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FEELINGS OF (UN)SAFETY IN THE NETHERLANDS

An examination into the relationship between social and physical disorder and people's perceptions of safety in neighbourhoods around Dutch harbour districts

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Preface

A safe living environment is aspired by all municipalities. Social cohesion, impoverishment, social inconvenience and quality of life are thought to be crucial aspects of people's perceptions of safety. Municipalities want to create a safe living environment by policies that focus on these various aspects. But to what extent do these aspects really play a role in people's perceptions of safety? And does this also account for the main Dutch harbour districts? More insight is needed to get a hold on these issues.

This final research concludes a period as a master's student in Human Geography. The specialisation of my master's program is Conflict, Territories and Identities and my main interest lies in criminality and safety issues; therefore this research is in a sense more related to my interest than my specialisation. Two goals are central in this research: (1) to identify the direct effect of social cohesion on people's perceptions of safety in Dutch harbour districts; and (2) to offer some insights in possible explanations for this relationship, with a focus on three forms of physical disorder (impoverishment, social inconvenience, and a lacking quality of life). The results from this research can contribute to policies regarding safety around the Dutch harbour districts.

Doing research for and writing my master's thesis was very instructive, but also a bit challenging. In particular problems in getting the complete dataset, resulted in some delay. The internship at Statistics Netherlands gave me the opportunity to work together with two other interns and provide an infographic for the internship organisation. A special thanks goes to Elke Moons and Ger van der Linden (both Statistics Netherlands) for supervising this project and for the critical feedback and tips for my thesis. I also want to thank my supervisor from the Radboud University, Bert Bomert, for his useful feedback. Last but not least, I want to thank my boyfriend Tommy Goossens for baking brownies and serving me wine during the difficult moments.

Senna Hansen

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Summary

Almost 16 percent of the Dutch population 'sometimes' feel unsafe in their own neighbourhood, while 1.5 percent 'often' feel unsafe (Veiligheidsmonitor, 2017). People who report that their neighbourhoods are characterized by disorder – for example crime, vandalism, graffiti, litter, noise, alcohol, and drugs – may experience high levels of fear and mistrust (Ross & Joon Jang, 2000). Thus, the need of a safe living environment can be seen as a universal human craving. According to Maslow's hierarchy of needs, safety and security are the most important human motives following physiological needs – such as food and accommodation (Taormina & Gao, 2013). Safety and people's perceptions of safety have become more important in the Dutch context (Boutellier, Van Steden & Van Stokkom, 2016). The research aim of this master's thesis is to get more insight in the predictors of people's perceptions of safety. The following central research question is answered: "*How and to what extent does social cohesion in the neighbourhoods around Dutch harbours positively contribute to people's perceptions of safety, during the period of 2012-2017?*" To answer this research question, data collected by Statistics Netherlands was used, in particular data from the Dutch National Crime Victimization Survey, called the Safety Monitor.

This thesis starts with the assumption that people who live in neighbourhoods characterized by a high level of social cohesion have lower levels of fear. Results from a representative sample of 61,988 Dutch residents collected by survey and telephone during the years 2012 until 2017 support that social cohesion positively contributes to people's perceptions of safety. The results for all three types of analysed neighbourhoods (harbour, border, and onshore neighbourhoods) show that a higher level of social cohesion in the neighbourhood leads to a higher level of perceived safety. These findings are in line with De Hart (2002) and Wittebrood & Van Dijk (2007), who found evidence for a strong relationship between people's perceptions of safety and social cohesion and integration in the neighbourhood. According to these studies, a higher level of social cohesion in the neighbourhood leads directly to less feelings of unsafety.

Secondly, the findings of this study show that the relationship between social cohesion and people's perceptions of safety cannot be explained by the three characteristics of (physical) disorder (impoverishment, social inconvenience, and a lacking quality of life); except for social inconvenience in the harbour neighbourhoods. In these neighbourhoods, the so-called *incivilities thesis* is applicable to a high degree. This theory deals with the social and physical conditions in a neighbourhood that can be seen as troublesome and potentially threatening by its residents and users of its public spaces (Taylor, 1995). According to this thesis, disorder leads to incivilities and this will eventually lead to fear. In harbour neighbourhoods, social cohesion is an important mechanism in preventing physical disorder (Hunter, 1978).

Finally, this master's thesis research brought up some important findings regarding the control variables. In all types of neighbourhoods, victimization play a small role in people's perceptions of safety. People who once or more often became a victim, feel more unsafe than people who were never a victim. In addition, ethnic background plays a role in how safe people feel themselves in the neighbourhood. People with a migration background feel more unsafe than people without a migration background do. Another important predictor of people's perceptions of safety is police satisfaction; people who have a high level of police satisfaction experience less fear than people with a low level of police satisfaction do. In the border neighbourhoods there is also a difference between people from 'Havengebied Amsterdam' and 'Havengebied Rotterdam'. People from 'Havengebied Rotterdam' feel more unsafe than people from 'Havengebied Amsterdam'. Note that this only accounts for the border neighbourhoods and not for the other types of neighbourhoods (harbour and onshore neighbourhoods). Most other control variables do influence people's perceptions of safety, but only add a very small contribution.

Safety policies need to focus on the care of economic and social structures, but also on approaching inconvenience and crime in the neighbourhood. Municipalities can use communication means to make residents aware of the importance of social cohesion in the neighbourhood. They can use advertisements to point residents to the facilities the neighbourhood has to offer. On the other hand, it could be an important step towards safety to let residents participate in safety projects; for example, let them make a round through the neighbourhood with local policemen. In this way they get a better view of the problems of the neighbourhood and can help to reduce these problems. Residents get the feeling they can change something, so they have more trust in the neighbourhood and feelings of safety increase. In other words, the combination of more surveillance, offering tailor-made care and physical and social investments can help to ban the neighbourhood's problems.

1. Introduction

This chapter starts with explaining the background and policies regarding perceived safety, being the basis of the research for my master's thesis. Next, in Section 1.3 the aim of this research is discussed. Following the research aim, I will explain the societal and scientific relevance of the research in Section 1.4. Based on the research aim and the topic's relevance, a central research question with several sub-questions has been formulated and described in Section 1.5. Finally, Section 1.6 addresses the outline of this thesis.

1.1 Background

'How safe do you feel in the area where you live?,' is a common question in surveys on perceptions of safety regularly conducted since the mid-1960s in the USA, Western Europe and elsewhere (Hutta, 2008). The need for a safe living environment is a universal human craving. According to Maslow's hierarchy of needs, safety and security are the most important human motives, directly following physiological needs – such as food and accommodation (Taormina & Gao, 2013). A safe surrounding is very important for individuals to acquire higher needs; (feelings of) unsafety can even endanger personal health (Baum, Ziersch, Zhang & Osborne, 2009).

It is remarkable that, although the crime figures in the Netherlands have decreased for several years, people's feelings of safety have not; over a longer period of time they are rather stable (Statistics Netherlands, 2018a). According to the most recent Safety Monitor (Veiligheidsmonitor 2017), 16 percent of the Dutch people do 'sometimes' feel unsafe in their own neighbourhood, while 1.5 percent 'often' feel unsafe; these numbers are comparable to 2016 and 2012. In general, in 2017 one out of three people 'sometimes' felt unsafe, while 2 percent of the Dutch population 'often' felt unsafe in general. These numbers are also comparable to 2016 and 2012.

Over the years, safety and people's perceptions of safety have gradually become more important in the Dutch context. Not only the media pay attention to this issue, also politicians and police authorities see it as an important theme (Boutellier, Van Steden & Van Stokkom, 2016). Feelings of unsafety can affect behaviour and other emotions (Jackson, 2006). Some people might be worried or afraid of the immediate prospect of victimization, anxious about one's safety. Others feel resentful about the prevalence of crime, angered that others might make one feel unsafe and intrude on one's way of life. In the worst case, feelings of unsafety can lead to conflicts (Reynolds, Ortengren, Richards & De Wit, 2006). Feelings of unsafety make you feel unstable, worried, uncomfortable and out of balance. These emotions can trigger negative behaviour; it is more difficult to think before you act. It brings impulsive behaviour and individuals tend to get angry more easily. For a peaceful society without conflicts, it is very important that people feel safe in their living environment.

People's perceptions of safety also tend to be connected to social cohesion in the neighbourhood (Maas-de Waal & Wittebrood, 2002). A high level of social cohesion positively contributes to people's feelings of safety. The other way around, social disorder means people feel more unsafe. The physical form of disorder can also lead to fear and feelings of unsafety amongst residents and outsiders, even when actual crime rates are low (Acuña-Rivera, Brown & Uzell, 2014). Although quite some research on the issue of safety has been done, not that much is known about the relationship between social and physical disorder and people's perceptions of safety in a specific kind of neighbourhood, namely the neighbourhoods around Dutch harbours.

Through (sea)ports huge quantities of goods come to land. These (sea)ports contribute to (local) employment and thus play a role in the regional economy. Clearing houses are more often located onshore; through inland shipping and railways other regions can be reached (Merk, 2013). In this way, (sea)ports play an important role in world trade; at the same time, they might be hot spots for various forms of crime (Helmick, 2008). Rotterdam – Europe's biggest port – in particular and other Dutch harbours in general are ideal locations for transport to Germany and France (Van Swaaningen, 2008). Therefore, these cities are also distribution centres of many illegal goods – notably drugs and, more recently, human smuggling and trafficking. These phenomena also offer a particularly good breeding-ground for rack-renters and (drugs-related) street crime (Van der Torre, 2004). This might harm the image of (sea)ports and it is fair to assume that people in the direct surroundings feel more unsafe than people further away.

1.2 Policy regarding perceived safety[1]

Nowadays, urban policies regarding safety mostly focus on improving the social and physical conditions of city districts in order to boost the feelings of safety in their neighbourhoods (Clampet-Lundquist, 2010). On the one hand, social cohesion plays an important role in improving the feelings of safety; therefore, policy makers invest in improving the social cohesion at a neighbourhood level. For example, the Dutch Act 'Wet Maatschappelijke Ondersteuning' encourages activities to increase mutual involvement in neighbourhoods and city districts; for instance, through developing attractive places where all kinds of people can meet, such as community centres combing care and welfare. In addition, sport can be an important factor to improve the social cohesion in a village, city district or neighbourhood. The Act 'Wet Maatschappelijke Ondersteuning' builds on two critical starting points for reaching a higher level of social cohesion. Firstly, municipalities and professional organisations have to develop all kinds of initiatives to improve the social cohesion and quality of life. Secondly, with their efforts and initiatives the residents are probably most important to improve the social cohesion in

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[1] Note that the policies outlined here are common for almost all Dutch municipalities. Unfortunately, it was not possible to zoom in on specific policies directed at harbour neighbourhoods. This might in itself be a good addition in future research.

their neighbourhood. The Netherlands Institute for Social Research (2004) found people have the willingness to participate and take responsibilities in their own neighbourhood.

On the other hand, municipalities take care of the physical environment of neighbourhoods, for instance through high-rise building projects that can be associated with enhancing the (perceived) safety (Pleysier, 2009). Initially, high-rise homes were built to save space for 'green zones' where sports and leisure activities could be practiced. Unfortunately, the goals of high-rise homes were not achieved and it often resulted in 'poverty under one roof'. Dirty streets, unsafe elevators and problems caused by youth became part of daily life. By definition, high-rise homes make it difficult to keep an eye on the neighbourhood and its residents, given its particular structure (Bernasco, Luykx & Elffers, 2004). Residents of high-rise buildings consider their surroundings less as their own 'territory'. The bigger and higher the size of a building project, the higher the level of 'fear of crime' of its residents (Ditton & Farrell, 2000). In the Netherlands, renovation is an important theme in neighbourhoods with high-rise homes (Wittebrood, 2010). Most of the high-rise homes will be demolished and a combination of public housing and personal property has to lead to a safer and more pleasant living environment.

Besides, housing corporations can play an important role in improving the quality of life in neighbourhoods (De Corporatiestrateeg, 2018). As of the year 2015, an act lists some measures housing corporations have to take to have a positive influence on the quality of life in a neighbourhood. Housing corporations often work together with municipalities, welfare organisations, and tenants' organisations. They operate as the caretaker of social neighbourhood teams, as they visit the neighbourhood themselves. In addition, they want their property in a clean and safe environment, so they take care of these aspects.

1.3 Research aim

Above I have addressed the interest in this master's thesis topic. People's perceptions of safety have become more important; it is a major theme for municipalities as well (Spithoven, 2014). They want a safe living environment in all of their neighbourhoods and policies are often (at least partly) based on outcomes from research about people's perceptions of safety. That is why I dive into this topic for my master's thesis research.

This research examines the factors – in addition to social cohesion – that influence people's perceptions of safety in the neighbourhoods around Dutch harbours. First of all, a literature study helps to give a better understanding of the important factors that explain people's perceptions of safety. Most of these findings are discussed in Chapter 1 and 2. Based on a literature study, I developed a conceptual model that is applied to citizens of the neighbourhoods around Dutch harbours.

Second, by means of linear multilevel regression analyses the significance and influence of multiple indicators for the dependent variable 'people's perceptions of safety' will be defined. The data that are used for these analyses are gathered from the Dutch National Crime Victimization Survey,

referred to as the Safety Monitor. In 1973, the first victimization survey in The Netherlands was held. From then onwards, the WODC and/or CBS (Statistics Netherlands) have periodically held standardized nationwide victimization surveys. Nowadays, analyses can be carried out at a communal or even neighbourhood level (at least for some regions). This survey aims to give a picture of safety, victimization, interactions between citizens and police, liveability, prevention, etc. in The Netherlands on a national scale, as well as at a more local level of police regions or even smaller units (at a community level).

1.4 Societal and scientific relevance

The previous sections already offer an introduction to the societal and scientific relevance of this research. This research will be beneficial to society because of the importance of the topic. The media as well as the government pay more attention to social cohesion and safety and it is a topic of day-to-day reality. Because of this growing interest, it is important to do (further) research on this topic. On the other hand, feelings of unsafety can have negative consequences for individuals as well as for the neighbourhood. Feelings of unsafety might lead to all kinds of behaviour (Smeets, 2016). People might want to avoid real or imagined threats because of feelings of unsafety. If citizens think their neighbourhood is unsafe during evening hours, they might decide to not leave their house in the evenings. Given these feelings of unsafety, they might also try to better secure themselves, their homes and their possessions, by adding more locks to their doors or even by carrying a weapon while going outside. On a totally different note, voting behaviour might also be seen as a safety mechanism. People might choose to vote for particular (right-wing) parties that are strong on fighting crime, expecting that their (feelings of) safety will be positively influenced.

This research will try to reveal some underlying mechanisms for people's perceptions of safety and will illustrate whether there is any relationship between social cohesion, physical disorder (impoverishment, social inconvenience and a lacking quality of life) and people's perceptions of safety. The outcomes will give more clarity, which is important for policymakers. They might want to decide whether or not specific contributions to social cohesion and feelings of safety are necessary. It is important that people feel safe in general, and in particular in their neighbourhood, because feelings of unsafety can have all kinds of negative consequences. Research on this topic therefore has societal relevance because results can be used to improve the feelings of safety. When you know the underlying mechanisms, you can get a hold of the problem.

From a scientific perspective, this research offers a real addition, because so far there has been no research dealing with this particular topic. Much research has been done on the relationship between social cohesion, physical disorder and people's perceptions of fear, but never in those areas I specifically study (Bellair, 1997; Putnam, 2000). Studies about the safety in and around Dutch harbours mainly deal with the accidents taking place and their impact on the workers in these harbours (Helmick, 2008; Merk,

2013; Van der Torre, 2014). In this master's thesis research, I give some new insights into people's perceptions of safety in the neighbourhoods around Dutch harbours. Several mechanisms will be statistically tested to see if and to what extent they influence people's perceptions of safety; by doing so, this research is innovative.

1.5 Research questions

Based on the research aim and relevance of this topic, research questions have been formulated. These are divided in a central research question and some sub-questions. The central research question is:

How and to what extent does social cohesion in the neighbourhoods around Dutch harbours positively contribute to people's perceptions of safety, during the period of 2012-2017?

