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CHOOSING PUBLIC TRANSPORT AND SAFETY

Young Women in Public Transport, the Perception of Safety and its influence on Transport Choice

MASTER THESIS

Floor Planken, 575189
f.planken@students.uu.nl
Advisor: M. Helbich
m.helbich@uu.nl

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Abstract

As the world is changing and more attention is being paid to sustainable solutions for the future, pressure rises for people to choose public transport over private cars. To get people to make more use of public transport their behavioural choices need to be investigated. This can be explained using the Theory of Planned Behaviour (TPB), adding the influences that habits have on us, to this. In previous research the focus has been on different demographic groups, based on gender or age separately. The combination of a specific gender and age group together with the geographic location, the Netherlands, makes this research interesting. The aim of the research is to find ways to increase young women's, between the ages of 18 and 30, feeling of safety while using public transport, while also finding behavioural explanations for them to use public transport more often. In the literature there were found five different types of crimes that happen often on public transport, as well as different ways to prevent these types of crimes from happening, with most of these solutions focussing on environmental changes on both public transport vehicles as well as stations and/or stops. This altogether formed the base of a survey targeted at women between the ages of 18 and 30, living in the Netherlands. Through different logit models, an ANOVA test and a Mann-Whitney test it could be concluded that there was no significant influence of a young women's fear of crime on her behavioural choices surrounding public transport. It was however found that trends regarding car ownership and whether or not someone uses public transport often, is of influence when a young women is asked if she would change her behaviour surrounding public transport to make her feel safer. This shows that having different options influence the behaviour of the young women involved in the research. It should be noted that to get more information on this topic, research from a more psychological point of view should be conducted.

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Introduction

For many governments, public transport is seen as one of the key assets in solving current congestion and environmental problems (Joewono & Kubota, 2006). Looking at congestion numbers provided by TomTom International BV (2019), it shows that worldwide there were 15 cities, in 2019, in which travel time was increased by over 50% due to congestion. Looking at cities within the Netherlands, numbers are not quite as high as 50%, with the highest ranking city being Leiden which saw a travel time increase of thirty percent due to congestion (TomTom International BV, 2019). These high rates of congestion are one of the main reasons why transport is seen as one of the sectors that has a large influence on our climate (Chapman, 2007). Looking at the numbers it shows that the worlds transport sector is responsible for at least 13% of the worlds Green House Gas emissions (Chen & Chao, 2011). Within the transport sector it is found that road transport is the biggest source of these emissions (Chapman, 2007; Dulal et al., 2011), making it a logical step for governments to try to change people's behaviour from going on the road with private modes of transport to start using public transport more often (Joewono & Kubota, 2006). More and more governments see a role for public transport to help create sustainable and liveable cities as it is seen as a primary way of decreasing congestion numbers (Gardner et al., 2017).

This shows that, due to climate change and the high levels of congestion, the need for people to leave their cars behind and start using other modes of transport grows (Muromachi, 2017). One of these modes is public transport. Different groups of the population have different motives for using public transport, or in some cases to not use it at all. Strategies on getting people to use public transport should thus focus on each group individually before a greater plan can be composed (Bilbao Ubillos & Fernández Sainz, 2004). However getting people to use public transport is not something that can be achieved overnight. As cities in Asia do see a change in the way that youths look at cars, they are less interested in car ownership as well as car use (Ajzen, 2002). This does not mean that they automatically make more use of public transport, students and youths around the world are slowly moving away from the private car and use of all different kinds of transport (Ajzen, 1991). One of the believes or attitudes that is shown regularly in research is the fact that women in general believe that using public transport is unsafe to use (Gardner et al., 2017; Joewono & Kubota, 2006; Shaaban & Kim, 2016; Zhou, 2012). This, together with the fact that it is said that women are the biggest user group of public transport (Chapman, 2007; Dulal et al., 2011), makes for an interesting point to be raised.

