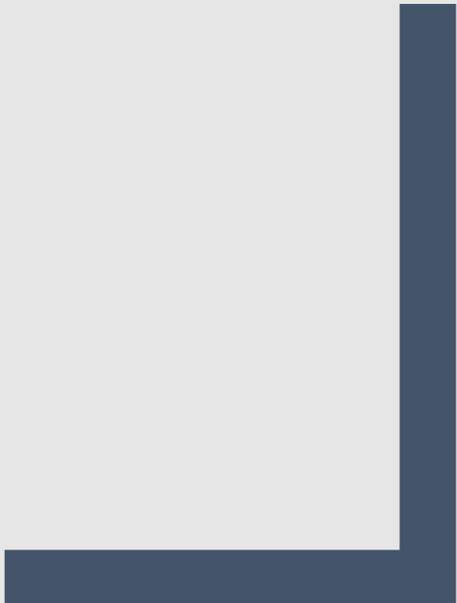




BUILT ENVIRONMENT, TRAVEL BEHAVIOR, AND SUBJECTIVE WELL-BEING

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Exploring gender differences in the city of Groningen,
the Netherlands



Colophon

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Abstract

The impact of subjective spatial characteristics on travel behaviour and subjective well-being has received increasing attention over the past decades due its implications for spatial planning. However, less emphasis has been put on gender differences in this respect. Using primary data collected via an online tool, this paper examines the impact of subjective built environment (BE) characteristics on the neighbourhood level on travel behaviour and subjective well-being (SWB) with correlation tests. The results suggest that various built environment characteristics correlate positively with subjective well-being. The exact BE aspects and the strengths of the correlation differs between women and men. Additionally, for men travel time for active travel also correlates positively with subjective well-being. The influence of the built environment on travel behaviour varies as well between the genders, with much more BE items influence travel related outcomes of the women. These results should inform policy makers when designing neighbourhood layouts that women and men value various spatial characteristics differently and that the characteristics influence the travel behaviour of both genders differently.

Future studies of the built environment should try to confirm these findings in a different or larger spatial setting and using a bigger sample, and should include a mediator model accounting for travel behaviour.

Keywords: built environment, subjective spatial characteristics, travel behaviour, well-being, gender difference

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1. Introduction

1.1 Background and relevance

Throughout human history, urbanization has been a key element in the process of social development (Bairoch, 1988). It has been projected that by the year 2050 around 68% of the world's population will live in cities. This development is mainly fuelled by rural-urban migration and the population decline in some former industrial cities (UN, 2018). Next to economic reasons such as increased economy of scales and specialisation (World Bank, 2009), it is believed that urbanisation or living in cities can impact the quality of life (QOL). This impact can be either negative through crime, congestion or contagious diseases (Glaeser, 2011) or positive through income gains (Glaeser, 2011), improved transportation and therefore accessibility of services and a higher amenity coverage, like education or health facilities (Bhattari & Budd, 2019).

Quality of life is a multifaceted concept, which is used in various disciplines and at different spatial scales. Therefore, various definitions for this complex concept are proposed including a variety of different measurement tools depending on the context (Mohit, 2013). Some basic indicators include wealth, employment, the natural and physical environment and different precursor of well-being (Gregory et al., 2009). The World Health Organization (1998) defines QOL as "an individual's perception of their position of life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards and concerns" (p.11). QOL research, using either objective or subjective measurements, gains increasing recognition in branches of spatial planning (Mohit, 2013). Subjective well-being (SWB) can be used as one of the subjective measurements of QOL (Costanza et al., 2005).

With achieving high levels of subjective well-being being one of the most important political goals (Stiglitz et al., 2009), therefore also a prime goal of spatial planning (Thin, 2012) it is recognized that the city and the neighbourhood can have influence on the individuals' well-being (Leyden et al., 2011). Various aspects of the built environment can be related to subjective well-being, a personal evaluation of one's life, such as density and land use (Hajrasouliha et al., 2018) or neighbourhood environmental quality and perceived safety (Kyttä et al., 2016). Yet the mechanism under which different spatial forms influence SWB remain largely unclear (Mouratidis, 2019). It is therefore important to investigate this relation, especially in light of gender differences, since women and men evaluate characteristics of the built environment differently (Koskela and Pain, 2000).

Next to that, others (Yin et al., 2020; Wang et al., 2020) have found that the built environment on different scales (city and neighbourhood) influences travel behaviour. According to the findings of Handy et al. (2005), aspects influencing travel behaviour are (among others) perceived accessibility by different modes, attractiveness of the trip and the perception of safety using different modes. Therefore, it is crucial to explore the influences of the built environment on travel behaviour (Bothe, 2010) since a shift towards more eco-friendly commuting modes is seen as a corner stone for sustainable development in the mobility sector (Mikiki and Panagiotis, 2012).

Furthermore, different aspects of travel behaviour (mode choice, travel time) can have an impact on subjective well-being (van Wee & Ettema, 2016). While Sweet and Kanaroglou (2016) investigated gender differences with regard to the role of travel behaviour on subjective well-being, they acknowledge that the direct link between travel time and SWB remains unclear. Empirical evidence on gender differences in travel behaviour suggesting significant differences in travel behaviour, needs and opportunities between women and men, such as shorter work commutes for women (Madden, 1981), more complex travel trips for women (Wheatly, 2014) and less car use for women (Uteng, 2011). Therefore, it is important to gather more data about the relation between the travel behaviour and well-being to make well informed policy recommendations based on different system users (Ettema & Schekkerman, 2015; Brereton et al., 2007).

1.2 Research aim and question

This research investigates gender difference in the relation between perceived built environment characteristics, travel behaviour and subjective well-being. To do so, the extent to which the above-mentioned relations differ between women and men is being examined in a specific neighbourhood (Oosterparkwijk) in the city of Groningen. It is first of all important to identify a suitable measurement tool for subjective well-being, as well as to define the set of BE characteristics this research focuses on.

Therefore, this research adopts the following research question:

“How and to what extent do perceived built environment characteristics on the neighbourhood level affect travel behaviour and subjective well-being when comparing women and men?”

Consequently, the following sub-questions are employed to investigate the different building blocks of the main question:

1. How can subjective well-being be measured in the field of spatial planning?
2. Which spatial variables on the neighbourhood level can be identified for a subjective evaluation of the BE characteristics?
3. What is the relation between built environment characteristics on the neighbourhood level and well-being/travel behaviour?
4. What is the relation between travel behaviour and well-being?

While all four sub-questions inform the theoretical framework, especially the last two shape the conceptual framework.

1.3 Reading guide

This research adopts the following structure: the second chapter discusses core concepts and theories and will end with the associated conceptual model. In chapter three the methodology is described, ensuring the reproducibility of this research. In chapter four the results of the primary data collection are presented and discussed in light of existing literature. An answer to the research questions is given in the last chapter, including policy implications, limitations of the research and future research suggestions.

2. Theoretical framework

2.1 Subjective well-being

Subjective well-being can be described as a self-reported measurement of an individual's well-being (Diener et al., 1985). According to Diener and Suh (1997) subjective well-being is made out of three components, which can be measured independently from each other, namely: positive affect, negative affect and life satisfaction. While the first two refer to affective, emotional aspects of the construct, life satisfaction refers to a cognitive, judgmental process. Important to note here is that the satisfaction judgment is dependent on a comparison between the current circumstances and a standard that each individual sets for him-/herself. This means, it centres on the person's own judgement and not upon external criteria (Diener et al., 1999). A meta-analysis of Batz & Tay (2018) suggests no differences in subjective well-being between women and men.

2.1.2 Measurement dimension

For the measurement of the cognitive judgmental component of subjective well-being the 'Satisfaction with Life Scale' (SWLS) has been developed by Diener et al. (1985). This scale assesses satisfaction with the respondent's life as a whole, therefore does not assess specific domains. The SWLS consists out of five self-report statements (see table 2), which are being rated on a 7-point Likert scales ranging from 'totally disagree' to 'totally agree' (Diener et al., 1985). With regard to suitability of this measurement, cognitive well-being has found recognition in several studies concerning spatial planning and transport planning (e.g. Ettema & Schekkerman, 2015; Archer et al., 2013).

2.2 Built environment characteristics and subjective well-being

An important distinction can be made between objective and subjective built environment characteristics. While objective variables are normally based on official statistics and land use data from spatial planning departments like population density or land use mix (Yin et al., 2020), subjective characteristics involve the evaluation of respondents themselves, like aesthetic or safety (Saelenes & Handy, 2010). The findings of Mouratidis (2019) show that the perceived availability of facilities (like shops or for leisure) influence SWB positively through the option of participating in activities. Negative influence on SWB can arise from low levels of safety perception or feelings of neighbourhood unattractiveness (Mouratidis, 2021).

An important argument brought forward by Ettema & Schekkerman (2015) concerns the differing nature of subjective and objective built environment characteristics. The subjective assessment of a certain BE characteristic is by definition biased towards one's preferences and is therefore a better predictor of subjective well-being (Ettema & Schekkerman, 2015).

Considering the parallels in research aim the items used by Ettema & Schekkerman (2015) are deemed to be suitable variables for this research. In total 34 items were used, which can be summarized into seven categories: attractiveness, facilities and public space, accessibility, traffic safety, car accessibility, social safety, nuisance. An overview of the item is presented in appendix 2.

2.3 Travel behaviour

Travel behaviour refers to the complex decision-making process of travellers, with regard to mode choice, route choice and other travel related factors (Li et al., 2019). According to Axhausen (2007) travel behaviour research investigates the physical movement of people outside their reference locations for any purpose. The reference location is defined as the place where a person returns to at the end of the day. Axhausen (2007) defines a set of basic elements, which need to be chosen by the traveller, in order to fully grasp one's travel behaviour. These are the purpose of the trip, duration of the trip (time in minutes), destination of the trip, participants of the trip and expenditure of the trip (Axhausen, 2007). The research on hand uses travel mode and minutes per travel mode (in a week) as predictor for travel behaviour.

2.3.1 Travel behaviour and perceived built environment

Much attention has been devoted to the relationship between travel behaviour and the built environment on neighbourhood level in recent years (see for example Wang et al., 2018). Evidence shows that the BE on this scale can influence different travel-related outcomes, such as mode choice (Handy et al., 2016). The findings of Saelens et al. (2003) suggest that higher perceived rates of safety and aesthetics in a neighbourhood environment stimulate active transportation. The work of Humpel et al. (2004) on this topic highlights gender differences in the sense that men were twice as likely to increase walking when the perception of aesthetics in the neighbourhood is increased.

The work of Van Acker et al. (2011) brings forward an important argument: the connection between the built environment might be partly a matter of personal tendency towards certain mobility outcomes. A person with a pro-environmental attitude preferring public transport might choose for a residential location with good public transport options (Van Acker et al., 2011).

2.3.2 Travel behaviour and subjective well-being

Subjective well-being may be influenced by travel in both a direct and an indirect way. While the direct influence is caused by the exposure to both the physical and social environment during travel, the indirect influence is linked to the instrumental role of traveling for participation in activities (van Wee & Ettema, 2016).

Exposure to the travel environment, being either the physical or the social one, can trigger an emotional response which results in a certain mood (Olsson et al., 2013). While active travel modes (walking, cycling) are more associated with higher levels of well-being, travel by car or public transport is associated with lower levels. This difference may be caused by better opportunities of enjoying the environment when using active modes of travel (Gatersleben and Uzzel, 2007). The indirect arises from the fact that travel can increase the action space of an individual and therefore enables activity participation through which life satisfaction can be increased (Ettema et al., 2010). Delbosc and Currie (2011) found out that the lack of transportation options and the associated lower levels in activity participation affects subjective well-being negatively. Specific literature on gender differences with regard to travel behaviour and subjective well-being has not been found. Nevertheless, several mediating factors could play role here, such as the lower levels of car ownership among women therefore less autonomy with regard to mobility options (Best & Lanzendorf, 2005).

2.3.3 Travel time and subjective well-being

The effect of travel time on subjective well-being is dependent on various factors. Most literature focuses on travel time with regard to commuting. Here, findings are rather straight forward, implying that extending the commuting time decreases well-being (Nie & Sousa-Poza, 2016; Stutzer & Frey, 2008; Choj, Coughlin & D'Ambrosio, 2013). This picture gets nuanced when considering different types of mode. Martin et al. (2014) analysis show that commuting time spent walking increases well-being, while time spent driving decreases it. The same holds true when comparing cycling and public transport. While travel time on the bike positively influences well-being mainly through interdomain transfer effects such as health benefits through physical activity (Gatersleben & Uzzel, 2007), time spent on public transport has a negative association with well-being (Wener et al., 2003). Another factor in this relation is the trip itself. The findings of Archer et al. (2013) show that travel time is not always perceived as wasted time but can be experienced as pleasant when the travel is undertaken for its inherent value.

To end this section, two interesting findings of Kroesen (2014) are presented which have been established specifically in the Dutch context. Firstly, his findings suggest that the effect of commuting time on subjective well-being is mediated by a person's satisfaction with her/his social contacts, an argument already brought forward by Robert Putnam (2000). Secondly, the findings indicate that commuting time matters little in how the Dutch population evaluates subjective well-being.

2.4 Conceptual model

In figure 2.1 the proposed conceptual model for this study is shown. Firstly, people's well-being tends to be influenced by built environment characteristics on the neighbourhood level directly (Wang and Wang, 2016) and indirectly when the travel behaviour acts as mediating role between them (Sun et al., 2017). Secondly, travel behaviour affects well-being because it enhances the ability of people to participate in activities (Zhang and Van Acker, 2017). Thirdly, gender tends to influence travel behaviour through differences in mobility needs (Anxo et al., 2007) or mode choice (Uteng, 2011) between women and men. Finally, to account for the aim of this research gender is linked to well-being.

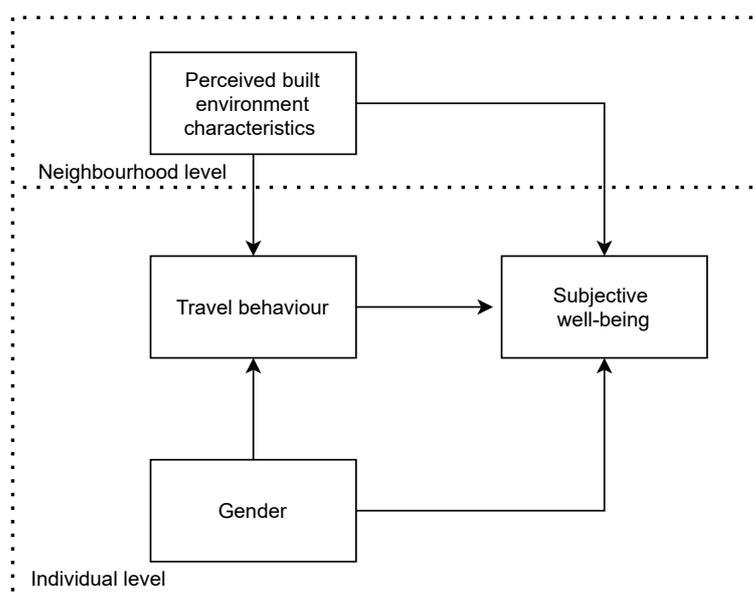


Figure 2.1: Conceptual model (Author, 2021)

2.5 Hypothesis

In light of the discussed literature in the theoretical framework and the conceptual model the following hypothesis are posed:

H1: There is a difference in effect of the perceived BE characteristics on subjective well-being between women and men.