Sub-questions are formulated to test a reasonable mediating effect of social cohesion on various forms of physical disorder:

1. In how far is the relationship between social cohesion and people's perceptions of safety explained by impoverishment?
2. In how far is the relationship between social cohesion and people's perceptions of safety explained by social inconvenience?
3. In how far is the relationship between social cohesion and people's perceptions of safety explained by quality of life?

1.6 Outline of this thesis

This thesis includes five chapters. The first chapter offers the general introduction of the master's thesis research, sketching the situation regarding feelings of (un)safety in the Netherlands. This chapter also briefly introduces the concept of social cohesion, the main question, relevance and research aim. This research focusses on the relationship between social cohesion and people's perceptions of safety in the neighbourhoods around Dutch harbours. Therefore, the concept of social cohesion needs to be further explained. A literature review regarding this topic will be the base of hypotheses as formulated in Chapter 2. The way in which this research has been conducted is discussed in Chapter 3. This chapter focuses on the units of analysis, the operationalization of the variables and the research methodology. Chapter 4 describes the results of the analyses testing the hypotheses. The final chapter sums up the results; the conclusion points out the contribution of this research to this field and reflects on the strengths and weaknesses of the research. This chapter ends with some policy recommendations based on the results of this master's thesis research.

2. Theoretical framework and hypotheses

This chapter describes the theoretical framework on which this research is based. I will discuss how and to what extent social cohesion, impoverishment, social inconvenience, and quality of life influence people's perceptions of safety in the neighbourhoods around Dutch harbours. Based on sociological and criminological theories (*broken windows theory* and *incivilities thesis*, respectively) and existing research, hypotheses are formulated.

2.1 Central explanation: social cohesion

In the Netherlands and Europe there already is plenty of research about the relationship between social cohesion in the neighbourhood and people's perceptions of safety (Bellair, 1997; Sampson & Groves, 1989). Despite its many definitions, social cohesion does include some aspects that seem to be general (Dekker, 2006). Social cohesion encompasses an inner power of affinity of a social system. This is characterized by group identification and solidarity, frequent and intensive contacts between group members. There has to be mutual trust, shared norms and values and engagement in everyday activities within this group.

Research about social cohesion shows that if in a community the level of social cohesion is higher, crime decreases (Bellair, 1997; Elffers & De Jong, 2004). Even if people know each other only superficially, they greet each other and pay attention to undesirable behaviour. In this way, people in the neighbourhood bond; forms of disorder (impoverishment and social inconvenience) and crime get less chance. These studies also show social cohesion has a clear influence on people's perceptions of safety. Safety and people's perceptions of safety have a strong connection to social cohesion and integration in the neighbourhood (De Hart, 2002; Wittebrood & Van Dijk, 2007). According to these studies, a higher level of social cohesion in the neighbourhood directly leads to less feelings of unsafety. This does not mean, however, that people in the neighbourhood hang around with each other intensively; rather, they expect help from each other if necessary. In this way the perception of social cohesion is enough for a positive contribution to people's perceptions of safety (Boers, Van Steden & Boutellier, 2008).

The views of the American political scientist Robert Putnam are important in analysing the relationship between the aspects of social cohesion, quality of life and safety. In reference to neighbourhoods with high levels of social capital, he states: "public spaces are cleaner, people are friendlier, and the streets are safer" (Putnam, 2000; 307). On the other side, social disorganisation is the soil for crime and feelings of unsafety. This disorganisation is typical for many urban neighbourhoods characterized by high mobility. Because of the ever-changing composition, neighbours do not know each other, there are different ethnic groups which can lead to conflicts and (underprivileged) youths form subcultures which do not merge into the 'adult world'. There are also fewer local organisations

because of the continuous movement of its inhabitants. In other words: it is a living environment characterized by a low level of social cohesion.

A low level of social cohesion is associated with an erosion of social ties (Ross & Jang, 2000). People who live in neighbourhoods with a low level of social cohesion report lower levels of informal integration with neighbours. These people also report somewhat lower levels of formal participation in neighbourhood organisations. A lack of informal attachments to neighbours makes the unfavourable effects of a low level of social cohesion on feelings of unsafety even worse. Residents do not trust their neighbours, have no social ties and do not correct undesirable behaviour. Thus, a high level of social cohesion will lead to a higher level of safety. Based on these research findings, the first hypothesis is:

I. *Neighbourhoods with a higher level of social cohesion experience a higher level of safety than neighbourhoods with a lower level of social cohesion.*

2.2 Sub-explanations

Impoverishment, social inconvenience and quality of life are three characteristics of physical disorder (Taylor & Shumaker, 1990). For over twenty years researchers have studied individual and collective responses to physical disorder. Neighbourhoods with a high level of physical disorder are considered as dirty and noisy. In these neighbourhoods, vandalism and graffiti are normal in everyday life and broken street furniture, bus stops and abandoned buildings can often be found (Ross & Mirowsky, 1999). The most widely studied psychological response to physical disorder is fear of crime, or people's perceptions of safety – as it is mostly called nowadays. One of the most famous studies in this field is by Wilson and Kelling (1982), who proposed a theory outlining a causal relationship between disorder, fear, and crime. Impoverishment, social inconvenience and quality of life can be seen as important factors for people's perceptions of safety (De Hart, 2002). According to this study, these factors are strongly connected to each other and to social cohesion. Impoverishment, social inconvenience, quality of life and social cohesion cumulate and can lead to concentrations of problems and a downward spiral of urban decay. In neighbourhoods characterised by impoverishment, social inconvenience and a bad quality of life, it is very important to improve the level of social cohesion (Duyvendak, 1998).

2.2.2   Impoverishment

Criminological studies pay much attention to the relationship between impoverishment and people's perceptions of safety (Kelling & Coles, 1997; Ross & Mirowsky,1999). Especially the *broken windows theory* plays an important role in explaining this relationship. This theory suggests that minor forms of public disorder (e.g. broken windows and graffiti) could lead to severe crime and a downward spiral of urban decay. The broken windows and graffiti are signs that nobody cares and this will lead to further disorder and eventually to serious crime. As this disorder increases, it signals to the residents that the

situation is escalating and that social control in their neighbourhood is failing. Perceived disorder also leads to negative thoughts; residents think that crime is increasing and therefore they adapt their behaviour. Residents will avoid the streets, become less prone to intervene against disorderly people and in some cases this could lead to the 'good' residents moving away. Residents also think the streets are not safe (Doran & Lees, 2005). Doran and Lees (2005) show that places that are avoided by people, have higher levels of disorder than places that were not avoided. These places are seen as frightening, with less social control and higher levels of disorder and crime.

As discussed above, there are several reasons why impoverishment has a negative influence on people's perceptions of safety. Firstly, impoverishment leads to a downward spiral of urban decay, followed by behaviour of avoidance and feelings of unsafety. Places with high levels of disorder are frightening, people avoid these places. Social cohesion plays an important role in keeping away disorder. A high level of social cohesion is important in bringing down serious forms of crime (Skogan, 1990). High levels of social cohesion in the neighbourhood are very important for the safety in that area. In the central explanation, some clarifications were brought up why high levels of social cohesion will lead to a higher level of safety. A stronger social connection will lead to more contact in the neighbourhood and people are more actively involved in the neighbourhood's everyday life. In this way, people are relatively close to each other and there will be social control in the neighbourhood. People do not want to be the topic of gossip, so they show decent behaviour. The community stands together if there are any forms of impoverishment, such as graffiti or broken windows. They will address people about their undesirable behaviour and this will help in making it an orderly place to live. Thus, a higher level of social cohesion leads to a lower level of impoverishment and this will therefore lead to a higher level of safety in the neighbourhood. The second hypothesis is therefore:

II. *Neighbourhoods with a higher level of social cohesion will have a lower level of impoverishment than neighbourhoods with a lower level of social cohesion, which means that residents experience a higher level of safety.*

2.2.3 Social inconvenience

In addition to impoverishment, social inconvenience plays an important role in people's perceptions of safety. Social inconvenience can also be seen as a form of physical disorder. According to Boers et al. (2008), social inconvenience can take on different forms. People can experience trouble from drunks, drug users, youth and other neighbours or can be bothered on the streets. Social inconvenience and other forms of physical disorder seem to have a stronger influence on people's perceptions of safety than the actual crime rates in that area (Vanderveen, 1999). Expressive fear as a perception of safety acts as a symbol of all kinds of social problems. As Hale (1996, 131) states: "there is growing evidence to relate fear of crime to perceptions of the local and physical environment. Even if crime levels are low,

neighbourhoods with "broken windows" may have residents with high levels of fear as incivilities become potent visible symbols of the lack of social control and order. Similarly, residents of neighbourhoods where social networks are weak, who feel socially isolated may exhibit high levels of fear." In other words, the physical environment plays an important role in people's perceptions of safety.

Next to the *broken windows theory*, the *incivilities thesis* encompasses the social and physical conditions in a neighbourhood that are seen as troublesome and potentially threatening by its residents and users of its public spaces (Taylor, 1995). According to this thesis, disorder leads to incivilities and this will eventually lead to fear (Hunter, 1978). Hunter (1978) describes that local residents assign disorderly activities and deteriorating physical conditions to the neighbourhood. Therefore, given the disorders in the neighbourhood and that residents cannot or will not mediate, they feel personally at risk of victimization. And it is not just the presence of the signs of incivilities that is threatening to them, but also the meaning attached to them. Sampson and Raudenbush (1999) find that disorder triggers attributions, predictions, and prejudices in the minds of residents of the neighbourhood as well as outsiders. Residents of neighbourhoods with a high level of social inconvenience will experience lower levels of safety than residents of neighbourhoods with a low level of social inconvenience.

Social cohesion can be seen as an important mechanism in preventing physical disorder as discussed in relation to the previous hypothesis. In neighbourhoods with a higher level of social cohesion, people know each other superficially and stand together against undesirable behaviour. In this way there is some bonding within the neighbourhood and thus incivilities such as impoverishment and social inconvenience get less chance. This leads to the third hypothesis of this research:

III.   *Neighbourhoods with a higher level of social cohesion will have a lower level of social inconvenience than neighbourhoods with a lower level of social cohesion, which means that residents experience a higher level of safety.*

2.2.4   Quality of life

Finally, quality of life plays an important role in people's perceptions of safety as well. The concept of quality of life is defined in many ways (De Hart, 2002). The various definitions all have something in common, however: the concept has some connection to people's housing and their housing environment (Goezinne & Verweij, 1997). It is all about the harmony between physical quality, social characteristics and the safety of the living environment. Neighbourhoods with a low quality of life experience a lower level of safety (Duyvendak, 1998). Duyvendak (1998) argues that especially in neighbourhoods with a low quality of life, it is important to improve the social cohesion, because residents who feel attached to their neighbours also perceive the neighbourhood as safer. Social integration provides the impression that it is safe to walk the streets at night and reduces the fear one feels.

On the other hand, poor subjective quality of life can have widespread social consequences (Adams & Serpe, 2000). A poor subjective quality of life is strongly connected to poor physical and mental health, poor role functioning, and reduced social participation. People with a low quality of life do often feel less safe than people who experience a higher quality of life (Ross, 1993). Social relationships directly improve life satisfaction by offering people social support when they face a stressful social situation, such as crime. Social integration also indirectly protects people from fear by improving their sense of control over the environment, which in turn positively affects the subjective well-being.

According to Specht (2012), quality of life and solidarity seem to be the most important factors for people's perceptions of safety. Quality of life is all about to what extent the living environment fulfils the physical and psychological needs. Some neighbourhoods do not have a proper living environment and residents experience a bad quality of life and lower level of safety. As stated before, social cohesion plays an important role in improving the quality of life in a neighbourhood. For example, residents who feel attached to their neighbours, also perceive the neighbourhood as safer. This leads to the final hypothesis of this thesis and its conceptual framework:

IV.   *Neighbourhoods with a higher level of social cohesion will experience a higher quality of life than neighbourhoods with a lower level of social cohesion, which means that residents experience a higher level of safety.*

The various hypotheses and research considerations lead to the following conceptual framework. The hypotheses can be seen as rather general, but the research population is the innovative factor of this master's thesis research as discussed in Chapter 1.

Figure 1. Conceptual framework
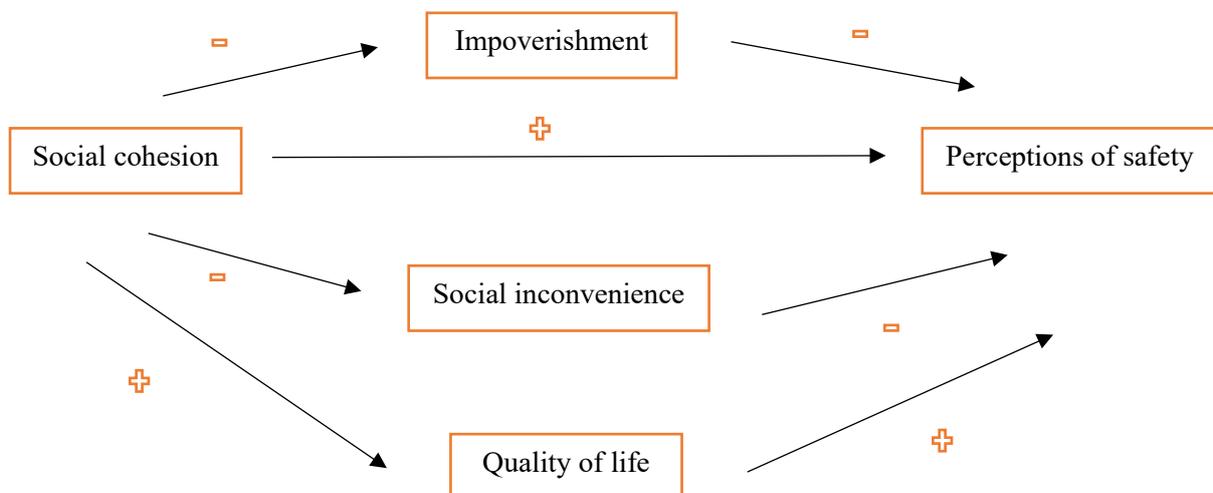
3. Data and operationalisation

3.1 The Dutch National Crime Victimization Survey (Safety Monitor)

For this thesis, I have analysed data from the Dutch National Crime Victimization Survey, also called the Safety Monitor, collected by Statistics Netherlands. For this master's thesis research, I have used the data from the years 2012 until 2017 in order to have enough information at a neighbourhood level for the statistical procedures I wanted to use. Until the year 2017, it is an annually recurring population survey on issues like the quality of life of the respondents' neighbourhood, feelings of unsafety, experiences of criminal behaviour, how residents perceive neighbourhood problems, opinions concerning police action and prevention. The history of surveys in The Netherlands concerning safety in general and victimization surveys in specific, dates back to the 1970s. The reason for the occurrence of victimization surveys was that officially registered figures on crime did not provide an adequate image of the unsafety problems. The types of crime that are not reported by victims, especially the less 'serious' crimes, therefore remain a 'dark number'.

The first victimization survey in The Netherlands was held in 1973. From then onwards, the WODC and/or Statistics Netherlands have conducted periodically standardized nationwide victimization surveys. Since 2008, the coverage of the survey has become even larger, so nowadays analyses can be carried out at communal or even at neighbourhood levels (at least for some regions). The aim of this survey is monitoring safety, victimization, interactions between residents and police, quality of life, prevention, etc. in The Netherlands on a national scale and at a more local level of police regions or even smaller (at community level). A second aim is to assess changes in feelings of safety, victimization, etc. over the years as well as between police regions and the national level.

The survey is carried out in a multi-modal design to ensure that hard-to-target groups are better represented. During the first wave, a web-based survey (CAWI) is sent out during a period of three weeks. This is supplemented with a paper-and-pencil survey, for those without internet access (PAPI). After three weeks, the web-survey is taken out and during a second wave telephone surveys (CATI) and personal interviews (CAPI) are used to capture those persons that did not respond yet. The goal at a national level is to have a minimum of 18,750 respondents filling out the survey. Municipalities can then decide to oversample; this is accounted for in the weighting of the survey. The target population of the Safety Monitor includes all people living in The Netherlands that are at least fifteen years of age. Besides, they have to account for personal households. The corporate population, which consists of people in institutes, shelters or other facilities, is not appraised. Throughout the years, the fieldwork has always taken place in the months of August until November. Table 3.1 encompasses information about the response rates in the various years, oversampling by municipalities and the number of respondents.