It has become clear that women use public transport in general more often than men. Their choice for public transport is thought to be strongly influenced by perceptions of fear and/or safety. This due to the fact that they experience assault and violence more often (Gardner et al., 2017; Joewono & Kubota, 2006; Shaaban & Kim, 2016; Zhou, 2012). Women pay more attention to perceptions, however in recent studies the main focus has been on physical attributes of public transport and policies on how to change those. As governments are implementing more and more policies that try to change people's behaviour into using public transport more (Gardner et al., 2017; Joewono & Kubota, 2006; Shaaban & Kim, 2016; Zhou, 2012), they should look into the reasons why women feel unsafe on public transport as well as how this feeling of unsafety can be tackled.

Relevance

As mentioned above more and more governments are looking into how to get citizen to use public transport more (Gardner et al., 2017). This makes that reasons for people to change their behaviour and use public transport more are of great interest for researchers. Looking into the reasoning that people use to decide whether or not they want to use public transport can gain governments new insight into policies that could be implemented and help to create a more sustainable future (Gardner et al., 2017; Joewono & Kubota, 2006). Data provided by Kamer (2020) shows that the Netherlands scores relatively positive on feeling safe while using public transport. With 46% of respondents saying that they feel safe, and 35% saying they do not feel safe nor unsafe (Kamer, 2020). The Dutch government has started to work together with the biggest transport company (Dutch Railways (NS)) and the company responsible for taking care of the tracks

(Prorail), to increase safety feelings on public transport in the Netherlands. These policies however focus on the wider spectrum of getting all users to feel safer while using public transport (Government of the Netherlands, 2020)

As has been said previous much research and has been done on the feeling of safety, however most of these have not solely focused on women, but combined men and women (Bilbao Ubillos & Fernández Sainz, 2004; Gardner et al., 2017; Neupane & Chesney-Lind, 2014; Shaaban & Kim, 2016; Smith & Clarke, 2000). This is interesting due to the fact that women often feel less safe while using public transport, this can then be of influence on their choice of using it or not. Even though there has been done research (Gardner et al., 2017; Neupane & Chesney-Lind, 2014) on this, that research has not focused on a specific age group. All these things combined makes that it is interesting to put a specific focus on just one gender and one age group. This way a deeper insight could be gained from the data that is being collected, and a possibility of creating better fitting policies could be found. Measurements taken by the Dutch government over the years are the increase of CCTV and surveillance, increasing fines, installing barriers and creating shelter places (Government of the Netherlands, 2020). However these measurements are focused on the wider scope of feeling safer, and not focused on any specific demographic group, as pointed out by Bilbao Ubillos & Fernández Sainz (2004). This is interesting when looking at the current situation and to see whether or not these improvements are similar to the ones that have been suggested in literature. As well as if it would be similar to changes that the users of public transport in the Netherlands themselves would suggest to create a greater feeling of safety.

Aim and research question

The aim of this research is to find a way to tackle women's perception of safety in such a way that their use of public transport will increase. With this aim we try to fill the gap on research on one particular group within the population and point out aspects to take into account when creating a policy on how to get this group more into public transport. Not only can the research fill this certain gap for women, but the results might also be useful for other groups who, might also, attach great value to the perception of safety while choosing their mode of transport. As the research will be executed in the Netherlands, it is also a possibility to see how a country, that does not rely on private vehicles as much as many other countries that have looked into this subject, is influenced by the feeling of safety on public transport. To be able to base a policy on these perceptions it is important to know what this perception of safety and fear encompass and what influences it. This results in the following research question and sub questions:

In what way does the perception of safety influence young women's choice to use public transport in the Netherlands?

Argumentation for this is provided earlier and shows us that women are the biggest user group of public transport worldwide, as well as the fact that it is shown to be that youths worldwide are showing a decrease in their interest in using and owning cars (Ajzen, 1985; Muromachi, 2017). This explains the reason to focus on young women and their use of public transport. The reason why the Netherlands is chosen as the location for the research is due to the fact that most research that is focused on the feeling of safety on public transport as well as the move from private cars to public transport are done in different countries around the world.