H2: There is a difference in effect of the perceived BE characteristics on travel behaviour between women and men.

H3: Travel behaviour, as mediator between BE and well-being, is affected differently by the perceived built environment characteristics between women and men.

3. Methodology

3.1 Study area

For this research the neighbourhood “Oosterparkwijk” (figure 3.1) in the city of Groningen, Netherlands, has been chosen. The selection of this particular study area is based on three reasons. Firstly, while only a few studies have investigated the above described topic in the Netherlands, the geographical focus of these studies is the Randstad, in particular Utrecht (Ettema & Schekkermann, 2015; Ettema & Smajic, 2015). Secondly, the neighbourhood is made out of five “buurten” (districts), which have been built in different time periods. While the neighbourhood is heterogenous at large, the various districts are homogenous in themselves when looking at the built environment. Lastly, it is convenient for the researcher to employ his data collection here because he lives in this neighbourhood himself and knows it therefore well.

Sample and population characteristics (if available) are shown in table 1. These suggest that the sample represents the population in terms of gender quite fairly. For the age distribution an overrepresentation of the age groups 18-24 and 25-44 can be noticed, while the other two groups are underrepresented. In terms of district coverage, there is an overrepresentation in the Gorechtbuurt, while the Vogel- and Florabuurt are underrepresented. The distribution between renter and owner represents well the population with a light deferral towards the owner. The population characteristics are based on the statistical bureau of the municipality of Groningen (Gemeente Groningen, 2021).

	Sample (%)	Population (%)
Gender		
Female	50.0	50.6
Male	50.0	49.4
Age		
18-24	31.4	17.3
25-44	57.1	40.8
45-64	8.6	19.1
65+	2.9	8.5
Area/District		
Vogelbuurt	21.4	38.4
Florabuurt	11.4	21.3
Gorechtbuurt	52.9	22.6
Bloemenbuurt	8.6	11.9
Damsterbuurt	5.7	5.8
Household composition		
Single	44.3	50.6
Single parent	1.4	6.3
Couple without children	37.1	19.3
Couple with children	1.4	7.5
Other	15.7	16.3
Tenure		
Renter	78.6	73.5
Owner	21.4	26.5
Car access and driver's license		
Has access to car	42.9	
Has driver's license	87.1	
Working situation		
No job	12.9	
Part time	37.1	
Full time	34.3	
Other	15.7	
Working location		
Works from home	47.1	

Table 1: Sample characteristics

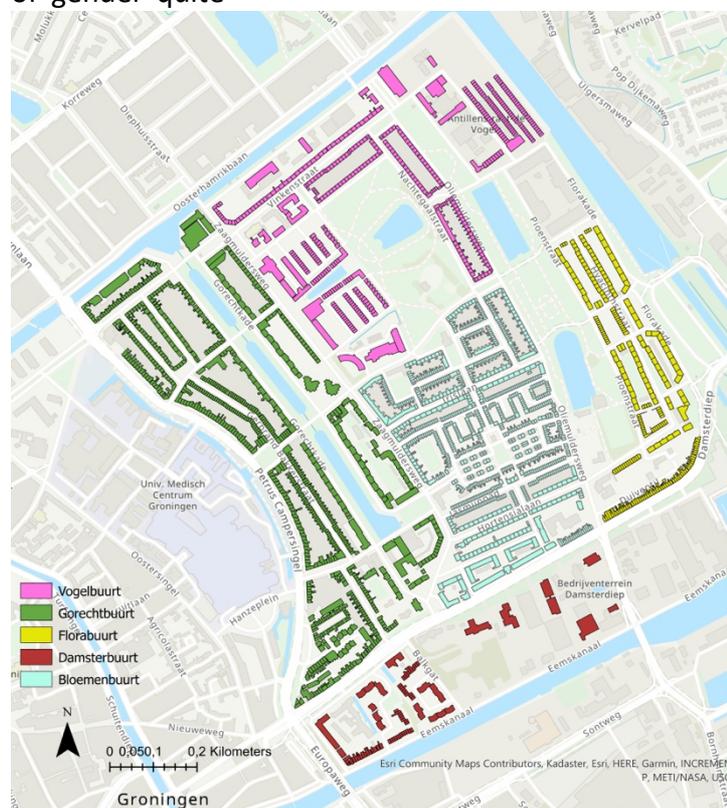


Figure 3.1: Map of neighbourhood with residential/mixed-use buildings only (colours indicating different districts) (Author, 2021).

3.2 Data collection

This research adopts a mixed-methods approach, a literature review is combined with an online questionnaire. An overview of the used methods in relation to the research questions is visualized in figure 3.2.

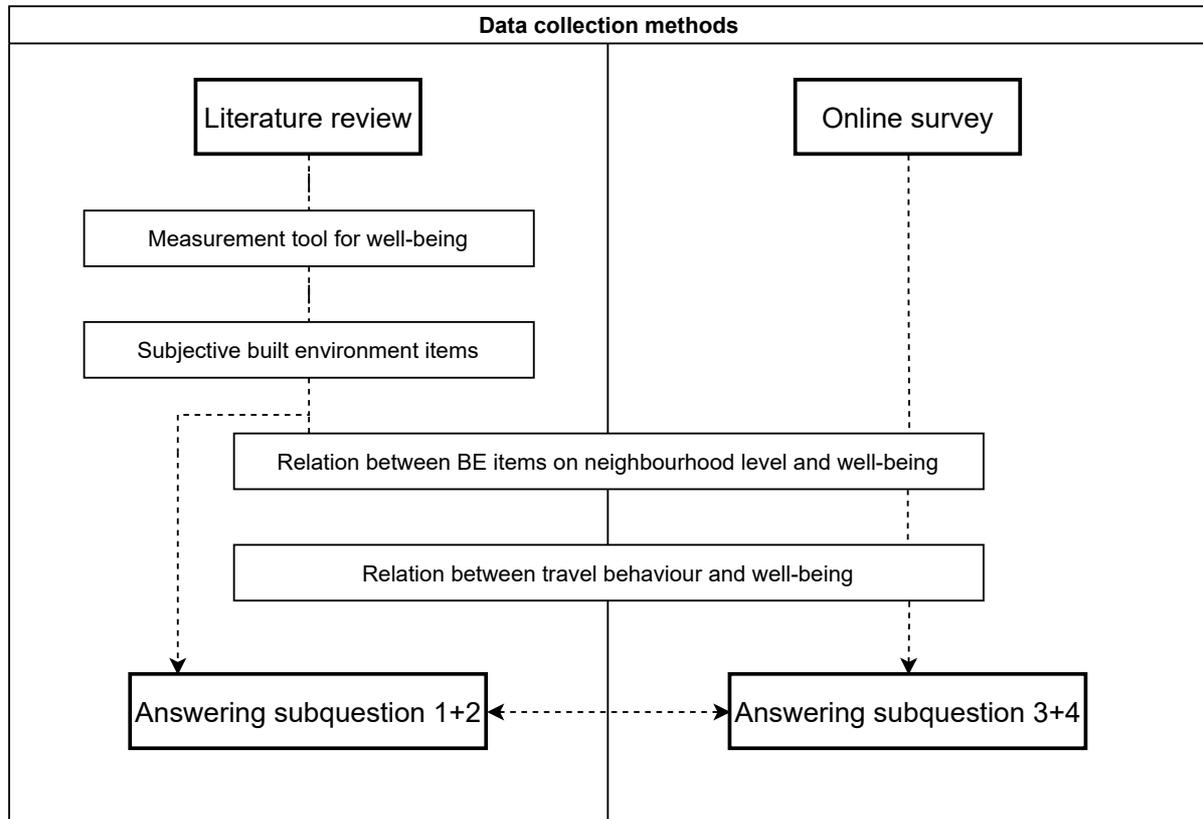


Figure 3.2: Data collection methods (Author, 2021)

A detailed description of the methodological approach can be found appendix 1.

3.2.1 Literature review

A literature review was employed to narrow down the scope of this research and elaborate on relevant concepts. The literature review helped to give answer to the first three sub-questions and provided input for the survey questions. While for sub-question 1 a suitable measurement tool for subjective well-being (SWB) in the field of spatial planning was found, for sub-question 2 relevant subjective built environment characteristics were assembled. Additionally, the literature review provides the opportunity to position the findings in a larger theoretical context (Clifford et al., 2016).

Different search engines like "SmartCat" or "Google Scholar" were used to find relevant literature. The literature concerns German, Dutch and international scientific literature, in order to gain a broadest possible understanding of the topic.

3.2.2 Questionnaire design

Survey research has proven to be useful for acquiring information about the characteristics, behaviours and attitudes of populations by administering a standardized questionnaire /survey to a sample (McLafferty, 2016). The primary data has been collected via an online

survey tool (Qualtrics). Access to Qualtrics was provided via the University of Groningen. The questionnaire was made up out of a combination of multiple-choice, matrix and constant-sum questions. An English and a Dutch version of the questionnaire was provided.

Three themes have formed the basis for the questionnaire design. The first theme concerned the socio-demographic characteristics (such as age, gender etc.) and questions about travel behaviour (travel mode, travel time in minutes). To account for the covid-19 situation, especially the appeal to work or study from home as much as possible, a question pertaining the current work location was included.

For the second theme a set of subjective built environment characteristics was used to evaluate to what extent respondents agree with the description of their neighbourhood. In total 34 items, spread over seven categories, were rated on a 5-point Likert scale.

The third theme (table 2) concerns questions about the cognitive well-being of the respondent and is based on the “5-items Satisfaction with Life Scale (SWLS) by Diener et al. (1985), which are rated on a 7-point Likert scale.

<i>Statements</i>	
In most ways my life is close to my ideal	
The conditions of my life are excellent	
I am satisfied with my life	
So far I have gotten the important things I want in life	
If I could live my life over, I would change almost nothing	
<i>Scoring</i>	
Extremely satisfied	31-35
Satisfied	26-30
Slightly satisfied	21-25
Neutral	20
Slightly dissatisfied	15-19
Dissatisfied	10-14
Extremely dissatisfied	5-9

Table 2: Satisfaction With Life Statements & Scoring

In appendix 2, an overview of the question per theme, including measurement levels, answer options and an explanation of the aim of the question is shown.

3.2.3 Recruiting participants

Via letterbox invites

For the recruitment of participants, a number of techniques have been employed. An invitation to participate in the research via the letterbox was one of them. For this purpose, a flyer was prepared, consisting of a small introduction to the research, a QR code and a link for the online questionnaire and a short explanation of the data management. Consequently, the invites have been put in the letterbox of residents. By adopting this approach, it is most likely that only residents of the Oosterparkwijk have filled in the questionnaire.

For this research stratified sampling was used in order to account for the five different districts within the Oosterparkwijk. By employing this sampling technique, it could be ensured that all residents had an equal chance of being selected (Maduekwe & de Vries, 2019). Based on the random points selected by ArcGis in the period from 31.03 until 28.04 500 flyers (see appendix 3) have been distributed throughout the neighbourhood, 100 flyers per district. In appendix 4 a flowchart of the steps taken in ArcGis Pro, including further description, is presented.

Via online platforms

Since it is known that spreading invites anonymously via the letterbox delivers a low response rate, several neighbourhood initiatives have been approached by the researcher with the question if they are willing to share information on the research on their social media

channels. On 23.04.21 the “Wijkkrant Oosterparkwijk” (neighbourhood newspaper) published an online article about the student’s research. The article can be found via the following link:

<https://wijkkrantoosterpark.nl/feb-2021-47-1/technische-planologie-onderzoek-oosterparkwijk/>.

Via social networks

Lastly, respondents for the questionnaire were recruited via the social network of the student himself. This approach included asking friends (living in the neighbourhood) and neighbours directly to fill in the questionnaire, and spreading the link to the online survey on his own social media channels.

The last two recruitment techniques did not follow a certain sampling framework but might be described as convenience or accessibility sampling. The coverage of the sample might therefore be biased towards certain subgroups of the population, namely residents of a certain age group (comparable to the researcher himself) and residents living in proximity of the researcher. Due to the covid-19 situation and the corresponding physical distance measures (1,5 meters) it was not possible to approach residents on the streets.

3.3 Data analysis

The aim of the data analysis in this research was twofold. First, descriptive statistics was used to summarize and describe the features from the sample, in order to compare if the sample is a good representation of the population (residents of the five districts). Next to measurements of central tendency and dispersion to describe the sample, non-parametric tests (Kruskal-Wallis; Mann-Whitney U) for analysis of variance was used to check if the differences between the districts and genders was significant (Burt et al, 2009). Second, a series of Spearman Correlation was used to examine possible relationships between the subjective well-being score (sum of the five SWL-statements scores per respondent) and the BE characteristics / travel behaviour (time in minutes per mode in a week), as well as between BE items and travel behaviour. The correlation tests are done twice. During the first round of tests the gender difference is not taking into account meaning that all cases went into the test simultaneously. In the second round of tests, the ‘split file’ tool is used to split the data set according to their response on the questions “What is your gender?”. The test is therefore done two times for each variable, based on the gender. The Spearman Rho correlation establishes whether there is a positive or negative correlation between two variables (BE items & travel behaviour, BE items & SWLS, travel behaviour & SWLS) and how strong this correlation is (Venhort, 2020).

The author would like to point out an important step within the analysis: despite that the individual statements of the SWL are rated on an (ordinal) Likert-scale, the overall score being the sum of the single answers is considered as a ratio variable. Therefore, the mean is being used in further analysis. This approach is in accordance with the literature (see for example: Ettema & Schekkerman, 2015; Statistics Netherlands, 2012).

In figure 3.2 the data analysis scheme is shown. The boxes highlighted in red indicate data sets, the boxes in green indicate steps taken within SPSS and the boxes in yellow are outcome.