Table 3.1. Response during the years 2012-2017

Year	Response rate (%)	Oversampling	Respondents
2012	38.4	19	80,000
2013	40.8	151	145,000
2014	38.8	27	86,382
2015	37.2	108	111,252
2016	38.5	23	81,000
2017	39.3	136	149,461

Source: VM 2012-2017

3.2 Units of analysis and research design

This section begins with debating the units of analysis for this research, followed by explaining the methods used for testing the hypotheses. The units of analysis are neighbourhoods in and around the main Dutch harbours. There are five primary harbour districts in The Netherlands: Havengebied Amsterdam, Havengebied Rotterdam, Zeeland Seaports, Den Helder, and Groningen Seaports (Statistics Netherlands, 2018b). Based on these various harbour districts, I use all neighbourhoods of the following municipalities: Amsterdam, Zaanstad, Beverwijk, Velsen (Havengebied Amsterdam); Rotterdam, Maassluis, Vlaardingen, Schiedam, Dordrecht, Westvoorne, Nissewaard (Havengebied Rotterdam); Vlissingen, Terneuzen (Zeeland Seaports); Delfzijl, Eemsmond (Groningen Seaports); and Den Helder. These sixteen municipalities comprise a total of 1,270 neighbourhoods, 1,132 of which have valid information on all variables for the statistical procedures. Not all of these 1,132 neighbourhoods made it to the analyses, however, because of a set criterion of at least 50 respondents per neighbourhood. Eventually, the analyses encompassed information about 61,988 respondents from 550 neighbourhoods within these sixteen municipalities.

To compare these neighbourhoods, I made a distinction between three categories of neighbourhoods: harbour neighbourhoods, border neighbourhoods and onshore neighbourhoods. The first category includes all neighbourhoods directly bound to the harbour and its work field or industry. The second category encompasses those neighbourhoods next to the neighbourhoods from the first category. The final category consists of all the neighbourhoods left, being more onshore than the first two categories. Unfortunately, no exact division existed; the classification made is based on Google Maps. Every municipality involved got zoomed in to at a neighbourhood level and the categories are based on the neighbourhood codes derived from the data from Statistics Netherlands.

The hypotheses based on the theoretical framework are tested with the statistical software program SPSS. Because of the hierarchical/clustered structure of the data, multilevel modelling is necessary to test the hypotheses (Singer, 1998). In this thesis research individuals are nested within neighbourhoods, each with their own characteristics. In this context we deal with the residents' individual level (level-1) and two neighbourhood-level covariates; one being an aggregate of residents' level characteristics, the other being neighbourhood-level variables. Variables on multiple levels can be tested simultaneously and their influence on the dependent variable can be found. Variables with

nominal and ordinal measure level are provided as 'dummies' in the analyses, unleashing one as a category of reference. This chapter concludes with Table 3.1, presenting all the variables used in this research. The variables are presented with their minimum, maximum, standard deviation and mean values.

3.3 Operationalisation of the research questions

3.3.1 Scales and factor analyses from Statistics Netherlands

In this thesis research derivations from Statistics Netherlands have been used. Statistics Netherlands uses the same scales and derivations in every Safety Monitor. Some concepts cannot be measured with only one variable and more than one variable can make it a more reliable measurement. A factor analysis is a useful tool for investigating variable relationships for complex concepts such as socioeconomic status, or psychological scales. It allows researchers to investigate concepts that are not easily measured directly by collapsing a large number of variables into a few interpretable underlying factors. In the first Safety Monitor, factor analyses showed that the scales were reliable enough to measure important concepts. Throughout the years these factor analyses were often repeated to check if anything changed regarding the reliability. The operationalisation and outcomes of the factor analyses can be found in the publications on the website of the Dutch Safety Monitor (http://www.veiligheidsmonitor.nl/Publicaties/ Rapportages).

3.3.1 Dependent variable

The dependent variable in this research is people's perceptions of safety. This means that people's perceptions of safety can be explained by (data concerning) other variables, such as social cohesion and physical disorder. This research is about people's perceptions of safety within their neighbourhood and therefore only items were used that explicitly informed about the neighbourhood situation. The following items of the Safety Monitor are used to measure people's perceptions of safety:

'*Do you sometimes not feel at ease when you are home alone in the evening?*',

'*Do you sometimes feel unsafe in your neighbourhood?*', and

'*Do you sometimes walk or drive another route to avoid unsafe places in your neighbourhood?*'.

Based on a derivation from Statistics Netherlands, the answer categories of these items are as follows: (0): Rest (conflation of categories never, sometimes and often) and (100): Occurs a lot. The scale 'Perceptions of safety' encompasses these three variables and consists of the categories (0): Less feelings of unsafety, and (100): Much feelings of unsafety.

3.3.2 Independent variables

The first independent variable concerns social cohesion. Social cohesion is measured by questions about the social ties between residents and the level of satisfaction with the neighbourhood. The following items in the Safety Monitor are used to measure social cohesion:

'*People in the neighbourhood hardly know each other*',

'*People in the neighbourhood interact with each other in a pleasurable manner*',

'*I live in a cheerful neighbourhood in which people do things together*',

'*I feel comfortable with the people of this neighbourhood*',

'*I frequently have contact with people of my neighbourhood*', and

'*I am satisfied with the population structure of the neighbourhood*'.

The variable 'Social cohesion' is made up of a scale score from (0): Low level of social cohesion, to (10): High level of social cohesion.

The next independent variables are all forms of physical disorder. The first form of physical disorder as discussed in the theoretical framework is impoverishment. Impoverishment is also measured with a subjective measure and thus encompasses the number of residents who think that, for example, dog dirt on the streets is a problem in the neighbourhood. Respondents gave answers to four assumptions representing impoverishment:

'*I experience a lot of trouble because of dirt on the streets*',

'*I experience a lot of trouble because of damaged street furniture'*,

'*I experience a lot of trouble because of dog dirt on the streets or patches',* and

'*I experience a lot of trouble because of defaced buildings or walls.'*

The answer categories on these assumptions read (0): Rest (conflation of categories never, sometimes and often), and (100): Occurs a lot. The scale variable 'Impoverishment' eventually has a score from (0): Low level of impoverishment, to (10): High level of impoverishment.

To build the variable 'Social inconvenience', respondents gave an answer to the following assumptions:

'*I experience a lot of trouble from drunk people on the streets'*,

'*I experience a lot of trouble from drugs users or drug dealing'*,

'*I experience a lot of trouble from people in my neighbourhood'*,

'*I experience a lot of trouble from street youths'*, and

'*I experience a lot of trouble from people who harass me.'*

The answer categories on these assumptions also read (0): Rest (conflation of categories never, sometimes and often) and (100): Occurs a lot. The scale variable 'Social inconvenience' has a score from (0): Low level of social inconvenience to (10): High level of social inconvenience.

The final independent variable in this research reads 'Quality of life'. There are five assumptions to measure respondents' feelings and attitudes about the quality of life in their neighbourhood. These are:

'*Paths, squares, and streets in the neighbourhood are well maintained*',

'*Patches, parks and public gardens in the neighbourhood are well maintained*',

'*Outside, there is enough lighting in the neighbourhood*',

'*There are lovely playgrounds for the children in the neighbourhood*', and

'*There are great facilities for the youth in the neighbourhood*'.

The answer categories of these assumptions read (0): Rest (conflation of categories (completely) disagree and neutral), and (100): (Completely) Agree. The variable 'Quality of life' eventually became a scale in which the grade of the quality of life in the neighbourhood is presented. The lowest grade is (1), the highest (10).

3.3.3   Control variables

If just the dependent and independent variables are measured in the analyses, the results might be distorted. Therefore, it is important to control for other factors that might play a role in the relationships that are tested. Based on existing literature, gender plays a role in people's perceptions of safety (LaGrange & Ferraro, 1989); women tend to have stronger feelings of unsafety than men. For this reason, I used gender as a control variable on the neighbourhood level. Respondents were asked about their gender; they could answer with (0): man or (1): woman.

Based on LaGrange and Ferraro (1989), the second control variable is age; it is assumed that older people have more feelings of unsafety than younger ones. Respondents were asked to fill out their age in exact numbers. The youngest respondents are 15 years old, the oldest is 105 years old.

All respondents were asked about the highest level of education they have obtained. Based on the International Standard Classification Education (ISCED) from UNESCO, the following division was made – from 0: No or only elementary school, to 7: Postdoctoral. This division did not have a linear connection to people's perceptions of safety. To save some space in the model, I chose to bring the answer categories from the level of education back to (0): Low level of education, (1): Average level of education, to (2): High level of education. This distinction is made with the ISCED division and now the effects of the educational level on people's perceptions of safety can be compared.

Victimization is another control variable in this research. Studies show that victims become more frightened of crime if they have been a victim of crime (Huys, 2008). Victims may feel more unsafe than non-victims; that is why it is important to use this as a control variable. Statistics Netherlands refers to 'Total personal victimization', in which (0) stands for never been a victim and (100) for once or more often became a victim. All kinds of crime are involved in this variable, so there is no division between cybercrime, robbery, and so on.

Ethnicity or the ethnic composition of a neighbourhood can also be an important factor in explaining feelings of (un)safety. On the one hand, studies typically find that minorities are more frightened (Lane & Meeker, 2003). On the other hand, neighbourhoods that are ethnically diverse have

more residents who feel unsafe than ethnically homogeneous neighbourhoods (Covington & Taylor, 1991). In this research the respondents' individual answers on the questions about their ethnicity count as a control variable for ethnicity. This variable consists of the categories (0): no migration background, and (1): migration background. Additional information about the ethnic composition of a neighbourhood is derived from StatLine, adding the percentage of non-natives to the dataset. Ethnicity thus counts as two control variables on two different levels. The percentage of public housing per neighbourhood is added to the dataset, also based on the data from StatLine.

Another important control variable is satisfaction with the police. Renauer (2007) saw a positive relationship between police satisfaction and feelings of safety. This variable is a scale, consisting of the following items:

'The police offer protection in this neighbourhood',

'The police maintain contact with residents of this neighbourhood',

'The police react on the problems in this neighbourhood',

'The police do its best in this neighbourhood',

'The police are efficient in dealing with neighbourhood matters',

'The police fine too less in this neighbourhood', and

'The police take you seriously'.

The answer categories of these assumptions read (0): Rest (conflation of categories (completely) disagree and neutral), and (100): (Completely) Agree. The variable 'Police satisfaction' has a score from (0): Low level of police satisfaction to (10): High level of police satisfaction.

The final control variable is 'Harbour districts'. This variable consists of the following categories (0): Havengebied Amsterdam, (1): Havengebied Rotterdam, (2): Zeeland Seaports, (3): Den Helder, and (4): Groningen Seaports.

Table 3.2 Describing statistics of the variables used in this research[2]

	Mean/Percentage	Standard deviation	Minimum	Maximum
Perceptions of safety *(0=feeling safe, 100=feeling unsafe)*	7.01	25.54	0	100
Social cohesion *(0=low level, 10=high level)*	5.77	1.78	0	10
Impoverishment *(0=low level, 10=high level)*	4.26	1.83	0	10
Social inconvenience *(0=low level, 10=high level)*	2.68	1.8	0	10
Quality of life *(0=low level, 10=high level)*	93.54	24.58	0	100
Neighbourhood				
Harbour neighbourhood	16.4		0	1
Border neighbourhood	38.9		0	1
Onshore neighbourhood	44.7		0	1
Gender (ref=male)	52.5		0	1
Age	49.95	17.81	15	101
Level of education				
Low level of education	19.1		0	1
Average level of education	40.9		0	1
High level of education	40		0	1
Victimization (ref=never been a victim)	23.1		0	1
Ethnicity (ref=no migration background)	20.9		0	1
Ethnic composition (ref= % natives)	25.54	13.34	3.63	85.67
Police satisfaction *(0=low level, 10=high level)*	5.39	1.31	0	10
Public housing (%)	54.89	21.66	1	100
Harbour districts				
Havengebied Amsterdam	46.65		0	1
Havengebied Rotterdam	49		0	1
Zeeland Seaports	2.9		0	1
Den Helder	0.2		0	1
Groningen Seaports	1.2		0	1

Source: VM 2012-2017, N=61,988

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[2] The statistics presented in this table are general descriptions. In the next chapter, a distinction is made between types of neighbourhoods. These three tables with mean/percentage, standard deviation, minimum and maximum can be found in appendix A.

4. Analyses and results

This chapter presents the results from the analyses, including decisions concerning the hypotheses. Since there are individual characteristics as well as neighbourhood characteristics, linear multilevel analysis has been conducted. This method makes it possible to test variables on multiple levels and determine the influence they have on the independent variable (Hox, 2000). Individuals are at the first level and nested in neighbourhoods, the latter of which can be considered to be the second level. Based on these individual and neighbourhood characteristics, five models were conducted. Every single model tests one hypothesis and controls for gender, age, level of education, victimization, ethnicity and ethnic composition of the neighbourhood, public housing, police satisfaction and harbour districts. The last model encompasses all variables at once to see if the results show the same direction, strength and significance. The analyses are divided in three selections, based on the type of neighbourhood: the harbour neighbourhoods, the border neighbourhoods, and the onshore neighbourhoods, respectively.

Before starting the analyses, the variables were tested regarding multicollinearity. It is likely that the predictors in the model point out a relationship; it is, however, not good if this relationship is too strong, because than information will get lost (Clark, 2013). If there is serious multicollinearity, the so-called VIF value is higher than 10. The numerical value for VIF tells you what percentage the variance (i.e. the standard error squared) is inflated for each coefficient. For example, a VIF of 1.9 tells that the variance of a particular coefficient is 90% larger than what you would expect if there was no multicollinearity – if there was no correlation with other predictors. After controlling the VIF values in all three datasets, it might be assumed that there are only small tolerance values. In all three datasets, the scale variable social inconvenience has the highest VIF value: 1.421; 1.654; and 1.673, respectively. The remaining VIF values for all variables can be found in appendix B.

The following sections of this chapter include the results of all analyses, presented in tables, for the three selections based on the type of neighbourhood; beginning with the harbour neighbourhoods, followed by the border neighbourhoods and the onshore neighbourhoods. Finally, the similarities and differences between the results for these three types of neighbourhoods will be discussed.

Figure 2 shows the relevant outcomes from the bivariate analyses. These are only the mean values, not controlled for other influences on people's perceptions of safety. Therefore, they have to be interpreted with care. The outcomes show some differences in the feelings of unsafety. People tend to feel most unsafe in the border neighbourhoods, followed by the harbour neighbourhoods and the onshore neighbourhoods. These differences are just minimal, but they seem to be bigger between the various harbour districts. Especially the results for 'Havengebied Rotterdam' are striking; in this harbour district the mean value of feelings of unsafety is the highest with 8 on a scale from 0 to 100.[3]

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[3] A percentage of 8 on a scale from 0 to 100 might seem very small, but it encompasses all the people who feel themselves (very) often unsafe. In light of the importance of this theme, this is a high percentage. See Chapter 1 for a more elaborate explanation.

It shows that 8 percent of the people in the harbour district 'Havengebied Rotterdam' (very) often feel unsafe. The harbour district 'Havengebied Amsterdam' also has a reasonably high mean value for feelings of unsafety with 6.2 percent. In the other harbour districts the mean value of people who (very) often feel unsafe is much lower, with percentages between 2.8 and 4.8. In the following sections these outcomes will be tested through multilevel analyses. The outcomes of the multilevel analyses are realised by controlling for other possible influences on people's perceptions of safety and can thus be seen as true for this research population.