- ***What factors make up one's perception of safety on public transport?***

  To be able to understand women's feeling of safety and their fear for certain crimes or other forms of harassment it is necessary to fully understand the idea behind the perception of safety on public transport. Answering this question is done partly through the theoretical framework, but also by asking women about what safety means to them and what makes them feel safe, as well as unsafe while using public transport. This way perceptions of safety can be explained further and might even give examples of what can be done to change people's, and in this case young women's, perception of safety on public transport in a positive way.

- ***Does experience with violence or assault have an influence on one's perception of safety on public transport?***

  From the literature it is shown that women have a greater fear of using public transport, mainly due to the fact that they feel more vulnerable to violence and assault while traveling. However numbers have also shown that even though their fear for it happening is higher than it is for men, they are in fact less often the victim of these forms of crime (Gardner et al., 2017; Joewono & Kubota, 2006; Shaaban & Kim, 2016; Zhou, 2012). This makes it interesting to look into the influence that experience has on one's perception of safety on public transport.

1. Theoretical framework

Climate change is one of the most important things to take into consideration when creating new policies. This is also evident in the transport sector (Marsden & Rye, 2010). The way in which the world currently relies on transport is found to be one of the main factors that is causing damage to our climate (Chapman, 2007). As a result to the fact that there is a growing travel demand (Ben-Elia & Ettema, 2011), we are increasing our consumption of fossil fuels (Chapman, 2007). Road transport is the biggest cause of these emissions, followed by aviation (Chapman, 2007; Dulal et al., 2011). Another problem arising due to the increase in the transport demand is the fact that congestion is on the rise (Chapman, 2007). Both the rise in congestion and the emissions caused by vehicles do not only have consequences for our climate, but they will also bring economic consequences with them (Ben-Elia & Ettema, 2011; Chapman, 2007; Dulal et al., 2011). To tackle these problems, in the end, we need to reduce the number of vehicles on the road (Ajzen, 1985). One of the ways to do this is to increase people's use of public transport. Governments see public transport as a vital component in tackling both environmental and energy policies and even see it as an essential to create economic vitality. With most governments noting that without public transport congestion and pollution could take over (Smith & Clarke, 2000). However to do this it is important to know why people choose to either use or to purposefully not use public transport (Conner & Armitage, 1998). This is linked to people's behaviour in different kind of ways, so to get a better understanding on people's choices it is necessary to look closer into why people make certain choices and what influences their behaviour. To do this we will put a focus on different theories that explain people's behaviour, followed by theories on the different types of users of public transport as well as putting our attention to the influences of feelings of safety and fear on our use of public transport.

1.1. Theory of Planned Behaviour and other influences on choices

As said above, to change the number of vehicles on the road and to get people to make more use of public transport, a change in behaviour is needed from the public (Chen & Chao, 2011). To be able to change someone's behaviour, it is important to understand it. One of the most used theories in trying to explain behaviour is the Theory of Planned Behaviour (TPB) (Ajzen, 2002). TPB was developed in the 1980s as it builds on the idea of the Theory of Reasoned Action (TRA). TRA was developed to predict people's behaviour from their personal attitudes and subjective norms. In the 1980s this was further developed into TPB by adding perceived behavioural control to it (Chaney et al., 2013). TPB is based on the idea that people's behaviour is based on three considerations, namely, the beliefs on the likely consequences of the behaviour (behavioural beliefs), beliefs on the expectations of others (normative beliefs) and the beliefs on factors that might influence the behaviour (control beliefs) (Bamberg et al., 2003; Chen & Chao, 2011). These three then form an intention, which can be carried out when one has enough control over their own actions (Chen & Chao, 2011). In a simpler way, an individual's behaviour is thus formed by the sum of behavioural intention and the perceived control that one has over its behaviour, or when there is an opportunity to act on these intentions (Bamberg et al., 2003). The three different believes, behavioural, normative and control, listed above are thus part of the sum of ones behavioural intention, *see figure 1.1.* (Chen & Chao, 2011). It is not necessarily so that an individual acts on these intentions, when there is a big enough intervention, with