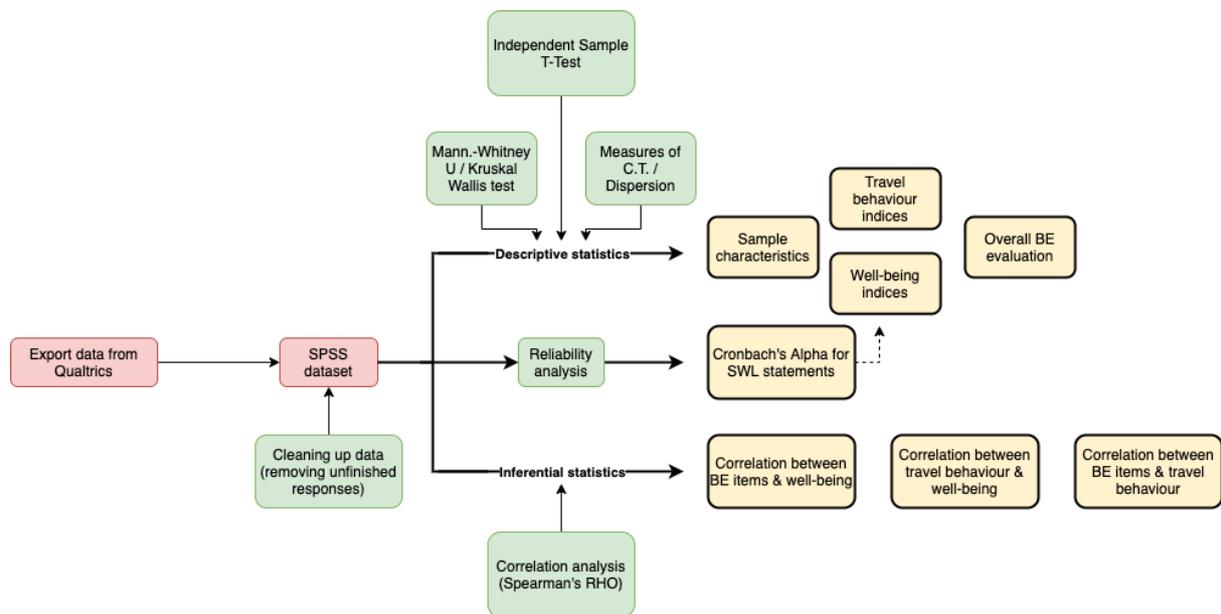


Figure 3.3: Data analysis scheme (Author, 2021)

3.4 Ethical considerations

In an effort to act ethically, it is important to be transparent and honest about the objectives and intentions of the research, and the process of data collection and analysis (Hay, 2016). No power asymmetry between the researcher and the survey respondents was present since the respondents choose voluntarily to fill in the questionnaire in absence of the researcher. With regard to positionality of the researcher, it influences both how the research is conducted, its outcomes and how the results are interpreted (Rowe, 2014). Based on the distinction suggested by Merton (1972) the researcher would classify himself as an insider being a 'member of the specified group or occupants of a specified social status' since he is living in the same neighbourhood and experiences therefore the same built environment characteristic. Furthermore, the data will be collected anonymously and the final outcome, a bachelor thesis, will only be shared within the student's organisation namely the University of Groningen.

4. Results

General

In the time from 23.04 until 30.04 a total of 76 responses were recorded via the online tool Qualtrics. Six responses were unfinished and therefore considered missing, which leaves 70 valid cases. Sample characteristics are presented in table 1.

	Mean	Std. Deviation	Cronbach's alpha
SWLS	26.18	7.93	0.85
<i>Gender</i>			
Female	26.00	6.55	
Male	26.37	6.19	
<i>Area/District</i>			
Vogelbuurt	28.00	5.49	
Florabuurt	24.62	5.26	
Gorechbuurt	25.35	6.65	
Bloemenbuurt	30.66	4.92	
Damsterbuurt	23.50	7.93	

Table 3: Descriptives of SWLS

4.1 Descriptive statistics

The results of descriptives of well-being indices are summarized in table 3. The average levels of the cognitive well-being, suggest that the sample has a reasonable level of well-being, given the theoretical minimum and maximum. The average of the SWLS (26,1857) indicates a life satisfaction between slightly satisfied and satisfied. When accounting for gender differences, the data shows nearly the same results, with men scoring slightly higher on the SWLS. However, this difference is not significant at $\alpha=0.05$ according to the Mann-Whitney U test. The same holds true when comparing the five different districts of the neighbourhood. According to the Kruskal-Wallis test the difference between the districts is not significant at $\alpha=0.05$.

For reliability analysis, Cronbach's alpha was calculated to assess the internal consistency of the SWL-statements. The internal consistency is satisfying with Cronbach's alpha = 0.85 (Blanz, 2015).

When considering travel behaviour (table 4), the results show that active travel (cycling/walking) is the most used mode of choice, followed by the car. The picture gets more nuanced when taking gender differences into account. The active travel remains the main mode, but for women a combination of modes is the second most used mode while for men this is the car. This goes in line with the findings of Susilo and Maat (2007), who found active travel modes the preferred modes in a Dutch context.

	Overall (%)	Women (%)	Men (%)
<i>Mode</i>			
Active travel	74.3	77.1	71.4
Car	14.3	8.6	20.0
Public Transport	1.4	2.9	
Combination of modes	10.0	11.4	8.6

Table 4: Descriptives of mode choice

For travel time per mode the results show differences for all modes of transport (table 5), with women spending more time on active travel and public transport while men spent more time on the car. However, these differences are not significant at $\alpha=0.05$ according to the independent samples test.

Regarding the evaluation of the built environment, no statistical difference ($\alpha=0.05$) is found between women and men when considering the overall evaluation (mean of ranks) according to the Mann-Whitney U test. When looking for individual built environment characteristics the picture gets a bit more nuanced. Six of the 34 items show significant differences according to the Mann-Whitney test with $\alpha=0.05$. While women agree more with that the neighbourhood looks attractive and that the people in the neighbourhood are trustworthy,

	Overall		Women		Men	
	Mean	Std. D.	Mean	Std. D.	Mean	Std. D.
<i>Minutes per mode</i>						
Active travel	176.77	164.82	190.20	181.59	163.34	147.60
Car	53.87	110.91	39.88	77.42	67.85	136.25
Public transport	32.25	68.62	45.20	86.44	19.31	41.68

Table 5: Descriptives of minutes per mode

men rate the car accessibility and traffic safety for pedestrian higher. The other two items concern situations at night/in the dark. For the individual BE characteristics no significant difference ($\alpha= 0.05$) was found when comparing the five districts of the neighbourhood.

Taken together, the results suggest no significant differences in well-being levels between gender or districts within the study area. The absence of gender differences is in agreement with the findings of Batz & Tay (2018), who performed a meta-analysis of SWB-related research. Furthermore, the results of the SWL-score are in line with other studies on this well-being indicator in a Dutch context: 26,14 (Ettema & Schekkermann, 2015) or 26,21 (Statistics Netherlands, 2012). With regard to travel behaviour, only the second most used mode-choice varies between genders, while the minutes per mode show no significant differences. The results for the mode choice, again go in line with findings from other scholars indicating that men use the car more (Uteng, 2011) while women tend to make more combined trips (Polk, 2003; Elias, Newmark and Shiftan, 2008). For the evaluation of the built environment, the overall score suggests no significant difference between gender and districts. In terms of individual BE characteristics, there are six aspects where significant differences between women and men can be found. Of particular interest are the statements about cycling in the dark and being alone outside at night. The results suggest that women agree less with both statements. This goes in line with the findings of Ravensbergen et al. (2020) suggesting that women fear for personal safety during in the dark or at night due to (e.g.) past experiences of sexual harassment.

Appendix 5 (table 14+15) provides an overview of the relevant SPSS output used for this section.

4.2 Correlation tests

4.2.1 Satisfaction with Life

The results of the Spearman's rank coefficient are shown in table 6. Due to simplicity, only the significant ($\alpha= 0.05$) ones are shown for *correlations with the overall satisfaction with life score (SWLS)*. The results suggest that seven of the built environment characteristics show a positive correlation with the cognitive well-being outcome (SWL score). While three of the items show a weak correlation (<0.3), the other four items show a moderate correlation (0.3-0.5). The interpretation of the strengths of the relationship is based on 'Additional notes for Statistics 2' (Venhorst, 2020).

No variable of the other two themes (socio-demographic characteristics; travel behaviour) correlates significantly ($\alpha= 0.05$) with the SWLS when testing for both genders together (the whole data set).

	Correlation Coefficient	p-value
<i>Attractiveness of neighbourhood</i>		
Neighbourhood meets requirements	0.277	.020
<i>Accessibility of neighbourhood</i>		
Neighbourhood is accessible by PT	0.263	.028
Neighbourhood is accessible by car	0.253	.035
<i>Traffic safety in neighbourhood</i>		
Traffic is safe for pedestrians	0.383	.001
<i>Social safety in neighbourhood</i>		
Not afraid to go out by myself at night	0.342	.004
It is safe to cycle in the dark	0.410	.000
There are many people on the street	0.315	.008

Table 6: Correlation Coefficients (whole data set) for correlations with overall satisfaction with life score

The results get more nuanced when taking gender differences into account (splitting the file according to gender). Here, the results suggest that the SWL-score for women is positive correlated with five built environment characteristics and the score for men is positive correlated with nine BE characteristics and one travel behaviour aspect. Results of this correlation tests are shown in table 7. Again, only statistically significant ($\alpha= 0.05$) correlations with the SWL-score are shown. All correlations are moderate in their strength, with even two strong correlations for the men regarding social safety in the neighbourhood.

	Correlation Women	p-value	Correlation Men	p-value
<i>Travel behaviour</i>				
Travel time for active travel			0.460	.005
<i>Attractiveness of neighbourhood</i>				
Neighbourhood meets requirements			0.349	.019
<i>Facility coverage and open spaces</i>				
There are sufficient shops for daily use			0.415	.013
There is enough public space	0.339	.047		
<i>Accessibility of neighbourhood</i>				
Neighbourhood is accessible by PT			0.447	.007
Neighbourhood is accessible by car			0.371	.028
Work location is well accessible			0.425	.011
<i>Traffic safety in neighbourhood</i>				
Traffic is safe for pedestrians	0.342	.044	0.443	.008
<i>Social safety in neighbourhood</i>				
Not afraid to go out by myself at night	0.353	.037	0.399	.018
It is safe to cycle in the dark	0.385	.022	0.507	.002
There are many people on the street			0.510	.002
<i>Nuisance in neighbourhood</i>				
There is no nuisance from other residents	0.495	.002		

Table 7: Correlation Coefficient (according to gender) for correlations with overall satisfaction with life score

Taken together, the results of the correlation analysis show only positive correlations between the different built environment characteristics/travel behaviour and the SWL-score. A positive coefficient indicates a positive association between both variables. This implies that the SWL score tends to increase when the respondent agrees more with a description of a built environment characteristic. Taking the example of “It is safe to cycle in the dark”: higher agreement with this statement tends to increase the overall SWL-score of this respondent. The findings for traffic safety and neighbourhood attractiveness are in line with results from other research (Ettema & Schekkerman, 2015) positively adding to life satisfaction. Furthermore, social safety is likely related to a feeling of independence, which has been identified as being beneficial for well-being (Ryan and Deci, 2000). This is again confirmed by the findings of Cao (2016) and Morris (2011) who identified safety and attractiveness as being determinants of life satisfaction.

Appendix 4 (table 16) provides an overview of the relevant SPSS output used for this section.

4.2.2 Travel behaviour

The results of the Spearman’s rank coefficient are shown in table 8. Due to simplicity, only the significant ($\alpha= 0.05$) ones are shown for *correlations between travel time in minutes per mode and BE items*. Correlation tests for the mode choice are not possible, since this is nominal data. The results suggest that in total eleven BE items correlate with minutes travelled with the car and with public transport. While the majority of

	Minutes with car	p-value	Minutes with PT	p-value
<i>Attractiveness of neighbourhood</i>				
Neighbourhood meets requirements	-0.225	.033		
There is no vandalism	-0.324	.006		
<i>Accessibility of neighbourhood</i>				
Neighbourhood is accessible by PT			0.256	.032
Neighbourhood is accessible by car	0.295	.013		
<i>Traffic safety in neighbourhood</i>				
Traffic is safe in neighbourhood	-0.372	.002	0.443	.008
Traffic is safe for cyclist	-0.298	.012		
Traffic is safe for pedestrian	-0.292	.014		
<i>Social safety in neighbourhood</i>				
There is a small chance of burglary			-0.277	.020
There are many people on the street	-0.240	.046		
<i>Nuisance in neighbourhood</i>				
There is no nuisance from traffic	-0.269	.024		
There is no litter			-0.288	.016

Table 8: Correlation Coefficient (whole data set) for correlations with BE items

correlations is negative, only three correlations are positive. Next to that, only two of the correlations are of moderate strength (0.3-0.5), while the rest is weak (<0.3).

When accounting for differences according to gender (split file) the picture gets more nuanced. The correlation coefficients are shown in tables 9 - 11. It gets immediately visible that women's travel behaviour (minutes per mode) is influenced by more built environment characteristics in total, but also the individual minutes per mode. While for the men in total seven items correlate with their travel behaviour (two with active travel, four with the car, and one with PT), 12 items correlate with travel behaviour of the women (four with active travel, five with the car, and five with PT). Furthermore, while for men the correlations are either positive (active travel, PT) or negative (car) per category, for the women they are mixed in two categories (car, PT). All correlations are of moderate strength (0.3-0.5). It is interesting to see that for the women several BE items from the same category exert influence on certain travel behaviour outcome (e.g. minutes for active travel are influenced by three items from the category "nuisance"), while for the men there is no pattern visible and therefore less conclusive.

	Correlation Women	p-value	Correlation Men	p-value
<i>Attractiveness of neighbourhood</i>				
Neighbourhood looks attractive			0.402	.017
<i>Facility coverage and open spaces</i>				
There are enough other facilities	-0.420	.012		
<i>Traffic safety in neighbourhood</i>				
Traffic is safe for pedestrians			0.456	.006
<i>Nuisance in neighbourhood</i>				
There is no nuisance from other residents	-0.405	.016		
There is no nuisance from air pollution	-0.344	.043		
There is no graffiti	-0.342	.044		

Table 9: Correlation Coefficient for Active travel

	Correlation Women	p-value	Correlation Men	p-value
<i>Attractiveness of neighbourhood</i>				
There is no vandalism			-0.347	.041
<i>Facility coverage and open spaces</i>				
There is a health centre			-0.362	.033
<i>Car accessibility of neighbourhood</i>				
Neighbourhood is accessible by car	0.505	.002		
There is sufficient parking space	0.382	.024		
<i>Traffic safety in neighbourhood</i>				
Traffic is safe	-0.403	.016	-0.346	.042
Traffic is safe for pedestrians	-0.450	.007		
Traffic is safe for cyclist	-0.358	.035		
<i>Social safety in neighbourhood</i>				
There are many people on the street			-0.371	.028

Table 10: Correlation Coefficient for the Car

Taken together, the results of the correlation analysis show vast differences between women and men when considering the influence of BE items on travel behaviour (minutes per mode). The findings of Mao and Wang (2020) hold comparable results for spouse-settings, where the influence of BE items on travel behaviour is inconsistently between women and men. While there is much literature on built environment characteristics influencing travel behaviour and related outcomes, results are rarely/not broken up according to genders. Therefore, the results are discussed more generally in comparison to existing literature. The negative influence of nuisance such as air pollution on active travel experienced by women is recognized by the study of Haddak & Mahdjoub (2017). Next to that, the distance to public transport infrastructure and therefore its perceived

	Correlation Women	p-value	Correlation Men	p-value
<i>Attractiveness of neighbourhood</i>				
There is no litter			-0.370	.029
<i>Accessibility of neighbourhood</i>				
Neighbourhood is accessible by PT	0.406	.016		
<i>Car accessibility of neighbourhood</i>				
Neighbourhood is accessible by car	-0.440	.008		
There is sufficient parking space	-0.377	.025		
<i>Traffic safety in neighbourhood</i>				
Traffic is safe	0.345	.042	-0.346	.042
Traffic is safe for cyclist	0.338	.047		

Table 11: Correlation Coefficient for Public Transport

Next to that, the distance to public transport infrastructure and therefore its perceived

accessibility can influence the time spent on public transport (Bothe, 2009), which is found for women in the spatial area in the research on hand. The findings of Singleton & Wang (2014) support the results concerning men, where perceived traffic safety influences time spent on active travel. Furthermore, for men the results indicate that neighbourhood attractiveness influences minutes spent on active travel. This is supported by the findings of Ogilvie et al. (2008) who found attractiveness of the local environment as determinant for active travel. Lastly, the rather straightforward finding that car accessibility and sufficient parking space positively influences the time spent on car travelling is supported by the literature (Geurs, 2010; McCahillet al., 2016).