Figure 2. Feelings of unsafety by type of neighbourhood and harbour districts (mean values)
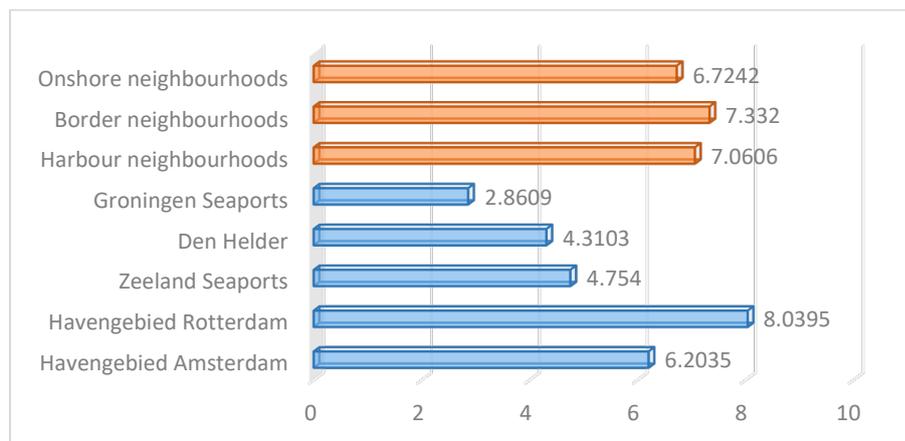
Source: VM 2012-2017, N=61.988

4.1 Harbour neighbourhoods

To test if multilevel analysis is the correct method for this case, a so-called empty model has been conducted first. This model only contains the dependent variable, i.e. people's perceptions of safety. In this model, the estimated average perceived safety across all neighbourhoods is presented. In the process, the so-called intraclass correlation coefficient (ICC) can be measured, which assesses the reliability of ratings by comparing the variability of different ratings of the same subject to the total variation across all ratings and all subjects. The ICC ranges from 0 to 1; a high ICC, close to 1, indicates high similarity between values from the same group while a low ICC, close to 0, means that values from the same group are not similar. The ICC in the empty model is 0.028 (18.197 / (18.197 + 636.581)), which is very low. The value of 18.197 stands for the variance between neighbourhoods while the value of 636.581 refers to the total variance. This means that only 2.8% of the total variance in perceived safety can be ascribed to differences in neighbourhoods. This figure is very low, but the variance[4] on the contextual level is significant; this means multilevel analysis is a suitable method for testing the hypotheses in this research.

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[4] Variance is the expectation of the squared deviation of a random variable from its mean.

Model 1, presented in Table 4.1, consists of the variables perception of safety, social cohesion, gender, age, level of education, victimization, ethnicity, ethnic composition, police satisfaction, public housing and harbour districts. In comparison to the empty model, the variance between neighbourhoods has decreased from 0.028 to 0.004. In this model the main effect between social cohesion and perceptions of safety is also measured: when the level of social cohesion in a neighbourhood increases, the feelings of unsafety decrease. This is one of the strongest effects in this model. If social cohesion is at its lowest level, the effect of social cohesion on perceptions of safety is 0 (-2.40*0). If social cohesion is at its highest level, the effect of social cohesion on perceptions of safety is -22.40 (-2.240*10). (All other variables in the model are kept constant.) The effects are significant and in line with Hypothesis I, which assumes neighbourhoods with a higher level of social cohesion experience a higher level of safety. In other words, Hypothesis I can thus be confirmed.

All variables in this model have a significant relation with perceptions of safety, except for the ethnic composition of the neighbourhood and the harbour districts. Women tend to have more feelings of unsafety than men. The older someone is, the lower someone's feelings of unsafety. As far as the educational level is concerned, people with an average or a high level of education experience lower levels of unsafety compared to people with a low level of education. People who have been a victim of crime feel more unsafe than people who have never been a victim. Migration background relates to feelings of unsafety, in the sense that people with a migration background feel more unsafe than people without a migration background. As far as police satisfaction is concerned, the more people are satisfied with the police, the less feelings of unsafety. Finally, public housing plays a role in people's perceptions of safety; neighbourhoods with higher levels of public housing experience a higher level of unsafety than neighbourhoods with a lower public housing percentage.

From Model 2 onwards, the mediation hypotheses[5] of this research have been tested. One of the most important goals of mediation analysis is to clarify a relationship between two variables (X and Y) by a third variable, Z (Verboon, 2014). The mediator variable Z can explain the causal process between X and Y. In other words: X has an influence on Z and Z in turn influences Y. There are two ways to conduct a mediation analysis. The first one is the most familiar and easiest way, based on Baron and Kenny (1986), the '*causal step method*' for mediation. The second method is the Preacher and Hayes (2004) bootstrap method, a non-parametric test. The bootstrap method does not violate assumptions of normality and is therefore recommended for small sample sizes. Since this research is based on large sample sizes, I have chosen Baron and Kenny's *causal step method* for the mediation analyses.

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[5] Mediating variables or mediating hypotheses are behavioural, biological, psychological, or social constructs that transmit the effect of one variable to another. Mediation is a way in which a researcher can explain the process or mechanism by which one variable affects another. For more information, see MacKinnon, Fairchild & Fritz (2010).

Impoverishment is added to shape Model 2, which tests the first mediation hypothesis. The variance between neighbourhoods decreased from 0.004 to 0.003. By adding impoverishment as a mediating predictor, the direct effect of social cohesion on perceptions of safety decreases from -2.240 to -2.037; a decrease of 9.06% compared to Model 1. Based on the results of Model 1, it appears that the main effect is in line with the expectations based on the theories and previous research. To fulfil a mediation analysis, the direct effect has to be significant and point in the same direction as expected. The results of Model 1 confirm Hypothesis I, which makes it possible to make the second and third step of mediation analysis.

The second step of mediation analysis is to test whether or not there is a relationship between X and Z, in which – in this model – social cohesion predicts impoverishment. The results show a significant effect between social cohesion and impoverishment; a higher level of social cohesion leads to a higher level of impoverishment. This is obviously not in line with the expectation according to which a higher level of social cohesion reduces impoverishment in the neighbourhood. Despite the significant results, Hypothesis II of this research has thus to be rejected. There is no evidence that a higher level of social cohesion leads to a lower level of impoverishment, eventually resulting in less feelings of unsafety. In addition, Model 2 shows that a lower level of impoverishment leads to a lower level of unsafety. If impoverishment is at its lowest level, the effect of impoverishment on perceptions of safety contains 0 (1,507*0). If impoverishment is at its highest level, the effect of impoverishment on perceptions of safety contains 15,070 (1,507*10). Finally, the same (control) variables are significant in Model 1 as well as Model 2. The strength and directions of these coefficients are almost the same.

Model 3 includes the variable social inconvenience in addition to all the variables of Model 1. This model tests the second mediation hypothesis. The variance between neighbourhoods stays the same, with a value of 0.003. There is a direct effect between social cohesion and perceptions of safety, an effect in line with the expectations. By adding social inconvenience, the direct effect of social cohesion on perceptions of safety decreases from -2.240 to -1.859, a decrease of 17% compared to Model 1. Once more, the relationship between X and Z is tested for this mediation hypothesis. There is a significant relationship between social cohesion and social inconvenience; a higher level of social cohesion decreases the level of social inconvenience. This is in line with the first part of Hypothesis III, stating that a higher level of social cohesion leads to a lower level of social inconvenience. Next, the final step of mediation analysis can be made.

To test whether there is a complete, or just a partial mediation, there has to be a relationship between social inconvenience and perceptions of safety. It turns out that there is a significant relationship between social inconvenience and perceptions of safety; the lower the level of social inconvenience, the lower the level of unsafety. In addition, the relationship between social cohesion and perceptions of safety has to disappear, or at least to decrease with 10% or more. This relationship has already been discussed in the previous section; after adding social inconvenience, the direct effect of social cohesion on perceptions of safety decreases with 17%. This effect is significant and in line

with the requirement of a decrease of at least 10%. Therefore, we can speak of a partial mediation. Hypothesis III of this research is confirmed; the results do indeed show that social cohesion leads to less social inconvenience which eventually leads to a higher level of safety. Finally, the same (control) variables are significant in this model as compared to the previous Models 1 and 2. The strengths and directions of these coefficients are almost the same.

Model 4, finally, tests the final mediation hypothesis of this research and includes all variables from Model 1, with quality of life added. The variance between neighbourhoods is almost the same, with a value of 0.004 as compared to 0.003 in the previous model. By adding quality of life as a mediating predictor, the direct relationship between social cohesion and perceptions of safety decreases from -2.240 to -2.136; a decrease of 4.64% compared to Model 1. The effect remains significant, but the percentage is not high enough to conclude a full or partial mediation. Nevertheless, the conclusion is that a higher level of social cohesion leads to a higher quality of life, which is in line with the first part of Hypothesis IV. The second part of the hypothesis is also confirmed by the results; they show that a higher quality of life leads to a lower level of unsafety which is in line with the expectations. Hypothesis IV, according to which a higher level of social cohesion leads to a higher quality of life which will in turn result in less feelings of unsafety, has nevertheless to be rejected because the direct effect is not strong enough to talk about a partial mediation.

In Model 4, the same (control) variables are significant as in the previous models, except for the average level of education. Based on this model, people with a high level of education feel safer than people with a low level of education; there is, however, no (significant) difference between people with an average and a low level of education. The other (control) variables have almost the same strengths and directions of their coefficients as in the previous models.

In a fifth model all mediating variables are taken together, so as to see whether or not there are any changes if they are all combined and measured together. If they are all in the same model, some variables change, such as social cohesion and impoverishment. These do not have a significant relationship with perceptions of safety when all mediating variables are combined in the same model. Social inconvenience and/or quality of life might overshadow these effects. All other (control) variables are significant in this model, just as they are in the previous models. The strength and directions of these coefficients are almost the same.

Based on the models referring to the harbour neighbourhoods, the most important findings regarding the control variables will now be discussed. In general, the findings are mostly in line with the current knowledge and insights regarding the determinants of perceptions of safety. The results show that women do indeed have stronger feelings of unsafety than men (LaGrange & Ferraro, 1989). The older people in the harbour neighbourhoods are, the lower their feelings of unsafety. Although the effects are just small, they are not in line with the expectations based on LaGrange and Ferraro (1989) who, contrary, found that the older the people, the higher the feelings of unsafety. The results show that people with a lower level of education have a stronger feeling of unsafety than people with an average

or high level of education. Victimization only plays a small role in feelings of unsafety; people who have been a victim of crime feel more unsafe than people who have never been a victim (Huys, 2008). Ethnicity only applies on one level in the harbour neighbourhoods. People with a migration background feel more unsafe than people without a migration background (Lane & Meeker, 2003). Ethnic composition in the harbour neighbourhoods does not make a difference in feelings of unsafety. On the other hand, police satisfaction does play a role in feelings of unsafety (Renauer, 2007); the higher the level of police satisfaction, the lower the feelings of unsafety. Public housing only plays a small role in predicting the feelings of unsafety. In harbour neighbourhoods with a higher percentage of public housing, the feelings of unsafety are slightly higher than in the harbour neighbourhoods with a lower level of public housing. The last control variable consists of the harbour districts themselves; feelings of unsafety do not differ in the harbour districts.

At the end of this part of the analysis, some remarks regarding the so-called log-likelihood-ratio (-2LL) can be made. The -2LL test assesses the fit of two competing statistical models based on the ratio of their likelihoods, specifically one found by maximization over the entire parameter space and another found after imposing some constraint. Based on this value, the models can be compared. If this value is small or decreases compared to the first model, the models do have a better fit. Table 4.1 shows that all models do have a lower -2LL than the first model, which means that these models fit the data better.

Note that previous sections only account for the harbour neighbourhoods, the results of which are shown in Table 4.1. The border neighbourhoods and onshore neighbourhoods are dealt with in the next sections. The final section discusses the similarities and differences of the results from the various types of neighbourhoods.

Table 4.1 Linear multilevel regression analyses from perceived safety (for harbour neighbourhoods)

	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Intercept	24.465***	17.568***	14.855***	30.240***	19.480***
Social cohesion	-2.240***	-2.037***	-1.859***	-2.136***	-1.774
Impoverishment		1.507***			0.085
Social inconvenience			3.121***		3.010***
Quality of life				-0.076***	-0.062***
Gender (ref=male)	4.079***	4.047***	3.909***	4.026***	3.872***
Age	-0.042**	-0.045**	-0.031*	-0.044**	-0.034*
Level of education (ref=low level of education)					
Average level of education	-1.289*	-1.331*	-1.242*	-1.068	-1.062
High level of education	-2.884***	-2.830***	-2.554***	-2.564***	-2.291***
Victimization (ref=never been a victim)	0.070***	0.065***	0.054***	0.068***	0.053***
Ethnicity (ref=no migration background)	4.377***	4.923***	4.858***	4.405***	4.872***
Ethnic composition (ref= % natives)	-0.041	-0.048	-0.077	-0.042	-0.076*
Police satisfaction	-1.879***	-1.717***	-1.519***	-1.710***	-1.389***
Public housing (%)	0.097***	0.079***	0.059***	0.095***	0.057***
Harbour districts (ref=Havengebied Amsterdam)[6]					
Havengebied Rotterdam	0.520	0.308	0.268	0.532	0.269
Zeeland Seaports	0	0	0	0	0
Den Helder	0	0	0	0	0
Groningen Seaports	-1.139	-0.978	-1.685	-1.314	-1.769
-2 Log Likelihood	93,704	93,580	93,217	93,637	93,170

Source: VM 2012-2017, N=10,155; Notes: *=p<0.05; **=p<0.01; ***=p<0.001

4.2 Border neighbourhoods

Next, the border neighbourhoods are addressed. Again, as a starting point, a baseline model of the multilevel regression analysis was fitted. The analysis shows that 3.7% of the variance in people's perceptions of safety can be attributed to the neighbourhood level. This level of intra-class correlation is very low, but the variance at the contextual level is significant, which means multilevel analysis is a suitable method for testing the hypotheses in this research.

Turning to the results of the main analysis in Table 4.2, it becomes clear that the level of social cohesion in the neighbourhood is related to people's perceptions of safety (Model 1). Model 1 includes the variables of perception of safety, social cohesion, gender, age, level of education, victimization, ethnicity, ethnic composition, police satisfaction, public housing and harbour districts. Compared to the empty model, the variance between neighbourhoods decreases from 0.036 to 0.026. If social cohesion is at its lowest level, the effect of social cohesion on perceptions of safety contains 0 (-2.190*0). If

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[6] Zeeland Seaports and Den Helder did not have any neighbourhoods in the analyses because the harbour neighbourhoods had not enough respondents to be included. Therefore, these were set to 0, because it is redundant.

social cohesion is at its highest level, the effect of social cohesion on perceptions of safety is -21.90 (-2.190*10). These effects are based on the condition that all the other variables in this model are kept the same. The effects are significant and are in line with Hypothesis I which assumes neighbourhoods with a higher level of social cohesion will experience a higher level of safety. Hypothesis I can thus be confirmed.

Turning to the control variables, most control variables have a significant relationship with perceptions of safety, except for the harbour districts of Zeeland Seaports, Den Helder and Groningen Seaports. Women tend to have more feelings of unsafety than men. The older someone is, the lower someone's feelings of unsafety. As far as the educational level is concerned, people with an average or a high level of education experience lower levels of unsafety than people with a low level of education. People who became a victim feel more unsafe than people who have never been a victim. Migration background relates to feelings of unsafety, in the sense that people with a migration background feel more unsafe than people without a migration background. This is also the case for neighbourhoods with a higher percentage of people with a migration background; people in these neighbourhoods feel more unsafe. Regarding police satisfaction, the more people are satisfied with the police, the less feelings of unsafety. Public housing also plays a role in people's perceptions of safety. Neighbourhoods with higher percentages of public housing experience a higher level of unsafety than neighbourhoods with a lower share of public housing. Finally, people in the harbour district of 'Havengebied Rotterdam' have more feelings of unsafety than people in the harbour district of 'Havengebied Amsterdam'.

