.

WALKING:

ANOVA

Walking

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5542,335	2	2771,168	,198	,821
Within Groups	10255252,969	731	14029,074		
Total	10260795,304	733			

Multiple Comparisons

Dependent Variable: walking
Bonferroni

(I) Perceived3categorieën	(J) Perceived3categorieën	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
		Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
Rural	Suburban	-7,076	11,433	1,000	-34,51	20,36
	Urban	-2,341	10,371	1,000	-27,23	22,54
Suburban	Rural	7,076	11,433	1,000	-20,36	34,51
	Urban	4,734	10,759	1,000	-21,08	30,55
Urban	Rural	2,341	10,371	1,000	-22,54	27,23
	Suburban	-4,734	10,759	1,000	-30,55	21,08

Appendix H χ2 analyses Independent variables – Dependent variables

Cycling:

Self efficacy cycling * cycling

Self efficacy Cycling * Cycling Crosstab

			Self efficacy cycling			Total
			Low	Moderate	High	Low
Cycling	Weinig	Count	154	123	89	366
		% within Self efficacy cycling	63,9%	46,6%	40,3%	50,4%
	Veel	Count	87	141	132	360
		% within Self efficacy cycling	36,1%	53,4%	59,7%	49,6%
Total		Count	241	264	221	726
		% within Self efficacy cycling	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28,173(a)	2	,000
Likelihood Ratio	28,473	2	,000
Linear-by-Linear Association	26,109	1	,000
N of Valid Cases	726		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 109,59.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,197	,000
	Cramer's V	,197	,000
N of Valid Cases		726	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Social influences cycling * cycling

Cycling * Social influences cycling Crosstab

			Social Influences Cycling			Total
			Low	Moderate	High	Low
Cycling	Weinig	Count	124	97	133	354
		% within Social Influences Cycling	51,7%	42,9%	54,7%	49,9%
	Veel	Count	116	129	110	355
		% within Social Influences Cycling	48,3%	57,1%	45,3%	50,1%
Total		Count	240	226	243	709
		% within Social Influences Cycling	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,973(a)	2	,031
Likelihood Ratio	6,992	2	,030
Linear-by-Linear Association	,465	1	,495
N of Valid Cases	709		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 112,84.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,099	,031
	Cramer's V	,099	,031
N of Valid Cases		709	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Safety cycling * Cycling

Cycling * Safety cycling Crosstabulation

			Safety Cycling			Total
			Low	Moderate	High	Low
Cycling VeelWeinig	Weinig	Count	99	100	132	331
		% within Safety Cycling	52,4%	45,5%	52,4%	50,1%
	Veel	Count	90	120	120	330
		% within Safety Cycling	47,6%	54,5%	47,6%	49,9%
Total		Count	189	220	252	661
		% within Safety Cycling	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2,817(a)	2	,245
Likelihood Ratio	2,820	2	,244
Linear-by-Linear Association	,019	1	,889
N of Valid Cases	661		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 94,36.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,065	,245
	Cramer's V	,065	,245
N of Valid Cases		661	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Aesthetics cycling * Cycling

Cycling * Aesthetics cycling Crosstab

			Aesthetics Cycling			Total
			Low	Moderate	High	Low
Cycling	Weinig	Count	105	136	103	344
		% within Items: Aesthetics Cycling	51,0%	56,2%	42,2%	49,7%
	Veel	Count	101	106	141	348
		% within Items: Aesthetics Cycling	49,0%	43,8%	57,8%	50,3%
Total		Count	206	242	244	692
		% within Items: Aesthetics Cycling	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9,692(a)	2	,008
Likelihood Ratio	9,725	2	,008
Linear-by-Linear Association	3,892	1	,049
N of Valid Cases	692		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 102,40.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,118	,008
	Cramer's V	,118	,008
N of Valid Cases		692	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Functionality cycling * Cycling

Functionality cycling * Cycling Crosstab

			Functionality cycling			Total
			Low	Moderate	High	Low
Cycling	Weinig	Count	131	98	122	351
		% within Items: Functionality cycling	53,0%	48,8%	47,5%	49,8%
	Veel	Count	116	103	135	354
		% within Items: Functionality cycling	47,0%	51,2%	52,5%	50,2%
Total		Count	247	201	257	705
		% within Items: Functionality cycling	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1,680(a)	2	,432
Likelihood Ratio	1,681	2	,431
Linear-by-Linear Association	1,549	1	,213
N of Valid Cases	705		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 100,07.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,049	,432
	Cramer's V	,049	,432
N of Valid Cases		705	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Destination * Cycling

Cycling * Destination Crosstab

			Destination			Total
			Low	Moderate	High	Low
Cycling	Weinig	Count	138	106	126	370
		% within Items: Destination	52,9%	53,0%	46,2%	50,4%
	Veel	Count	123	94	147	364
		% within Items: Destination	47,1%	47,0%	53,8%	49,6%
Total		Count	261	200	273	734
		% within Items: Destination	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3,149(a)	2	,207
Likelihood Ratio	3,151	2	,207
Linear-by-Linear Association	2,438	1	,118
N of Valid Cases	734		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 99,18.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,065	,207
	Cramer's V	,065	,207
N of Valid Cases		734	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Walking:

Self efficacy walking * Walking

Walking * Self efficacy walking Crosstabulation

			Selfefficacy Walking			Total
			Low	Moderate	High	Low
Walking	Weinig	Count	126	110	117	353
		% within Selfefficacy Walking	52,1%	50,0%	49,6%	50,6%
	Veel	Count	116	110	119	345
		% within Selfefficacy Walking	47,9%	50,0%	50,4%	49,4%
Total		Count	242	220	236	698
		% within Selfefficacy Walking	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,339(a)	2	,844
Likelihood Ratio	,339	2	,844
Linear-by-Linear Association	,297	1	,585
N of Valid Cases	698		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 108,74.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,022	,844
	Cramer's V	,022	,844
N of Valid Cases		698	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Social influences walking * Walking

Walking * Social influences walking Crosstabulation

			Social Influences Walking			Total
			Low	Moderate	High	Low
Walking	Weinig	Count	112	118	122	352
		% within Social Influences Walking	49,6%	52,9%	49,4%	50,6%
	Veel	Count	114	105	125	344
		% within Social Influences Walking	50,4%	47,1%	50,6%	49,4%
Total		Count	226	223	247	696
		% within Social Influences Walking	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,720(a)	2	,698
Likelihood Ratio	,720	2	,698
Linear-by-Linear Association	,003	1	,954
N of Valid Cases	696		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 110,22.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,032	,698
	Cramer's V	,032	,698
N of Valid Cases		696	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Safety walking * walking

Walking * Safety Crosstabulation

			Safety walking			Total
			Low	Moderate	High	Low
Walking	Weinig	Count	102	130	99	331
		% within Safety walking	44,5%	56,0%	50,5%	50,4%
	Veel	Count	127	102	97	326
		% within Safety walking	55,5%	44,0%	49,5%	49,6%
Total		Count	229	232	196	657
		% within Safety walking	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,091(a)	2	,048
Likelihood Ratio	6,105	2	,047
Linear-by-Linear Association	1,752	1	,186
N of Valid Cases	657		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 97,25.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,096	,048
	Cramer's V	,096	,048
N of Valid Cases		657	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Aesthetics walking * walking

Walking * Aesthetics walking Crosstabulation

			Aesthetics walking			Total
			Low	Moderate	High	Low
Walking	Weinig	Count	142	96	110	348
		% within Items: Aesthetics walking	55,5%	45,9%	48,5%	50,3%
	Veel	Count	114	113	117	344
		% within Items: Aesthetics walking	44,5%	54,1%	51,5%	49,7%
Total		Count	256	209	227	692
		% within Items: Aesthetics walking	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4,638(a)	2	,098
Likelihood Ratio	4,646	2	,098
Linear-by-Linear Association	2,515	1	,113
N of Valid Cases	692		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 103,90.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,082	,098
	Cramer's V	,082	,098
N of Valid Cases		692	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Functionality walking * walking

Walking * Functionality walking Crosstabulation

			Functionality walking			Total
			Low	Moderate	High	Low
Walking	Weinig	Count	129	110	113	352
		% within Functionality walking	51,6%	51,6%	48,5%	50,6%
	Veel	Count	121	103	120	344
		% within Functionality walking	48,4%	48,4%	51,5%	49,4%
Total		Count	250	213	233	696
		% within Functionality walking	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,604(a)	2	,739
Likelihood Ratio	,605	2	,739
Linear-by-Linear Association	,454	1	,501
N of Valid Cases	696		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 105,28.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,029	,739
	Cramer's V	,029	,739
N of Valid Cases		696	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Destination * walking

Walking * Destination Crosstabulation

			Destination			Total
			Low	Moderate	High	Low
Walking	Weinig	Count	128	101	142	371
		% within Items: Destination	49,0%	50,5%	52,0%	50,5%
	Veel	Count	133	99	131	363
		% within Items: Destination	51,0%	49,5%	48,0%	49,5%
Total		Count	261	200	273	734
		% within Items: Destination	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,472(a)	2	,790
Likelihood Ratio	,472	2	,790
Linear-by-Linear Association	,471	1	,492
N of Valid Cases	734		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 98,91.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,025	,790
	Cramer's V	,025	,790
N of Valid Cases		734	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis

Appendix I χ2 analyses Demographic characteristics – Dependent variables

Cycling:

Age categories – cycling

Cycling * Age categories Crosstabulation

			Age categories							Total
			Group 1 (17-20)	Group 2 (21-30)	Group 3 (31-40)	Group 4 (41-50)	Group 5 (51-60)	Group 6 (61-70)	Group 7 (71-80)	Groep 1 (17-20)
Cycling	Weinig	Count	5	116	56	60	65	35	5	342
		% within Age categories	35,7%	54,5%	52,3%	48,4%	43,6%	48,6%	83,3%	49,9%
	Veel	Count	9	97	51	64	84	37	1	343
		% within Age categories	64,3%	45,5%	47,7%	51,6%	56,4%	51,4%	16,7%	50,1%
Total		Count	14	213	107	124	149	72	6	685
		% within Age categories	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8,344(a)	6	,214
Likelihood Ratio	8,613	6	,197
Linear-by-Linear Association	1,217	1	,270
N of Valid Cases	685		

a 2 cells (14,3%) have expected count less than 5. The minimum expected count is 3,00.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,110	,214
	Cramer's V	,110	,214
N of Valid Cases		685	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Gender - cycling

Cycling * gender Crosstabulation

			Gender		Total
			Male	Female	Male
Cycling	Weinig	Count	140	202	342
		% within gender	44,2%	54,9%	49,9%
	Veel	Count	177	166	343
		% within gender	55,8%	45,1%	50,1%
Total		Count	317	368	685
		% within gender	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7,839(b)	1	,005		
Continuity Correction(a)	7,416	1	,006		
Likelihood Ratio	7,854	1	,005		
Fisher's Exact Test				,006	,003
Linear-by-Linear Association	7,827	1	,005		
N of Valid Cases	685				

a Computed only for a 2x2 table
b 0 cells (,0%) have expected count less than 5. The minimum expected count is 158,27.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	-,107	,005
	Cramer's V	,107	,005
N of Valid Cases		685	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

BMI > 25 - cycling

Cycling * BMI > 25 Crosstabulation

			BMI>25		Total
			Yes	No	Yes
Cycling	Weinig	Count	132	196	328
		% within Sectie3BMI25	52,2%	47,9%	49,5%
	Veel	Count	121	213	334
		% within Sectie3BMI25	47,8%	52,1%	50,5%
Total		Count	253	409	662
		% within Sectie3BMI25	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,131(b)	1	,288		
Continuity Correction(a)	,967	1	,325		
Likelihood Ratio	1,131	1	,288		
Fisher's Exact Test				,299	,163
N of Valid Cases	662				

a Computed only for a 2x2 table
b 0 cells (,0%) have expected count less than 5. The minimum expected count is 125,35.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,041	,288
	Cramer's V	,041	,288
N of Valid Cases		662	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Educational attainment - cycling

Cycling * Educational attainment Crosstabulation

			Educational attainment			Total
			Low	Moderate	High	Low
Cycling	Weinig	Count	27	78	237	342
		% within 3 categorie	50,9%	54,2%	48,6%	49,9%
	Veel	Count	26	66	251	343
		% within 3 categorie	49,1%	45,8%	51,4%	50,1%
Total		Count	53	144	488	685
		% within 3 categorie	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1,419(a)	2	,492
Likelihood Ratio	1,420	2	,492
Linear-by-Linear Association	,778	1	,378
N of Valid Cases	685		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 26,46.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,046	,492
	Cramer's V	,046	,492
N of Valid Cases		685	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis

Availability of a car – cycling

Cycling * Availability of a car Crosstabulation

			Availability of a car				Total
			Never	Sometimes	Regularly	Always	Never
Cycling	Weinig	Count	30	40	34	266	370
		% within Availability of a car	36,6%	36,4%	43,6%	57,3%	50,4%
	Veel	Count	52	70	44	198	364
		% within availability of a car	63,4%	63,6%	56,4%	42,7%	49,6%
Total		Count	82	110	78	464	734
		% within availability of a car	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25,284(a)	3	,000
Likelihood Ratio	25,500	3	,000
Linear-by-Linear Association	23,100	1	,000
N of Valid Cases	734		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 38,68.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,186	,000
	Cramer's V	,186	,000
N of Valid Cases		734	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Perceived general health - cycling