Appendix 5 (table 17) provides an overview of the relevant SPSS output used for this section.

4.3 Mediator model

Due to the small sample size testing for the mediator hypothesis was not possible. Nevertheless, since at least for the men certain BE items have an influence on travel behaviour (minutes per active travel), and travel behaviour has an influence on subjective well-being, the claim of travel behaviour acting as mediator can be supported.

5. Conclusion

In this research, the relation between subjective built environment characteristics on the neighbourhood level, travel behaviour and a conceptualisation of well-being has been investigated in a neighbourhood of the city of Groningen. A special focus of this research was the presence of gender differences when it comes to the influence from perceived spatial characteristics. The findings show that a gender difference with regard to the relationship between perceived built environment characteristics on the neighbourhood level and travel behaviour and subjective well-being is present. A general difference between women and men is the amount of BE items that have an influence. While the subjective well-being of men is under influence of more built environment characteristics, women's travel behaviour is influenced more by the built environment. With regard to the influence of travel behaviour on subjective well-being a relationship for the men could be established, while for the women no statistically relation was found. Regarding the evaluation of the neighbourhood, it can be concluded that for men especially accessibility and social safety of/in the neighbourhood are of importance when considering well-being, while for the women this is less distinct. With regard to the influence from BE characteristics on travel behaviour this had only little influence on men mostly on minutes travelled by car, while for women especially nuisance in the neighbourhood, car accessibility and traffic safety influenced travel behaviour (all modes). The results hold some implications for policy making. When designing and maintaining the built environment a gender perspective should be incorporated, which takes differing needs of women and men into account constructing a more equal city. The "Manual of Urban Planning for Everyday Life's" of the municipality of Barcelona (2019) or the Handbook for "Gender-Inclusive Urban Planning Design" of the World Bank (2020) could be of help here. The aim is to facilitate spaces for both women and men and stimulate incentives for sustainable mobility.

Limitations and future research suggestions

Despite the case study method (Oosterparkwijk) offered a suitable method for answering the research question as it takes a specific spatial area and scale into account, it is important to acknowledge certain limitations of this research with regard to explanatory power and generalizations of findings. Firstly, the sample size (n=70) is rather small and decreases the explanatory power of the results. Secondly, the skew in sample with regard to age and area questions the generalization of the results for the whole neighbourhood, as well as for a larger population. Lastly, the small sample size offered only limited statistical analysis. While it was desired to perform a multiple regression analysis and a mediator model, the sample size proved only sufficient for a correlation analysis.

Further research should investigate the gender differences in the relationship between subjective spatial characteristics on the neighbourhood level, travel behaviour and subjective well-being using a larger sample size accounting for a better representation of the population in terms of age and district coverage, as well as using other spatial areas (e.g. other neighbourhoods in the city of Groningen) to provide for better generalisation. Next to that, other components of travel behaviour (like purpose of the trip participants) suggested by Axhausen (2007) could be used to provide for a more holistic understanding of the influence of travel behaviour on subjective well-being directly or indirectly as mediator. Another interesting future research could concern a post-corona situation, since the results of Möhring et al. (2020) suggest that the corona pandemic decreased subjective well-being.

References

- Archer, M., Paletti, R., Konduri, K.C., Pendyala, R.M. and Bhat, C.R. (2013). Modeling the connection between activity-travel patterns and subjective well-being. *Transportation Research Record: Journal of the Transportation Research Board*, 2382, 102-111.
- Axhausen, K.W. (2007). Concepts of travel behaviour research. In T. Gärling and L. Steg (Ed.) *Threats from Car traffic to the Quality of Urban Life* (165-185). Bingley: Emerald Group Publishing Limited.
- Bairoch, P. (1988). *Cities and Economic Development: From Dawn of History to the Present*. Chicago, Illinois: University of Chicago Press.
- Batz, C. & Tay, L. (2018). Gender Differences in Subjective Well-Being. In. E. Diener, S. Oishi & L. Tray (Eds.) *Handbook of well-being*. Salt Lake City, UT: DEF Publishers.
- Blanz, M. (2015). *Forschungsmethoden und Statistik für die Soziale Arbeit: Grundlagen und Anwendungen*. Stuttgart: Kohlhammer.
- Best, H. & Lanzendorf, M. (2005). Division of labour and gender differences in metropolitan car use: An empirical study in Cologne, Germany. *Journal of Transport Geography*, 13, 109-121.
- Bhattari, K. & Budd, D. (2019). Effects of Rapid Urbanization on the Quality of Life. In S. Braj Raj Jumar (Ed.), *Multidimensional Approach to Quality of Life Issues* (pp. 327-341). Berlin: Springer.
- Brereton, F., Clincj J.P., Ferreira, S. (2007). Happiness, geography and the environment. *Ecological Economics*, 65, 386-396.
- Bothe, W. (2010). *Residential self-selection and travel: The relationship between travel-related attitudes, built environment characteristics and travel behaviour*. IOS Press BV: Delft University, Centre for Sustainable Urban Areas.
- Bothe, W., van Wee, B. and Maat, K. (2009). Measuring attitudes in research on residential self-selection and travel behaviour. *Transport Reviews*, 29(3), 325-357.
- Burt, J., Barber, G.M. & Rigby, D.L. (2009). *Elementary Statistics for Geographers*. 3rd Edition. New York/London: The Guildford Press.
- Cao, X.J. (2016). How does neighbourhood design affect life satisfaction? Evidence from tiwn cities. *Travel Behaviour Society*, 5, 58-76.
- Choi, J., Coughlin, J.F., D'Ambrosio, L. (2013). Travel time and subjective well-being. *Transportation Research Record: Journal of the Transportation Research Board*, 2357, 100-108.

- Clifford, N., Cope, M., Gillispie, T., & French, S. (2016). *Key Methods in Geography* (Third Ed.). London: SAGE.
- Coa, X.J. (2016). How does neighbourhood design affect life satisfaction? Evidence from twin cities. *Travel Behaviour Society*, 5, 68-76.
- Delbosc, A. & Currie, G. (2011). Exploring the relative influence of transport disadvantage and social exclusion on well-being. *Transport Policy*, 3(1), 1-43.
- Diener, E., Emmons, R.A., Larsen, R.J. & Griffen, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75.
- Diener, E. & Suh, E. (1997). Measuring quality of life: economic, social, and subjective indicators. *Social Indication Research*, 40, 189-216.
- Elias, W., Newmark, G.L. and Shiftan, Y. (2008). Gender and Travel behaviour in two Arab Communities in Israel. *Transportation Research Record: Journal of the Transportation Research Board*, 297, 75-83.
- Ettema, D., Gärling, T., Olsson, L.E., Friman, M. (2010). Out-of-home activities, daily travel, and subjective well-being. *Transport Research A: Policy and Practice*, 44(9), 723-732.
- Ettema, D. & Schekkerman, M. (2015). How do spatial characteristics influence well-being and mental health? Comparing the effect of objective and subjective characteristics at different spatial scales. *Travel Behaviour and Society*, 5, 56-67.
- Ettema, D. & Smajic, I. (2015). Walking, places and wellbeing. *The Geographical Journal*, 181(2), p-102-109.
- Frey, B.S. & Stutzer, A. (2010). Happiness and public choice. *Public choice*, 144, 536-555.
- Gattersleben, B. Uzzel, D. (2007). Affective appraisals of the daily commute: comparing perceptions of drivers, cyclists, walkers and users of public transport. *Environment and Behaviour*, 39(3), 416-431.
- Gemeente Groningen (2021). Onderzoek Informatie Statistiek Groningen: Gronometer. Retrieved on April 24, 2021 from: <https://groningen.buurtmonitor.nl>. Groningen: Gemeente Groningen.
- Geurs, K., Zondag, B., de Jong, G., de Bok, M. (2010). Accessibility appraisal of land-use/transport policy strategies: more than just adding up travel-time savings. *Transportation Research Part D: Transport and Environment*, 15(7), 382-393.
- Glaeser, E. (2011). Cities, Productivity, and Quality of Life. *Science*, 333 (6042), 592-594.
- Gregory, D., Johnston, R., Pratt, G., Watts, M. Whatsmore, S. (2009). Keyword: "Quality of Life". *The Dictionary of Human Geography*. Hoboken: Wiley-Blackwell.

Haddak, M.M. & Mahdjoub, S. (2017). Effects of road-traffic nuisance on the active travel modes. What are the consequences? *European Journal of Public Health*, 27(3).

Hajrasouliha, A., del Rio, V., Francis, J., Edmonson, J. (2018). Urban form and mental wellbeing: Scoping a framework for action. *Journal of Urban Design and Mental Health*, 5(10).

Handy, S., Cao, X., Mokhtarian, P. (2005). Correlation or causality between the built environment and travel behavior? Evidence from Northern California. *Transportation Research Part D*, 10, 427-444.

Hay, I. (2016). On being ethical in Geographical Research. In: N. Clifford, M. Cope, T. Gillespie & S. French. *“Key Methods in Geography”*. London: SAGE.

Humpel, N., Marshall, A.L., Leslie, E., Bauman, A., Owen, N. (2004). Changes in Neighborhood Walking are related to Changes in Perceptions of Environmental Attributes. *Annals of Behavioural Medicine*, 27(1), 60-67.

Koskela, H. & Pain, R. (2000). Revisiting Fear and Place: Women’s Fear of Attack and the Built environment. *Geoforum*, 31(2), 269-280.

Kroesen, M. (2014). Assessing Mediators in the Relationship between commute time and subjective well-being. *Transportation Research Record: Journal of the Transportation Research Board*, 2452, 114-123.

Kyttä, M., Broberg, A.K., Haybatollahi, S.M., Schmidt-Thomé, K. (2016). Urban Happiness: context-sensitive study of the social sustainability of urban settings. *Environment and Planning B Planning and Design*, 47(1), 1-24.

Leyden, K.M., Goldberg, A., Michealbach, P. (2011). Understanding the pursuit of happiness in ten major cities. *Urban Affairs Review*, 47, 861-888.

Li, M., Zou, M, Li, H. (2019). Urban Travel Behaviour Study Based on Data Fusion Model. In Y. Wang and Z. Zeng (Ed.) *Data-Driven Solutions to Transportation Problems* (p. 11-135). Amsterdam: Elsevier.

Lin, L., Moudon, A.V. (2010). Objective versus subjective measures of the built environment, which are most effective in capturing associations with walking? *Health Place*, 12(2), 339-348.

Madden, J.F. (1981). Why women work closer to home. *Urban Studies*, 18, 181-194.

Maduekwe, E. & de Vries, W.T. (2019). Random Spatial and Systematic Random Sampling Approach to Development Survey Data: Evidence from Field Application in Malawi. *Journal of Sustainability*, 11, 1-27.

- Martin, A. Goryakin, Y. & Suhrcke, M. (2014). Does active commuting improve psychological well-being? Longitudinal evidence from eighteen waves of British Household Panel Survey. *Preventive Medicine*, 69, 296-303.
- McCahill, C., Garrick, N.W., Atkinson-Palombo, C. Polinski, A. (2016). Effects of Parking Provision on Automobile Use in Cities: Inferring Causality. *Transportation Research Record: Journal of The Transportation Research Board*, 2543(1), 159-165.
- McLafferty, S. (2016). Conducting Questionnaire Surveys. In: N. Clifford, M. Cope, T. Gillespie & S. French. *“Key Methods in Geography”*. London: SAGE.
- Merton, R.K. (1972). Insiders and Outsiders: A Chapter in the Sociology of Knowledge. *American Journal of Sociology*, 48(1), 9-47.
- Mikiki, F. & Papaioannou, P. (2012). Investigating pro-environmental and active travel behavior for successful sustainable travel promotion. *Procedia - Social and Behavioral Sciences*, 48, 1424-1433.
- Mohit, M. A. (2013). Quality of Life in Natural and Built Environment – An Introductory Analysis. *Procedia*, 101, 33-43.
- Möhring, K., Naumann, E., Reifenschied, M., Wenz, A., Rettig, T., Krieger, U., Finkel, M., Cornesse, C. & Blom, A.G. (2020). The COVID-19 pandemic and subjective well-being: longitudinal evidence on satisfaction with work and family. *European Societies*, 23 (1), 601-617.
- Morris, E.A. (2011). *Access and Outcomes: Transportation, Location and Subjective Well-being*. Los Angeles: University of California.
- Mouratidis, K. (2019). Compact City, urban sprawl, and subjective well-being. *Cities*, 92, 261-272.
- Mouratidis, K. (2021). Urban Planning and quality of life: A review of pathways linking the built environment to subjective well-being. *Cities*, 115, 103229.
- Municipality of Barcelona (2019). *Manual of Urban Planning for Everyday Life's*. Barcelona: Municipality of Barcelona.
- Nie, P. & Sousa-Poza, A. (2016). Commute time and subjective well-being in urban China. *China Economic Review*, 48, 188-204.
- Ogilvie, D., Mitchell, R., Mutrie, N. Petticrew, M & Platt, S. (2008). Perceived characteristics of the environment associated with active travel: development and testing of a new scale. *International Journal of Behavioural Nutrition and Physical Activity*, 5.
- Olsson, L.E., Gärling, T., Ettema, D., Friman, M., Fujii, S. (2013). Happiness and satisfaction with work commute. *Social Indicators Research*, 111(1), 255-263.

Polk, M. (2003). Are Women potentially more accommodating than Men to a sustainable transportation system in Sweden? *Transportation Research Part D*, 8, 75-95.

Putnam, R. (2000). *Bowling Alone*. New York City: Simon & Schuster.

Ravensbergen, L., Builuing, R., Laliberté, N. (2020). Fear of cycling: Social, spatial and temporal dimensions. *Journal of Transport Geography*, 87, [page numbers missing].

Rowe, W.E. (2014). Positionality. In D. Coghlan M. Brydon-Miller, *The Sage Encyclopaedia of Action Research* (pp. 628). Thousand Oaks: SAGE Publications Ltd.

Ryan, R.M. & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychological Association*, 55(1), 68-78.

Salens, B.E., Sallis J.F., Black, J.B. and Chen, D. (2003). Neighborhood-based differences in Physical Activity: An Environment Scale Evaluation. *American Journal of Public Health*, 93(9), 1552-558.

Saelens, B. E. & Handy, S.L. (2010). Built Environment correlates of Walking: A Review. *Medical Science Sports Exercises*, 40(7), 550-566.

Singleton, P.A. & Wang, L. (2014). Safety and Security in Discretionary travel decision making: Focus on Active Travel Mode and Destination Choice. *Transportation Research Record: Journal of The Transportation Research Board*, 2430(1), 47-58.