As previously discussed in the analyses regarding the harbour neighbourhoods, from Model 2 onwards the mediation hypotheses are tested. Impoverishment is added to Model 2, in which the first mediation hypothesis is tested. The variance between neighbourhoods decreases from 0.026 to 0.006. By adding impoverishment as a mediating predictor, the direct effect of social cohesion on perceptions of safety increases from -2.190 to -2.316. This means an increase of 5.3% compared to Model 1. Based on the results of Model 1, it appears the main effect is in line with the expectations based on the theories and previous research. To fulfil a mediation analysis, the direct effect has to be significant and has to point in the same direction as expected. The results of Model 1 confirm Hypothesis I, but the direct effect has increased instead of decreased. This means there is no mediating effect and thus Hypothesis II has to be rejected; there is no evidence that a higher level of social cohesion leads to a lower level of impoverishment, which eventually results in less feelings of unsafety.

Model 2 shows that a lower level of impoverishment leads to a lower level of unsafety. If impoverishment is at its lowest level, the effect of impoverishment on perceptions of safety is 0 (1.425*0). When impoverishment is at its highest level, the effect of impoverishment on perceptions of safety contains 14.25 (1.425*10). Finally, almost the same (control) variables are significant in Model 1 as well as Model 2. The strength and directions of these coefficients are almost the same. Only age is not significant in this model, as compared to the previous model.

As stated in Hypothesis III, one of the main goals of this analysis is to ascertain the mediating effect of social inconvenience (Model 3). This model includes the variable social inconvenience, next to the same variables as Model 1, and tests the second mediation hypothesis. The variance between neighbourhoods increases from 0.006 to a value of 0.012 for this model. The results show that there is a direct effect between social cohesion and perceptions of safety, in line with the expectations. By adding social inconvenience, the direct effect of social cohesion on perceptions of safety decreases from -2.190 to -2.019, a decrease of 7.81% compared to Model 1. The relationship between X and Z is also tested for this mediation hypothesis. There is a significant relationship between social cohesion and social inconvenience; a higher level of social cohesion will decrease the level of social inconvenience. This is in line with the first part of Hypothesis III, which states that a higher level of social cohesion leads to a lower level of inconvenience. Next, the final step of the mediation analysis can be applied.

To test whether there is a complete mediation or partial mediation, there has to be a relationship between social inconvenience and perceptions of safety. There is indeed; the lower the level of social inconvenience, the lower the level of unsafety. Furthermore, the relationship between social cohesion and perceptions of safety has to disappear or to decrease by at least 10%. (This relationship has already been discussed in the previous section.) The direct effect of social cohesion on perceptions of safety decreases with 7.81% after including social inconvenience. This effect is significant, but does, however, not meet the requirement of at least 10%; therefore, it is not partial mediation. Hypothesis III of this research has thus to be rejected, because the results are not strong enough to conclude that social cohesion leads to less social inconvenience which eventually results in a higher level of safety. Finally, the same (control) variables are significant in this model as compared to the previous Model 2. The strength and directions of these coefficients are almost the same.

Model 4 tests the final mediation hypothesis, using all variables from Model 1 with quality of life added. The variance between neighbourhoods is almost the same, with a value of 0.010 compared to 0.012 for the previous model. By adding quality of life as a mediating predictor, the direct relationship between social cohesion and perceptions of safety decreases from -2.190 to -2.068; a decrease of 4.75% compared to Model 1. The direct effect is significant, but once more the percentage is not high enough to speak of a full or partial mediation. Nevertheless, a higher level of social cohesion leads to a higher quality of life, in line with the first part of Hypothesis IV. The second part of the hypothesis is also confirmed by the results. The results show that a higher quality of life leads to a lower level of unsafety; in line with the expectations. Hypothesis IV, according to which a higher level of social cohesion will lead to a higher quality of life that will in turn lead to less feelings of unsafety, is however rejected, based on failing the requirement of a decrease in direct effect with at least 10%. Finally, the same (control) variables are significant in Model 4 as compared to Model 1. The strength and directions of these coefficients are almost the same.

For the analyses of the border neighbourhoods, there is also a fifth model. Model 5 includes all mediating variables, to see whether there are any changes if they are all measured together. Some

variables change if they are together in the same model, such as impoverishment. This variable does not have a significant relationship with perceptions of safety when all the mediating variables are measured in the same model. The other mediating variables might perhaps overshadow this effect. As in the previous models, all other (control) variables are significant in this model, except for age. Age is only significant in Model 1 and Model 4. The strength and directions of all the other coefficients are almost the same.

Based on all models from the harbour neighbourhoods, the most important findings referring to the control variables are addressed. The findings are mostly in line with the current knowledge about the determinants of perceptions of safety. The outcomes of these results show that women indeed have stronger feelings of unsafety than men (LaGrange & Ferraro, 1989). For the border neighbourhoods, age does not make a difference in people's perceptions of safety. Furthermore, the results show that people with a lower level of education have indeed stronger feelings of unsafety than people with an average or a high level of education. Victimization only plays a small role in feelings of unsafety; people that have been a victim feel more unsafe than people who have never been a victim (Huys, 2008). Ethnicity accounts at two levels in the border neighbourhoods; people with a migration background feel more unsafe than people without a migration background (Lane & Meeker, 2003), while more ethnic diverse border neighbourhoods do have less feelings of unsafety. Police satisfaction also plays a role in feelings of unsafety (Renauer, 2007); the higher the police satisfaction, the lower the feelings of unsafety. Public housing plays a small role in predicting the feelings of unsafety; in harbour neighbourhoods with a higher share of public housing, the feelings of unsafety are a little bit higher than in the border neighbourhoods with a lower percentage of public housing. The final control variable refers to the harbour districts. People who live in the harbour district of 'Havengebied Rotterdam' have more feelings of unsafety than people from 'Havengebied Amsterdam'.

Finally, some remarks regarding the log-likelihood-ratio (-2LL). Based on this value, the models can be compared. If this value is small or decreases compared to the first model, the models do have a better fit. Table 4.2 shows that all models do have a lower -2LL than the first model, which states that the models better fit the data.

Table 4.2 Linear multilevel regression analyses from perceived safety (for border neighbourhoods)

	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	24.564***	20.852***	19.750***	30.614***	23.967***
Social cohesion	-2.190***	-2.316***	-2.019***	-2.068***	-1.842***
Impoverishment		1.425***			0.084
Social inconvenience			2.865***		2.738***
Quality of life				-0.078***	-0.067***
Gender (ref=male)	3.999***	4.509***	4.540***	3.938***	4.417***
Age	-0.034**	-0.027	0.001	-0.037***	0.000
Level of education (ref=low level of education)					
Average level of education	-2.497***	-2.555***	-2.226**	-2.440***	-2.028**
High level of education	-4.771***	-5.643***	-5.069***	-4.601***	-4.726***
Victimization (ref=never been a victim)	0.049***	0.054***	0.042***	0.048***	0.041***
Ethnicity (ref=no migration background)	3.536***	4.807***	4.085***	3.488***	3.910***
Ethnic composition (ref= % natives)	-0.053**	-0.098***	-0.153***	-0.053**	-0.149***
Police satisfaction	-1.796***	-1.809***	-1.589***	-1.643***	-1.392***
Public housing (%)	0.095***	0.088***	0.042*	0.093***	0.041*
Harbour districts (ref=Havengebied Amsterdam)					
Havengebied Rotterdam	3.536***	4.003***	3.792***	3.327***	3.290***
Zeeland Seaports	1.791	2.785	1.259	1.703	1.555
Den Helder	2.817	1.167	2.183	2.894	3.554
Groningen Seaports	-2.123	-2.959	-5.362	-2.196	-4.238
-2 Log Likelihood	223,469	113,799	104,833	223,327	97,718

Source: VM 2012-2017, N=24,127; Notes: *=p<0.05; **=p<0.01; ***=p<0.001

4.3 Onshore neighbourhoods

According to the hypotheses formulated in a previous chapter, a high level of perceived safety will be present in neighbourhoods with a high level of social cohesion, with a low level of impoverishment, a low level of social inconvenience, and a high quality of life. The results of the test of these four hypotheses are presented in Table 4.3. The last analyses are conducted for the onshore neighbourhoods. Prior to the analyses, the ICC was measured for the empty model. In this model, only the dependent variable people's perceptions of safety was used to measure the ICC. The ICC in the empty model is 0.033 (20.911 / (20.911 + 606.780)); the value 20.911 stands for the variance between neighbourhoods and the value 606.780 is the total variance. This means only 3.3% of the total variance in perceived safety can be ascribed to differences in neighbourhoods. This value is very low, but the variance at the contextual level is significant, which means multilevel analysis is a suitable method for testing the hypotheses in this research.

Model 1 consists of the variables of perception of safety, social cohesion, gender, age, level of education, victimization, ethnicity, ethnic composition, police satisfaction, public housing and harbour districts. With reference to the empty model, the variance between neighbourhoods has decreased from

0.033 to 0.012. Further, in this model the main effect between social cohesion and perceptions of safety is measured. The outcomes show that if the level of social cohesion in the neighbourhood increases, the feelings of unsafety decrease. This is one of the strongest effects in this model. If social cohesion is at its lowest level, the effect of social cohesion on perceptions of safety contains 0 (-2.173*0). If social cohesion is at its highest level, the effect of social cohesion on perceptions of safety is -21.73 (-2.173*10). These effects are based on the condition that all the other variables in this model are kept constant. The effects are significant and in line with Hypothesis I, which assumes that neighbourhoods with a higher level of social cohesion will experience a higher level of safety. Hypothesis I can be confirmed.

Furthermore, all other variables in this model have a significant relation with perceptions of safety, except for age and the harbour districts. Women tend to have more feelings of unsafety than men do. For the educational level, people with an average level of education or a high level of education experience lower levels of unsafety than people with a low level of education do. People who once or more became a victim feel more unsafe than people who have never been a victim. Migration background relates to feelings of unsafety, in the sense that people with a migration background feel more unsafe than people without a migration background. This is also the case for neighbourhoods with a higher percentage of people with a migration background; people feel more unsafe in these neighbourhoods. As far as police satisfaction is concerned, the more people are satisfied with the police, the less feelings of unsafety. Finally, public housing plays a role in people's perceptions of safety; neighbourhoods with higher percentages of public housing experience a higher level of unsafety than neighbourhoods with a lower share of public housing.

As addressed in the analyses from the harbour neighbourhoods and border neighbourhoods, from Model 2 onwards the mediation hypotheses of this research were tested. Impoverishment was added to shape Model 2, in which the first mediation hypothesis was tested. The variance between neighbourhoods decreased from 0.012 to 0.007. Through adding impoverishment as a mediating predictor, the direct effect of social cohesion on perceptions of safety increased from -2.173 to a value of -2.197; an increase of 2% compared to Model 1. Based on the results from Model 1, it appears that the main effect is in line with the expectations regarding the theories and earlier research. To fulfil a mediation analysis, the direct effect has to be significant and has to point in the same direction as expected. The results of Model 1 confirm Hypothesis I, but the direct effect has increased instead of decreased compared to Model 1. This means there is no mediating effect and thus Hypothesis II has to be rejected. There is no evidence that a higher level of social cohesion leads to a lower level of impoverishment, eventually resulting in less feelings of unsafety.

Furthermore, Model 2 shows that a lower level of impoverishment leads to a lower level of unsafety. If impoverishment is at its lowest level, the effect of impoverishment on perceptions of safety is 0 (1.354*0). If impoverishment is at its highest level, the effect of impoverishment on perceptions of

safety contains 13.54 (1.354*10). Finally, the same (control) variables are significant in Model 1 and Model 2, while the strength and directions of these coefficients are almost the same.

Model 3 consists of the variable social inconvenience; the other variables are the same as Model 1. The variance between neighbourhoods increases from 0.007 to a value of 0.011 for this model. There is a direct effect between social cohesion and perceptions of safety, in line with the expectations. By adding social inconvenience, the direct effect of social cohesion on perceptions of safety decreases from -2.173 to -1.810, a decrease 16.71% compared to Model 1. The relation between X and Z is tested for this mediation hypothesis. There is a significant relation between social cohesion and social inconvenience; a higher level of social cohesion will increase the level of social inconvenience. This is not in line with the first part of Hypothesis III, that states that a higher level of social cohesion leads to a lower level of inconvenience.

The last step of mediation analysis is not necessary to conduct, since Hypothesis III has to be rejected; the results are not in the same direction as stated. Finally, almost the same (control) variables are significant in this model as in the previous Models 1 and 2. The strength and directions of these coefficients are almost the same. One particular difference concerns the control variable age, which shows a significant relation with perceptions of safety; the older a person, the more feelings of unsafety.

Model 4 tests the last mediation hypothesis from this research; it includes all the variables from Model 1 with quality of life added. The variance between neighbourhoods is the same with a value of 0.011. By adding quality of life as a mediating predictor, the direct relation between social cohesion and perceptions of safety decreases from -2.173 to -2.083; 4.14% as compared to Model 1. The direct effect remains significant, but the percentage is not high enough to speak of a full or partial mediation. Nevertheless, a higher level of social cohesion leads to a higher quality of life; this is in line with the first part of Hypothesis IV. The second part of the hypothesis is also confirmed by the results; it shows that a higher quality of life leads to a lower level of unsafety, in line with the expectations. Hypothesis IV, according to which a higher level of social cohesion will lead to a higher quality of life that will lead to less feelings of unsafety, has to be rejected, based on these results. The diminishing of the main effect was not strong enough to confirm this hypothesis. Finally, the same (control) variables are significant in Model 4 as in Model 3. The strength and directions of these coefficients are almost the same.

To finish the analyses of the onshore neighbourhoods, once more a fifth model is used. Model 5 includes all of the mediating variables, to see if there are any changes if measured together. Some variables change, such as impoverishment, age and public housing. These variables do not have a significant relation with perceptions of safety when all mediating variables are measured in the same model. The other mediating variables might overshadow these effects. All the other (control) variables are significant in this model, just like in the previous models. The strength and directions of all the other coefficients are almost the same.

Based on all models from the onshore neighbourhoods, it ca be said that the most important findings with reference to the control variables are mostly in line with the current knowledge about the determinants of perceptions of safety. The outcomes of these results show that women do indeed have stronger feelings of unsafety than men (LaGrange & Ferraro, 1989). For the border neighbourhoods, age does not make a difference in people's perceptions of safety. Furthermore, the results do show that people with a lower level of education have stronger feelings of unsafety than people with an average or a high level of education. Victimization only plays a small role in feelings of unsafety; people who once or more became a victim feel more unsafe than people who have never been a victim (Huys, 2008). As far as ethnicity is concerned; people with a migration background feel more unsafe than people without a migration background (Lane & Meeker, 2003), and the ethnic more diverse onshore neighbourhoods do have less feelings of unsafety. Police satisfaction also plays a role in feelings of unsafety (Renauer, 2007); the higher the police satisfaction, the lower the feelings of unsafety. Public housing plays a small role in predicting the feelings of unsafety. In onshore neighbourhoods with a higher share of public housing, the feelings of unsafety are slightly higher than in the onshore neighbourhoods with a lower level of public housing. The last control variable relates to the harbour districts; feelings of unsafety do not differ in the harbour districts.

Finally, once more, the log-likelihood-ratio (-2LL), which makes it possible to compare the models. If this value is small or decreases compared to the first model, the models do have a better fit. Table 4.3 shows that all models do have a lower -2LL than the first model, which warrants the conclusion that the models better fit the data.