Cycling * Perceived health status: Crosstabulation

			Mijn gezondheid is in het algemeen:				Total
			Moderate	Average	Good	Very good	Moderate
Cycling	Weinig	Count	7	32	217	86	342
		% within Perveid health status:	70,0%	62,7%	51,9%	41,7%	49,9%
	Veel	Count	3	19	201	120	343
		% within Perceived health status:	.	37,3%	48,1%	58,3%	50,1%
Total		Count	10	51	418	206	685
		% within Perceived health status:	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11,136(a)	3	,011
Likelihood Ratio	11,245	3	,010
Linear-by-Linear Association	11,091	1	,001
N of Valid Cases	685		

a 1 cells (12,5%) have expected count less than 5. The minimum expected count is 4,99.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,128	,011
	Cramer's V	,128	,011
N of Valid Cases		685	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis

Walking:

Age categories – walking

Walking * Age categories Crosstabulation

			Age categories							Total
			Group 1 (17-20)	Group 2 (21-30)	Group 3 (31-40)	Group 4 (41-50)	Group 5 (51-60)	Group 6 (61-70)	Group 7 (71-80)	Group 1 (17-20)
Walking	Weinig	Count	7	118	59	65	63	31	3	346
		% within age categories	50,0%	55,4%	55,1%	52,4%	42,3%	43,1%	50,0%	50,5%
	Veel	Count	7	95	48	59	86	41	3	339
		% within age categories	50,0%	44,6%	44,9%	47,6%	57,7%	56,9%	50,0%	49,5%
Total		Count	14	213	107	124	149	72	6	685
		% within agecategories	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8,773(a)	6	,187
Likelihood Ratio	8,798	6	,185
Linear-by-Linear Association	6,413	1	,011
N of Valid Cases	685		

a 2 cells (14,3%) have expected count less than 5. The minimum expected count is 2,97.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,113	,187
	Cramer's V	,113	,187
N of Valid Cases		685	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Gender - walking

Walking * gender Crosstabulation

			Gender		Total
			Male	Female	Male
Walking	Weinig	Count	161	185	346
		% within Gender	50,8%	50,3%	50,5%
	Veel	Count	156	183	339
		% within Gender	49,2%	49,7%	49,5%
Total		Count	317	368	685
		% within Gender	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,018(b)	1	,893		
Continuity Correction(a)	,003	1	,954		
Likelihood Ratio	,018	1	,893		
Fisher's Exact Test				,939	,477
Linear-by-Linear Association	,018	1	,893		
N of Valid Cases	685				

a Computed only for a 2x2 table
b 0 cells (,0%) have expected count less than 5. The minimum expected count is 156,88.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,005	,893
	Cramer's V	,005	,893
N of Valid Cases		685	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

BMI > 25 – walking

Walking * BMI>25 Crosstabulation

			BMI>25		Total
			Yes	No	ja
Walking	Weinig	Count	132	209	341
		% within BMI>25	52,2%	51,1%	51,5%
	Veel	Count	121	200	321
		% within BMI>25	47,8%	48,9%	48,5%
Total		Count	253	409	662
		% within BMI>25	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,072(b)	1	,788		
Continuity Correction(a)	,036	1	,850		
Likelihood Ratio	,072	1	,788		
Fisher's Exact Test				,811	,425
N of Valid Cases	662				

a Computed only for a 2x2 table
b 0 cells (,0%) have expected count less than 5. The minimum expected count is 122,68.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,010	,788
	Cramer's V	,010	,788
N of Valid Cases		662	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Educational attainment - walking

Walking * Educational attainment Crosstabulation

			Educational attainment			Total
			Low	Moderate	High	Low
Walking	Weinig	Count	19	81	246	346
		% within 3 categorie	35,8%	56,3%	50,4%	50,5%
	Veel	Count	34	63	242	339
		% within 3 categorie	64,2%	43,8%	49,6%	49,5%
Total		Count	53	144	488	685
		% within 3 categorie	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6,457(a)	2	,040
Likelihood Ratio	6,521	2	,038
Linear-by-Linear Association	,799	1	,371
N of Valid Cases	685		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 26,23.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,097	,040
	Cramer's V	,097	,040
N of Valid Cases		685	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Walking * availability of a car:

Walking * Availability of a car Crosstabulation

			Availability of a car				Total
			Never	Sometimes	Regularly	Always	Never
Walking	Weinig	Count	29	59	46	237	371
		% within Availability of a car	35,4%	53,6%	59,0%	51,1%	50,5%
	Veel	Count	53	51	32	227	363
		% within availability of a car	64,6%	46,4%	41,0%	48,9%	49,5%
Total		Count	82	110	78	464	734
		% within availability of a car	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10,249(a)	3	,017
Likelihood Ratio	10,365	3	,016
Linear-by-Linear Association	2,690	1	,101
N of Valid Cases	734		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 38,57.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,118	,017
	Cramer's V	,118	,017
N of Valid Cases		734	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Perceived general health - walking

Walking * Perceived general health status Crosstabulation

			Perceived general health:				Total
			Moderate	Average	Good	Excellent	Moderate
Walking	Weinig	Count	4	17	217	108	346
		% within Perceived general health:	40,0%	33,3%	51,9%	52,4%	50,5%
	Veel	Count	6	34	201	98	339
		% within perceived general health	60,0%	66,7%	48,1%	47,6%	49,5%
Total		Count	10	51	418	206	685
		% within perceived general health:	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7,094(a)	3	,069
Likelihood Ratio	7,206	3	,066
Linear-by-Linear Association	3,240	1	,072
N of Valid Cases	685		

a 1 cells (12,5%) have expected count less than 5. The minimum expected count is 4,95.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,102	,069
	Cramer's V	,102	,069
N of Valid Cases		685	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Appendix J χ2 analyses Demographic variables – Perceived degree of urbanization

Age - Perceived degree of urbanization

Perceived degree of urbanization * Age categories Crosstabulation

			Age categories							Total
			Group 1 (17-20)	Group 2 (21-30)	Group 3 (31-40)	Group 4 (41-50)	Group 5 (51-60)	Group 6 (61-70)	Group 7 (71-80)	Group 1 (17-20)
Perceived degree of urbanization	Rural	Count	4	40	23	40	61	41	4	213
		% within Age categories	28,6%	18,8%	21,1%	31,7%	40,4%	53,9%	66,7%	30,6%
	Suburban	Count	6	48	33	43	45	24	2	201
		% within Age categories	42,9%	22,5%	30,3%	34,1%	29,8%	31,6%	33,3%	28,9%
	Urban	Count	4	125	53	43	45	11	0	281
		% within Age categories	28,6%	58,7%	48,6%	34,1%	29,8%	14,5%	,0%	40,4%
Total		Count	14	213	109	126	151	76	6	695
		% within Age categories	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	79,647(a)	12	,000
Likelihood Ratio	82,989	12	,000
Linear-by-Linear Association	65,568	1	,000
N of Valid Cases	695		

a 5 cells (23,8%) have expected count less than 5. The minimum expected count is 1,74.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,339	,000
	Cramer's V	,239	,000
N of Valid Cases		695	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

*Not fulfilling the condition of Cochran

Age (*fulfilling condition of Cochran) – Perceived degree of urbanization

Perceived degree of urbanization * Age categories Crosstabulation

			Age categories * fulfilling rule of Cochran					Total
			Group 1 (17-30)	Group 2 (31-40)	Group 3 (41-50)	Group 4 (51-60)	Group 5 (61-80)	Group 1 (17-30)
Perceived degree of urbanization	Rural	Count	44	23	40	61	45	213
		% within LeeftijdVuistregelChi	19,4%	21,1%	31,7%	40,4%	54,9%	30,6%
	Suburban	Count	54	33	43	45	26	201
		% within LeeftijdVuistregelChi	23,8%	30,3%	34,1%	29,8%	31,7%	28,9%
	Urban	Count	129	53	43	45	11	281
		% within LeeftijdVuistregelChi	56,8%	48,6%	34,1%	29,8%	13,4%	40,4%
Total		Count	227	109	126	151	82	695
		% within LeeftijdVuistregelChi	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	73,826(a)	8	,000
Likelihood Ratio	76,179	8	,000
Linear-by-Linear Association	68,255	1	,000
N of Valid Cases	695		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 23,72.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,326	,000
	Cramer's V	,230	,000
N of Valid Cases		695	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Gender – Perceived degree of urbanization

Perceived degree of urbanization * gender Crosstabulation

			Gender		Total
			Male	Female	Male
Perceived degree of urbanization	Rural	Count	98	115	213
		% within Gender	30,4%	30,8%	30,6%
	Suburban	Count	97	104	201
		% within Gender	30,1%	27,9%	28,9%
	Urban	Count	127	154	281
		% within Gender	39,4%	41,3%	40,4%
Total		Count	322	373	695
		% within Gender	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	,455(a)	2	,797
Likelihood Ratio	,455	2	,797
Linear-by-Linear Association	,052	1	,820
N of Valid Cases	695		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 93,13.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,026	,797
	Cramer's V	,026	,797
N of Valid Cases		695	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Educational attainment - Perceived degree of urbanization

Perceived degree of urbanization * Educational attainment Crosstabulation

			Educational attainment			Total
			Low	Moderate	High	Low
Perceived degree of urbanization	Rural	Count	27	54	132	213
		% within 3 categorie	50,0%	36,2%	26,8%	30,6%
	Suburban	Count	18	52	131	201
		% within 3 categorie	33,3%	34,9%	26,6%	28,9%
	Urban	Count	9	43	229	281
		% within 3 categorie	16,7%	28,9%	46,5%	40,4%
Total		Count	54	149	492	695
		% within 3 categorie	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30,588(a)	4	,000
Likelihood Ratio	31,941	4	,000
Linear-by-Linear Association	27,456	1	,000
N of Valid Cases	695		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 15,62.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,210	,000
	Cramer's V	,148	,000
N of Valid Cases		695	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

BMI > 25 - Perceived degree of urbanization

Perceived degree of urbanization * BMI Crosstabulation

			BMI > 25		Total
			Yes	No	Yes
Perceived degree of urbanization	Rural	Count	93	110	203
		% within BMI > 25	36,0%	26,6%	30,2%
	Between	Count	78	119	197
		% within BMI > 25	30,2%	28,7%	29,3%
	Urban	Count	87	185	272
		% within BMI > 25	33,7%	44,7%	40,5%
Total		Count	258	414	672
		% within BMI > 25	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9,567(a)	2	,008
Likelihood Ratio	9,590	2	,008
N of Valid Cases	672		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 75,63.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,119	,008
	Cramer's V	,119	,008
N of Valid Cases		672	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Availability of a car – Perceived degree of urbanization

Availability of a car * Perceived degree of urbanization Crosstabulation

			Perceived degree of urbanization			Total
			Rural	Suburban	Urban	Rural
Availability of a car	Never	Count	8	13	62	83
		% within Perceived degree of urbanization	3,4%	6,3%	20,2%	11,1%
	Sometimes	Count	20	24	71	115
		% within Perceived degree of urbanization	8,5%	11,7%	23,1%	15,4%
	Regularly	Count	24	26	28	78
		% within Perceived degree of urbanization	10,3%	12,6%	9,1%	10,4%
	Always	Count	182	143	146	471
		% within Perceived degree of urbanization	77,8%	69,4%	47,6%	63,1%
Total		Count	234	206	307	747
		% within Perceived degree of urbanization	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	82,982(a)	6	,000
Likelihood Ratio	84,374	6	,000
Linear-by-Linear Association	73,286	1	,000
N of Valid Cases	747		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 21,51.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,333	,000
	Cramer's V	,236	,000
N of Valid Cases		747	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Perceived general health status - Perceived degree of urbanization

Perceived degree of urbanization * Perceived general health: Crosstabulation

			Perceived general health:				Total
			Moderate	Average	Good	Very good	Matig
Perceived general health:	Rural	Count	4	24	139	46	213
		% within Perceived general health:	40,0%	44,4%	32,9%	22,0%	30,6%
	Between	Count	2	18	127	54	201
		% within Perceived general health:	20,0%	33,3%	30,1%	25,8%	28,9%
	Urban	Count	4	12	156	109	281
		% within Perceived general health:	40,0%	22,2%	37,0%	52,2%	40,4%
Total		Count	10	54	422	209	695
		% within Perceived general health:	100,0%	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23,761(a)	6	,001
Likelihood Ratio	24,213	6	,000
Linear-by-Linear Association	19,645	1	,000
N of Valid Cases	695		

a 3 cells (25,0%) have expected count less than 5. The minimum expected count is 2,89.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,185	,001
	Cramer's V	,131	,001
N of Valid Cases		695	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Appendix K χ2 analyses Perceived degree of urbanization - Perceived physical environment variables

Cycling:

Safety cycling - Perceived degree of urbanization

SafetyCycling * PerceivedDegreeOfUrbanization Crosstabulation

			Perceived Degree Of Urbanization			Total
			Rural	Suburban	Urban	Rural
SafetyCycling	low	Count	55	55	82	192
		% within PerceivedDegreeOfUrbanization	26,3%	29,3%	30,1%	28,7%
	moderate	Count	80	62	82	224
		% within PerceivedDegreeOfUrbanization	38,3%	33,0%	30,1%	33,5%
	high	Count	74	71	108	253
		% within PerceivedDegreeOfUrbanization	35,4%	37,8%	39,7%	37,8%
Total		Count	209	188	272	669
		% within PerceivedDegreeOfUrbanization	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3,564(a)	4	,468
Likelihood Ratio	3,543	4	,471
Linear-by-Linear Association	,005	1	,943
N of Valid Cases	669		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 53,96.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,073	,468
	Cramer's V	,052	,468
N of Valid Cases		669	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Aesthetics cycling - Perceived degree of urbanization