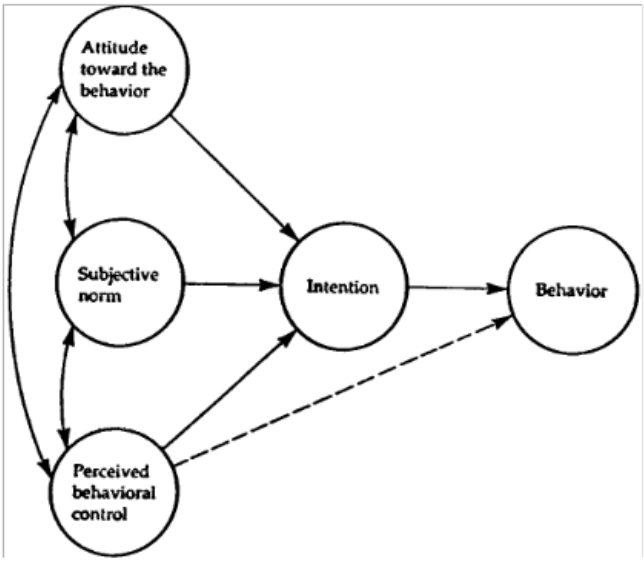

Figure 1.1 Theory of Planned Behaviour (Ajzen, 1991)

significant effects, of the intentions they can be influenced. An example of such an intervention can be the availability of free public transport, instead of having to pay for it (Bamberg et al., 2003).

Another important model that resulted from TRA and must not be overlooked when looking into people's acceptance of public transport and the way they use it, is that of Technology Acceptance Model (TAM). The model tries to explain the way in which people accept new technologies and how they take them up in their day to day life. The model mainly looks at the perceived ease of use of an item and the perceived usefulness, and how these influence people's attitude towards something, in our case public transport (Chen & Chao, 2011). This is where it interferes with TPB, which also includes people's attitude towards the behaviour that is included in the research (Ajzen, 1991). This can be seen as our first addition to TPB, however there are more.

1.1.1. Past behaviour and habits

For different research questions and goals, different extensions and additions can be made to the theory, depending on what is relevant for that research. That way TPB can be fitted better to a specific research (Chen & Chao, 2011). A second addition to TPB, after TAM, is that of past behaviour. When we belief that our behaviour is completely reasonable, past behaviour can only be seen as an indirect influence on ones behaviour. However Bamberg et al. (2003) has shown that past behaviour plays a significant role in ones behaviour, making for the fact that our behaviour cannot be seen as completely reasonable, it includes some automatic elements. These automatic elements are smaller than our reasonable ones, which can be seen as the base of our behaviour. As a result it can be concluded that habits, a repeating of past behaviour, play an important role in the way that we behave, and thus inevitably make our decisions (Bamberg et al., 2003). Habits are formed by our past behaviours and not by our attitudes, intentions or other ideas that refer to more conscious processes (Aarts & Dijksterhuis, 2000).