Table 4.3 Linear multilevel regression analyses from perceived safety (for onshore neighbourhoods)

	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Intercept	24.316***	20.114***	15.338***	30.635***	21.431***
Social cohesion	-2.173***	-2.197***	-1.810***	-2.083***	-1.648***
Impoverishment		1.354***			0.075
Social inconvenience			3.018***		2.769***
Quality of life				-0.079***	-0.083***
Gender (ref=male)	4.293***	4.846***	4.540***	4.263***	4.417***
Age	-0.016	-0.0198	0.097*	-0.019*	0.029
Level of education (ref=low level of education)					
Average level of education	-1.273**	-2.254***	-1.927**	-1.193**	-1.781**
High level of education	-3.471***	-4.438***	-3.665***	-3.292***	-3.299***
Victimization (ref=never been a victim)	0.048***	0.043***	0.037***	0.046***	0.032***
Ethnicity (ref=no migration background)	2.453***	3.200**	3.567***	2.358***	2.856***
Ethnic composition (ref= % natives)	-0.104***	-0.082**	-0.095**	-0.102***	-0.077**
Police satisfaction	-1.418***	-1.425***	-1.238***	-1.265***	-1.076***
Public housing (%)	0.074***	0.061***	0.021	0.073***	0.024
Harbour districts (ref=Havengebied Amsterdam)					
Havengebied Rotterdam	-0.109	0.174	0.174	-0.177	0.119
Zeeland Seaports	-0.715	0.733	0.885	-0.697	0.851
Den Helder	-5.403	-4.862	-2.196	-6.857	-3.594
Groningen Seaports	-3.217	-1.894	-0.917	-3.286	-0.920
-2 Log Likelihood	254,934	117,442	103,813	254,774	97,950

Source: VM 2012-2017, N=27,706; Notes: *=p<0.05; **=p<0.01; ***=p<0.001

4.4 Comparing the results on the basis of the type of neighbourhood

In the final part of this chapter, the results relating to the three types of neighbourhoods are discussed. Most of the hypotheses of this research had to be rejected. Table 4.4 shows per type of neighbourhood whether the hypotheses are confirmed or rejected. For all types of neighbourhoods, Hypothesis I was confirmed. Neighbourhoods with a higher level of social cohesion experience a higher level of safety than neighbourhoods with a lower level of safety. As far as the other hypotheses (II, III and IV) are concerned, only in the case of the harbour neighbourhoods a second hypothesis could be confirmed, namely Hypothesis III about social inconvenience. For people from harbour neighbourhoods who live in a neighbourhood with a higher level of social cohesion, it shows that these neighbourhoods have a lower level of social inconvenience than neighbourhoods with a lower level of social cohesion, which means that residents experience a higher level of safety.

To finish this analysis, the direct effects of the (control) variables have to be addressed. Most variables in all models always have a significant effect on people's perceptions of safety. There are no remarkable differences in the strengths or directions of the effects; in other words, the variables for the hypotheses do point in the same direction for all three types of neighbourhoods and they have almost

the same strength. For all types of neighbourhoods, social inconvenience is the strongest predictor for feelings of unsafety. Regarding the other (control) variables in the models, the variables of ethnicity, gender, educational level and harbour districts (only for border neighbourhoods) are all strong predictors for people's perceptions of safety.

Table 4.4 Outcomes of the various hypotheses for the three types of neighbourhoods

Hypotheses	Harbour neighbourhoods	Border neighbourhoods	Onshore neighbourhoods
I. Neighbourhoods with a higher level of social cohesion experience a higher level of safety than neighbourhoods with a lower level of safety	Confirmed	Confirmed	Confirmed
II. Neighbourhoods with a higher level of social cohesion will have a lower level of impoverishment than neighbourhoods with a lower level of social cohesion, which means that residents experience a higher level of safety	Rejected	Rejected	Rejected
III. Neighbourhoods with a higher level of social cohesion will have a lower level of social inconvenience than neighbourhoods with a lower level of social cohesion, which means that residents experience a higher level of safety	Confirmed	Rejected	Rejected
IV. Neighbourhoods with a higher level of social cohesion will experience a higher quality of life than neighbourhoods with a lower level of social cohesion, which means that residents experience a higher level of safety	Rejected	Rejected	Rejected

Source: VM 2012-2017

5. Conclusion and discussion

5.1 Conclusion

The starting point of this thesis was that quite some research on the issue of safety has been done, but at the same time that not that much is known about the relationship between social and physical disorder and people's perceptions of safety in specific types of neighbourhoods, being the neighbourhoods around Dutch harbours. The central research question of this study is thus formulated as follows: '*How and to what extent does social cohesion in the neighbourhoods around Dutch harbours positively contribute to people's perceptions of safety, during the period of 2012-2017?*' In line with this central research question, three types of (physical) disorder were central in this study: impoverishment, social inconvenience, and quality of life. These were used to find out whether or not these forms of disorder can explain the relationship between social cohesion and people's perceptions of safety. Municipalities spend a lot of money and energy on policies regarding perceived safety, because feelings of unsafety can have (strong) negative consequences for individuals as well as neighbourhoods. Feelings of unsafety might lead to all kinds of (undesirable) behaviour (Smeets, 2016). The results of this master's thesis research can provide a positive contribution to the development of existing and new policies.

Based on the results of this study, one can conclude that social cohesion positively contributes to people's perceptions of safety. The results for all three types of neighbourhoods (harbour, border, and onshore neighbourhoods) show that a higher level of social cohesion in a neighbourhood leads to a higher level of perceived safety. These findings are in line with De Hart (2002) and Wittebrood & Van Dijk (2007), who already found evidence for a strong relationship between people's perceptions of safety and social cohesion and integration in a neighbourhood. According to these studies, a higher level of social cohesion in a neighbourhood directly leads to less feelings of unsafety. The other way around, the findings from this research also link to the findings of Ross & Jang (2000); people who live in neighbourhoods with a low level of social cohesion report lower levels of informal integration with neighbours. A lack of informal attachments to neighbours makes the unfavourable effects of a low level of social cohesion on feelings of safety even worse.

Secondly – and surprisingly –, the findings of this study show that the relationship between social cohesion and people's perceptions of safety cannot be explained by the three characteristics of (physical) disorder (impoverishment, social inconvenience, and quality of life); except for social inconvenience in the harbour neighbourhoods. In these neighbourhoods, the *incivilities thesis* is applicable. This theory focuses on the social and physical conditions in a neighbourhood that can be seen as troublesome and potentially threatening by its residents and users of its public spaces (Taylor, 1995). According to this notion, disorder leads to incivilities and this will eventually result in fear. In harbour neighbourhoods, social cohesion can be seen as an important mechanism in preventing physical disorder (Hunter, 1978). In the harbour neighbourhoods with a higher level of social cohesion, people

know each other at least superficially and stand together against undesirable behaviour. Social inconvenience gets less chance.

In addition, the findings of this study show that impoverishment in the neighbourhood plays a role in people's perceptions of safety. Impoverishment does indeed lead to a downward spiral of urban decay, followed by behaviour of avoidance and feelings of unsafety (Kelling & Coles, 1997). This study did not find any evidence, however, that a higher level of social cohesion plays a role in keeping away impoverishment, leading to less feelings of unsafety. This is not in line with the findings of Skogan (1990), who found that a high level of social cohesion brings down disorder as well as serious forms of crime. Furthermore, quality of life also plays an important role in people's perceptions of safety. A poor subjective quality of life can have widespread social consequences (Adams & Serpe, 2000). This is strongly connected to poor physical and mental health, and people with a low quality of life do often feel less safe than people who experience a higher quality of life (Ross, 1993). On the other hand, the results of this study are not in line with the findings of Duyvendak (1998), who argues that in particular in neighbourhoods with a low quality of life it is important to improve the social cohesion, because residents who feel attached to their neighbours also perceive the neighbourhood as safer. There is no evidence in this study that the relationship between social cohesion and people's perceptions of safety can be explained by quality of life.

Finally, this master's thesis research shows some important findings regarding the control variables. In all types of neighbourhoods, victimization plays a small role in people's perceptions of safety. People who have become a victim of crime, feel more unsafe than people who have never been a victim. This is in line with previous research of Huys (2008), who found that victims become more frightened of crime and feel more unsafe than non-victims. Furthermore, ethnic background does play a role in how safe people themselves feel in the neighbourhood. People with a migration background feel more unsafe than people without a migration background. Previous studies typically find that minorities are more fearful (Lane & Meeker, 2003). Another important predictor of people's perceptions of safety is police satisfaction; people who have a higher level of police satisfaction experience a lower level of unsafety than people with a low level of police satisfaction. Renauer (2007) also found a positive relationship between police satisfaction and feelings of safety. In the border neighbourhoods there is also a difference between people from 'Havengebied Amsterdam' and 'Havengebied Rotterdam'. People from 'Havengebied Rotterdam' feel more unsafe than people from 'Havengebied Amsterdam'. Note, however, that this only accounts for the border neighbourhoods and not for the other types of neighbourhoods (harbour and onshore neighbourhoods).

Most other control variables do influence people's perceptions of safety, albeit by only adding a very small contribution. In this study there is evidence that women feel slightly more unsafe than men. Next to that, the level of education plays a role in the perceived safety. People with an average or a high level of education feel less unsafe than people with a low level of education. The ethnic contribution plays a small role in people's perceptions of safety, in the sense that more ethnic diverse neighbourhoods

experience higher levels of unsafety than more ethnic homogeneous neighbourhoods. Neighbourhoods with more public housing, finally, experience a higher level of safety than neighbourhoods with less public housing.

This master thesis contributes to the existing studies about the relationship between social cohesion and people's perceptions of safety. Previous studies about this relationship never focussed on the Dutch harbours. Studies that do deal with the safety in Dutch harbours are about the accidents taking place and their impact on the workers in these harbours (Helmick, 2008; Van der Torre, 2014). In this thesis research, new insights into people's perceptions of safety in the neighbourhoods around Dutch harbours are given. This does not mean that these findings will stand for once and for all. Research on this topic still remains necessary to test whether or not these predictors are stable in a changing context. Therefore, follow-up research could test the sustainability of the tested theories in this research. Are these theories obsolete and out-of-date to predict people's perceptions of safety or does it differ for divergent cohorts? Follow-up research might give the answer. The outcomes of this master's thesis research also contribute to the debate on a societal level. Municipalities spend lots of money on policies regarding perceived safety. Therefore, in a following section some policy recommendations will be presented to contribute to existing policies.

5.2 Discussion

This master's thesis research also highlights some weak spots that follow-up research has to take into account. Firstly, there are some shortcomings regarding the harbour districts for the harbour neighbourhoods. No neighbourhoods were included for 'Zeeland Seaports' and 'Den Helder', because there were not enough respondents for these harbour districts. The harbour district of 'Groningen Seaports' also had few respondents, which makes it difficult to see a difference with 'Havengebied Amsterdam' and 'Havengebied Rotterdam'. Follow-up research might better combine these categories into one larger category or just focus on the bigger (or smaller) harbour districts. For the smaller harbour districts, more casual analyses might be enough to test the discussed relationships. On the other hand, the problem might be reduced if more editions of the Dutch Safety Monitor are used; more years of the Safety Monitor will result in more respondents and more accurate analyses.

A second shortcoming concerns the three types of neighbourhoods. There was not yet a classification of harbour neighbourhoods, border neighbourhoods, and onshore neighbourhoods. This classification is based on my own distinction between all neighbourhoods in these municipalities. I put each neighbourhood of the dataset in one specific category after consulting Google Maps. This is not a problem in itself, but it would be more accurate if at least two researchers made the distinctions and compared their classifications. Another more accurate measurement might be made after contacting the municipalities; they might have some classifications in their policies which can serve as a good starting point for follow-up research.

Finally, the issue of the scale variables is addressed. It might be interesting and useful for policymakers to know which part of, for example, social cohesion has the largest contribution to people's perceptions of safety. In this research no additional analyses have been conducted to check the strongest predictors of a scale variable. Follow-up research can do this, so as to make more accurate policy recommendations. These limitations do not imply that this research makes no reliable and valid contribution. The research confirms many relationships regarding social cohesion, (physical) disorder and feelings of (un)safety.

5.3 Policy recommendations

The most important findings of this master's thesis research read as follows: a higher level of social cohesion leads to less feelings of unsafety, a higher level of impoverishment and social inconvenience leads to more feelings of unsafety and a higher subjective quality of life leads to less feelings of unsafety. Furthermore, police satisfaction seems to be an important predictor of people's perceptions of safety. The central explanation of this research is thus confirmed in this study. Which implications do these results have on policies regarding perceived safety?

Current policies mostly focus on improving the social and physical conditions of city districts, in order to boost the feelings of safety in their neighbourhoods. Policy initiatives have to go hand in hand with the care of economic and social structures, but also with approaching inconvenience and crime in the neighbourhood. Municipalities can use communication means to make residents aware of the importance of social cohesion in the neighbourhood. They can use advertisements to point residents to the facilities the neighbourhood has to offer.

On the other hand, it could be an important step towards safety to let residents participate in safety projects. For example, let them make a round through the neighbourhood with local policemen. In this way they get a better picture of the problems of the neighbourhood and can help in reducing these problems. Residents get the feeling they can change something, so they have more trust in the neighbourhood and feelings of safety increase.

In particular, the combination of increased surveillance, tailor-made care and physical and social investments can help in fighting a neighbourhood's problems. An integral approach towards impoverishment and social inconvenience is possible. An example is about the drugs criminality in the neighbourhood. Ask residents to point out the people who are involved in these businesses and make sure policemen are more on the streets. This can have an alarming result and diminishes this inconvenience and will lead to a higher level of safety.

Security cameras can also play a role in people's feelings of safety. This can also have an alarming result and in this way decreases the actual crime rate. The feelings of people play an important role in this as well. People are aware that there are cameras and think that thanks to the surveillance criminality will diminish. They thus feel safer in public spaces with security cameras.

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Appendix

A. Describing statistics

Table A1. Describing statistics of the variables used in this research (harbour neighbourhoods)

	Mean/Percentage	Standard deviation	Minimum	Maximum
Perceptions of safety *(0=feeling safe, 100=feeling unsafe)*	7.06	25.62	0	100
Social cohesion *(0=low level, 10=high level)*	5.79	1.80	0	10
Impoverishment *(0=low level, 10=high level)*	4.22	1.87	0	10
Social inconvenience *(0=low level, 10=high level)*	2.61	1.79	0	10
Quality of life *(0=low level, 10=high level)*	92.44	26.44	0	100
Gender (ref=male)	51.2		0	1
Age	50.57	17.64	15	101
Level of education				
Low level of education	31.8		0	1
Average level of education	29.3		0	1
High level of education	31.3		0	1
Victimization (ref=never been a victim)	20.3		0	1
Ethnicity (ref=no migration background)	20.1		0	1
Ethnic composition (ref= % natives)	21.35	10.31	6.56	65.48
Police satisfaction *(0=low level, 10=high level)*	5.28	1.33	0	10
Public housing (%)	50.28	21.27	1	91
Harbour districts				
Havengebied Amsterdam	17.4		0	1
Havengebied Rotterdam	80.9		0	1
Zeeland Seaports	0		0	1
Den Helder	0		0	1
Groningen Seaports	1.7		0	1

Source: VM 2012-2017, N=10,155

Table A2. Describing statistics of the variables used in this research (border neighbourhoods)

	Mean/Percentage	Standard deviation	Minimum	Maximum
Perceptions of safety *(0=feeling safe, 100=feeling unsafe)*	7.33	26.07	0	100
Social cohesion *(0=low level, 10=high level)*	5.73	1.80	0	10
Impoverishment *(0=low level, 10=high level)*	4.42	2.61	0	10
Social inconvenience *(0=low level, 10=high level)*	2.97	2.81	0	10
Quality of life *(0=low level, 10=high level)*	93.31	24.98	0	100
Gender (ref=male)	52.32		0	1
Age	49.01	17.57	15	100
Level of education				
Low level of education	24.6		0	1
Average level of education	25		0	1
High level of education	44.3		0	1
Victimization (ref=never been a victim)	26.09		0	1
Ethnicity (ref=no migration background)	21.91		0	1
Ethnic composition (ref= % natives)	30	15.34	5.43	93.16
Police satisfaction *(0=low level, 10=high level)*	5.39	1.31	0	10
Public housing (%)	56.96	19.64	2	97
Harbour districts				
Havengebied Amsterdam	55.2		0	1
Havengebied Rotterdam	39.4		0	1
Zeeland Seaports	4.7		0	1
Den Helder	0.3		0	1
Groningen Seaports	0.4		0	1

Source: VM 2012-2017, N=24,127

Table A3. Describing of the variables used in this research (onshore neighbourhoods)