AestheticsCycling * PerceivedDegreeOfUrbanization Crosstabulation

			PerceivedDegreeOfUrbanization			Total
			Rural	Suburban	Urban	Rural
AestheticsCycling	Low	Count	45	65	99	209
		% within PerceivedDegreeOfUrbanization	20,5%	32,3%	35,0%	29,7%
	Moderate	Count	83	63	102	248
		% within PerceivedDegreeOfUrbanization	37,9%	31,3%	36,0%	35,3%
	High	Count	91	73	82	246
		% within PerceivedDegreeOfUrbanization	41,6%	36,3%	29,0%	35,0%
Total		Count	219	201	283	703
		% within PerceivedDegreeOfUrbanization	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16,375(a)	4	,003
Likelihood Ratio	17,033	4	,002
Linear-by-Linear Association	13,756	1	,000
N of Valid Cases	703		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 59,76.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,153	,003
	Cramer's V	,108	,003
N of Valid Cases		703	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Functionality cycling - Perceived degree of urbanization

FunctionalityCycling * Perceived Degree Of Urbanization Crosstabulation

			Perceived Degree Of Urbanization			Total
			Rural	Suburban	Urban	Rural
Functionality Cycling	Low	Count	94	65	92	251
		% within PerceivedDegreeOfUrbanization	42,3%	32,2%	31,5%	35,1%
	Moderate	Count	49	60	94	203
		% within PerceivedDegreeOfUrbanization	22,1%	29,7%	32,2%	28,4%
	High	Count	79	77	106	262
		% within PerceivedDegreeOfUrbanization	35,6%	38,1%	36,3%	36,6%
Total		Count	222	202	292	716
		% within PerceivedDegreeOfUrbanization	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9,822(a)	4	,044
Likelihood Ratio	9,851	4	,043
Linear-by-Linear Association	2,144	1	,143
N of Valid Cases	716		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 57,27.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,117	,044
	Cramer's V	,083	,044
N of Valid Cases		716	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Destination - Perceived degree of urbanization

Destination * PerceivedDegreeOfUrbanization Crosstabulation

			PerceivedDegreeOfUrbanization			Total
			Rural	Suburban	Urban	Rural
Destination	Low	Count	122	80	63	265
		% within PerceivedDegreeOfUrbanization	52,1%	38,8%	20,5%	35,5%
	Moderate	Count	67	59	78	204
		% within PerceivedDegreeOfUrbanization	28,6%	28,6%	25,4%	27,3%
	High	Count	45	67	166	278
		% within PerceivedDegreeOfUrbanization	19,2%	32,5%	54,1%	37,2%
Total		Count	234	206	307	747
		% within PerceivedDegreeOfUrbanization	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	84,004(a)	4	,000
Likelihood Ratio	86,708	4	,000
Linear-by-Linear Association	82,240	1	,000
N of Valid Cases	747		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 56,26.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,335	,000
	Cramer's V	,237	,000
N of Valid Cases		747	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Walking:

Safety walking - Perceived degree of urbanization

Safety Walking * PerceivedDegreeOfUrbanization Crosstabulation

			Perceived Degree Of Urbanization			Total
			Rural	Suburban	Urban	Rural
Safety Walking	Low	Count	74	75	82	231
		% within PerceivedDegreeOfUrbanization	35,9%	41,2%	29,8%	34,8%
	Moderate	Count	84	64	88	236
		% within PerceivedDegreeOfUrbanization	40,8%	35,2%	32,0%	35,6%
	High	Count	48	43	105	196
		% within PerceivedDegreeOfUrbanization	23,3%	23,6%	38,2%	29,6%
Total		Count	206	182	275	663
		% within PerceivedDegreeOfUrbanization	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18,553(a)	4	,001
Likelihood Ratio	18,292	4	,001
Linear-by-Linear Association	9,107	1	,003
N of Valid Cases	663		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 53,80.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,167	,001
	Cramer's V	,118	,001
N of Valid Cases		663	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Aesthetics walking - Perceived degree of urbanization

AestheticsWalking * Perceived Degree Of Urbanization Crosstabulation

			PerceivedDegreeOfUrbanization			Total
			Rural	Suburban	Urban	Rural
Aesthetics Walking	Low	Count	46	67	144	257
		% within PerceivedDegreeOfUrbanization	21,0%	33,3%	50,9%	36,6%
	Moderate	Count	68	70	73	211
		% within PerceivedDegreeOfUrbanization	31,1%	34,8%	25,8%	30,0%
	High	Count	105	64	66	235
		% within PerceivedDegreeOfUrbanization	47,9%	31,8%	23,3%	33,4%
Total		Count	219	201	283	703
		% within PerceivedDegreeOfUrbanization	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	56,862(a)	4	,000
Likelihood Ratio	57,175	4	,000
Linear-by-Linear Association	52,480	1	,000
N of Valid Cases	703		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 60,33.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,284	,000
	Cramer's V	,201	,000
N of Valid Cases		703	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Functionality walking - Perceived degree of urbanization

FunctionalityWalking * PerceivedDegreeOfUrbanization Crosstabulation

			PerceivedDegreeOfUrbanization			Total
			Rural	Suburban	Urban	Rural
FunctionalityWalking	Low	Count	95	82	76	253
		% within PerceivedDegreeOfUrbanization	43,2%	40,8%	26,6%	35,8%
	Moderate	Count	59	62	95	216
		% within PerceivedDegreeOfUrbanization	26,8%	30,8%	33,2%	30,6%
	High	Count	66	57	115	238
		% within PerceivedDegreeOfUrbanization	30,0%	28,4%	40,2%	33,7%
Total		Count	220	201	286	707
		% within PerceivedDegreeOfUrbanization	100,0%	100,0%	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19,429(a)	4	,001
Likelihood Ratio	19,767	4	,001
Linear-by-Linear Association	13,864	1	,000
N of Valid Cases	707		

a 0 cells (,0%) have expected count less than 5. The minimum expected count is 61,41.

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	,166	,001
	Cramer's V	,117	,001
N of Valid Cases		707	

a Not assuming the null hypothesis.
b Using the asymptotic standard error assuming the null hypothesis.

Appendix L Correlations Pearson

Total Correlations

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.Cycling	Pearson Correlation	1	,076(*)	,228(**)	,129(**)	-,023	-,017	,050	,040	-,071	-,021	,125(**)	,054	-,001
	Sig. (2-tailed)		,039	,000	,001	,532	,661	,179	,293	,063	,585	,001	,156	,973
	N		734	726	698	709	696	734	692	692	661	657	705	696
2.Walking	Pearson Correlation		1	-,005	,010	-,033	-,006	-,003	,042	,050	-,054	-,050	,033	,016
	Sig. (2-tailed)			,893	,791	,384	,879	,941	,272	,188	,165	,198	,383	,672
	N			726	698	709	696	734	692	692	661	657	705	696
3.Self effiacy Cycling	Pearson Correlation			1	,442(**)	,140(**)	,023	,101(**)	-,059	-,039	,233(**)	,197(**)	,166(**)	,088(*)
	Sig. (2-tailed)				,000	,000	,536	,006	,118	,300	,000	,000	,000	,019
	N				709	720	707	739	703	703	669	663	716	707
4.Self efficacy Walking	Pearson Correlation				1	-,010	,324(**)	,121(**)	,068	-,104(**)	,106(**)	,264(**)	,093(*)	,097(**)
	Sig. (2-tailed)					,784	,000	,001	,073	,006	,006	,000	,013	,010
	N					709	707	709	703	703	669	663	709	707
5.Social Influences Cycling	Pearson Correlation					1	,435(**)	,118(**)	-,051	,016	,061	,017	,232(**)	,138(**)
	Sig. (2-tailed)						,000	,002	,173	,678	,117	,665	,000	,000
	N						707	720	703	703	669	663	716	707
6.Social Influences Walking	Pearson Correlation						1	,066	,108(**)	,082(*)	-,034	,097(*)	,085(*)	,168(**)
	Sig. (2-tailed)							,080	,004	,030	,378	,013	,025	,000
	N							707	703	703	669	663	707	707
7.Destination	Pearson Correlation							1	-,038	-,147(**)	,087(*)	,179(**)	,278(**)	,203(**)
	Sig. (2-tailed)								,310	,000	,024	,000	,000	,000
	N								703	703	669	663	716	707
8.Aesthetics Cycling	Pearson Correlation								1	,577(**)	,049	,089(*)	,134(**)	,129(**)
	Sig. (2-tailed)									,000	,203	,022	,000	,001
	N									703	669	663	703	703
9.Aesthetics Walking	Pearson Correlation									1	,064	,025	,077(*)	,120(**)
	Sig. (2-tailed)										,098	,519	,040	,001
	N										669	663	703	703
10.Safety Cycling	Pearson Correlation										1	,611(**)	,277(**)	,162(**)
	Sig. (2-tailed)											,000	,000	,000
	N											653	669	669
11.Safety Walking	Pearson Correlation											1	,209(**)	,258(**)
	Sig. (2-tailed)												,000	,000
	N												663	663
12.Functionality Cycling	Pearson Correlation												1	,386(**)
	Sig. (2-tailed)													,000
	N													707
13.Functionality Walking	Pearson Correlation													1
	Sig. (2-tailed)													
	N													

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Rural Correlations

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.Cycling	Pearson Correlation	1	,186(**)	,214(**)	,112	-,126	-,118	-,015	-,007	-,074	-,062	,153(*)	,123	-,009
	Sig. (2-tailed)		,005	,001	,101	,063	,083	,823	,914	,282	,379	,029	,070	,895
	N		229	227	217	220	216	229	215	215	207	205	218	216
2.Walking	Pearson Correlation		1	,055	,107	-,029	-,062	-,049	-,046	-,013	-,112	-,020	,087	,029
	Sig. (2-tailed)			,413	,115	,673	,362	,458	,506	,853	,108	,775	,199	,674
	N			227	217	220	216	229	215	215	207	205	218	216
3.Self effiacy Cycling	Pearson Correlation			1	,557(**)	,064	,095	,089	-,079	-,097	,282(**)	,228(**)	,178(**)	,163(*)
	Sig. (2-tailed)				,000	,344	,161	,176	,241	,151	,000	,001	,008	,015
	N				221	224	220	232	219	219	209	206	222	220
4.Self efficacy Walking	Pearson Correlation				1	-,050	,316(**)	,054	,131	-,060	,078	,252(**)	,104	,124
	Sig. (2-tailed)					,463	,000	,421	,053	,373	,259	,000	,122	,067
	N					221	220	221	219	219	209	206	221	220
5.Social Influences Cycling	Pearson Correlation					1	,428(**)	-,033	-,163(*)	-,068	,015	-,146(*)	,215(**)	,136(*)
	Sig. (2-tailed)						,000	,627	,015	,318	,835	,036	,001	,043
	N						220	224	219	219	209	206	222	220
6.Social Influences Walking	Pearson Correlation						1	,002	,154(*)	,173(*)	-,006	,021	,129	,147(*)
	Sig. (2-tailed)							,979	,023	,010	,933	,763	,056	,029
	N							220	219	219	209	206	220	220
7.Destination	Pearson Correlation							1	,013	-,173(*)	,121	,177(*)	,283(**)	,259(**)
	Sig. (2-tailed)								,844	,010	,080	,011	,000	,000
	N								219	219	209	206	222	220
8.Aesthetics Cycling	Pearson Correlation								1	,556(**)	,017	,116	,095	,127
	Sig. (2-tailed)									,000	,802	,097	,161	,061
	N									219	209	206	219	219
9.Aesthetics Walking	Pearson Correlation									1	-,015	,056	-,035	,098
	Sig. (2-tailed)										,826	,426	,609	,149
	N										209	206	219	219
10.Safety Cycling	Pearson Correlation										1	,543(**)	,278(**)	,200(**)
	Sig. (2-tailed)											,000	,000	,004
	N											203	209	209
11.Safety Walking	Pearson Correlation											1	,243(**)	,247(**)
	Sig. (2-tailed)												,000	,000
	N												206	206
12.Functionality Cycling	Pearson Correlation												1	,453(**)
	Sig. (2-tailed)													,000
	N													220
13.Functionality Walking	Pearson Correlation													1
	Sig. (2-tailed)													
	N													

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Suburban Correlations

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.Cycling	Pearson Correlation	1	,089	,236(**)	,015	,012	-,028	,114	,090	,041	,003	,092	,114	,044
	Sig. (2-tailed)		,209	,001	,830	,870	,698	,105	,210	,563	,971	,222	,111	,541
	N		202	202	197	198	197	202	197	197	185	179	198	197
2.Walking	Pearson Correlation		1	,072	,001	-,068	-,012	,008	,127	,022	,004	-,124	,039	-,030
	Sig. (2-tailed)			,307	,988	,339	,863	,905	,076	,760	,955	,097	,585	,673
	N			202	197	198	197	202	197	197	185	179	198	197
3.Self effiacy Cycling	Pearson Correlation			1	,320(**)	,106	-,055	,143(*)	,075	,093	,325(**)	,223(**)	,223(**)	,002
	Sig. (2-tailed)				,000	,133	,437	,041	,287	,187	,000	,003	,001	,978
	N				201	202	201	206	201	201	188	182	202	201
4.Self efficacy Walking	Pearson Correlation				1	-,055	,285(**)	,214(**)	,156(*)	-,079	,112	,225(**)	,092	,057
	Sig. (2-tailed)					,441	,000	,002	,027	,264	,127	,002	,192	,424
	N					201	201	201	201	201	188	182	201	201
5.Social Influences Cycling	Pearson Correlation					1	,500(**)	,204(**)	,045	,112	-,004	,109	,343(**)	,184(**)
	Sig. (2-tailed)						,000	,004	,527	,112	,957	,144	,000	,009
	N						201	202	201	201	188	182	202	201
6.Social Influences Walking	Pearson Correlation						1	,099	,117	,063	-,093	,078	,066	,237(**)
	Sig. (2-tailed)							,162	,098	,376	,203	,293	,355	,001
	N							201	201	201	188	182	201	201
7.Destination	Pearson Correlation							1	-,001	,024	,160(*)	,188(*)	,365(**)	,167(*)
	Sig. (2-tailed)								,983	,735	,028	,011	,000	,018
	N								201	201	188	182	202	201
8.Aesthetics Cycling	Pearson Correlation								1	,472(**)	,123	,177(*)	,159(*)	,187(**)
	Sig. (2-tailed)									,000	,093	,017	,024	,008
	N									201	188	182	201	201
9.Aesthetics Walking	Pearson Correlation									1	,118	,089	,228(**)	,226(**)
	Sig. (2-tailed)										,106	,230	,001	,001
	N										188	182	201	201
10.Safety Cycling	Pearson Correlation										1	,725(**)	,312(**)	,211(**)
	Sig. (2-tailed)											,000	,000	,004
	N											180	188	188
11.Safety Walking	Pearson Correlation											1	,287(**)	,318(**)
	Sig. (2-tailed)												,000	,000
	N												182	182
12.Functionality Cycling	Pearson Correlation												1	,370(**)
	Sig. (2-tailed)													,000
	N													201
13.Functionality Walking	Pearson Correlation													1
	Sig. (2-tailed)													
	N													