As a result of the fact that habits are the repeating of past behaviour, we cannot overlook the role that habits have on someone's choice in behaviour. This makes that when looking at ones behaviour, it is not enough to just use TPB, one needs to take habits into account as well (Chen & Chao, 2011). The difference between the two approaches, TPB and looking at habits, is the fact that TPB is seen as something that is controlled. Whereas habits are seen as automatic, something that happens without thinking about it (Chen & Chao, 2011). This suits Hull's (1943) definition of habits, he sees them as conditioned responses on which we handle unconscious as they are being controlled by environmental stimuli that surround us (Bamberg et al., 2003). Habits make it possible to handle mindless and automatic. Most of our actions are actually based on this, which is of importance because it makes more room for actions that we need to be conscious about (Aarts & Dijksterhuis, 2000; Verplanken & Aarts, 1999). It is however possible for the TPB and a person's habits to have an opposite effect on people's behaviour. As shown by Chen & Chao (2011), in their research, they found that while the three considerations (behavioural, normative and control beliefs) that form an intention all had positive effects on people choosing for public transport instead of their private cars. However at the same time the fact that using the car was a habit for these people and this requires less of their attention, this had a negative effect on the choice for public transport. Sometimes however, intentions can change meaning that we have to, again, navigate through them, which then can change our behaviour. When this happens often enough this can result in a change of habits (Bamberg et al., 2003). Someone performs a habit, or automatic behaviour, when a certain goal is activated. So once a goal changes or the route to the goal changes, a habit can change (Aarts & Dijksterhuis, 2000). This shows that habits and TPB can be seen as an interlinked system and not just as two different systems that interfere with each other (Bamberg et al., 2003). When goals can change, can we then also change a habit, without changing the goal? According to Aarts & Dijksterhuis (2000), this is indeed possible. To do this, one needs to look into the goal and the different ways in which someone can achieve it. If there are indeed several options to achieve the goal, then one can use different ways of planning, or interventions to change ones way of achieving that goal. This according to their research can already be achieved with little planning (Aarts & Dijksterhuis, 2000).

1.2. From Private Car to Public Transport

Before diving deeper into the use of public transport it is important to point out that this research will be focussing on mass transit and not on para transit. The difference here is that with mass transit we refer to metros, buses, trams, commuter trains as well as other modes of rail rapid transit. With para transit one refers to taxis, dial-a-ride and other modes that help to reach mass transit (Smith & Clarke, 2000). When looking at literature that dives into the choice between public transport and the use of the private car it shows that certain groups make use of private cars less often than others (Redman et al., 2013). These groups can be defined by different variables, like gender, age, income or household composition. Reason to mainly focus on the differences between private car and public transport is the fact that public transport is seen as a key in solving current congestion and environmental problems (Joewono & Kubota, 2006). The fact that this is then only compared to private car use in this section is due to the fact that private cars, together with road transport, are at the cause of the congestion we are facing (Ben-Elia & Ettema, 2011).

When trying to get people to use public transport more it shows that most research and policies are focused on the physical attributes of public transport (Dell'Olio et al., 2011; Redman et al., 2013). This brings to the forefront that within these physical attributes the focus lies on reliability, frequency, pricing, speed, access, comfort and convenience (Corpuz, 2007). These factors, together with the different groups which are listed above can be categorised in three groups; attributes of the traveller, attributes of the journey and characteristics of the transport facility (Beirão & Sarsfield Cabral, 2007; Ryan et al., 2015). All these factors tell us that it is important to have a look into what customers want. This can however be difficult due to the vast population that uses public transport and the fact that all have different mobility needs (Gatersleben & Uzzell, 2007). With the focus being mainly on the physical attributes, the perceptions of users have been overlooked, or their might have been less attention paid to them. It is hard to tell what has happened, however current development in literature and theory shows that psychological factors have been put to the side when looking into how we can get people to leave their cars behind and find alternative ways to get to their destinations. These perceptions can give us a better understanding of why public transport users have a more negative attitude to their mode of transport than others (Buehler & Pucher, 2012). Gatersleben & Uzell (2007) have shown that this might be related to stress related to the physical attributes, however stress could also be attributed to people's perception of for example safety.