	Mean/Percentage	Standard deviation	Minimum	Maximum
Perceptions of safety *(0=feeling safe, 100=feeling unsafe)*	6.72	25.05	0	100
Social cohesion *(0=low level, 10=high level)*	5.81	1.76	0	10
Impoverishment *(0=low level, 10=high level)*	4.14	2.65	0	10
Social inconvenience *(0=low level, 10=high level)*	2.44	2.66	0	10
Quality of life *(0=low level, 10=high level)*	94.15	23.46	0	100
Gender (ref=male)	49.9		0	1
Age	50.54	18.04	15	97
Level of education				
Low level of education	27.4		0	1
Average level of education	27		0	1
High level of education	39.4		0	1
Victimization (ref=never been a victim)	21.6		0	1
Ethnicity (ref=no migration background)	20.2		0	1
Ethnic composition (ref= % natives)	23.19	11.19	3.63	66.12
Police satisfaction *(0=low level, 10=high level)*	5.42	1.27	0	10
Public housing (%)	54.79	23.16	3	100
Harbour districts				
Havengebied Amsterdam	49.9		0	1
Havengebied Rotterdam	45.7		0	1
Zeeland Seaports	2.4		0	1
Den Helder	0.2		0	1
Groningen Seaports	1.8		0	1

Source: VM 2012-2017, N=27,706

Table A4. Included neighbourhoods in this master's thesis research

Neighbourhood name	Municipality	Neighbourhood code
Kop Zeedijk	Amsterdam	03630000
Oude Kerk e.o.	Amsterdam	03630001
Burgwallen Oost	Amsterdam	03630002
BG-terrein e.o.	Amsterdam	03630004
Spuistraat Noord	Amsterdam	03630103
Nieuwe Kerk e.o.	Amsterdam	03630104
Spuistraat Zuid	Amsterdam	03630105
Langestraat e.o.	Amsterdam	03630200
Leliegracht e.o.	Amsterdam	03630201
Felix Meritisbuurt	Amsterdam	03630202
Van Loonbuurt	Amsterdam	03630302
Amstelveldbuurt	Amsterdam	03630303
Scheepvaarthuisbuurt	Amsterdam	03630401
Rapenburg	Amsterdam	03630402
Lastage	Amsterdam	03630403
Nieuwmarkt	Amsterdam	03630404
Uilenburg	Amsterdam	03630405
Valkenburg	Amsterdam	03630406
Zuiderkerkbuurt	Amsterdam	03630407
Waterloopleinbuurt	Amsterdam	03630408
Westerdokseiland	Amsterdam	03630500
Haarlemmerbuurt Oost	Amsterdam	03630501
Haarlemmerbuurt West	Amsterdam	03630502
Westelijke eilanden	Amsterdam	03630503
Driehoekbuurt	Amsterdam	03630600
Bloemgrachtbuurt	Amsterdam	03630602
Marnixbuurt Noord	Amsterdam	03630603
Elandsgrachtbuurt	Amsterdam	03630606
Anjeliersbuurt Noord	Amsterdam	03630610
Anjeliersbuurt Zuid	Amsterdam	03630611
Weteringbuurt	Amsterdam	03630704
Den Texbuurt	Amsterdam	03630705
Utrechtsebuurt Zuid	Amsterdam	03630706
Frederikspleinbuurt	Amsterdam	03630707
Weesperbuurt	Amsterdam	03630800
Sarphatistrook	Amsterdam	03630801
Plantage	Amsterdam	03630803
Kattenburg	Amsterdam	03630901
Wittenburg	Amsterdam	03630902
Oostenburg	Amsterdam	03630903
Czaar Peterbuurt	Amsterdam	03630904
Het Funen	Amsterdam	03630905
Kazernebuurt	Amsterdam	03630907

Neighbourhood name	Municipality	Neighbourhood code
Kadijken	Amsterdam	03630908
Zeeheldenbuurt	Amsterdam	03631300
Spaarndammerbuurt Noordoost	Amsterdam	03631301
Spaarndammerbuurt Noordwest	Amsterdam	03631305
Fannius Scholtenbuurt	Amsterdam	03631403
Westerstaatsman	Amsterdam	03631404
Buyskade e.o.	Amsterdam	03631405
Frederik Hendrikbuurt Noord	Amsterdam	03631600
Frederik Hendrikbuurt Zuidoost	Amsterdam	03631601
Da Costabuurt Noord	Amsterdam	03631700
Bellamybuurt Noord	Amsterdam	03631800
Bellamybuurt Zuid	Amsterdam	03631801
Da Costabuurt Zuid	Amsterdam	03631900
Borgerbuurt	Amsterdam	03631901
Lootsbuurt	Amsterdam	03631902
Helmersbuurt Oost	Amsterdam	03632000
WG-terrein	Amsterdam	03632001
Cremerbuurt Oost	Amsterdam	03632002
Cremerbuurt West	Amsterdam	03632100
Vondelparkbuurt West	Amsterdam	03632101
Hemonybuurt	Amsterdam	03632400
Gerard Doubuurt	Amsterdam	03632401
Frans Halsbuurt	Amsterdam	03632402
Hercules Seghersbuurt	Amsterdam	03632403
Sarphatiparkbuurt	Amsterdam	03632404
Willibrordusbuurt	Amsterdam	03632500
Van der Helstpleinbuurt	Amsterdam	03632501
Lizzy Ansinghbuurt	Amsterdam	03632502
Cornelis Troostbuurt	Amsterdam	03632503
Diamantbuurt	Amsterdam	03632600
Burgemeester Tellegenbuurt Oost	Amsterdam	03632601
Burgemeester Tellegenbuurt West	Amsterdam	03632602
Swammerdambuurt	Amsterdam	03632700
Weesperzijde Midden/Zuid	Amsterdam	03632701
Oosterparkbuurt Noordwest	Amsterdam	03632800
Oosterparkbuurt Zuidoost	Amsterdam	03632802
Oosterparkbuurt Zuidwest	Amsterdam	03632803
Dapperbuurt Noord	Amsterdam	03632900
Dapperbuurt Zuid	Amsterdam	03632901
Transvaalbuurt West	Amsterdam	03633000
Transvaalbuurt Oost	Amsterdam	03633001
Noordwestkwadrant Indische buurt Noord	Amsterdam	03633100
Noordwestkwadrant Indische buurt Zuid	Amsterdam	03633101
Zuidwestkwadrant Indische buurt	Amsterdam	03633102

Neighbourhood name	Municipality	Neighbourhood code
Noordoostkwadrant Indische buurt	Amsterdam	03633200
Zuidoostkwadrant Indische buurt	Amsterdam	03633201
Rietlanden	Amsterdam	03633301
Java-eiland	Amsterdam	03633302
KNSM-eiland	Amsterdam	03633303
Sporenburg	Amsterdam	03633304
Borneo	Amsterdam	03633305
Architectenbuurt	Amsterdam	03633307
Steigereiland Zuid	Amsterdam	03633501
Haveneiland Zuidwest/Rieteiland West	Amsterdam	03633502
Haveneiland Noordwest	Amsterdam	03633504
Haveneiland Noordoost	Amsterdam	03633505
Bosleeuw	Amsterdam	03633702
Landlust Zuid	Amsterdam	03633703
Gibraltarbuurt	Amsterdam	03633705
Erasmusparkbuurt West	Amsterdam	03633802
Robert Scottbuurt Oost	Amsterdam	03633803
Robert Scottbuurt West	Amsterdam	03633900
Kolenkitbuurt Zuid	Amsterdam	03633902
Kolenkitbuurt Noord	Amsterdam	03633903
Geuzenhofbuurt	Amsterdam	03634000
Trompbuurt	Amsterdam	03634001
Pieter van der Doesbuurt	Amsterdam	03634002
John Franklinbuurt	Amsterdam	03634100
Jan Maijenbuurt	Amsterdam	03634101
Orteliusbuurt Noord	Amsterdam	03634102
Balboaplein e.o.	Amsterdam	03634200
Columbusplein e.o.	Amsterdam	03634201
Paramariboplein e.o.	Amsterdam	03634300
Postjeskade e.o.	Amsterdam	03634301
Westlandgrachtbuurt	Amsterdam	03634401
Aalsmeerwegbuurt West	Amsterdam	03634402
Aalsmeerwegbuurt Oost	Amsterdam	03634403
Legmeerpleinbuurt	Amsterdam	03634404
Schinkelbuurt Noord	Amsterdam	03634500
Schinkelbuurt Zuid	Amsterdam	03634501
Valeriusbuurt West	Amsterdam	03634601
Cornelis Schuytbuurt	Amsterdam	03634703
Harmoniehofbuurt	Amsterdam	03634706
Marathonbuurt West	Amsterdam	03634802
Van Tuyllbuurt	Amsterdam	03634805
Minervabuurt Midden	Amsterdam	03634904
Minervabuurt Zuid	Amsterdam	03634905
Haveneiland Oost	Amsterdam	03635101
Wielingenbuurt	Amsterdam	03635200

Neighbourhood name	Municipality	Neighbourhood code
Scheldebuurt West	Amsterdam	03635201
Scheldebuurt Midden	Amsterdam	03635202
Scheldebuurt Oost	Amsterdam	03635203
IJselbuurt West	Amsterdam	03635300
IJselbuurt Oost	Amsterdam	03635301
Kromme Mijdrechtbuurt	Amsterdam	03635400
Rijnbuurt Oost	Amsterdam	03635401
Rijnbuurt Midden	Amsterdam	03635402
Don Bosco	Amsterdam	03635503
De Wetbuurt	Amsterdam	03635506
Tuindorp Frankendael	Amsterdam	03635507
Linnaeusparkbuurt	Amsterdam	03635600
Middenmeer Noord	Amsterdam	03635601
Middenmeer Zuid	Amsterdam	03635602
Park de Meer	Amsterdam	03635605
Betondorp	Amsterdam	03635700
Prinses Irenebuurt	Amsterdam	03635900
Van der Pekbuurt	Amsterdam	03636000
Bloemenbuurt Zuid	Amsterdam	03636001
Bloemenbuurt Noord	Amsterdam	03636002
IJplein e.o.	Amsterdam	03636100
Vogelbuurt Zuid	Amsterdam	03636101
Tuindorp Nieuwendam Oost	Amsterdam	03636201
Tuindorp Oostzaan Oost	Amsterdam	03636501
Terrasdorp	Amsterdam	03636502
Twiske West	Amsterdam	03636603
Werengouw Midden	Amsterdam	03636802
Markengouw Midden	Amsterdam	03636803
Plan van Gool	Amsterdam	03636910
Buikslotermeer Noord	Amsterdam	03636912
Banne Zuidwest	Amsterdam	03637000
Banne Zuidoost	Amsterdam	03637001
Banne Noordoost	Amsterdam	03637003
Zunderdorp	Amsterdam	03637307
Elzenhagen Noord	Amsterdam	03637402
Kortenaerkwartier	Amsterdam	03637500
De Wester Quartier	Amsterdam	03637502
Buurt 3	Amsterdam	03637600
Buurt 2	Amsterdam	03637601
Slotermeer Zuid	Amsterdam	03637700
Noordoever Sloterplas	Amsterdam	03637701
Buurt 4 Oost	Amsterdam	03637702
Buurt 5 Noord	Amsterdam	03637703
Buurt 5 Zuid	Amsterdam	03637705
Buurt 6	Amsterdam	03637800

Neighbourhood name	Municipality	Neighbourhood code
Buurt 7	Amsterdam	03637801
Buurt 8	Amsterdam	03637802
Buurt 9	Amsterdam	03637803
Buurt 10	Amsterdam	03637901
Wildeman	Amsterdam	03638100
Meer en Oever	Amsterdam	03638101
Osdorp Zuidoost	Amsterdam	03638104
Osdorp Midden Zuid	Amsterdam	03638201
Zuidwestkwadrant Osdorp Zuid	Amsterdam	03638203
De Punt	Amsterdam	03638300
Middelveldsche Akerpolder	Amsterdam	03638400
De Aker West	Amsterdam	03638401
De Aker Oost	Amsterdam	03638402
Oostoever Sloterplas	Amsterdam	03638500
Emanuel van Meterenbuurt	Amsterdam	03638501
Overtoomse Veld Noord	Amsterdam	03638600
Overtoomse Veld Zuid	Amsterdam	03638601
Koningin Wilhelminaplein	Amsterdam	03638700
Delflandpleinbuurt West	Amsterdam	03638703
Nieuw Sloten Noordwest	Amsterdam	03638804
Nieuw Sloten Noordoost	Amsterdam	03638805
Nieuw Sloten Zuidwest	Amsterdam	03638807
Louis Crispijnbuurt	Amsterdam	03638900
Jacques Veldmanbuurt	Amsterdam	03638901
Staalmanbuurt	Amsterdam	03638902
Gelderlandpleinbuurt	Amsterdam	03639000
Buitenveldert Midden Zuid	Amsterdam	03639002
Buitenveldert Zuidwest	Amsterdam	03639003
Buitenveldert Oost Midden	Amsterdam	03639101
Buitenveldert Zuidoost	Amsterdam	03639102
Venserpolder West	Amsterdam	03639300
Venserpolder Oost	Amsterdam	03639301
D-buurt	Amsterdam	03639302
F-buurt	Amsterdam	03639303
Rechte H-buurt	Amsterdam	03639306
Hakfort/Huigenbos	Amsterdam	03639307
G-buurt West	Amsterdam	03639401
Bijlmermuseum Noord	Amsterdam	03639402
Kortvoort	Amsterdam	03639403
Kelbergen	Amsterdam	03639404
K-buurt Midden	Amsterdam	03639405
Grunder/Koningshoef	Amsterdam	03639408
G-buurt Oost	Amsterdam	03639409
Kantershof	Amsterdam	03639410
Bijlmermuseum Zuid	Amsterdam	03639413

Neighbourhood Name	Municipality	Neighbourhood code
L-buurt	Amsterdam	03639500
Holendrecht West	Amsterdam	03639600
Reigersbos Noord	Amsterdam	03639601
Holendrecht Oost	Amsterdam	03639602
Gaasperdam Noord	Amsterdam	03639603
Gaasperdam Zuid	Amsterdam	03639604
Reigersbos Midden	Amsterdam	03639605
Reigersbos Zuid	Amsterdam	03639606
Gein Noordwest	Amsterdam	03639700
Gein Noordoost	Amsterdam	03639702
Gein Zuidoost	Amsterdam	03639703
Dorp Driemond	Amsterdam	03639800
Vondellaan	Beverwijk	03750100
Ronde Boogaard	Beverwijk	03750101
Plantage	Beverwijk	03750300
Oostertuinen	Beverwijk	03750301
Warande	Beverwijk	03750400
Westertuinen	Beverwijk	03750500
Oosterwijk	Beverwijk	03750600
Zwaansmeer	Beverwijk	03750601
Wijkerbaan	Beverwijk	03750702
Wijk aan Zee	Beverwijk	03750800
Lanen	Beverwijk	03751000
Farmsum	Delfzijl	00100001
Delfzijl-Noord	Delfzijl	00100002
Delfzijl-West	Delfzijl	00100003
Tuikwerd	Delfzijl	00100005
Nieuwe Haven en omgeving	Dordrecht	05050100
Groenmarkt en omgeving	Dordrecht	05050101
Boogjes en omgeving	Dordrecht	05050106
Centrum	Dordrecht	05050108
Bleijenhoek	Dordrecht	05050200
Stadswerven	Dordrecht	05050201
Lijnbaan	Dordrecht	05050202
Merwestein-Noord	Dordrecht	05050204
Kasperspad en omgeving	Dordrecht	05050205
Park Merwestein en omgeving	Dordrecht	05050206
Viottakade en omgeving	Dordrecht	05050301
Erasmuslaan en omgeving	Dordrecht	05050302
Breitnerstraat en omgeving	Dordrecht	05050303
Jacob Marisstraat en omgeving	Dordrecht	05050304
Krispijnse Driehoek	Dordrecht	05050305
Jacob Catsstraat en omgeving	Dordrecht	05050306
Pr. Bernhardstraat en omgeving	Dordrecht	05050400
Waldeck Pyrmontweg en omgeving	Dordrecht	05050401