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Urban Correlations

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1.Cycling	Pearson Correlation	1	-,019	,205(**)	,190(**)	-,006	,079	-,093	,120(*)	-,021	-,021	,080	-,079	-,119(*)
	Sig. (2-tailed)		,747	,000	,001	,914	,185	,106	,045	,730	,734	,185	,179	,046
	N		303	297	284	291	283	303	280	280	269	273	289	283
2.Walking	Pearson Correlation		1	-,108	-,068	-,010	,042	,025	,050	,118(*)	-,050	-,024	-,018	,041
	Sig. (2-tailed)			,062	,254	,864	,483	,664	,408	,048	,416	,695	,766	,492
	N			297	284	291	283	303	280	280	269	273	289	283
3.Self effiacy Cycling	Pearson Correlation			1	,433(**)	,216(**)	,037	,009	-,108	-,024	,121(*)	,123(*)	,098	,044
	Sig. (2-tailed)				,000	,000	,532	,872	,069	,690	,046	,041	,095	,455
	N				287	294	286	301	283	283	272	275	292	286
4.Self efficacy Walking	Pearson Correlation				1	,040	,372(**)	,024	-,013	-,093	,116	,271(**)	,070	,045
	Sig. (2-tailed)					,503	,000	,680	,833	,120	,056	,000	,235	,448
	N				287	287	286	287	283	283	272	275	287	286
5.Social Influences Cycling	Pearson Correlation					1	,379(**)	,176(**)	-,024	,049	,142(*)	,014	,145(*)	,065
	Sig. (2-tailed)						,000	,002	,683	,409	,019	,813	,013	,270
	N						286	294	283	283	272	275	292	286
6.Social Influences Walking	Pearson Correlation						1	,138(*)	,053	,024	-,016	,150(*)	,070	,135(*)
	Sig. (2-tailed)							,019	,375	,687	,790	,013	,235	,022
	N							286	283	283	272	275	286	286
7.Destination	Pearson Correlation							1	,011	-,057	-,030	,095	,175(**)	,025
	Sig. (2-tailed)								,848	,340	,624	,116	,003	,675
	N								283	283	272	275	292	286
8.Aesthetics Cycling	Pearson Correlation								1	,624(**)	,031	,060	,179(**)	,169(**)
	Sig. (2-tailed)									,000	,614	,326	,003	,004
	N									283	272	275	283	283
9.Aesthetics Walking	Pearson Correlation									1	,108	,054	,108	,217(**)
	Sig. (2-tailed)										,074	,373	,071	,000
	N										272	275	283	283
10.Safety Cycling	Pearson Correlation										1	,583(**)	,245(**)	,078
	Sig. (2-tailed)											,000	,000	,202
	N											270	272	272
11.Safety Walking	Pearson Correlation											1	,118	,175(**)
	Sig. (2-tailed)												,051	,004
	N												275	275
12.Functionality Cycling	Pearson Correlation												1	,322(**)
	Sig. (2-tailed)													,000
	N													286
13.Functionality Walking	Pearson Correlation													1
	Sig. (2-tailed)													
	N													

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Appendix M Correlations Spearman

Total Correlations

			1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
Spearman's rho	1.Cycling	Correlation Coefficient	1,000	,076(*)	,217(**)	,129(**)	-,025	-,012	,070	,053	-,059	-,011	,122(**)	,037	,006
		Sig. (2-tailed)	.	,039	,000	,001	,507	,762	,060	,162	,119	,772	,002	,325	,877
		N		734	726	698	709	696	734	692	692	661	657	705	696
	2.Walking	Correlation Coefficient		1,000	-,007	,003	-,033	-,001	-,015	,050	,061	-,056	-,054	,019	,008
		Sig. (2-tailed)		.	,858	,939	,383	,973	,692	,192	,107	,151	,169	,613	,824
		N			726	698	709	696	734	692	692	661	657	705	696
	3.Self effiacy Cycling	Correlation Coefficient			1,000	,455(**)	,137(**)	,038	,185(**)	-,063	-,030	,225(**)	,195(**)	,168(**)	,085(*)
		Sig. (2-tailed)			.	,000	,000	,308	,000	,095	,431	,000	,000	,000	,024
		N				709	720	707	739	703	703	669	663	716	707
	4.Self efficacy Walking	Correlation Coefficient				1,000	-,012	,331(**)	,167(**)	,070	-,097(**)	,129(**)	,280(**)	,100(**)	,087(*)
		Sig. (2-tailed)				.	,742	,000	,000	,062	,010	,001	,000	,008	,020
		N					709	707	709	703	703	669	663	709	707
	5.Social Influences Cycling	Correlation Coefficient					1,000	,412(**)	,161(**)	-,059	,023	,055	,022	,193(**)	,126(**)
		Sig. (2-tailed)					.	,000	,000	,116	,548	,153	,564	,000	,001
		N						707	720	703	703	669	663	716	707
	6.Social Influences Walking	Correlation Coefficient						1,000	,082(*)	,088(*)	,085(*)	-,028	,094(*)	,074(*)	,171(**)
		Sig. (2-tailed)						.	,028	,020	,024	,466	,016	,048	,000
		N							707	703	703	669	663	707	707
	7.Destination	Correlation Coefficient							1,000	-,038	-,139(**)	,136(**)	,247(**)	,263(**)	,197(**)
		Sig. (2-tailed)							.	,308	,000	,000	,000	,000	,000
		N								703	703	669	663	716	707
	8.Aesthetics Cycling	Correlation Coefficient								1,000	,566(**)	,030	,087(*)	,118(**)	,145(**)
		Sig. (2-tailed)								.	,000	,439	,026	,002	,000
		N									703	669	663	703	703
	9.Aesthetics Walking	Correlation Coefficient									1,000	,054	,011	,071	,144(**)
		Sig. (2-tailed)									.	,166	,787	,060	,000
		N										669	663	703	703
	10.Safety Cycling	Correlation Coefficient										1,000	,612(**)	,273(**)	,146(**)
		Sig. (2-tailed)										.	,000	,000	,000
		N											653	669	669
	11.Safety Walking	Correlation Coefficient											1,000	,213(**)	,245(**)
		Sig. (2-tailed)											.	,000	,000
		N												663	663
	12.Functionality Cycling	Correlation Coefficient												1,000	,368(**)
		Sig. (2-tailed)												.	,000
		N													707
	13.Functionality Walking	Correlation Coefficient													1,000
		Sig. (2-tailed)													.
		N													

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Rural Correlations

			1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
Spearman's rho	1.Cycling	Correlation Coefficient	1,000	,186(**)	,210(**)	,109	-,132(*)	-,112	,013	,013	-,049	-,034	,147(*)	,141(*)	,019
		Sig. (2-tailed)	.	,005	,001	,108	,050	,101	,845	,852	,477	,624	,036	,038	,786
		N		229	227	217	220	216	229	215	215	207	205	218	216
	2.Walking	Correlation Coefficient		1,000	,045	,088	-,038	-,045	-,041	-,036	-,007	-,107	-,025	,090	,009
		Sig. (2-tailed)		.	,496	,197	,577	,509	,541	,598	,923	,124	,719	,188	,900
		N			227	217	220	216	229	215	215	207	205	218	216
	3.Self effiacy Cycling	Correlation Coefficient			1,000	,548(**)	,065	,097	,099	-,102	-,102	,270(**)	,230(**)	,180(**)	,149(*)
		Sig. (2-tailed)			.	,000	,333	,153	,131	,132	,132	,000	,001	,007	,027
		N				221	224	220	232	219	219	209	206	222	220
	4.Self efficacy Walking	Correlation Coefficient				1,000	-,077	,306(**)	,054	,119	-,067	,116	,284(**)	,098	,107
		Sig. (2-tailed)				.	,252	,000	,423	,080	,322	,093	,000	,146	,113
		N					221	220	221	219	219	209	206	221	220
	5.Social Influences Cycling	Correlation Coefficient					1,000	,402(**)	-,021	-,173(*)	-,057	-,005	-,141(*)	,213(**)	,104
		Sig. (2-tailed)					.	,000	,758	,011	,403	,944	,043	,001	,125
		N						220	224	219	219	209	206	222	220
	6.Social Influences Walking	Correlation Coefficient						1,000	-,017	,102	,167(*)	-,037	,011	,120	,119
		Sig. (2-tailed)						-	,798	,132	,013	,593	,879	,076	,078
		N							220	219	219	209	206	220	220
	7.Destination	Correlation Coefficient							1,000	,038	-,140(*)	,172(*)	,192(**)	,328(**)	,232(**)
		Sig. (2-tailed)							.	,580	,038	,013	,006	,000	,001
		N								219	219	209	206	222	220
	8.Aesthetics Cycling	Correlation Coefficient								1,000	,560(**)	,024	,152(*)	,066	,146(*)
		Sig. (2-tailed)								.	,000	,733	,029	,330	,031
		N									219	209	206	219	219
	9.Aesthetics Walking	Correlation Coefficient									1,000	-,009	,051	-,044	,117
		Sig. (2-tailed)									.	,895	,465	,516	,084
		N										209	206	219	219
	10.Safety Cycling	Correlation Coefficient										1,000	,586(**)	,231(**)	,166(*)
		Sig. (2-tailed)										.	,000	,001	,016
		N											203	209	209
	11.Safety Walking	Correlation Coefficient											1,000	,235(**)	,240(**)
		Sig. (2-tailed)											.	,001	,001
		N												206	206
	12.Functionality Cycling	Correlation Coefficient												1,000	,408(**)
		Sig. (2-tailed)												.	,000
		N													220
	13.Functionality Walking	Correlation Coefficient													1,000
		Sig. (2-tailed)													.
		N													

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Suburban Correlations

			1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
Spearman's rho	1.Cycling	Correlation Coefficient	1,000	,089	,229(**)	,022	,016	-,001	,062	,118	,075	-,004	,085	,064	,049
		Sig. (2-tailed)		,209	,001	,756	,818	,988	,381	,098	,293	,954	,257	,373	,495
		N		202	202	197	198	197	202	197	197	185	179	198	197
	2.Walking	Correlation Coefficient		1,000	,068	,009	-,069	-,008	-,020	,118	,034	-,014	-,134	,011	-,019
		Sig. (2-tailed)		.	,338	,898	,332	,907	,775	,099	,633	,852	,074	,877	,793
		N			202	197	198	197	202	197	197	185	179	198	197
	3.Self effiacy Cycling	Correlation Coefficient			1,000	,347(**)	,080	-,024	,256(**)	,108	,124	,306(**)	,222(**)	,226(**)	,011
		Sig. (2-tailed)			.	,000	,256	,739	,000	,126	,080	,000	,003	,001	,874
		N				201	202	201	206	201	201	188	182	202	201
	4.Self efficacy Walking	Correlation Coefficient				1,000	-,051	,296(**)	,219(**)	,164(*)	-,083	,132	,241(**)	,119	,053
		Sig. (2-tailed)				.	,471	,000	,002	,020	,243	,070	,001	,091	,457
		N					201	201	201	201	201	188	182	201	201
	5.Social Influences Cycling	Correlation Coefficient					1,000	,479(**)	,250(**)	,065	,137	,011	,111	,282(**)	,174(*)
		Sig. (2-tailed)					.	,000	,000	,360	,052	,882	,136	,000	,013
		N						201	202	201	201	188	182	202	201
	6.Social Influences Walking	Correlation Coefficient						1,000	,101	,112	,066	-,081	,041	,035	,235(**)
		Sig. (2-tailed)						.	,152	,113	,348	,269	,579	,621	,001
		N							201	201	201	188	182	201	201
	7.Destination	Correlation Coefficient							1,000	-,027	,080	,211(**)	,221(**)	,305(**)	,131
		Sig. (2-tailed)							.	,704	,256	,004	,003	,000	,064
		N								201	201	188	182	202	201
	8.Aesthetics Cycling	Correlation Coefficient								1,000	,508(**)	,078	,166(*)	,167(*)	,185(**)
		Sig. (2-tailed)								.	,000	,287	,025	,018	,008
		N									201	188	182	201	201
	9.Aesthetics Walking	Correlation Coefficient									1,000	,093	,076	,229(**)	,205(**)
		Sig. (2-tailed)									.	,206	,306	,001	,003
		N										188	182	201	201
	10.Safety Cycling	Correlation Coefficient										1,000	,704(**)	,343(**)	,216(**)
		Sig. (2-tailed)										.	,000	,000	,003
		N											180	188	188
	11.Safety Walking	Correlation Coefficient											1,000	,302(**)	,316(**)
		Sig. (2-tailed)											.	,000	,000
		N												182	182
	12.Functionality Cycling	Correlation Coefficient												1,000	,371(**)
		Sig. (2-tailed)												.	,000
		N													201
	13.Functionality Walking	Correlation Coefficient													1,000
		Sig. (2-tailed)													.
		N													