Statistic Netherlands (2012). The Satisfaction with Life Scale examining construct validity. The Hague: Statistic Netherlands.

Stiglitz, J., Sen, A. & Fitoussi, J-P. (2009). *The measurement of economic performance and social progress revisited: Reflections and overviews*. Vols. 2009-33. Paris: Commission on the Measurement of Economic Performance and Social Progress.

Stutzer, A. & Frey, B.S. (2008). Stress that doesn't pay off: The commuting paradox. *Scandinavian Journal of Economics*, 110, 339-366.

Sun, B., Yan, H. & Zhang, T. (2017). Built environmental impacts on individual mode choice and BMI: Evidence from China. *Journal of Transport Geography*, 63, 11-21.

Susilo, Y.O. & Maat, K. (2007). The influence of built environment to the trends in commuting journeys in the Netherlands. *Transportation*, 34(5), 589-609.

Sweet, M. Kanaroglou, P. (2016). Gender differences: the role of travel and time use in subjective well-being. *Transportation Research Part F*, 40, 23-34.

Thin, N. (2012). *Social Happiness: Theory into policy and practice*. Bristol: Policy Press.

United Nations (2018). *2018 Revision of World Urbanization Prospects*. New York: United Nations, Department of Economic and Social Affairs.

Uteng, T.P. (2011). *Gender and Mobility in the Developing World*. Washington: World Bank.

Van Acker, V., Mokhtarian, P.L., Witlox, F. (2011). Going soft: on how subjective variables explain modal choices for leisure travel. *European Journal of Transport and Infrastructure Research*, 11(2), p.115-146.

Van Wee, B. & Ettema, D. (2016). Travel behaviour and health: A conceptual model and research agenda. *Journal of Transport and Health*, 3(3), 240-248.

Venhorst, V. (2020). *Some additional notes for Statistics 2 – GESTST2 2019-2020*. Groningen: University of Groningen, Faculty of Spatial Science.

Wang, X., Shao, C., Yin, C., Guan, L. (2020). Built environment, life events and commuting mode shift: Focus on gender differences. *Transportation Research Part D: Transport and Environment*, 88, 1-9.

Wang, F. & Wang, D. (2016). Contribution to the usage and affective experience of the residential to residential satisfaction, *Housing Studies*, 36(1), 42-60.

Wener, R.E., Evans, G.W., Phillips, D., Nadler, N. (2003). Running for the 7:45: The effects of public transit improvements on commuter stress. *Transportation*, 30(2), 203-220.

Wheatly, D. (2012). Work-life balance, travel to work, and the dual career household. *Personnel Review*, 41(6), 813-831.

World Bank (2009). *Urbanization and Growth*. Washington: World Bank, Commission Growth and Development.

World Bank (2020). *Handbook for Gender-Inclusive Urban Planning Design*. Washington: International Bank for Reconstruction and Development / World Bank.

World Health Organization (1998). *Programme on Mental Health: WHOQOL User Manual*. Geneva: WHO.

Yin, C., Zhang, J., Shao, C. (2020). Relationships of the multi-scale built environment with active commuting, body mass index, and life satisfaction in China: A GSEM-based analysis. *Travel Behaviour and Society*, 21, 69-78.

Zhang, J. and Van Acker, V. (2017). Life-oriented travel behaviour research: an overview. *Transport Research Part A: Policy Practice*, 104, 168-178.

Appendix

Appendix 1: Methodological approach

	Which information?	Moment of collection	Sources: how to obtain the data	Documentation: how to archive the data?	Analysis of the data
RQ: "How and to what extent do perceived built environment characteristics on the neighbourhood level affect travel behaviour and subjective well-being when comparing women and men?"	Influence of built environment characteristics on the neighbourhood scale and travel behaviour on subjective well-being	During data collection (from week 11 until 19) and while writing TF	Qualtrics using a survey Survey based on literature review	Answer to the main research question will be giving using the information provided by the four sub-questions, either from literature or primary data collected in course of the study Data analysis will be described in length in the method section of the thesis itself.	Reading/comparing articles, Citing obtained information
SO1: "How can subjective well-being be measured in the field of spatial planning?"	Definition and measurement of subjective well-being	While writing TF, before primary data collection (Week 6-10)	Academic literature	N/A	Reading/comparing articles, Citing obtained information
SO2: "Which spatial variables on the neighbourhood level can be identified for a subjective evaluation of the BE characteristics?"	Set of perceived built environment characteristics for neighbourhood evaluation	While writing TF, before primary data collection (Week 6-10)	Academic literature	N/A	Reading/comparing articles, Citing obtained information
SO3: "What is the relation between perceived built environment characteristics on the neighbourhood level and travel behaviour?"	Influence of built environment characteristics on travel behaviour	During data collection (Week 6-10)	Qualtrics using a survey	Data will be archived in Qualtrics, imported later to Excel and then to SPSS for data analysis	Data will be analysed in SPSS (see chapter on data analysis)
SO4: "What is the relation between travel behaviour and well-being?"	Influence of travel behaviour on subjective well-being	During data collection (Week 6-10)	Qualtrics using a survey	Data will be archived in Qualtrics, imported later to Excel and then to SPSS for data analysis	Data will be analysed in SPSS (see chapter on data analysis)

Appendix 2: Overview survey question

Table 13: Survey questions with measurement level, answer options and explanation of aim of the question

Q#	Question	Measurement level	Answer options	Aim of question
Socio-demographic characteristics				
Q1	What is your gender?	Nominal	Female Male Other	Question gathers general information about the sample Enables the gender comparison aimed on in this research
Q2	What is your age?	Ordinal	18-24 25-44 45-64 65+	Question gathers general information about the sample Allows for the opportunity to separate age groups later on in the data analysis
Q3	In which district of the Oosterparkwijk do you live?	Nominal	Vogelbuurt Florabuurt Gorechtbuurt Bloemenbuurt Damsterbuurt	Question gathers general information about the sample Enables the comparison between different districts and its corresponding objective BE characteristics
Q4	What is your household composition?	Nominal	Single Single parent Couple without children Couple with children Other	Question gathers general information about the sample Gives insight into respondent's household composition which can affect travel behaviour
Q5	What is your living condition?	Nominal	Renter Owner	Question gathers general information about the sample
Q6	Do you have a driver's license?	Binary	Yes No	Question gathers general information about the sample Can be related to travel behaviour, because it influences the mode choice
Q7	Do you have access to a car?	Binary	Yes No	Question gathers general information about the sample

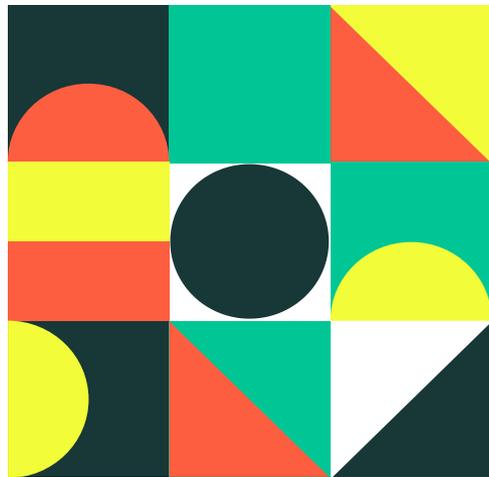
				Can be related to travel behaviour and well-being, because it influences the action space of a person and therefore the ability to take part in activities (Ettema et al., 2010).
Q8	What is your working situation?	Nominal	No job Part time Full time Other	Question gathers general information about the sample Information can provide insight about the general time budget the respondent has
Q9	In light of the current situation: Do you work from home?	Binary	Yes No	Question gathers general information about the sample Information can be linked to respondents travel behaviour
Travel behaviour				
Q10	What is your main mode of transportation?	Nominal	Active travel (cycling/walking) Car Public transport Combination of modes	Question aims to identify the main mode of transport Information can be linked to well-being, since active travel can contribute to subjective well-being (Gatersleben & Uzzel, 2007)
Q11	Could you please indicate how much time (in min.) you spend on each travel mode, when considering the last seven days	Ratio	(t) in minutes per mode: Active travel Car Public transport	Question aims to identify the amount of time per mode + total travel time in a week
Subjective built environment characteristics				
Q13	Neighbourhood meets requirements	Ordinal	Respondents indicate on a 1-5 Likert scale in how much they agree with the statement	Questions aim to identify the perception of the respondent towards the attractiveness of the neighbourhood
Q14	Neighbourhood is quit			
Q15	Neighbourhood looks attractive			

Q16	Houses are well maintained		1: Totally disagree 2: Disagree 3: Neutral 4: Agree 5: Totally agree		
Q17	There is no vandalism				
Q18	I trust the people in my neighbourhood				
Q19	There are sufficient shops for daily use				Questions aim to identify the attitude of the respondents towards facilities and public spaces of the neighbourhood
Q20	There are sufficient non-daily shops				
Q21	There is a health centre				
Q22	There are enough other facilities				
Q23	There are enough bars/restaurants				
Q24	There is enough public space				
Q25	There is enough green space				
Q26	Neighbourhood is accessible by public transport			Questions aim to identify the attitude of the respondents towards general accessibility of the neighbourhood Information can be linked to travel behaviour, especially mode choice since this might be affected by the overall accessibility	
Q27	Neighbourhood is accessible by bike				
Q28	Neighbourhood is accessible on foot				
Q29	City centre is well accessible				
Q30	Work location is well accessible				
Q31	Traffic in neighbourhood is safe				Questions aim to identify the attitude of the respondents towards traffic safety of the neighbourhood Information can be related to travel mode choice, since perceived traffic safety can affect the choice
Q32	Traffic is safe for cyclists				
Q33	Traffic is safe for pedestrians				

Q34	Neighbourhood is accessible by car				<p>Questions aim to identify the attitude of the respondents towards car accessibility of the neighbourhood</p> <p>Information can be related to travel mode, especially the car</p>
Q35	There is sufficient parking space				
Q36	Sufficient street lighting				
Q37	I am not afraid to go out by myself at night				
Q38	It is safe to cycle in the dark				
Q39	Children can play safely				
Q40	There is a small chance of burglary				
Q41	There are many people on the street				
Q42	There is no nuisance from traffic				
Q43	There is no nuisance from air pollution				
Q44	There is no nuisance of other residents				
Q45	There is no graffiti				
Q46	There is no litter				
Cognitive well-being					
Q47	In most ways my life is close to my ideal	Ordinal*	7-point Likert-scale: 7: Strongly agree 6: Agree 5: Slightly agree 4: Neither agree nor disagree 3: slightly disagree 2: Disagree 1: Strongly disagree		<p>Questions aim to identify the satisfaction with life of the respondent, assessing the satisfaction as a whole</p>
Q48	The conditions of my life are excellent				
Q49	I am satisfied with my life				
Q50	So far I have gotten the important things I want in life				

Q51	If I could live my life over, I would change almost nothing			
-----	---	--	--	--

*Despite the measurement level for cognitive well-being being ordinal (when considering the answer possibilities in words), the result can be seen as a **ratio outcome**, because the scores (1-7) for the five statements are being add up to one final score (with 5 the lowest score and 35 the highest score). The final score is then being worded again. The student adopts this approach from Ettema & Schickermann (2015)



Onderzoek in de Ooster- parkwijk

**Wilt u mij helpen?
Vul dan nu mijn enquête in!
Het duurt maar slechts 5 minuten.**

Voor mijn bachelor scriptie
doe ik onderzoek naar de
relatie tussen de gebouwde
omgeving, reisgedrag en
welzijn.



Link:

https://rug.eu.qualtrics.com/jfe/form/SV_cN0TqUgVEZdNale

**Voor vragen kunt u mij bereiken via:
j.vollbrandt@student.rug.nl**

**Alle antwoorden zijn volledig anoniem en
worden alleen voor dit onderzoek gebruikt!**



Figure A.3: Flyer for promoting online questionnaire (Author, 2021).

Appendix 4: GIS analysis

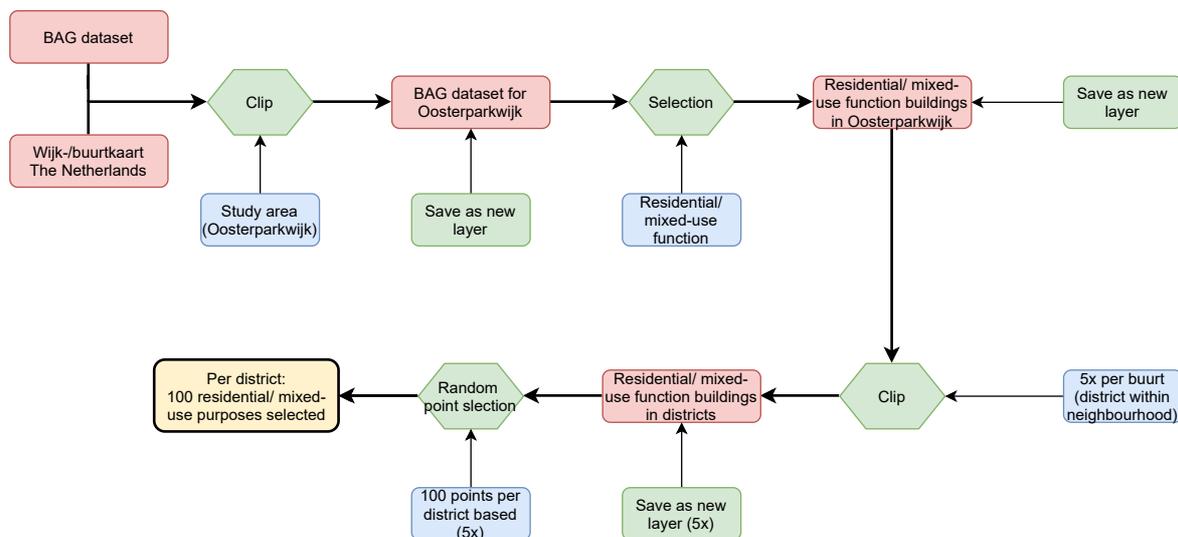


Figure A.4: Overview steps in GIS (Author, 2021)

Additional information on GIS analysis:

- Data sets: Two datasets were used for this analysis. First, the dataset from the BAG (Basisregistratie Adressen en Gebouwen), contains information over every building and its associated units. Per building the amount of its units and their associated functions are counted. Second, a base map from the Central Bureau voor de Statistiek contains information over the official neighbourhood and district boundaries.
- Accuracy: The dataset BAG was downloaded from the website GEO-Dienst, which is run by the university of Groningen. The platform itself claims to have accurate and up-to-date information. The base map from the municipality was cross-checked for accuracy by means of the website of the municipality.
- Excluding buildings: For the distribution of the flyer only buildings with a residential function should be included in the sampling frame. For this the attribute table of the BAG dataset was checked and all buildings with either only a residential function or a mixed function (including residential function) was selected.
- Random selection: Certain buildings could have multiple residential units (e.g. studentflats), and therefore multiple addresses. Because the random selection was based on the residential units (addresses) one building could have been selected multiple times.
- Sampling strategy for buildings with multiple addresses: When a chosen building had multiple addresses but only was chosen once, the lowest street number was chosen.