Neighbourhood name	Municipality	Neighbourhood code
Anna Paulownastraat en omgeving	Dordrecht	05050402
Emmastraat en omgeving	Dordrecht	05050403
Transvaalstraat en omgeving	Dordrecht	05050501
Indische Buurt-Noord	Dordrecht	05050503
Boeroestraat en omgeving	Dordrecht	05050504
Vogelplein-Aalscholverstraat en omgeving	Dordrecht	05050505
Standhasenstraat en omgeving	Dordrecht	05050507
Heysterbachstraat en omgeving	Dordrecht	05050508
Amerstraat en omgeving	Dordrecht	05050603
Merwedepolder-West	Dordrecht	05050604
Merwedepolder-Oost	Dordrecht	05050605
Admiraalsplein	Dordrecht	05050700
Van Kinsbergenstraat en omgeving	Dordrecht	05050701
Cornelis Evertsenstraat en omgeving	Dordrecht	05050702
Dordtse Hout	Dordrecht	05050707
Crabbehof-Zuid	Dordrecht	05050800
Crabbehof-Noord	Dordrecht	05050801
Zuidhoven	Dordrecht	05050802
Sterrenburg 1-West	Dordrecht	05050900
Sterrenburg 1-Oost	Dordrecht	05050901
Waterman en omgeving	Dordrecht	05050902
Mildenburg en omgeving	Dordrecht	05050906
Zuilenburg en omgeving	Dordrecht	05050907
Vredenburg en omgeving	Dordrecht	05050908
Wittenstein en omgeving	Dordrecht	05050909
Dubbeldam-Noord	Dordrecht	05051006
Dubbeldam-Zuid	Dordrecht	05051007
De Hoven	Dordrecht	05051011
Amazone en omgeving	Dordrecht	05051100
Palissander en omgeving	Dordrecht	05051101
Iroko en omgeving	Dordrecht	05051103
Van Ravesteijn-erf en omgeving	Dordrecht	05051105
Van den Broek-erf en omgeving	Dordrecht	05051106
Pearl Buck-erf en omgeving	Dordrecht	05051109
Aletta Jacobs-erf en omgeving	Dordrecht	05051110
Johanna Naber-erf en omgeving	Dordrecht	05051111
Uithuizen	Eemsmond	16510001
Uithuizermeeden	Eemsmond	16510100
Usquert	Eemsmond	16510300
Warffum	Eemsmond	16510400
Oud Den Helder	Den Helder	04000200
Kruiszwin	Den Helder	04000804
Taanschuurpolder	Maassluis	05560101
Vertobuurt	Maassluis	05560201
Bomendal	Maassluis	05560203

Neighbourhood name	Municipality	Neighbourhood code
Sluispolder Oost	Maassluis	05560301
Koningshoek	Maassluis	05560403
Vogelbuurt	Maassluis	05560501
Burgemeesterswijk	Maassluis	05560502
Steendijkpolder Noord	Maassluis	05560601
Steendijkpolder Zuid	Maassluis	05560602
Hoogwerf-Noord	Nissewaard	19300301
Hoogwerf-Zuid	Nissewaard	19300302
Groenewoud-Koop	Nissewaard	19300703
Sterrenkwartier-Oost	Nissewaard	19300803
Schenkel-Zuidwest	Nissewaard	19300903
Schenkel-Zuidoost	Nissewaard	19300904
De Dijk	Nissewaard	19301001
Vogelenzang-Zuid	Nissewaard	19301101
Gaarden	Nissewaard	19301201
Vriesland	Nissewaard	19301301
Maaswijk-Noordoost	Nissewaard	19301501
Maaswijk-Zuidwest	Nissewaard	19301503
Maaswijk-Zuidoost	Nissewaard	19301504
Ravensteijn-West	Nissewaard	19302503
Geervliet-Noordoost	Nissewaard	19302702
Kern Zuidland	Nissewaard	19303101
Kerckhoek	Nissewaard	19303102
Stadsdriehoek	Rotterdam	05990110
Oude Westen	Rotterdam	05990111
Cool	Rotterdam	05990112
Nieuwe Werk	Rotterdam	05990118
Delfshaven	Rotterdam	05990320
Bospolder	Rotterdam	05990321
Tussendijken	Rotterdam	05990322
Spangen	Rotterdam	05990323
Nieuwe Westen	Rotterdam	05990324
Middelland	Rotterdam	05990325
Oud Mathenesse	Rotterdam	05990327
Schiemond	Rotterdam	05990329
Kleinpolder	Rotterdam	05990451
Overschie	Rotterdam	05990456
Provenierswijk	Rotterdam	05990516
Bergpolder	Rotterdam	05990531
Blijdorp	Rotterdam	05990532
Liskwartier	Rotterdam	05990534
Oude Noorden	Rotterdam	05990535
Schiebroek	Rotterdam	05990660
Hillegersberg Zuid	Rotterdam	05990661
Hillegersberg Noord	Rotterdam	05990662

Neighbourhood name	Municipality	Neighbourhood code
Terbregge	Rotterdam	05990664
Molenlaankwartier	Rotterdam	05990665
Rubroek	Rotterdam	05990814
Nieuw Crooswijk	Rotterdam	05990836
Oud Crooswijk	Rotterdam	05990837
Kralingen West	Rotterdam	05990841
Kralingen Oost	Rotterdam	05990842
De Esch	Rotterdam	05990845
Struisenburg	Rotterdam	05990847
Kop van Zuid	Rotterdam	05991017
Kop van Zuid - Entrepot	Rotterdam	05991079
Vreewijk	Rotterdam	05991080
Bloemhof	Rotterdam	05991081
Hillesluis	Rotterdam	05991082
Katendrecht	Rotterdam	05991085
Afrikaanderwijk	Rotterdam	05991086
Feijenoord	Rotterdam	05991087
Noordereiland	Rotterdam	05991088
Oud IJsselmonde	Rotterdam	05991283
Lombardijen	Rotterdam	05991284
Groot IJsselmonde	Rotterdam	05991289
Beverwaard	Rotterdam	05991290
Pernis	Rotterdam	05991391
's Gravenland	Rotterdam	05991444
Prinsenland	Rotterdam	05991448
Het Lage Land	Rotterdam	05991449
Ommoord	Rotterdam	05991463
Zevenkamp	Rotterdam	05991466
Oosterflank	Rotterdam	05991467
Nesselande	Rotterdam	05991468
Tarwewijk	Rotterdam	05991571
Carnisse	Rotterdam	05991572
Zuidwijk	Rotterdam	05991573
Oud Charlois	Rotterdam	05991574
Pendrecht	Rotterdam	05991577
Hoogvliet Noord	Rotterdam	05991692
Hoogvliet Zuid	Rotterdam	05991699
Dorp	Rotterdam	05991702
Rozenburg	Rotterdam	05992704
Buurt 00	Schiedam	06060000
Natuurkundigenbuurt	Schiedam	06060102
Singelkwartier	Schiedam	06060103
Newtonbuurt	Schiedam	06060106
Rotterdamsedijk	Schiedam	06060107
Brandersbuurt	Schiedam	06060201

Neighbourhood name	Municipality	Neighbourhood code
Walvisbuurt	Schiedam	06060202
De Plantage	Schiedam	06060203
Schildersbuurt	Schiedam	06060301
Schrijversbuurt	Schiedam	06060302
Fabribuurt	Schiedam	06060303
Frankenland	Schiedam	06060304
Liduinabuurt	Schiedam	06060305
Nassaubuurt	Schiedam	06060306
Oranjekwartier	Schiedam	06060307
Haverschmidtkwartier	Schiedam	06060308
Distillateursbuurt	Schiedam	06060309
Noletbuurt	Schiedam	06060401
Eilandenbuurt	Schiedam	06060402
Piet Sandersbuurt	Schiedam	06060403
Maasboulevard	Schiedam	06060404
Staatsliedenbuurt	Schiedam	06060603
Hollandiabuurt	Schiedam	06060605
Schiehart	Schiedam	06060606
Nolensbuurt	Schiedam	06060607
Wibautbuurt	Schiedam	06060608
Groenoord-Midden	Schiedam	06060703
Groenoord-Noord	Schiedam	06060704
Kethel-dorp	Schiedam	06060705
Vogelbuurt	Schiedam	06060706
Tuindorp	Schiedam	06060707
Toneelspelersbuurt	Schiedam	06060901
Ambachtenbuurt	Schiedam	06060902
Kastelenbuurt	Schiedam	06060903
Botenbuurt	Schiedam	06060904
De Gaarden/Sveafors	Schiedam	06060905
De Vlinderhoven/Sveaholm	Schiedam	06060906
De Akkers en De Velden	Schiedam	06060907
Sveaborg en -Dal	Schiedam	06060908
Binnenstad-Java	Terneuzen	07150101
Katspolder	Terneuzen	07150702
Oudelandse Hoeve	Terneuzen	07150703
Zeldenrust	Terneuzen	07150705
Lievenspolder	Terneuzen	07151001
Noordpolder	Terneuzen	07151002
Serlippenspolder	Terneuzen	07151003
Zuiderpark	Terneuzen	07151005
Othene	Terneuzen	07151301
Kern Axel	Terneuzen	07151900
Kern Hoek	Terneuzen	07153100
Kern Koewacht	Terneuzen	07153700

Neighbourhood name	Municipality	Neighbourhood code
Kern Philippine	Terneuzen	07154900
Kern Sas van Gent	Terneuzen	07155500
Kern Sluiskil	Terneuzen	07156100
Kern Zaamslag	Terneuzen	07157900
Velserbeek	Velsen	04530001
Kapelbuurt	Velsen	04530003
Driehuis-Dorp	Velsen	04530005
Zeeheldenbuurt	Velsen	04530102
Natuurkundigenbuurt	Velsen	04530104
Tussenbeeksbuurt	Velsen	04530200
Velseroord	Velsen	04530203
Rivierenbuurt	Velsen	04530206
Vissersbuurt	Velsen	04530301
Oud-IJmuiden	Velsen	04530302
Saturnusbuurt	Velsen	04530402
Kruisbergbuurt	Velsen	04530405
Watervlietbuurt	Velsen	04530504
Bloemenbuurt	Velsen	04530604
Santhaesbuurt	Velsen	04530607
Neethofbuurt	Velsen	04530700
Rijkersparkbuurt	Velsen	04530701
Blekersbuurt	Velsen	04530702
Weidbuurt	Velsen	04530802
Pijlkruidbuurt	Velsen	04530803
Florarondebuurt	Velsen	04530804
Bastionbuurt	Velsen	04530805
Springerbuurt	Velsen	04530806
Tjotterbuurt	Velsen	04530807
Indische Buurt	Vlaardingen	06220101
Vettenoordse Polder Oost	Vlaardingen	06220102
Centrum	Vlaardingen	06220103
Hoogkamer	Vlaardingen	06220201
Zuidbuurt	Vlaardingen	06220202
Wetering	Vlaardingen	06220203
Lage Weide	Vlaardingen	06220204
Hofbuurt	Vlaardingen	06220401
Oostbuurt	Vlaardingen	06220402
Babberspolder Noord	Vlaardingen	06220501
Oranjebuurt	Vlaardingen	06220502
Babberspolder West	Vlaardingen	06220503
Babberspolder Oost	Vlaardingen	06220504
Vaart Zuid	Vlaardingen	06220601
Statenbuurt	Vlaardingen	06220602
Loper Zuid	Vlaardingen	06220603
Vogelbuurt Noord	Vlaardingen	06220604

Neighbourhood name	Municipality	Neighbourhood code
Vogelbuurt Zuid	Vlaardingen	06220606
Drevenbuurt	Vlaardingen	06220701
Kruidenbuurt	Vlaardingen	06220702
Loper Noord	Vlaardingen	06220703
Hoofdstedenbuurt	Vlaardingen	06220704
Hoevenbuurt	Vlaardingen	06220706
Vaart Noord	Vlaardingen	06220708
Oude Binnenstad	Vlissingen	07180100
Scheldestraat e.o.	Vlissingen	07180101
Paauwenburg Zuidoost	Vlissingen	07180300
Paauwenburg West	Vlissingen	07180301
Paauwenburg Noordoost	Vlissingen	07180303
Rosenburg	Vlissingen	07180400
West-Souburg	Vlissingen	07180406
Schoonenburg - Groot Abeele	Vlissingen	07180502
Rockanje	Westvoorne	06140000
Stuifakker	Westvoorne	06140003
Zuidhoek	Westvoorne	06140004
Nieuw gebied	Westvoorne	06140005
Verspreide huizen	Westvoorne	06140009
Oostvoorne	Westvoorne	06140100
Goudhoek	Westvoorne	06140104
Vogelenzang	Westvoorne	06140105
Verspreide huizen in het Oosten	Westvoorne	06140109
Bomenbuurt	Zaanstad	04791120
Burgemeestersbuurt	Zaanstad	04791130
Poelenburg	Zaanstad	04791210
Peldersveld	Zaanstad	04791310
Hoornseveld	Zaanstad	04791320
Rosmolenbuurt	Zaanstad	04791410
Kogerveld	Zaanstad	04791510
Boerejonkerbuurt	Zaanstad	04791520
Kalf	Zaanstad	04791610
Het Eiland	Zaanstad	04792130
Russische buurt	Zaanstad	04792140
Oud West	Zaanstad	04792210
Schilders- en Waddenbuurt	Zaanstad	04792230
Westerspoor	Zaanstad	04792310
Westerwatering	Zaanstad	04792320
Oud Koog	Zaanstad	04793110
Westerkoog	Zaanstad	04793210
Oud Zaandijk	Zaanstad	04794110
Rooswijk	Zaanstad	04794210
Rooswijk Noord	Zaanstad	04794220
Wormerveer Zuid	Zaanstad	04795110

Neighbourhood name	Municipality	Neighbourhood code
Wormerveer Noord	Zaanstad	04795130
Zuiderhoofdbuurt	Zaanstad	04796110
Noorderhoofdbuurt	Zaanstad	04796120
Snuiverbuurt	Zaanstad	04796130
Zuiderham	Zaanstad	04796210
Noorderham	Zaanstad	04796220
Willis	Zaanstad	04796240
De Zuid	Zaanstad	04797110
Centrum	Zaanstad	04797120
Waterrijk	Zaanstad	04797210
Parkrijk	Zaanstad	04797230
Westzaan Zuid	Zaanstad	04798120
Westzaan Noord	Zaanstad	04798140

Source: VM 2012-2017, N=61,988

B. Results (bivariate) analyses

Table B1. Multicollinearity test for the harbour neighbourhoods

Variable	Tolerance (min >0,10)	VIF (max <10)
Social Cohesion	0.898	1.114
Impoverishment	0.717	1.395
Social inconvenience	0.704	1.421
Quality of life	0.956	1.046
Gender	0.995	1.005
Level of education	0.981	1.019
Victimization	0.946	1.057
Ethnicity	0.913	1.095
Ethnic composition	0.888	1.126
Police satisfaction	0.930	1.075
Public housing	0.842	1.187
Harbour districts	0.967	1.035

Source: VM 2012-2017, N=10,155

Table B2. Multicollinearity test for the border neighbourhoods

Variable	Tolerance (min >0,10)	VIF (max <10)
Social Cohesion	0.859	1.164
Impoverishment	0.644	1.552
Social inconvenience	0.605	1.654
Quality of life	0.933	1.072
Gender	0.996	1.004
Level of education	0.986	1.014
Victimization	0.946	1.057
Ethnicity	0.913	1.095
Ethnic composition	0.888	1.126
Police satisfaction	0.909	1.100
Public housing	0.842	1.187
Harbour districts	0.840	1.191

Source: VM 2012-2017, N=24,127

Table b.3. Multicollinearity test for the onshore neighbourhoods

Variable	Tolerance (min >0,10)	VIF (max <10)
Social Cohesion	0.854	1.171
Impoverishment	0.627	1.594
Social inconvenience	0.598	1.673
Quality of life	0.944	1.059
Gender	0.995	1.005
Level of education	0.987	1.014
Victimization	0.931	1.074
Ethnicity	0.937	1.067
Ethnic composition	0.833	1.200
Police satisfaction	0.919	1.088
Public housing	0.804	1.244
Harbour districts	0.800	1.249

Source: VM 2012-2017, N=27,706