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Urban Correlations

			1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
Spearman's rho	1.Cycling	Correlation Coefficient	1,000	-,019	,180(**)	,177(**)	-,007	,069	-,035	,114	-,019	-,008	,070	-,093	-,111
		Sig. (2-tailed)	.	,747	,002	,003	,909	,244	,542	,056	,758	,892	,247	,114	,062
		N		303	297	284	291	283	303	280	280	269	273	289	283
	2.Walking	Correlation Coefficient		1,000	-,097	-,074	-,001	,039	-,005	,061	,130(*)	-,046	-,027	-,035	,029
		Sig. (2-tailed)		.	,094	,213	,981	,512	,930	,312	,030	,452	,658	,552	,624
		N			297	284	291	283	303	280	280	269	273	289	283
	3.Self effiacy Cycling	Correlation Coefficient			1,000	,445(**)	,232(**)	,050	,142(*)	-,129(*)	-,020	,130(*)	,128(*)	,115(*)	,073
		Sig. (2-tailed)			.	,000	,000	,396	,013	,030	,739	,032	,034	,049	,220
		N				287	294	286	301	283	283	272	275	292	286
	4.Self efficacy Walking	Correlation Coefficient				1,000	,039	,379(**)	,150(*)	-,006	-,081	,128(*)	,272(**)	,092	,065
		Sig. (2-tailed)				.	,515	,000	,011	,921	,173	,034	,000	,120	,272
		N					287	286	287	283	283	272	275	287	286
	5.Social Influences Cycling	Correlation Coefficient					1,000	,371(**)	,179(**)	-,036	,047	,123(*)	,035	,112	,091
		Sig. (2-tailed)					.	,000	,002	,550	,434	,044	,558	,057	,124
		N						286	294	283	283	272	275	292	286
	6.Social Influences Walking	Correlation Coefficient						1,000	,174(**)	,056	,045	,004	,172(**)	,064	,156(**)
		Sig. (2-tailed)						.	,003	,351	,447	,944	,004	,284	,008
		N							286	283	283	272	275	286	286
	7.Destination	Correlation Coefficient							1,000	,018	-,072	,069	,227(**)	,158(**)	,114
		Sig. (2-tailed)							.	,762	,230	,254	,000	,007	,054
		N								283	283	272	275	292	286
	8.Aesthetics Cycling	Correlation Coefficient								1,000	,581(**)	,010	,037	,150(*)	,164(**)
		Sig. (2-tailed)								.	,000	,868	,545	,012	,006
		N									283	272	275	283	283
	9.Aesthetics Walking	Correlation Coefficient									1,000	,079	,027	,084	,236(**)
		Sig. (2-tailed)									.	,193	,659	,156	,000
		N										272	275	283	283
	10.Safety Cycling	Correlation Coefficient										1,000	,583(**)	,262(**)	,077
		Sig. (2-tailed)										.	,000	,000	,204
		N											270	272	272
	11.Safety Walking	Correlation Coefficient											1,000	,148(*)	,167(**)
		Sig. (2-tailed)											.	,014	,005
		N												275	275
	12.Functionality Cycling	Correlation Coefficient												1,000	,339(**)
		Sig. (2-tailed)												.	,000
		N													286
	13.Functionality Walking	Correlation Coefficient													1,000
		Sig. (2-tailed)													.

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Appendix N Collinearity statistics for Cycling and Walking for transport

These results are based on a linear regression, which was performed just to obtain the statistics on collinearity.

Cycling:

Coefficients (a)

Model		Collinearity Statistics	
		Tolerance	VIF
1	Self effiacy Cycling	,913	1,095
	Social Influences Cycling	,932	1,073
	Destination	,928	1,078
	Aesthetics Cycling	,968	1,033
	Safety Cycling	,884	1,132
	Functionality Cycling	,809	1,236

a Dependent Variable: Cycling

Walking:

Coefficients (a)

Model		Collinearity Statistics	
		Tolerance	VIF
1	Self efficacy Walking	,811	1,234
	Social Influences Walking	,858	1,165
	Destination	,915	1,093
	Aesthetics Walking	,937	1,067
	Safety Walking	,858	1,165
	Functionality Walking	,881	1,135

a Dependent Variable: Walking

Appendix O Logistic Regression Analyses Cycling- not stratified

Model for cycling with all variables p.25 included

Logistic Regression

Case Processing Summary

Unweighted Cases(a)		N	Percent
Selected Cases	Included in Analysis	655	87,7
	Missing Cases	92	12,3
	Total	747	100,0
Unselected Cases		0	,0
Total		747	100,0

a If weight is in effect, see classification table for the total number of cases

Dependent Variable Encoding

Original Value	Internal Value
Weinig	0
Veel	1

Block 0: Beginning Block

Classification Table(a,b)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 0	Cycling	Weinig	329	0	100,0
		Veel	326	0	,0
	Overall Percentage				50,2

a Constant is included in the model.
b The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
		Lower	Upper	Lower	Upper	Lower	Upper
Step 0	Constant	-,009	,078	,014	1	,907	,991

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Availability car	25,136	1	,000
		Age	,800	1	,371
		Gender	8,580	1	,003
		Perceived general health	9,007	1	,003
		Perceived degree of urbanization	23,479	1	,000
	Overall Statistics		67,722	5	,000

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	71,594	5	,000
	Block	71,594	5	,000
	Model	71,594	5	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	836,415(a)	,104	,138

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	11,308	8	,185

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig		Cycling = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	54	51,038	12	14,962	66
	2	43	44,738	23	21,262	66
	3	41	41,117	25	24,883	66
	4	35	37,347	31	28,653	66
	5	43	34,538	23	31,462	66
	6	24	31,564	42	34,436	66
	7	27	29,400	40	37,600	67
	8	27	25,372	39	40,628	66
	9	19	21,411	47	44,589	66
	10	16	12,475	44	47,525	60

Classification Table(a)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 1	FietsenVeelWeinig	Weinig	222	107	67,5
		Veel	120	206	63,2
	Overall Percentage				65,3

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,479	,091	27,477	1	,000	,620	,518	,741
	Age	,026	,007	13,727	1	,000	1,026	1,012	1,041
	sectie3geslacht	-,432	,177	5,968	1	,015	,649	,459	,918
	sectie3gezondheid	,403	,137	8,657	1	,003	1,496	1,144	1,957
	Perceived3categorieën	,394	,107	13,580	1	,000	1,483	1,203	1,829
	Constant	-1,391	,845	2,713	1	,100	,249		

a Variable(s) entered on step 1: Availability car, age, gender, perceived general health, perceived degree of urbanization

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,048	4	,400
	Block	4,048	4	,400
	Model	75,642	9	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	832,367(a)	,109	,145

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	11,721	8	,164

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig		Cycling = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	56	51,306	10	14,694	66
	2	44	45,352	22	20,648	66
	3	38	41,376	28	24,624	66
	4	37	37,807	29	28,193	66
	5	38	34,420	28	31,580	66
	6	28	31,565	38	34,435	66
	7	25	28,611	41	37,389	66
	8	32	25,161	34	40,839	66
	9	15	20,806	51	45,194	66
	10	16	12,595	45	48,405	61

Classification Table(a)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Cycling	Weinig	213	116	64,7
		Veel	118	208	63,8
	Overall Percentage				64,3

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	Df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,473	,092	26,686	1	,000	,623	,520	,745
	Age	,025	,007	11,977	1	,001	1,025	1,011	1,039
	Gender	-,441	,178	6,126	1	,013	,643	,454	,912
	Perceived general health	,405	,139	8,490	1	,004	1,500	1,142	1,969
	Perceived degree of urbanization	,414	,112	13,764	1	,000	1,513	1,216	1,883
	Aesthetics cycling	,021	,016	1,682	1	,195	1,021	,989	1,055
	Safety cycling	-,025	,019	1,758	1	,185	,975	,940	1,012
	Functionality cycling	,022	,023	,920	1	,337	1,022	,977	1,069
	Destination	-,004	,025	,022	1	,883	,996	,949	1,046
	Constant	-1,643	1,053	2,433	1	,119	,193		

a Variable(s) entered on step 1: Aesthetics cycling, Safety cycling, Functionality cycling, Destinaton.

Block 3: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	35,356	2	,000
	Block	35,356	2	,000
	Model	110,999	11	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	797,010(a)	,156	,208

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	7,078	8	,528

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig		Cycling = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	58	55,366	8	10,634	66
	2	49	48,299	17	17,701	66
	3	44	42,603	22	23,397	66
	4	34	38,680	32	27,320	66
	5	29	35,122	37	30,878	66
	6	33	30,836	33	35,164	66
	7	28	26,954	38	39,046	66
	8	28	22,809	38	43,191	66
	9	16	18,032	50	47,968	66
	10	10	10,299	51	50,701	61

Classification Table(a)

Observed			Predicted		
			FietsenVeelWeinig		Percentage Correct
			Weinig	Veel	Weinig
Step 1	FietsenVeelWeinig	Weinig	211	118	64,1
		Veel	115	211	64,7
	Overall Percentage				64,4

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,470	,095	24,622	1	,000	,625	,519	,752
	Age	,024	,007	10,806	1	,001	1,025	1,010	1,040
	Gender	-,427	,183	5,438	1	,020	,652	,455	,934
	Perceived general health	,240	,146	2,705	1	,100	1,271	,955	1,693
	Perceived degree of urbanization	,429	,115	13,931	1	,000	1,535	1,226	1,923
	Aesthetics cycling	,027	,017	2,498	1	,114	1,027	,994	1,061
	Safety cycling	-,049	,020	6,170	1	,013	,952	,915	,990
	Functionality cycling	,024	,024	,977	1	,323	1,024	,977	1,073
	Destination	-,006	,026	,046	1	,830	,994	,946	1,046
	Selfefficacy cycling	,098	,018	30,188	1	,000	1,103	1,065	1,143
	Social influences cycling	-,033	,014	5,679	1	,017	,967	,941	,994
	Constant	-1,676	1,112	2,272	1	,132	,187		

a Variable(s) entered on step 1: Self efficacy cycling, Social influences cycling

Appendix P Logistic Regression Analyses Cycling- stratified for perceived degree of urbanization

Model for cycling with all variables p<.25 included, stratified by perceived degree of urbanization

Perceived degree of urbanization = Rural

Block 0: Beginning Block

Classification Table(a,b)

Observed			Predicted Cycling Weinig	Predicted Cycling Veel	Percentage Correct Weinig
Step 0	Cycling	Weinig	128	0	100,0
		Veel	74	0	,0
	Overall Percentage				63,4

a Constant is included in the model.
b The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
		Lower	Upper	Lower	Upper	Lower	Upper
Step 0	Constant	-,548	,146	14,080	1	,000	,578

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Availability car	6,992	1	,008
		Age	4,934	1	,026
		Gender	,016	1	,899
		Perceived general health	,942	1	,332
	Overall Statistics		21,172	4	,000

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	21,912	4	,000
	Block	21,912	4	,000
	Model	21,912	4	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	243,507(a)	,103	,141

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	10,899	8	,208

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig Observed	Cycling = Weinig Expected	Walking = Veel Observed	Walking = Veel Expected	Total Observed
Step 1	1	19	17,054	1	2,946	20
	2	17	16,791	4	4,209	21
	3	16	15,130	4	4,870	20
	4	16	14,392	4	5,608	20
	5	10	13,301	10	6,699	20
	6	11	13,062	10	7,938	21
	7	14	12,847	8	9,153	22
	8	8	10,818	12	9,182	20
	9	8	9,076	12	10,924	20
	10	9	5,530	9	12,470	18

Classification Table(a)

Observed			Predicted Cycling Weinig	Predicted Cycling Veel	Percentage Correct Weinig
Step 1	Cycling	Weinig	112	16	87,5
		Veel	53	21	28,4
	Overall Percentage				65,8

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,750	,216	12,075	1	,001	,472	,309	,721
	Age	,046	,013	12,633	1	,000	1,048	1,021	1,075
	Gender	-,394	,339	1,351	1	,245	,674	,347	1,311
	Perceived general health	,506	,259	3,821	1	,051	1,658	,999	2,754
	Constant	-1,933	1,341	2,078	1	,149	,145		

a Variable(s) entered on step 1: availability car, age, gender, perceived general health

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	5,090	4	,278
	Block	5,090	4	,278
	Model	27,003	8	,001

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	10,688	8	,220

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	238,416(a)	,125	,171

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig		Cycling = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	19	17,582	1	2,418	20
	2	18	16,271	2	3,729	20
	3	15	15,528	5	4,472	20
	4	15	14,693	5	5,307	20
	5	11	13,663	9	6,337	20
	6	11	12,502	9	7,498	20
	7	14	11,467	6	8,533	20
	8	6	10,438	14	9,562	20
	9	10	9,149	10	10,851	20
	10	9	6,707	13	15,293	22

Classification Table(a)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Cycling	Weinig	106	22	82,8
		Veel	50	24	32,4
	Overall Percentage				64,4

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,759	,219	12,080	1	,001	,468	,305	,718
	Age	,044	,013	11,168	1	,001	1,045	1,019	1,073
	Gender	-,404	,353	1,312	1	,252	,667	,334	1,333
	Perceived general health	,533	,270	3,905	1	,048	1,705	1,004	2,893
	Aesthetics Cycling	-,013	,031	,173	1	,678	,987	,929	1,049
	Safety Cycling	-,048	,037	1,722	1	,189	,953	,887	1,024
	Functionality cycling	,088	,043	4,071	1	,044	1,092	1,003	1,188
	Destination	-,023	,041	,305	1	,581	,977	,901	1,060
	Constant	-1,924	1,761	1,193	1	,275	,146		

a Variable(s) entered on step 1:Aesthetics cycling, Safety cycling, Functionality cycling, Destination.