Sources used in analysis

- GEO-Dienst (2021). Basisregistratie Adressen en Gebouwen (BAG). Retrieved on March 02, 2021 from <https://geodienst.xyz/data/municipalities.php>. Groningen: Rijksuniversiteit Groningen.
- CBS (2020). Wijk- en Buurtkaart 2020, Versie 1. Retrieved on March 03, 2021 from <https://data.overheid.nl/dataset/13726-wijk--en-buurtkaart-2020-versie-1>. The Hague: Statistics Netherlands.

Appendix 5: SPSS Output

Table 14: Frequencies for descriptive statistics

Question / Information	SPSS Output																																									
Q1: Gender	<p style="text-align: center;">What is your gender?</p> <table border="1"> <thead> <tr> <th></th> <th></th> <th>Frequency</th> <th>Percent</th> <th>Valid Percent</th> <th>Cumulative Percent</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Valid</td> <td>Female</td> <td>35</td> <td>50,0</td> <td>50,0</td> <td>50,0</td> </tr> <tr> <td>Male</td> <td>35</td> <td>50,0</td> <td>50,0</td> <td>100,0</td> </tr> <tr> <td>Total</td> <td>70</td> <td>100,0</td> <td>100,0</td> <td></td> </tr> </tbody> </table>							Frequency	Percent	Valid Percent	Cumulative Percent	Valid	Female	35	50,0	50,0	50,0	Male	35	50,0	50,0	100,0	Total	70	100,0	100,0																
		Frequency	Percent	Valid Percent	Cumulative Percent																																					
Valid	Female	35	50,0	50,0	50,0																																					
	Male	35	50,0	50,0	100,0																																					
	Total	70	100,0	100,0																																						
Q2: Age	<p style="text-align: center;">What is your age?</p> <table border="1"> <thead> <tr> <th></th> <th></th> <th>Frequency</th> <th>Percent</th> <th>Valid Percent</th> <th>Cumulative Percent</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Valid</td> <td>18-24</td> <td>22</td> <td>31,4</td> <td>31,4</td> <td>31,4</td> </tr> <tr> <td>25-44</td> <td>40</td> <td>57,1</td> <td>57,1</td> <td>88,6</td> </tr> <tr> <td>45-64</td> <td>6</td> <td>8,6</td> <td>8,6</td> <td>97,1</td> </tr> <tr> <td>65+</td> <td>2</td> <td>2,9</td> <td>2,9</td> <td>100,0</td> </tr> <tr> <td>Total</td> <td>70</td> <td>100,0</td> <td>100,0</td> <td></td> </tr> </tbody> </table>							Frequency	Percent	Valid Percent	Cumulative Percent	Valid	18-24	22	31,4	31,4	31,4	25-44	40	57,1	57,1	88,6	45-64	6	8,6	8,6	97,1	65+	2	2,9	2,9	100,0	Total	70	100,0	100,0						
		Frequency	Percent	Valid Percent	Cumulative Percent																																					
Valid	18-24	22	31,4	31,4	31,4																																					
	25-44	40	57,1	57,1	88,6																																					
	45-64	6	8,6	8,6	97,1																																					
	65+	2	2,9	2,9	100,0																																					
	Total	70	100,0	100,0																																						
Q3: District	<p style="text-align: center;">In which district of the Oosterparkwijk do you live?</p> <table border="1"> <thead> <tr> <th></th> <th></th> <th>Frequency</th> <th>Percent</th> <th>Valid Percent</th> <th>Cumulative Percent</th> </tr> </thead> <tbody> <tr> <td rowspan="6">Valid</td> <td>Vogelbuurt</td> <td>15</td> <td>21,4</td> <td>21,4</td> <td>21,4</td> </tr> <tr> <td>Florabuurt</td> <td>8</td> <td>11,4</td> <td>11,4</td> <td>32,9</td> </tr> <tr> <td>Gorechtbuurt</td> <td>37</td> <td>52,9</td> <td>52,9</td> <td>85,7</td> </tr> <tr> <td>Bloemenbuurt</td> <td>6</td> <td>8,6</td> <td>8,6</td> <td>94,3</td> </tr> <tr> <td>Damsterbuurt</td> <td>4</td> <td>5,7</td> <td>5,7</td> <td>100,0</td> </tr> <tr> <td>Total</td> <td>70</td> <td>100,0</td> <td>100,0</td> <td></td> </tr> </tbody> </table>							Frequency	Percent	Valid Percent	Cumulative Percent	Valid	Vogelbuurt	15	21,4	21,4	21,4	Florabuurt	8	11,4	11,4	32,9	Gorechtbuurt	37	52,9	52,9	85,7	Bloemenbuurt	6	8,6	8,6	94,3	Damsterbuurt	4	5,7	5,7	100,0	Total	70	100,0	100,0	
		Frequency	Percent	Valid Percent	Cumulative Percent																																					
Valid	Vogelbuurt	15	21,4	21,4	21,4																																					
	Florabuurt	8	11,4	11,4	32,9																																					
	Gorechtbuurt	37	52,9	52,9	85,7																																					
	Bloemenbuurt	6	8,6	8,6	94,3																																					
	Damsterbuurt	4	5,7	5,7	100,0																																					
	Total	70	100,0	100,0																																						
Q4: Household composition	<p style="text-align: center;">What is your household composition?</p> <table border="1"> <thead> <tr> <th></th> <th></th> <th>Frequency</th> <th>Percent</th> <th>Valid Percent</th> <th>Cumulative Percent</th> </tr> </thead> <tbody> <tr> <td rowspan="6">Valid</td> <td>Single</td> <td>31</td> <td>44,3</td> <td>44,3</td> <td>44,3</td> </tr> <tr> <td>Single-parent</td> <td>1</td> <td>1,4</td> <td>1,4</td> <td>45,7</td> </tr> <tr> <td>Couple without children</td> <td>26</td> <td>37,1</td> <td>37,1</td> <td>82,9</td> </tr> <tr> <td>Couple with children</td> <td>1</td> <td>1,4</td> <td>1,4</td> <td>84,3</td> </tr> <tr> <td>Other</td> <td>11</td> <td>15,7</td> <td>15,7</td> <td>100,0</td> </tr> <tr> <td>Total</td> <td>70</td> <td>100,0</td> <td>100,0</td> <td></td> </tr> </tbody> </table>							Frequency	Percent	Valid Percent	Cumulative Percent	Valid	Single	31	44,3	44,3	44,3	Single-parent	1	1,4	1,4	45,7	Couple without children	26	37,1	37,1	82,9	Couple with children	1	1,4	1,4	84,3	Other	11	15,7	15,7	100,0	Total	70	100,0	100,0	
		Frequency	Percent	Valid Percent	Cumulative Percent																																					
Valid	Single	31	44,3	44,3	44,3																																					
	Single-parent	1	1,4	1,4	45,7																																					
	Couple without children	26	37,1	37,1	82,9																																					
	Couple with children	1	1,4	1,4	84,3																																					
	Other	11	15,7	15,7	100,0																																					
	Total	70	100,0	100,0																																						
Q5: Living condition	<p style="text-align: center;">What is your living condition?</p> <table border="1"> <thead> <tr> <th></th> <th></th> <th>Frequency</th> <th>Percent</th> <th>Valid Percent</th> <th>Cumulative Percent</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Valid</td> <td>Renter</td> <td>55</td> <td>78,6</td> <td>78,6</td> <td>78,6</td> </tr> <tr> <td>Owner</td> <td>15</td> <td>21,4</td> <td>21,4</td> <td>100,0</td> </tr> <tr> <td>Total</td> <td>70</td> <td>100,0</td> <td>100,0</td> <td></td> </tr> </tbody> </table>							Frequency	Percent	Valid Percent	Cumulative Percent	Valid	Renter	55	78,6	78,6	78,6	Owner	15	21,4	21,4	100,0	Total	70	100,0	100,0																
		Frequency	Percent	Valid Percent	Cumulative Percent																																					
Valid	Renter	55	78,6	78,6	78,6																																					
	Owner	15	21,4	21,4	100,0																																					
	Total	70	100,0	100,0																																						

Q6 + Q7:
Driver's
license +
access to car

Do you have a drivers license?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	61	87,1	87,1	87,1
	No	9	12,9	12,9	100,0
	Total	70	100,0	100,0	

Do you have access to a car?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	30	42,9	42,9	42,9
	No	40	57,1	57,1	100,0
	Total	70	100,0	100,0	

Q8 +Q9:
Working
condition +
location

What is your current working condition?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No job	9	12,9	12,9	12,9
	Parttime	26	37,1	37,1	50,0
	Fulltime	24	34,3	34,3	84,3
	Other	11	15,7	15,7	100,0
	Total	70	100,0	100,0	

**Considering the current situation, with regard to COVID-19:
Do you work from home?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	33	47,1	47,8	47,8
	No	36	51,4	52,2	100,0
	Total	69	98,6	100,0	
Missing	System	1	1,4		
Total		70	100,0		

Q10: Main mode of transportation	<p style="text-align: center;">What is your main mode of transportation, when taking the last 7 days into consideration?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2"></th> <th>Frequency</th> <th>Percent</th> <th>Valid Percent</th> <th>Cumulative Percent</th> </tr> </thead> <tbody> <tr> <td rowspan="5" style="vertical-align: top;">Valid</td> <td>Active travel (cycling/walking)</td> <td style="text-align: center;">52</td> <td style="text-align: center;">74,3</td> <td style="text-align: center;">74,3</td> <td style="text-align: center;">74,3</td> </tr> <tr> <td>Car</td> <td style="text-align: center;">10</td> <td style="text-align: center;">14,3</td> <td style="text-align: center;">14,3</td> <td style="text-align: center;">88,6</td> </tr> <tr> <td>Public transport</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1,4</td> <td style="text-align: center;">1,4</td> <td style="text-align: center;">90,0</td> </tr> <tr> <td>Combination of different modes</td> <td style="text-align: center;">7</td> <td style="text-align: center;">10,0</td> <td style="text-align: center;">10,0</td> <td style="text-align: center;">100,0</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">70</td> <td style="text-align: center;">100,0</td> <td style="text-align: center;">100,0</td> <td></td> </tr> </tbody> </table>			Frequency	Percent	Valid Percent	Cumulative Percent	Valid	Active travel (cycling/walking)	52	74,3	74,3	74,3	Car	10	14,3	14,3	88,6	Public transport	1	1,4	1,4	90,0	Combination of different modes	7	10,0	10,0	100,0	Total	70	100,0	100,0	
		Frequency	Percent	Valid Percent	Cumulative Percent																												
Valid	Active travel (cycling/walking)	52	74,3	74,3	74,3																												
	Car	10	14,3	14,3	88,6																												
	Public transport	1	1,4	1,4	90,0																												
	Combination of different modes	7	10,0	10,0	100,0																												
	Total	70	100,0	100,0																													
Q11: Time (in minutes) per mode	<p style="text-align: center;">Descriptive Statistics</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>N</th> <th>Minimum</th> <th>Maximum</th> <th>Mean</th> <th>Std. Deviation</th> </tr> </thead> <tbody> <tr> <td>Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Active travel (cycling/walking)</td> <td style="text-align: center;">70</td> <td style="text-align: center;">,00</td> <td style="text-align: center;">840,00</td> <td style="text-align: center;">176,7714</td> <td style="text-align: center;">164,82860</td> </tr> <tr> <td>Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Car</td> <td style="text-align: center;">70</td> <td style="text-align: center;">,00</td> <td style="text-align: center;">660,00</td> <td style="text-align: center;">53,8714</td> <td style="text-align: center;">110,91124</td> </tr> <tr> <td>Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Public transport</td> <td style="text-align: center;">70</td> <td style="text-align: center;">,00</td> <td style="text-align: center;">360,00</td> <td style="text-align: center;">32,2571</td> <td style="text-align: center;">68,62029</td> </tr> <tr> <td>Valid N (listwise)</td> <td style="text-align: center;">70</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		N	Minimum	Maximum	Mean	Std. Deviation	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Active travel (cycling/walking)	70	,00	840,00	176,7714	164,82860	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Car	70	,00	660,00	53,8714	110,91124	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Public transport	70	,00	360,00	32,2571	68,62029	Valid N (listwise)	70						
	N	Minimum	Maximum	Mean	Std. Deviation																												
Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Active travel (cycling/walking)	70	,00	840,00	176,7714	164,82860																												
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Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Public transport	70	,00	360,00	32,2571	68,62029																												
Valid N (listwise)	70																																

Table 15: Relevant statistical tests for descriptive statistics

<p>Test used</p> <p>Reliability analysis: Cronbach's Alpha</p> <p>For the internal consistency of the five SWLS-statements</p>	<p>SPSS output</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Reliability Statistics</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Cronbach's Alpha</th> <th>N of Items</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">,856</td> <td style="text-align: center;">5</td> </tr> </tbody> </table> </div> <div style="text-align: center;"> <p>Case Processing Summary</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2"></th> <th>N</th> <th>%</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="vertical-align: top;">Cases</td> <td>Valid</td> <td style="text-align: center;">70</td> <td style="text-align: center;">100,0</td> </tr> <tr> <td>Excluded^a</td> <td style="text-align: center;">0</td> <td style="text-align: center;">,0</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">70</td> <td style="text-align: center;">100,0</td> </tr> </tbody> </table> <p style="font-size: small;">a. Listwise deletion based on all variables in the procedure.</p> </div> </div>	Cronbach's Alpha	N of Items	,856	5			N	%	Cases	Valid	70	100,0	Excluded ^a	0	,0	Total	70	100,0																																			
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<p>Compare means: Ind. Samples T-Test</p> <p>For comparing SWLS scores between</p>	<p style="text-align: center;">Independent Samples Test</p> <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th colspan="4">Levene's Test for Equality of Variances</th> <th colspan="6">t-test for Equality of Means</th> </tr> <tr> <th colspan="2"></th> <th>F</th> <th>Sig.</th> <th>t</th> <th>df</th> <th>Sig. (2-tailed)</th> <th>Mean Difference</th> <th>Std. Error Difference</th> <th colspan="2">95% Confidence Interval of the Difference</th> </tr> <tr> <th colspan="2"></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Lower</th> <th>Upper</th> </tr> </thead> <tbody> <tr> <td rowspan="2">SWLScore</td> <td>Equal variances assumed</td> <td style="text-align: center;">,021</td> <td style="text-align: center;">,885</td> <td style="text-align: center;">-,244</td> <td style="text-align: center;">68</td> <td style="text-align: center;">,808</td> <td style="text-align: center;">-,37143</td> <td style="text-align: center;">1,52408</td> <td style="text-align: center;">-3,41269</td> <td style="text-align: center;">2,66983</td> </tr> <tr> <td>Equal variances not assumed</td> <td></td> <td></td> <td style="text-align: center;">-,244</td> <td style="text-align: center;">67,785</td> <td style="text-align: center;">,808</td> <td style="text-align: center;">-,37143</td> <td style="text-align: center;">1,52408</td> <td style="text-align: center;">-3,41287</td> <td style="text-align: center;">2,67001</td> </tr> </tbody> </table>	Levene's Test for Equality of Variances				t-test for Equality of Means								F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference											Lower	Upper	SWLScore	Equal variances assumed	,021	,885	-,244	68	,808	-,37143	1,52408	-3,41269	2,66983	Equal variances not assumed			-,244	67,785	,808	-,37143	1,52408	-3,41287	2,67001
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	Ranks			
	What is your gender?	N	Mean Rank	Sum of Ranks
Q32: Traffic is safe for pedestrians	Female	35	40,43	1415,00
	Male	35	30,57	1070,00
	Total	70		
Q34: Neighbourhood is accessible by car	Female	35	40,87	1430,50
	Male	35	30,13	1054,50
	Total	70		
Q37: I am not afraid to go out by myself at night	Female	35	31,47	1101,50
	Male	35	39,53	1383,50
	Total	70		
Q38: It is safe to cycle in the dark	Female	35	27,84	974,50
	Male	35	43,16	1510,50
	Total	70		
	Female	35	27,10	948,50
	Male	35	43,90	1536,50
	Total	70		
	Female	35	30,37	1063,00
	Male	35	40,63	1422,00
	Total	70		

Test Statistics ^a						
	Statements about attractiveness of the neighbourhood - Neighbourhood looks attractive	Statements about attractiveness of the neighbourhood - I trust the people in my neighbourhood	Statements about traffic safety - Traffic is safe for pedestrians	Statements about social safety - I am not afraid to go out by myself at night	Statements about social safety - It is safe to cycle in the dark	Statements about car accessibility - Neighbourhood is accessible by car
Mann-Whitney U	440,000	424,500	471,500	344,500	318,500	433,000
Wilcoxon W	1070,000	1054,500	1101,500	974,500	948,500	1063,000
Z	-2,152	-2,409	-2,136	-3,315	-3,808	-2,248
Asymp. Sig. (2-tailed)	,031	,016	,033	,001	,000	,025

a. Grouping Variable: What is your gender?