Block 3: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	18,405	2	,000
	Block	18,405	2	,000
	Model	45,408	10	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	220,011(a)	,201	,275

a Estimation terminated at iteration number 5 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	9,422	8	,308

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	19	18,702	1	1,298	20
	2	20	17,384	0	2,616	20
	3	16	16,370	4	3,630	20
	4	16	15,361	4	4,639	20
	5	11	14,141	9	5,859	20
	6	12	12,901	8	7,099	20
	7	10	11,185	10	8,815	20
	8	9	9,259	11	10,741	20
	9	11	7,347	9	12,653	20
	10	4	5,350	18	16,650	22

Classification Table(a)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Cycling	Weinig	105	23	82,0
		Veel	36	38	51,4
	Overall Percentage				70,8

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,726	,232	9,782	1	,002	,484	,307	,763
	Age	,043	,014	9,179	1	,002	1,044	1,015	1,074
	Gender	-,380	,372	1,044	1	,307	,684	,330	1,418
	Perceived general health	,366	,291	1,574	1	,210	1,441	,814	2,552
	Aesthetics cycling	-,016	,034	,215	1	,643	,984	,922	1,052
	Safety cycling	-,080	,038	4,392	1	,036	,923	,856	,995
	Functionality cycling	,127	,048	6,927	1	,008	1,136	1,033	1,248
	Destination	-,055	,045	1,492	1	,222	,946	,866	1,034
	Self efficacy cycling	,117	,037	9,928	1	,002	1,124	1,045	1,209
	Social influences cycling	-,085	,029	8,276	1	,004	,919	,868	,973
	Constant	-1,139	1,951	,340	1	,560	,320		

a Variable(s) entered on step 1: Self efficacy cycling, Social influences cycling

Perceived degree of urbanization = Suburban

Case Processing Summary

Unweighted Cases(a)		N	Percent
Selected Cases	Included in Analysis	185	89,8
	Missing Cases	21	10,2
	Total	206	100,0
Unselected Cases		0	,0
Total		206	100,0

a If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Weinig	0
Veel	1

Block 0: Beginning Block

Classification Table(a,b)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 0	Cycling	Weinig	0	92	,0
		Veel	0	93	100,0
	Overall Percentage				50,3

a Constant is included in the model.
b The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
		Lower	Upper	Lower	Upper	Lower	Upper
Step 0	Constant	,011	,147	,005	1	,941	1,011

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Availability car	2,468	1	,116
		Age	3,169	1	,075
		Gender	5,909	1	,015
		Perceived general health	,895	1	,344
	Overall Statistics		15,623	4	,004

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	16,314	4	,003
	Block	16,314	4	,003
	Model	16,314	4	,003

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	240,145(a)	,084	,113

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	12,732	8	,121

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	14	14,088	5	4,912	19
	2	13	12,623	6	6,377	19
	3	14	11,455	5	7,545	19
	4	8	10,511	11	8,489	19
	5	6	9,765	13	9,235	19
	6	13	8,736	6	10,264	19
	7	8	7,940	11	11,060	19
	8	4	7,200	15	11,800	19
	9	8	6,473	11	12,527	19
	10	4	3,208	10	10,792	14

Classification Table(a)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Cycling	Weinig	55	37	59,8
		Veel	38	55	59,1
	Overall Percentage				59,5

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,508	,188	7,286	1	,007	,602	,416	,870
	Age	,026	,013	4,153	1	,042	1,026	1,001	1,052
	Gender	-,737	,332	4,937	1	,026	,478	,250	,917
	Perceived general health	,343	,257	1,779	1	,182	1,409	,851	2,333
	Constant	,318	1,491	,046	1	,831	1,375		

a Variable(s) entered on step 1: Availability car, Age, Gender, Perceived general health.

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	5,382	4	,250
	Block	5,382	4	,250
	Model	21,696	8	,006

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	234,764(a)	,111	,148

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	7,489	8	,485

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig		Cycling = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	14	14,833	5	4,167	19
	2	15	12,820	4	6,180	19
	3	15	11,701	4	7,299	19
	4	8	10,613	11	8,387	19
	5	8	9,825	11	9,175	19
	6	10	8,934	9	10,066	19
	7	7	7,736	12	11,264	19
	8	6	6,992	13	12,008	19
	9	5	5,858	14	13,142	19
	10	4	2,688	10	11,312	14

Classification Table(a)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Cycling	Weinig	60	32	65,2
		Veel	35	58	62,4
	Overall Percentage				63,8

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,546	,195	7,874	1	,005	,579	,395	,848
	Age	,026	,013	3,821	1	,051	1,026	1,000	1,053
	Gender	-,840	,344	5,964	1	,015	,432	,220	,847
	Perceived general health	,240	,265	,815	1	,367	1,271	,755	2,138
	Aesthetics Cycling	,030	,031	,983	1	,322	1,031	,971	1,094
	Safety Cycling	-,034	,036	,901	1	,343	,966	,900	1,037
	Functionality cycling	,042	,044	,928	1	,335	1,043	,957	1,137
	Destination	,071	,049	2,089	1	,148	1,074	,975	1,182
	Constant	-,992	1,904	,271	1	,602	,371		

a Variable(s) entered on step 1: Aesthetics cycling, Safety cycling, Functionality cycling, destination

Block 3: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	12,103	2	,002
	Block	12,103	2	,002
	Model	33,798	10	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	222,661(a)	,167	,223

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	5,295	8	,726

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	18	16,275	1	2,725	19
	2	12	13,564	7	5,436	19
	3	10	12,247	9	6,753	19
	4	12	11,021	7	7,979	19
	5	10	9,804	9	9,196	19
	6	8	8,840	11	10,160	19
	7	7	7,491	12	11,509	19
	8	8	5,938	11	13,062	19
	9	4	4,820	15	14,180	19
	10	3	1,999	11	12,001	14

Classification Table(a)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Cycling	Weinig	60	32	65,2
		Veel	32	61	65,6
	Overall Percentage				65,4

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,563	,204	7,622	1	,006	,569	,382	,849
	Age	,027	,014	3,738	1	,053	1,027	1,000	1,055
	Gender	-,860	,360	5,718	1	,017	,423	,209	,856
	Perceived general health	,166	,278	,357	1	,550	1,181	,685	2,035
	Aesthetics cycling	,025	,031	,623	1	,430	1,025	,964	1,090
	Safety cycling	-,078	,040	3,779	1	,052	,925	,855	1,001
	Functionality cycling	,040	,049	,672	1	,412	1,041	,946	1,145
	Destination	,073	,050	2,150	1	,143	1,076	,976	1,187
	Selfefficacy cycling	,110	,034	10,732	1	,001	1,117	1,045	1,193
	Social influences cycling	-,024	,026	,832	1	,362	,976	,927	1,028
	Constant	-1,009	2,008	,252	1	,615	,365		

a Variable(s) entered on step 1: Self efficacy Cyling, Social influences Cycling

Perceived degree of urbanization = Urban

Case Processing Summary

Unweighted Cases(a)		N	Percent
Selected Cases	Included in Analysis	268	87,3
	Missing Cases	39	12,7
	Total	307	100,0
Unselected Cases		0	,0
Total		307	100,0

a If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Weinig	0
Veel	1

Block 0: Beginning Block

Classification Table(a,b)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 0	Cycling	Weinig	0	109	,0
		Veel	0	159	100,0
	Overall Percentage				59,3

a Constant is included in the model.
b The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
		Lower	Upper	Lower	Upper	Lower	Upper
Step 0	Constant	,378	,124	9,218	1	,002	1,459

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Availability car	6,393	1	,011
		Age	,200	1	,654
		Gender	7,571	1	,006
		Perceived general health	3,649	1	,056
	Overall Statistics		21,012	4	,000

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	22,000	4	,000
	Block	22,000	4	,000
	Model	22,000	4	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	340,143(a)	,079	,106

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	7,069	8	,529

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	20	17,739	7	9,261	27
	2	18	15,174	9	11,826	27
	3	11	13,158	16	13,842	27
	4	11	12,572	16	14,428	27
	5	10	10,901	16	15,099	26
	6	9	10,274	18	16,726	27
	7	9	9,463	18	17,537	27
	8	6	7,769	20	18,231	26
	9	7	7,320	20	19,680	27
	10	8	4,631	19	22,369	27

Classification Table(a)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Cycling	Weinig	39	70	35,8
		Veel	18	141	88,7
	Overall Percentage				67,2

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,388	,122	10,064	1	,002	,679	,534	,862
	Age	,013	,012	1,246	1	,264	1,013	,990	1,036
	Gender	-,777	,276	7,908	1	,005	,460	,267	,790
	Perceived general health	,445	,212	4,399	1	,036	1,560	1,030	2,364
	Constant	,324	1,176	,076	1	,783	1,383		

a Variable(s) entered on step 1: Availability car, Age, Gender, Perceived general health

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	8,602	4	,072
	Block	8,602	4	,072
	Model	30,603	8	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	331,541(a)	,108	,146

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	2,655	8	,954

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	19	18,957	8	8,043	27
	2	18	15,859	9	11,141	27
	3	14	13,795	13	13,205	27
	4	12	12,517	15	14,483	27
	5	10	11,381	17	15,619	27
	6	9	10,246	18	16,754	27
	7	8	9,135	19	17,865	27
	8	9	7,623	18	19,377	27
	9	5	5,893	22	21,107	27
	10	5	3,595	20	21,405	25

Classification Table(a)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Cycling	Weinig	49	60	45,0
		Veel	23	136	85,5
	Overall Percentage				69,0

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,377	,126	8,963	1	,003	,686	,536	,878
	Age	,011	,012	,902	1	,342	1,011	,988	1,036
	Gender	-,810	,282	8,233	1	,004	,445	,256	,774
	Perceived general health	,497	,221	5,055	1	,025	1,644	1,066	2,535
	Aesthetics Cycling	,054	,026	4,143	1	,042	1,055	1,002	1,111
	Safety Cycling	-,010	,030	,117	1	,732	,990	,933	1,050
	Functionality Cycling	-,043	,038	1,270	1	,260	,958	,890	1,032
	Destination	-,087	,057	2,314	1	,128	,916	,819	1,025
	Constant	1,943	1,812	1,149	1	,284	6,977		

a Variable(s) entered on step 1: Aesthetics cycling, Safety cycling, Functionality Cycling, Destination

Block 3: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	10,434	2	,005
	Block	10,434	2	,005
	Model	41,037	10	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	321,107(a)	,142	,192

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	8,488	8	,387

Contingency Table for Hosmer and Lemeshow Test

		Cycling = Weinig		Cycling = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	20	20,782	7	6,218	27
	2	17	16,797	10	10,203	27
	3	13	14,358	14	12,642	27
	4	12	12,334	15	14,666	27
	5	14	10,945	13	16,055	27
	6	13	9,666	14	17,334	27
	7	6	8,350	21	18,650	27
	8	7	6,921	20	20,079	27
	9	2	5,552	25	21,448	27
	10	5	3,294	20	21,706	25

Classification Table(a)

Observed			Predicted		
			Cycling		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Cycling	Weinig	48	61	44,0
		Veel	29	130	81,8
	Overall Percentage				66,4

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,353	,128	7,637	1	,006	,703	,547	,902
	Age	,009	,012	,511	1	,475	1,009	,985	1,033
	Gender	-,790	,288	7,526	1	,006	,454	,258	,798
	Perceived general health	,254	,238	1,138	1	,286	1,289	,808	2,056
	Aesthetics cycling	,069	,027	6,353	1	,012	1,072	1,016	1,131
	Safety cycling	-,017	,031	,280	1	,596	,983	,925	1,046
	Functionality cycling	-,057	,039	2,075	1	,150	,945	,875	1,021
	Destination	-,080	,061	1,728	1	,189	,923	,819	1,040
	Selfefficacy cycling	,091	,029	9,974	1	,002	1,095	1,035	1,159
	Social influences cycling	-,012	,024	,272	1	,602	,988	,943	1,035
	Constant	1,466	1,896	,598	1	,439	4,333		

a Variable(s) entered on step 1: Self efficacy cycling, Social Influences cycling

Appendix Q Logistic Regression Analyses Cycling (not stratified) – Interaction term included

Gender

Block 4: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	3,183	4	,528
	Block	3,183	4	,528
	Model	114,181	15	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	793,828(a)	,160	,213

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Classification Table(a)

Observed			Predicted: Cycling – Weinig	Predicted: Cycling – Veel	Percentage Correct – Weinig
Step 1	Cycling	Weinig	217	112	66,0
		Veel	117	209	64,1
	Overall Percentage				65,0

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	Gender	,827	1,517	,297	1	,586	2,286
	Age	,025	,007	11,004	1	,001	1,025
	Availability car	-,473	,095	24,676	1	,000	,623
	Perceived general health	,241	,147	2,692	1	,101	1,273
	Perceived degree of urbanization	,420	,116	13,194	1	,000	1,523
	Aesthetics Cycling	,050	,023	4,595	1	,032	1,051
	Safety Cycling	-,045	,026	2,834	1	,092	,956
	Functionality Cycling	,018	,033	,286	1	,593	1,018
	Destination	-,023	,036	,413	1	,521	,977
	Self efficacy cycling	,098	,018	29,648	1	,000	1,103
	Social influences cycling	-,033	,014	5,703	1	,017	,967
	Destination * gender	,038	,050	,579	1	,447	1,039
	Aesthetics cycling * gender	-,050	,033	2,219	1	,136	,952
	Safety cycling * gender	-,015	,039	,141	1	,707	,985
	Functionality cycling * gender	,017	,047	,128	1	,721	1,017
	Constant	-2,682	1,207	4,941	1	,026	,068

a Variable(s) entered on step 1: Destination * gender, Aesthetics cycling * gender, Safety cycling * gender, Functionality cycling * gender.