Table 16: SPSS output of Spearman's rank correlation coefficient (satisfaction with life)

Question / Information	SPSS output																																																																																																																																																																																																																																																										
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Correlation is significant at the 0.01 level (2-tailed).</p>	Spearman's rho	SWLScore	SWLScore	Statements about attractiveness of the neighbourhood - Neighbourhood meets the requirements	Statements about general accessibility - Neighbourhood is accessible by public transport	Statements about car accessibility - Neighbourhood is accessible by car	Statements about traffic safety - Traffic is safe for pedestrians	Statements about social safety - I am not afraid to go out by myself at night	Statements about social safety - It is safe to cycle in the dark	Statements about social safety - There are many people on the street		Correlation Coefficient	1,000	,277*	,263*	,253*	,383**	,342**	,410**	,315**		Sig. (2-tailed)	.	,020	,028	,035	,001	,004	,000	,008		N	70	70	70	70	70	70	70	70	Statements about attractiveness of the neighbourhood - Neighbourhood meets the requirements	Correlation Coefficient	,277*	1,000	,329**	,249*	,278*	,261*	,272*	,012		Sig. (2-tailed)	,020	.	,005	,037	,020	,029	,023	,925		N	70	70	70	70	70	70	70	70	Statements about general accessibility - Neighbourhood is accessible by public transport	Correlation Coefficient	,263*	,329**	1,000	,272*	,215	,404**	,398**	,128		Sig. (2-tailed)	,028	,005	.	,023	,074	,001	,001	,289		N	70	70	70	70	70	70	70	70	Statements about car accessibility - Neighbourhood is accessible by car	Correlation Coefficient	,253*	,249*	,272*	1,000	,103	,453**	,445**	,105		Sig. (2-tailed)	,035	,037	,023	.	,396	,000	,000	,385		N	70	70	70	70	70	70	70	70	Statements about traffic safety - Traffic is safe for pedestrians	Correlation Coefficient	,383**	,278*	,215	,103	1,000	,320**	,392**	,059		Sig. (2-tailed)	,001	,020	,074	,396	.	,007	,001	,627		N	70	70	70	70	70	70	70	70	Statements about social safety - I am not afraid to go out by myself at night	Correlation Coefficient	,342**	,261*	,404**	,453**	,320**	1,000	,806**	-,081		Sig. (2-tailed)	,004	,029	,001	,000	,007	.	,000	,507		N	70	70	70	70	70	70	70	70	Statements about social safety - It is safe to cycle in the dark	Correlation Coefficient	,410**	,272*	,398**	,445**	,392**	,806**	1,000	-,037		Sig. (2-tailed)	,000	,023	,001	,000	,001	,000	.	,759		N	70	70	70	70	70	70	70	70	Statements about social safety - There are many people on the street	Correlation Coefficient	,315**	,012	,128	,105	,059	-,081	-,037	1,000		Sig. (2-tailed)	,008	,925	,289	,385	,627	,507	,759	.		N	70	70	70	70	70	70	70	70
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What is your gender? = Female</p>	Spearman's rho	SWLScore	SWLScore	Statements about facilities coverage - There is enough public space	Statements about traffic safety - Traffic is safe for pedestrians	Statements about social safety - I am not afraid to go out by myself at night	Statements about social safety - It is safe to cycle in the dark	Statements about nuisance - There is no nuisance from other residents		Correlation Coefficient	1,000	,339*	,342*	,353*	,385*	,495**		Sig. (2-tailed)	.	,047	,044	,037	,022	,002		N	35	35	35	35	35	35	Statements about facilities coverage - There is enough public space	Correlation Coefficient	,339*	1,000	,367*	,272	,290	,340*		Sig. (2-tailed)	,047	.	,030	,114	,091	,045		N	35	35	35	35	35	35	Statements about traffic safety - Traffic is safe for pedestrians	Correlation Coefficient	,342*	,367*	1,000	,159	,156	,274		Sig. (2-tailed)	,044	,030	.	,362	,371	,112		N	35	35	35	35	35	35	Statements about social safety - I am not afraid to go out by myself at night	Correlation Coefficient	,353*	,272	,159	1,000	,870**	,225		Sig. (2-tailed)	,037	,114	,362	.	,000	,194		N	35	35	35	35	35	35	Statements about social safety - It is safe to cycle in the dark	Correlation Coefficient	,385*	,290	,156	,870**	1,000	,281		Sig. (2-tailed)	,022	,091	,371	,000	.	,102		N	35	35	35	35	35	35	Statements about nuisance - There is no nuisance from other residents	Correlation Coefficient	,495**	,340*	,274	,225	,281	1,000		Sig. (2-tailed)	,002	,045	,112	,194	,102	.		N	35	35	35	35	35	35																																																																																																		
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Correlation test:
Spearman's RHO
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 *men

		Correlations ^a										
		SWLScore	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Active travel (cycling/walking)	Statements about attractiveness of the neighbourhood - Neighbourhood meets the requirements	Statements about facilities coverage - There are sufficient shops for daily use	Statements about general accessibility - Neighbourhood is accessible by public transport	Statements about car accessibility - Neighbourhood is accessible by car	Statements about general accessibility - Work location is well accessible	Statements about social safety - I am not afraid to go out by myself at night	Statements about social safety - It is safe to cycle in the dark	Statements about social safety - There are many people on the street	
Spearman's rho	SWLScore	Correlation Coefficient	1,000	,460**	,394*	,415*	,447**	,371*	,425*	,399*	,507**	,510**
		Sig. (2-tailed)		,005	,019	,013	,007	,028	,011	,018	,002	,002
		N	35	35	35	35	35	35	35	35	35	35
Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Active travel (cycling/walking)	SWLScore	Correlation Coefficient	,460**	1,000	,300	,136	-,121	-,011	-,194	-,068	,165	,282
		Sig. (2-tailed)	,005		,080	,437	,488	,951	,264	,699	,287	,100
		N	35	35	35	35	35	35	35	35	35	35
Statements about attractiveness of the neighbourhood - Neighbourhood meets the requirements	SWLScore	Correlation Coefficient	,394*	,300	1,000	,556**	,308	,344*	,273	,532**	,526**	,032
		Sig. (2-tailed)	,019	,080		,001	,072	,043	,113	,001	,001	,857
		N	35	35	35	35	35	35	35	35	35	35
Statements about facilities coverage - There are sufficient shops for daily use	SWLScore	Correlation Coefficient	,415*	,136	,556**	1,000	,264	,296	,295	,584**	,465**	,131
		Sig. (2-tailed)	,013	,437	,001		,125	,084	,085	,000	,005	,453
		N	35	35	35	35	35	35	35	35	35	35
Statements about general accessibility - Neighbourhood is accessible by public transport	SWLScore	Correlation Coefficient	,447**	-,121	,308	,264	1,000	,518**	,201	,564**	,474**	,144
		Sig. (2-tailed)	,007	,488	,072	,125		,001	,247	,000	,004	,408
		N	35	35	35	35	35	35	35	35	35	35
Statements about car accessibility - Neighbourhood is accessible by car	SWLScore	Correlation Coefficient	,371*	-,011	,344*	,296	,518**	1,000	,321	,613**	,667**	,063
		Sig. (2-tailed)	,028	,951	,043	,084	,001		,060	,000	,000	,718
		N	35	35	35	35	35	35	35	35	35	35
Statements about general accessibility - Work location is well accessible	SWLScore	Correlation Coefficient	,425*	,194	,273	,295	,201	,321	1,000	,460**	,487**	,126
		Sig. (2-tailed)	,011	,264	,113	,085	,247	,060		,005	,003	,469
		N	35	35	35	35	35	35	35	35	35	35
Statements about social safety - I am not afraid to go out by myself at night	SWLScore	Correlation Coefficient	,399*	-,068	,532**	,584**	,564**	,613**	,460**	1,000	,677**	,044
		Sig. (2-tailed)	,018	,699	,001	,000	,000	,000	,005		,000	,804
		N	35	35	35	35	35	35	35	35	35	35
Statements about social safety - It is safe to cycle in the dark	SWLScore	Correlation Coefficient	,507**	,185	,526**	,465**	,474**	,667**	,487**	,677**	1,000	,151
		Sig. (2-tailed)	,002	,287	,001	,005	,004	,000	,003	,000		,385
		N	35	35	35	35	35	35	35	35	35	35
Statements about social safety - There are many people on the street	SWLScore	Correlation Coefficient	,510**	,282	,032	,131	,144	,063	,126	,044	,151	1,000
		Sig. (2-tailed)	,002	,100	,857	,453	,408	,718	,469	,804	,385	
		N	35	35	35	35	35	35	35	35	35	35

** Correlation is significant at the 0.01 level (2-tailed).
 * Correlation is significant at the 0.05 level (2-tailed).
 a. What is your gender? = Male

Table 17: SPSS output of Spearman's rank correlation coefficient (**travel behaviour**)

Information	SPSS output											
<p>Correlation test: Spearman's RHO Only pairs of question with significant ($\alpha= 0.05$) correlation are shown. *both genders</p>	Correlations											
		Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Car	Statements about attractiveness of the neighbourhood - Neighbourhood meets the requirements	Statements about attractiveness of the neighbourhood - There is no vandalism	Statements about car accessibility - Neighbourhood is accessible by car	Statements about traffic safety - Traffic in the neighbourhood is safe	Statements about traffic safety - Traffic is safe for cyclists	Statements about traffic safety - Traffic is safe for pedestrians	Statements about social safety - There are many people on the street	Statements about nuisance - There is no nuisance from traffic		
	Spearman's rho	Correlation Coefficient	1,000	-.255*	-.324**	.295*	-.372**	-.298*	-.292*	-.240*	-.269*	
		Sig. (2-tailed)	.	.033	.006	.013	.002	.012	.014	.046	.024	
		N	70	70	70	70	70	70	70	70	70	
		Correlation Coefficient	-.255*	1,000	.315**	.249*	.216	.233	.278*	.012	.383**	
		Sig. (2-tailed)	.033	.	.008	.037	.072	.053	.020	.925	.002	
		N	70	70	70	70	70	70	70	70	70	
		Correlation Coefficient	-.324**	.315**	1,000	-.068	.431**	.243*	.107	-.250*	.441**	
		Sig. (2-tailed)	.006	.008	.	.576	.000	.043	.378	.037	.000	
		N	70	70	70	70	70	70	70	70	70	
		Correlation Coefficient	.295*	.249*	-.068	1,000	.045	-.007	.103	.105	-.155	
		Sig. (2-tailed)	.013	.037	.576	.	.713	.956	.396	.385	.201	
		N	70	70	70	70	70	70	70	70	70	
		Correlation Coefficient	-.372**	.216	.431**	.045	1,000	.518**	.380**	-.027	.177	
		Sig. (2-tailed)	.002	.072	.000	.713	.	.000	.001	.825	.142	
		N	70	70	70	70	70	70	70	70	70	
		Correlation Coefficient	-.298*	.233	.243*	-.007	.518**	1,000	.429**	-.028	.293*	
		Sig. (2-tailed)	.012	.053	.043	.956	.000	.	.000	.817	.014	
		N	70	70	70	70	70	70	70	70	70	
	Correlation Coefficient	-.292*	.278*	.107	.103	.380**	.429**	1,000	.059	.136		
	Sig. (2-tailed)	.014	.020	.378	.396	.001	.000	.	.627	.261		
	N	70	70	70	70	70	70	70	70	70		
	Correlation Coefficient	-.240*	.012	-.250*	.105	-.027	-.028	.059	1,000	-.207		
	Sig. (2-tailed)	.046	.925	.037	.385	.825	.817	.627	.	.085		
	N	70	70	70	70	70	70	70	70	70		
	Correlation Coefficient	-.269*	.363**	.441**	-.155	.177	.293*	.136	-.207	1,000		
	Sig. (2-tailed)	.024	.002	.000	.201	.142	.014	.261	.085	.		
	N	70	70	70	70	70	70	70	70	70		

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

Correlation test:
Spearman's RHO
 Only pairs of question with significant ($\alpha = 0.05$) correlation are shown.
 *active travel, both genders are show separately

Correlations^a

	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Active travel (cycling/walking)		Statements about attractiveness of the neighbourhood - Neighbourhood looks attractive	Statements about facilities coverage - There are enough other facilities	Statements about traffic safety - Traffic is safe for pedestrians	Statements about nuisance - There is no nuisance from other residents	Statements about nuisance - There is no nuisance from air pollution	Statements about nuisance - There is no graffiti	
Spearman's rho	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Active travel (cycling/walking)	Correlation Coefficient	1,000	,402*	,275	,456**	,159	-,022	,132
		Sig. (2-tailed)	.	,017	,110	,006	,362	,902	,448
		N	35	35	35	35	35	35	35
Statements about attractiveness of the neighbourhood - Neighbourhood looks attractive	Statements about attractiveness of the neighbourhood - Neighbourhood looks attractive	Correlation Coefficient	,402*	1,000	,210	,413*	,579**	,472**	,253
		Sig. (2-tailed)	,017	.	,227	,014	,000	,004	,142
		N	35	35	35	35	35	35	35
Statements about facilities coverage - There are enough other facilities	Statements about facilities coverage - There are enough other facilities	Correlation Coefficient	,275	,210	1,000	,383*	,470**	,265	,053
		Sig. (2-tailed)	,110	,227	.	,023	,004	,124	,762
		N	35	35	35	35	35	35	35
Statements about traffic safety - Traffic is safe for pedestrians	Statements about traffic safety - Traffic is safe for pedestrians	Correlation Coefficient	,456**	,413*	,383*	1,000	,446**	,132	,113
		Sig. (2-tailed)	,006	,014	,023	.	,007	,448	,519
		N	35	35	35	35	35	35	35
Statements about nuisance - There is no nuisance from other residents	Statements about nuisance - There is no nuisance from other residents	Correlation Coefficient	,159	,579**	,470**	,446**	1,000	,681**	,369*
		Sig. (2-tailed)	,362	,000	,004	,007	.	,000	,029
		N	35	35	35	35	35	35	35
Statements about nuisance - There is no nuisance from air pollution	Statements about nuisance - There is no nuisance from air pollution	Correlation Coefficient	-,022	,472**	,265	,132	,681**	1,000	,333
		Sig. (2-tailed)	,902	,004	,124	,448	,000	.	,051
		N	35	35	35	35	35	35	35
Statements about nuisance - There is no graffiti	Statements about nuisance - There is no graffiti	Correlation Coefficient	,132	,253	,053	,113	,369*	,333	1,000
		Sig. (2-tailed)	,448	,142	,762	,519	,029	,051	.
		N	35	35	35	35	35	35	35