Age

Block 4: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	1,050	4	,902
	Block	1,050	4	,902
	Model	112,049	15	,000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	795,960(a)	,157	,210

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Classification Table(a)

			Predicted		
			Cycling		Percentage Correct
	Observed		Weinig	Veel	Weinig
Step 1	Cycling	Weinig	213	116	64,7
		Veel	114	212	65,0
	Overall Percentage				64,9

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	Gender	,412	,184	4,994	1	,025	1,510
	Age	,066	,051	1,682	1	,195	1,069
	Availability car	-,464	,095	23,910	1	,000	,628
	Perceived general health	,230	,147	2,448	1	,118	1,258
	Perceived degree of urbanization	,427	,115	13,776	1	,000	1,533
	Aesthetics Cycling	,029	,052	,318	1	,573	1,029
	Safety Cycling	-,033	,060	,300	1	,584	,968
	Functionality Cycling	,034	,075	,212	1	,645	1,035
	Destination	,056	,076	,546	1	,460	1,058
	Self efficacy cycling	,101	,018	30,769	1	,000	1,106
	Social influences cycling	-,033	,014	5,610	1	,018	,967
	Destination * age	-,001	,002	,724	1	,395	,999
	Aesthetics cycling * age	,000	,001	,001	1	,976	1,000
	Safety cycling * age	,000	,001	,082	1	,774	1,000
	Functionality cycling * age	,000	,002	,029	1	,866	1,000
	Constant	-4,388	2,421	3,286	1	,070	,012

a Variable(s) entered on step 1: Destination * age , Aesthetics cycling * age, Safety cycling * age, Functionality cycling * age.

Appendix R Logistic Regression Walking- not stratified

Model for walking with all variables p < .25 included

Case Processing Summary

Unweighted Cases(a)		N	Percent
Selected Cases	Included in Analysis	651	87,1
	Missing Cases	96	12,9
	Total	747	100,0
Unselected Cases		0	,0
Total		747	100,0

a If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Weinig	0
Veel	1

Block 0: Beginning Block

Classification Table(a,b)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 0	Walking	Weinig	329	0	100,0
		Veel	322	0	,0
	Overall Percentage				50,5

a Constant is included in the model.
b The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
		Lower	Upper	Lower	Upper	Lower	Upper
Step 0	Constant	-,022	,078	,075	1	,784	,979

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Availability car	2,258	1	,133
		Age	5,481	1	,019
		Education	,838	1	,360
		Perceived general health	4,040	1	,044
		Perceived degree of urbanization	,003	1	,955
	Overall Statistics		15,088	5	,010

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	15,259	5	,009
	Block	15,259	5	,009
	Model	15,259	5	,009

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	887,143(a)	,023	,031

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	3,632	8	,889

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	40	41,651	26	24,349	66
	2	35	38,321	30	26,679	65
	3	39	36,420	26	28,580	65
	4	36	34,972	29	30,028	65
	5	34	33,276	31	31,724	65
	6	36	32,685	30	33,315	66
	7	34	31,385	32	34,615	66
	8	25	29,032	39	34,968	64
	9	28	27,859	37	37,141	65
	10	22	23,399	42	40,601	64

Classification Table(a)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Walking	Weinig	193	136	58,7
		Veel	151	171	53,1
	Overall Percentage				55,9

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,211	,084	6,303	1	,012	,810	,687	,955
	Age	,018	,006	7,823	1	,005	1,018	1,005	1,031
	Education	-,034	,133	,064	1	,800	,967	,745	1,256
	Perceived general health	-,194	,130	2,222	1	,136	,824	,638	1,063
	Perceived degree of urbanization	,035	,103	,116	1	,733	1,036	,846	1,268
	Constant	,754	,764	,973	1	,324	2,126		

a Variable(s) entered on step 1: Availability car, age, education, perceived general health, perceived degree of urbanization

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	2,267	4	,687
	Block	2,267	4	,687
	Model	17,526	9	,041

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	884,877(a)	,027	,035

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	6,116	8	,634

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	44	42,067	21	22,933	65
	2	31	38,599	34	26,401	65
	3	36	36,767	29	28,233	65
	4	37	34,832	28	30,168	65
	5	38	33,234	27	31,766	65
	6	33	32,001	32	32,999	65
	7	30	30,718	35	34,282	65
	8	31	29,384	34	35,616	65
	9	26	27,557	39	37,443	65
	10	23	23,840	43	42,160	66

Classification Table(a)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Walking	Weinig	189	140	57,4
		Veel	141	181	56,2
	Overall Percentage				56,8

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,219	,084	6,720	1	,010	,804	,681	,948
	Age	,017	,006	7,005	1	,008	1,017	1,004	1,030
	Education	-,011	,135	,006	1	,937	,990	,760	1,288
	Perceived general health	-,178	,132	1,822	1	,177	,837	,646	1,084
	Perceived degree of urbanization	,039	,109	,127	1	,721	1,040	,840	1,287
	Destination	,015	,024	,412	1	,521	1,016	,969	1,065
	Aesthetics walking	,013	,016	,635	1	,426	1,013	,982	1,045
	Safety walking	-,024	,019	1,494	1	,222	,977	,940	1,014
	Functionality walking	,005	,018	,069	1	,793	1,005	,970	1,041
	Constant	,639	,950	,453	1	,501	1,895		

a Variable(s) entered on step 1: Destination, Aesthetics walking, Safety walking, Functionality walking.

Block 3: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	1,450	2	,484
	Block	1,450	2	,484
	Model	18,975	11	,062

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	883,427(a)	,029	,038

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	7,525	8	,481

Contingency Table for Hosmer and Lemeshow Test

		Walking= Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	46	42,584	19	22,416	65
	2	34	38,650	31	26,350	65
	3	33	36,645	32	28,355	65
	4	41	34,949	24	30,051	65
	5	35	33,427	30	31,573	65
	6	28	32,203	37	32,797	65
	7	29	30,655	36	34,345	65
	8	32	29,185	33	35,815	65
	9	29	27,204	36	37,796	65
	10	22	23,496	44	42,504	66

Classification Table(a)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Walking	Weinig	198	131	60,2
		Veel	145	177	55,0
	Overall Percentage				57,6

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,224	,085	7,021	1	,008	,799	,677	,943
	Age	,017	,006	6,708	1	,010	1,017	1,004	1,030
	Education	-,024	,136	,032	1	,858	,976	,747	1,275
	Perceived general health	-,208	,135	2,389	1	,122	,812	,624	1,057
	Perceived degree of urbanization	,036	,109	,106	1	,745	1,036	,836	1,284
	Destination	,014	,024	,345	1	,557	1,014	,967	1,063
	Aesthetics walking	,015	,016	,889	1	,346	1,015	,984	1,048
	Safety walking	-,028	,020	2,049	1	,152	,972	,935	1,011
	Functionality walking	,005	,018	,088	1	,766	1,005	,970	1,043
	Self efficacy walking	,018	,015	1,427	1	,232	1,018	,988	1,049
	Social infuences walking	-,006	,012	,272	1	,602	,994	,971	1,017
	Constant	,689	,959	,517	1	,472	1,992		

a Variable(s) entered on step 1: Self efficacy walking, Social influences walking.

Appendix S Logistic Regression Analyses Walking- stratified for perceived degree of urbanization

Perceived degree of urbanization = Rural

Case Processing Summary

Unweighted Cases(b)		N	Percent
Selected Cases(a)	Included in Analysis	200	85,5
	Missing Cases	34	14,5
	Total	234	100,0
Unselected Cases		0	,0
Total		234	100,0

a The variable Perceived3categorieën is constant for all selected cases. Since a constant was requested in the model, it will be removed from the analysis.
b If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Weinig	0
Veel	1

Block 0: Beginning Block

Classification Table(a,b)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 0	Walking	Weinig	0	100	,0
		Veel	0	100	100,0
	Overall Percentage				50,0

a Constant is included in the model.
b The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
		Lower	Upper	Lower	Upper	Lower	Upper
Step 0	Constant	,000	,141	,000	1	1,000	1,000

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Availability car	,540	1	,463
		Age	2,574	1	,109
		Education	,087	1	,769
		Perceived general health	1,205	1	,272
	Overall Statistics		4,615	4	,329

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,665	4	,323
	Block	4,665	4	,323
	Model	4,665	4	,323

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	272,594(a)	,023	,031

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	9,348	8	,314

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	13	12,760	7	7,240	20
	2	9	11,841	11	8,159	20
	3	11	11,016	9	8,984	20
	4	12	10,436	8	9,564	20
	5	8	10,026	12	9,974	20
	6	13	10,065	8	10,935	21
	7	7	9,247	13	10,753	20
	8	11	8,554	8	10,446	19
	9	11	8,620	9	11,380	20
	10	5	7,434	15	12,566	20

Classification Table(a)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Walking	Weinig	50	50	50,0
		Veel	41	59	59,0
	Overall Percentage				54,5

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,230	,197	1,370	1	,242	,794	,540	1,168
	Age	,018	,011	2,913	1	,088	1,019	,997	1,040
	Education	,051	,206	,062	1	,803	1,053	,704	1,575
	Perceived general health	-,165	,230	,515	1	,473	,848	,540	1,331
	Constant	,519	1,296	,160	1	,689	1,680		

a Variable(s) entered on step 1: Availability car, Age, Education, Perceived general health

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	,652	4	,957
	Block	,652	4	,957
	Model	5,317	8	,723

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	271,942(a)	,026	,035

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	15,937	8	,043

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	13	12,769	7	7,231	20
	2	8	11,907	12	8,093	20
	3	14	11,194	6	8,806	20
	4	13	10,525	7	9,475	20
	5	10	10,049	10	9,951	20
	6	7	9,735	13	10,265	20
	7	9	9,406	11	10,594	20
	8	10	8,950	10	11,050	20
	9	13	8,340	7	11,660	20
	10	3	7,126	17	12,874	20

Classification Table(a)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Walking	Weinig	53	47	53,0
		Veel	40	60	60,0
	Overall Percentage				56,5

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,216	,201	1,161	1	,281	,806	,544	1,194
	Age	,019	,011	2,973	1	,085	1,019	,997	1,041
	Education	,048	,207	,054	1	,817	1,049	,699	1,575
	Perceived general health	-,162	,240	,457	1	,499	,850	,531	1,361
	Destination	-,022	,038	,339	1	,560	,978	,907	1,054
	Aesthetics Walking	-,018	,031	,351	1	,554	,982	,924	1,043
	Safety Walking	-,006	,039	,025	1	,874	,994	,921	1,072
	Functionality Walking	,008	,029	,085	1	,771	1,008	,953	1,067
	Constant	1,254	1,695	,547	1	,460	3,503		

a Variable(s) entered on step 1: Destination, Aesthetics walking, Safety Walking, Functionality walking

Block 3: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,138	2	,126
	Block	4,138	2	,126
	Model	9,455	10	,490

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	267,804(a)	,046	,062

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	2,956	8	,937

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	13	13,894	7	6,106	20
	2	12	12,278	8	7,722	20
	3	13	11,401	7	8,599	20
	4	10	10,761	10	9,239	20
	5	9	10,265	11	9,735	20
	6	8	9,805	12	10,195	20
	7	11	9,172	9	10,828	20
	8	9	8,419	11	11,581	20
	9	9	7,672	11	12,328	20
	10	6	6,334	14	13,666	20

Classification Table(a)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Walking	Weinig	58	42	58,0
		Veel	46	54	54,0
	Overall Percentage				56,0

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,182	,205	,789	1	,374	,834	,558	1,245
	Age	,017	,011	2,258	1	,133	1,017	,995	1,039
	Education	-,003	,217	,000	1	,989	,997	,651	1,526
	Perceived general health	-,221	,245	,811	1	,368	,802	,496	1,296
	Destination	-,026	,039	,435	1	,510	,975	,903	1,052
	Aesthetics Walking	-,006	,032	,035	1	,852	,994	,934	1,058
	Safety Walking	-,021	,040	,290	1	,590	,979	,905	1,058
	Functionality Walking	,011	,030	,129	1	,719	1,011	,954	1,071
	Self efficacy Walking	,050	,027	3,411	1	,065	1,052	,997	1,109
	Social Influences Walking	-,032	,023	1,905	1	,168	,969	,926	1,013
	Constant	1,440	1,724	,698	1	,403	4,221		

a Variable(s) entered on step 1: Self efficacy walking, Social influences walking.

Perceived degree of urbanization = suburban

Case Processing Summary(b)

Unweighted Cases(a)		N	Percent
Selected Cases	Included in Analysis	179	86,9
	Missing Cases	27	13,1
	Total	206	100,0
Unselected Cases		0	,0
Total		206	100,0

a If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Weinig	0
Veel	1

Classification Table(a,b)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 0	Walking	Weinig	92	0	100,0
		Veel	87	0	,0
	Overall Percentage				51,4

a Constant is included in the model.
b The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
		Lower	Upper	Lower	Upper	Lower	Upper
Step 0(a)	Constant	-,056	,150	,140	1	,709	,946

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Age	1,403	1	,236
		Availability car	1,861	1	,172
		Perceived general health	,146	1	,703
		Education	,905	1	,342
	Overall Statistics		5,624	4	,229

Block 1: Method = Enter

Omnibus Tests of Model Coefficients(a)

		Chi-square	df	Sig.
Step 1	Step	5,708	4	,222
	Block	5,708	4	,222
	Model	5,708	4	,222

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	242,299(a)	,031	,042

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	10,522	8	,230

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	11	11,760	7	6,240	18
	2	10	11,117	8	6,883	18
	3	10	10,416	8	7,584	18
	4	15	9,958	3	8,042	18
	5	9	9,943	10	9,057	19
	6	10	9,037	8	8,963	18
	7	6	8,613	12	9,387	18
	8	7	8,059	11	9,941	18
	9	6	7,530	12	10,470	18
	10	8	5,566	8	10,434	16

Variables in the Equation(b)

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Age	,019	,012	2,506	1	,113	1,019	,996	1,043
	Availability car	-,346	,183	3,573	1	,059	,708	,494	1,013
	Perceived general health	-,029	,252	,013	1	,909	,972	,593	1,593
	Education	-,186	,240	,600	1	,439	,830	,518	1,330
	Constant	,927	1,463	,401	1	,527	2,526		

a Variable(s) entered on step 1: Age, Availability car, Perceived general health, Education.

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	3,060	4	,548
	Block	3,060	4	,548
	Model	8,768	8	,362

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	239,239(a)	,048	,064

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test(a)

Step	Chi-square	Df	Sig.
1	9,788	8	,280

Contingency Table for Hosmer and Lemeshow Test(a)

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	15	12,441	3	5,559	18
	2	12	11,445	6	6,555	18
	3	7	10,787	11	7,213	18
	4	9	9,984	9	8,016	18
	5	10	9,520	8	8,480	18
	6	9	8,975	9	9,025	18
	7	7	8,464	11	9,536	18
	8	11	7,951	7	10,049	18
	9	5	7,133	13	10,867	18
	10	7	5,299	10	11,701	17

Classification Table

			Predicted		
			Walking		Percentage Correct
Observed			Weinig	Veel	Weinig
Step 1	Walking	Weinig	57	35	62,0
		Veel	40	47	54,0
	Overall Percentage				58,1

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Age	,020	,012	2,574	1	,109	1,020	,996	1,045
	Availability car	-,362	,185	3,815	1	,051	,696	,484	1,001
	Perceived general health	-,058	,263	,048	1	,826	,944	,563	1,581
	Education	-,139	,250	,307	1	,579	,870	,533	1,422
	Destination	,030	,045	,450	1	,502	1,031	,944	1,126
	Aesthetics walking	,003	,033	,011	1	,916	1,003	,941	1,069
	Safety walking	-,050	,036	1,893	1	,169	,951	,886	1,021
	Functionality walking	-,019	,036	,267	1	,605	,981	,914	1,054
	Constant	1,949	1,875	1,080	1	,299	7,019		

a Variable(s) entered on step 1: Destination, Aesthetics walking, Safety walking, Functionality walking.

Block 3: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	1,107	2	,575
	Block	1,107	2	,575
	Model	9,875	10	,452

Model Summary(b)

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	238,132(a)	,054	,072

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	5,235	8	,732

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	14	12,818	4	5,182	18
	2	12	11,397	6	6,603	18
	3	9	10,617	9	7,383	18
	4	10	10,025	8	7,975	18
	5	9	9,518	9	8,482	18
	6	6	9,047	12	8,953	18
	7	10	8,583	8	9,417	18
	8	9	8,003	9	9,997	18
	9	6	6,997	12	11,003	18
	10	7	4,993	10	12,007	17

Classification Table

			Predicted		
			Walking		Percentage Correct
Observed			Weinig	Veel	Weinig
Step 1	Walking	Weinig	58	34	63,0
		Veel	43	44	50,6
	Overall Percentage				57,0

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Age	,020	,012	2,719	1	,099	1,021	,996	1,046
	Availability car	-,401	,190	4,435	1	,035	,670	,461	,973
	Perceived general health	-,082	,266	,094	1	,759	,922	,548	1,551
	Education	-,125	,256	,239	1	,625	,882	,534	1,458
	Destination	,024	,046	,283	1	,595	1,025	,937	1,121
	Aesthetics walking	,006	,033	,038	1	,845	1,006	,944	1,074
	Safety walking	-,059	,038	2,463	1	,117	,943	,876	1,015
	Functionality walking	-,013	,038	,126	1	,723	,987	,917	1,062
	Self efficacy walking	,028	,028	,980	1	,322	1,029	,973	1,088
	Social influences walking	-,013	,021	,383	1	,536	,987	,946	1,029
	Constant	2,004	1,887	1,128	1	,288	7,418		

a Variable(s) entered on step 1: Self efficacy walking, Social influences walking.

Perceived degree of urbanization = urban

Case Processing Summary

Unweighted Cases(b)		N	Percent
Selected Cases(a)	Included in Analysis	272	88,6
	Missing Cases	35	11,4
	Total	307	100,0
Unselected Cases		0	,0
Total		307	100,0

a The variable Perceived3categorieën is constant for all selected cases. Since a constant was requested in the model, it will be removed from the analysis.
b If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Weinig	0
Veel	1

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
		Lower	Upper	Lower	Upper	Lower	Upper
Step 0	Constant	-,015	,121	,015	1	,903	,985

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Availability car	,662	1	,416
		Age	2,116	1	,146
		Education	,185	1	,667
		Perceived general health	3,549	1	,060
	Overall Statistics		7,022	4	,135

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	7,137	4	,129
	Block	7,137	4	,129
	Model	7,137	4	,129

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	369,921(a)	,026	,035

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	15,089	8	,057

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	18	16,867	9	10,133	27
	2	18	15,752	9	11,248	27
	3	13	15,102	14	11,898	27
	4	14	14,532	13	12,468	27
	5	10	14,112	17	12,888	27
	6	15	13,206	11	12,794	26
	7	15	13,654	13	14,346	28
	8	17	12,417	10	14,583	27
	9	5	11,464	22	15,536	27
	10	12	9,895	17	19,105	29

Classification Table(a)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Walking	Weinig	88	49	64,2
		Veel	71	64	47,4
	Overall Percentage				55,9

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,160	,111	2,082	1	,149	,852	,685	1,059
	Age	,018	,011	2,741	1	,098	1,018	,997	1,040
	Education	,005	,261	,000	1	,983	1,005	,603	1,677
	Perceived general health	-,333	,205	2,622	1	,105	,717	,479	1,072
	Constant	1,217	1,209	1,015	1	,314	3,379		

a Variable(s) entered on step 1: Availability car, Age, Education, Perceived general health.

Block 2: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	5,153	4	,272
	Block	5,153	4	,272
	Model	12,289	8	,139

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	364,768(a)	,044	,059

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	6,964	8	,540

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	19	18,562	8	8,438	27
	2	13	16,548	14	10,452	27
	3	17	15,548	10	11,452	27
	4	16	14,802	11	12,198	27
	5	12	14,007	15	12,993	27
	6	15	13,279	12	13,721	27
	7	16	12,515	11	14,485	27
	8	10	11,627	17	15,373	27
	9	12	10,692	15	16,308	27
	10	7	9,420	22	19,580	29

Classification Table(a)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Walking	Weinig	81	56	59,1
		Veel	60	75	55,6
	Overall Percentage				57,4

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,162	,112	2,085	1	,149	,850	,683	1,060
	Age	,013	,011	1,356	1	,244	1,013	,991	1,035
	Education	,062	,266	,054	1	,816	1,064	,631	1,793
	Perceived general health	-,419	,215	3,795	1	,051	,657	,431	1,003
	Destination	,062	,050	1,557	1	,212	1,064	,965	1,172
	Aesthetics walking	,035	,024	2,156	1	,142	1,036	,988	1,085
	Safety walking	-,011	,030	,133	1	,716	,989	,933	1,049
	Functionality walking	,030	,032	,830	1	,362	1,030	,967	1,098
	Constant	-,615	1,632	,142	1	,706	,541		

a Variable(s) entered on step 1: Destination, Aesthetics walking, Safety walking, Functionality walking.

Block 3: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	,914	2	,633
	Block	,914	2	,633
	Model	13,204	10	,213

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	363,854(a)	,047	,063

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	14,431	8	,071

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	20	18,752	7	8,248	27
	2	11	16,664	16	10,336	27
	3	15	15,663	12	11,337	27
	4	21	14,760	6	12,240	27
	5	16	14,096	11	12,904	27
	6	12	13,298	15	13,702	27
	7	15	12,312	12	14,688	27
	8	9	11,536	18	15,464	27
	9	9	10,577	18	16,423	27
	10	9	9,342	20	19,658	29

Classification Table(a)

Observed			Predicted		
			Walking		Percentage Correct
			Weinig	Veel	Weinig
Step 1	Walking	Weinig	86	51	62,8
		Veel	60	75	55,6
	Overall Percentage				59,2

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Availability car	-,158	,112	1,977	1	,160	,854	,685	1,064
	Age	,014	,011	1,570	1	,210	1,014	,992	1,037
	Education	,077	,267	,083	1	,773	1,080	,640	1,823
	Perceived general health	-,378	,225	2,837	1	,092	,685	,441	1,064
	Destination	,056	,050	1,264	1	,261	1,058	,959	1,166
	Aesthetics Walking	,033	,024	1,863	1	,172	1,034	,986	1,084
	Safety Walking	-,011	,031	,123	1	,726	,989	,931	1,051
	Functionality Walking	,026	,033	,638	1	,424	1,026	,963	1,094
	Selfefficacy Walking	-,014	,026	,290	1	,590	,986	,936	1,038
	Social Influences Walking	,018	,020	,872	1	,350	1,019	,980	1,059
	Constant	-,762	1,650	,213	1	,644	,467		

a Variable(s) entered on step 1: Self efficacy walking, Social influences walking.

Appendix T Logistic Regression Analyses Cycling (not stratified) – interaction term included

Gender:

Block 4: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	1,998	4	,736
	Block	1,998	4	,736
	Model	20,973	15	,138

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	881,429(a)	,032	,042

a Estimation terminated at iteration number 3 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	9,964	8	,268

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	46	43,328	19	21,672	65
	2	37	39,054	28	25,946	65
	3	33	36,745	32	28,255	65
	4	37	34,823	28	30,177	65
	5	37	33,416	28	31,584	65
	6	32	32,071	33	32,929	65
	7	21	30,483	44	34,517	65
	8	32	28,886	33	36,114	65
	9	31	26,891	34	38,109	65
	10	23	23,303	43	42,697	66

Classification Table(a)

Observed			Predicted Walking Weinig	Predicted Walking Veel	Percentage Correct Weinig
Step 1	Walking	Weinig	198	131	60,2
		Veel	141	181	56,2
	Overall Percentage				58,2

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Age	,018	,007	7,202	1	,007	1,019	1,005	1,032
	Education	-,010	,137	,005	1	,941	,990	,756	1,296
	Perceived general health	-,204	,135	2,281	1	,131	,816	,626	1,063
	Perceived degree of urbanization	,047	,110	,183	1	,669	1,048	,845	1,301
	Availability car	-,217	,085	6,522	1	,011	,805	,682	,951
	Aesthetics walking	,035	,044	,617	1	,432	1,035	,949	1,129
	Safety walking	-,022	,055	,163	1	,686	,978	,879	1,089
	Functionality walking	,020	,056	,122	1	,727	1,020	,913	1,139
	Destination	-,046	,067	,474	1	,491	,955	,837	1,089
	Self efficacy walking	,020	,015	1,669	1	,196	1,020	,990	1,051
	Social influences walking	-,007	,012	,299	1	,584	,994	,971	1,017
	Destination *gender	,039	,041	,906	1	,341	1,040	,960	1,126
	Aesthetics walking * gender	-,013	,027	,240	1	,624	,987	,936	1,040
	Safety walking * gender	-,004	,034	,014	1	,907	,996	,933	1,064
	Functionality walking * gender	-,009	,036	,061	1	,806	,991	,925	1,063
	Constant	,490	,976	,252	1	,616	1,632		

a Variable(s) entered on step 1: Destination * Gender , Aesthetics walking * gender , Safety walking * gender , Functionality walking * gender .

Age:

Block 4: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,964	4	,291
	Block	4,964	4	,291
	Model	23,939	15	,066

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	878,464(a)	,036	,048

a Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	3,306	8	,914

Contingency Table for Hosmer and Lemeshow Test

		Walking = Weinig		Walking = Veel		Total
		Observed	Expected	Observed	Expected	Observed
Step 1	1	43	44,405	22	20,595	65
	2	37	38,824	28	26,176	65
	3	34	36,459	31	28,541	65
	4	36	34,870	29	30,130	65
	5	36	33,462	29	31,538	65
	6	32	32,297	33	32,703	65
	7	36	30,556	29	34,444	65
	8	27	28,824	38	36,176	65
	9	26	26,579	39	38,421	65
	10	22	22,725	44	43,275	66

Classification Table(a)

			Predicted		
			Walking		Percentage Correct
	Observed		Weinig	Veel	Weinig
Step 1	Walking	Weinig	196	133	59,6
		Veel	152	170	52,8
	Overall Percentage				56,2

a The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95,0% C.I.for EXP(B)	
		Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Step 1(a)	Age	,032	,048	,434	1	,510	1,032	,939	1,135
	Education	-,037	,138	,073	1	,787	,963	,736	1,262
	Perceived general health	-,217	,135	2,561	1	,110	,805	,618	1,050
	Perceived degree of urbanization	,044	,110	,156	1	,692	1,045	,842	1,296
	Availability car	-,212	,085	6,192	1	,013	,809	,684	,956
	Aesthetics walking	,039	,049	,625	1	,429	1,040	,944	1,145
	Safety walking	-,078	,057	1,842	1	,175	,925	,827	1,035
	Functionality walking	-,047	,059	,648	1	,421	,954	,850	1,070
	Destination	,153	,078	3,829	1	,050	1,165	1,000	1,358
	Self efficacy walking	,021	,015	1,908	1	,167	1,021	,991	1,053
	Social influences walking	-,006	,012	,273	1	,601	,994	,971	1,017
	Destination * age	-,003	,002	3,630	1	,057	,997	,994	1,000
	Aesthetics walking * age	-,001	,001	,225	1	,635	,999	,997	1,002
	Safety walking * age	,001	,001	,810	1	,368	1,001	,999	1,004
	Functionality walking * age	,001	,001	,937	1	,333	1,001	,999	1,004
	Constant	-,066	2,240	,001	1	,976	,936		

a Variable(s) entered on step 1: Destination * age, Aesthetics walking * age, Safety walking * age, Functionality walking * age

Appendix U Population density per province in the Netherlands and origin respondents

CBS, 2006