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

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

a. What is your gender? = Male

Correlations^a

	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Active travel (cycling/walking)		Statements about attractiveness of the neighbourhood - Neighbourhood looks attractive	Statements about facilities coverage - There are enough other facilities	Statements about traffic safety - Traffic is safe for pedestrians	Statements about nuisance - There is no nuisance from other residents	Statements about nuisance - There is no nuisance from air pollution	Statements about nuisance - There is no graffiti	
Spearman's rho	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Active travel (cycling/walking)	Correlation Coefficient	1,000	-,093	-,420*	-,200	-,405*	-,344*	-,342*
		Sig. (2-tailed)	.	,595	,012	,249	,016	,043	,044
		N	35	35	35	35	35	35	35
Statements about attractiveness of the neighbourhood - Neighbourhood looks attractive	Statements about attractiveness of the neighbourhood - Neighbourhood looks attractive	Correlation Coefficient	-,093	1,000	,352*	,331	,107	,226	,109
		Sig. (2-tailed)	,595	.	,038	,052	,542	,192	,533
		N	35	35	35	35	35	35	35
Statements about facilities coverage - There are enough other facilities	Statements about facilities coverage - There are enough other facilities	Correlation Coefficient	-,420*	,352*	1,000	,388*	,057	,300	,308
		Sig. (2-tailed)	,012	,038	.	,021	,744	,080	,072
		N	35	35	35	35	35	35	35
Statements about traffic safety - Traffic is safe for pedestrians	Statements about traffic safety - Traffic is safe for pedestrians	Correlation Coefficient	-,200	,331	,388*	1,000	,274	,176	-,091
		Sig. (2-tailed)	,249	,052	,021	.	,112	,313	,604
		N	35	35	35	35	35	35	35
Statements about nuisance - There is no nuisance from other residents	Statements about nuisance - There is no nuisance from other residents	Correlation Coefficient	-,405*	,107	,057	,274	1,000	,079	,202
		Sig. (2-tailed)	,016	,542	,744	,112	.	,654	,244
		N	35	35	35	35	35	35	35
Statements about nuisance - There is no nuisance from air pollution	Statements about nuisance - There is no nuisance from air pollution	Correlation Coefficient	-,344*	,226	,300	,176	,079	1,000	,417*
		Sig. (2-tailed)	,043	,192	,080	,313	,654	.	,013
		N	35	35	35	35	35	35	35
Statements about nuisance - There is no graffiti	Statements about nuisance - There is no graffiti	Correlation Coefficient	-,342*	,109	,308	-,091	,202	,417*	1,000
		Sig. (2-tailed)	,044	,533	,072	,604	,244	,013	.
		N	35	35	35	35	35	35	35

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

a. What is your gender? = Female

Correlation test:
Spearman's RHO
 Only pairs of question with significant ($\alpha = 0.05$) correlation are shown.
 *car, both genders are show separately

Correlations^a

	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Car	Statements about attractiveness of the neighbourhood - There is no vandalism	Statements about facilities coverage - There is a health care centre	Statements about car accessibility - Neighbourhood is accessible by car	Statements about car accessibility - There is sufficient parking space	Statements about traffic safety - Traffic in the neighbourhood is safe	Statements about traffic safety - Traffic is safe for cyclists	Statements about traffic safety - Traffic is safe for pedestrians	Statements about social safety - There are many people on the street	
Spearman's rho	Correlation Coefficient	1,000	-.347*	-.362*	,168	-.170	-.346*	-.249	-.186	-.371*
	Sig. (2-tailed)	.	,041	,033	,335	,329	,042	,150	,283	,028
	N	35	35	35	35	35	35	35	35	35
Statements about attractiveness of the neighbourhood - There is no vandalism	Correlation Coefficient	-.347*	1,000	,404*	-.022	,344*	,528**	,488**	,075	-.240
	Sig. (2-tailed)	,041	.	,016	,900	,043	,001	,003	,668	,164
	N	35	35	35	35	35	35	35	35	35
Statements about facilities coverage - There is a health care centre	Correlation Coefficient	-.362*	,404*	1,000	-.004	,331	,321	,246	,211	,055
	Sig. (2-tailed)	,033	,016	.	,981	,052	,060	,153	,224	,754
	N	35	35	35	35	35	35	35	35	35
Statements about car accessibility - Neighbourhood is accessible by car	Correlation Coefficient	,168	-.022	-.004	1,000	,130	,244	,072	,279	,063
	Sig. (2-tailed)	,335	,900	,981	.	,455	,157	,683	,104	,718
	N	35	35	35	35	35	35	35	35	35
Statements about car accessibility - There is sufficient parking space	Correlation Coefficient	-.170	,344*	,331	,130	1,000	,276	,101	,105	-.021
	Sig. (2-tailed)	,329	,043	,052	,455	.	,108	,565	,548	,906
	N	35	35	35	35	35	35	35	35	35
Statements about traffic safety - Traffic in the neighbourhood is safe	Correlation Coefficient	-.346*	,528**	,321	,244	,276	1,000	,670**	,460**	-.063
	Sig. (2-tailed)	,042	,001	,080	,157	,108	.	,000	,005	,637
	N	35	35	35	35	35	35	35	35	35
Statements about traffic safety - Traffic is safe for cyclists	Correlation Coefficient	-.249	,488**	,246	,072	,101	,670**	1,000	,523*	-.154
	Sig. (2-tailed)	,150	,003	,153	,683	,565	,000	.	,001	,377
	N	35	35	35	35	35	35	35	35	35
Statements about traffic safety - Traffic is safe for pedestrians	Correlation Coefficient	-.186	,075	,211	,279	,105	,460**	,523*	1,000	,206
	Sig. (2-tailed)	,283	,668	,224	,104	,548	,005	,001	.	,235
	N	35	35	35	35	35	35	35	35	35
Statements about social safety - There are many people on the street	Correlation Coefficient	-.371*	-.240	,055	,063	-.021	-.083	-.154	,206	1,000
	Sig. (2-tailed)	,028	,164	,754	,718	,906	,637	,377	,235	.
	N	35	35	35	35	35	35	35	35	35

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).
 a. What is your gender? = Male

Correlations^a

	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Car	Statements about attractiveness of the neighbourhood - There is no vandalism	Statements about facilities coverage - There is a health care centre	Statements about car accessibility - Neighbourhood is accessible by car	Statements about car accessibility - There is sufficient parking space	Statements about traffic safety - Traffic in the neighbourhood is safe	Statements about traffic safety - Traffic is safe for cyclists	Statements about traffic safety - Traffic is safe for pedestrians	Statements about social safety - There are many people on the street	
Spearman's rho	Correlation Coefficient	1,000	-.314	,086	,505**	,382*	-.403*	-.398*	-.450**	-.106
	Sig. (2-tailed)	.	,066	,625	,002	,024	,016	,035	,007	,545
	N	35	35	35	35	35	35	35	35	35
Statements about attractiveness of the neighbourhood - There is no vandalism	Correlation Coefficient	-.314	1,000	,020	-.141	-.060	,314	,014	,139	-.231
	Sig. (2-tailed)	,066	.	,909	,420	,733	,066	,935	,426	,182
	N	35	35	35	35	35	35	35	35	35
Statements about facilities coverage - There is a health care centre	Correlation Coefficient	,086	,020	1,000	-.164	,268	,072	,057	,098	-.057
	Sig. (2-tailed)	,625	,909	.	,347	,120	,681	,743	,577	,744
	N	35	35	35	35	35	35	35	35	35
Statements about car accessibility - Neighbourhood is accessible by car	Correlation Coefficient	,505**	-.141	-.164	1,000	,418*	-.164	-.129	-.226	,235
	Sig. (2-tailed)	,002	,420	,347	.	,012	,346	,460	,192	,175
	N	35	35	35	35	35	35	35	35	35
Statements about car accessibility - There is sufficient parking space	Correlation Coefficient	,382*	-.060	,268	,418*	1,000	-.218	-.069	,189	-.103
	Sig. (2-tailed)	,024	,733	,120	,012	.	,208	,693	,276	,556
	N	35	35	35	35	35	35	35	35	35
Statements about traffic safety - Traffic in the neighbourhood is safe	Correlation Coefficient	-.403*	,314	,072	-.164	-.218	1,000	,373*	,327	,045
	Sig. (2-tailed)	,016	,066	,681	,346	,208	.	,027	,055	,798
	N	35	35	35	35	35	35	35	35	35
Statements about traffic safety - Traffic is safe for cyclists	Correlation Coefficient	-.398*	,014	,057	-.129	-.069	,373*	1,000	,323	,151
	Sig. (2-tailed)	,035	,935	,743	,460	,693	,027	.	,058	,385
	N	35	35	35	35	35	35	35	35	35
Statements about traffic safety - Traffic is safe for pedestrians	Correlation Coefficient	-.450**	,139	,098	-.226	,189	,327	,323	1,000	,013
	Sig. (2-tailed)	,007	,426	,577	,192	,276	,055	,058	.	,939
	N	35	35	35	35	35	35	35	35	35
Statements about social safety - There are many people on the street	Correlation Coefficient	-.106	-.231	-.057	,235	-.103	,045	,151	,013	1,000
	Sig. (2-tailed)	,545	,182	,744	,175	,556	,798	,385	,939	.
	N	35	35	35	35	35	35	35	35	35

** Correlation is significant at the 0.01 level (2-tailed).
 * Correlation is significant at the 0.05 level (2-tailed).
 a. What is your gender? = Female

Correlation test:
Spearman's RHO
 Only pairs of question with significant ($\alpha= 0.05$) correlation are shown.
 *public transport, both genders are show separately

		Correlations ^a							
			Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Public transport	Statements about nuisance - There is no litter	Statements about general accessibility - Neighbourhood is accessible by public transport	Statements about car accessibility - Neighbourhood is accessible by car	Statements about car accessibility - There is sufficient parking space	Statements about traffic safety - Traffic in the neighbourhood is safe	Statements about traffic safety - Traffic is safe for cyclists
Spearman's rho	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Public transport	Correlation Coefficient	1,000	-.370*	,123	,023	-.074	-.165	-.279
		Sig. (2-tailed)	.	,029	,480	,898	,671	,345	,104
		N	35	35	35	35	35	35	35
Statements about nuisance - There is no litter		Correlation Coefficient	-.370*	1,000	-.237	-.165	,242	,261	,372*
		Sig. (2-tailed)	,029	.	,171	,343	,161	,130	,028
		N	35	35	35	35	35	35	35
Statements about general accessibility - Neighbourhood is accessible by public transport		Correlation Coefficient	,123	-.237	1,000	,518**	-.006	,318	,091
		Sig. (2-tailed)	,480	,171	.	,001	,975	,063	,603
		N	35	35	35	35	35	35	35
Statements about car accessibility - Neighbourhood is accessible by car		Correlation Coefficient	,023	-.165	,518**	1,000	,130	,244	,072
		Sig. (2-tailed)	,898	,343	,001	.	,455	,157	,683
		N	35	35	35	35	35	35	35
Statements about car accessibility - There is sufficient parking space		Correlation Coefficient	-.074	,242	-.006	,130	1,000	,276	,101
		Sig. (2-tailed)	,671	,161	,975	,455	.	,108	,565
		N	35	35	35	35	35	35	35
Statements about traffic safety - Traffic in the neighbourhood is safe		Correlation Coefficient	-.165	,261	,318	,244	,276	1,000	,670**
		Sig. (2-tailed)	,345	,130	,063	,157	,108	.	,000
		N	35	35	35	35	35	35	35
Statements about traffic safety - Traffic is safe for cyclists		Correlation Coefficient	-.279	,372*	,091	,072	,101	,670**	1,000
		Sig. (2-tailed)	,104	,028	,603	,683	,565	,000	.
		N	35	35	35	35	35	35	35

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

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

a. What is your gender? = Male

		Correlations ^a							
			Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Public transport	Statements about nuisance - There is no litter	Statements about general accessibility - Neighbourhood is accessible by public transport	Statements about car accessibility - Neighbourhood is accessible by car	Statements about car accessibility - There is sufficient parking space	Statements about traffic safety - Traffic in the neighbourhood is safe	Statements about traffic safety - Traffic is safe for cyclists
Spearman's rho	Could you please indicate how much time (in minutes) you spend on each travel mode, when considering the last 7 days? - Public transport	Correlation Coefficient	1,000	-.213	,406*	-.440**	-.377*	,345*	,338*
		Sig. (2-tailed)	.	,219	,016	,008	,025	,042	,047
		N	35	35	35	35	35	35	35
Statements about nuisance - There is no litter		Correlation Coefficient	-.213	1,000	,266	,006	-.005	,359*	,150
		Sig. (2-tailed)	,219	.	,122	,973	,977	,034	,389
		N	35	35	35	35	35	35	35
Statements about general accessibility - Neighbourhood is accessible by public transport		Correlation Coefficient	,406*	,266	1,000	-.103	-.053	,368*	,278
		Sig. (2-tailed)	,016	,122	.	,555	,760	,030	,106
		N	35	35	35	35	35	35	35
Statements about car accessibility - Neighbourhood is accessible by car		Correlation Coefficient	-.440**	,006	-.103	1,000	,418*	-.164	-.129
		Sig. (2-tailed)	,008	,973	,555	.	,012	,346	,460
		N	35	35	35	35	35	35	35
Statements about car accessibility - There is sufficient parking space		Correlation Coefficient	-.377*	-.005	-.053	,418*	1,000	-.218	-.069
		Sig. (2-tailed)	,025	,977	,760	,012	.	,208	,693
		N	35	35	35	35	35	35	35
Statements about traffic safety - Traffic in the neighbourhood is safe		Correlation Coefficient	,345*	,359*	,368*	-.164	-.218	1,000	,373*
		Sig. (2-tailed)	,042	,034	,030	,346	,208	.	,027
		N	35	35	35	35	35	35	35
Statements about traffic safety - Traffic is safe for cyclists		Correlation Coefficient	,338*	,150	,278	-.129	-.069	,373*	1,000
		Sig. (2-tailed)	,047	,389	,106	,460	,693	,027	.
		N	35	35	35	35	35	35	35

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

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

a. What is your gender? = Female