Looking closer into the different user groups, research from Muromachi (2017) shows that recently a change is seen in the interests of car ownership as well as car use. It shows that youths are slowly changing their perceptions about owning a car and using one. Reasons for this shift can be found in the way that they look at the world, new ICT developments as well as the fact that more and more of them are being raised in cities, in which cars are not always as useful as they used to be (Muromachi, 2017). In other research by Zhou (2012) it is seen that university education and experience could promote sustainable transport and therefor reshape students' behaviour and awareness. Due to the idea that actions taken during university years can influence those taken later in life (Zhou, 2012). This links to the idea of the "social theory of travel mode behaviour" which shows that children learn through different agents of socialization. In this case that is thus the university. This in advance can then be linked to the fact that it was found that previous use of public transport that uses rail, showed that students later on in life showed less interest in cars (Muromachi, 2017). These findings could show us the importance of looking into changing students' behaviour and getting them to make less use of their private cars and move towards other forms of transportation. Something that is already been done around the world (Bilbao Ubillos & Fernández Sainz, 2004; Muromachi, 2017; Shaaban & Kim, 2016; Zhou, 2012). Another reason to focus on youth is the belief that once travel behaviour can gradually influence someone's' life decisions (Muromachi, 2017). However Shaaban & Kim (2016) showed that in Europe safety and security play an important role in the choice that students make in their transport mode. It is therefore that we now turn towards the feeling of safety and its influence on public transport.

1.3. Safety and Fear on Public Transport

Recent trends in Germany surrounding cut-backs on labour-force and maintenance at public transport companies have caused for an increase in the crime numbers on public transport (Schmucki, 2002). These funding problems surrounding public transport point to direct results that can be of influence on the crime that is reported on public transport. Direct results of this are that of overcrowding, which can lead to a rise in pickpocketing and sexual assault opportunities, as well as a lack of supervision which makes the prevention of crime more difficult (Smith & Clarke, 2000). The rise in the crime rates can lead to a fall in the number of people using public transport (Delbosc & Currie, 2012). However it is not just the fact that these numbers are actually rising, but also the fear of crime that has an influence on people's choice for public transport (Currie et al., 2013). This fear can be seen as a barrier for people to use public transport, and can be linked to the feeling of not being in control of the situation (Joewono & Kubota, 2006; Smith & Clarke, 2000). These fears can be caused by darkness, disorderly spaces, strangers as well as the invasion of someone's personal space. The last one, invasion of personal space, can lead to anxiety and physiological stress (Currie et al., 2010). In this case it is not the physical attributes that cause the stress as Gatersleben & Uzell (2007) pointed towards, here the focus is on the perception of ones fear and their concerns (Cozens et al., 2003). These perceptions of fear do not only relate towards the moments when people are on public transport, but can also be found when people are on their way to the station, or waiting for their trains and busses (Fu & Juan, 2017). The European Commission has defined security on public transport as "the actual degree of safety from crime or accidents and the feeling of security resulting from that and other psychological factors." (Joewono & Kubota, 2006, p. 87). This definition is used in the Transportation Research Board which does research on the quality of public transport within Europe. In this definition three aspects can be taken; safety from crime, safety from accidents and the perceptions of security (Joewono & Kubota, 2006). Thus someone's perception of safety is formed by the fear that they experience. This fear is than based on several other components, on which later more.

1.3.1. From Safety to Fear

Though perceptions change and differ per person in each situation, perceptions of safety are as important to be understood as the situation itself is, and the actual conditions surrounding people's safety (Elias & Shiftan, 2012). Even though their research was based on perceptions of road safety Elias & Shiftan (2012) showed that when people are aware of their risks they are willing to change from their private car (with higher risks of car accidents) to public transport. This might not be the same for the feeling of safety on public transport. However it can give us a starting point, telling us that when people are able to do something about their own safety they are willing to act on this (Elias & Shiftan, 2012). Connecting this to the safety perception on public transport regarding crime and harassment, research has shown that the fear of crime and concerns surrounding personal safety do in fact influence the usage of public transport (Newton, 2004). Not only harassment itself has an effect on people's feeling of safety. It is also proven that victimization and the fact that the victims are being blamed for their own harassment leads to fear, emotional distress and disempowerment in the use of public transport. As a result of this, victims feel restricted to use public transport (Neupane & Chesney-Lind, 2014). In short, the fear for crime in any form, on public transport can result in a "cycle of fear" in which people decide to only use public transport at certain times of the day or are even completely pushed out of public transport (Smith & Clarke, 2000).

This fear of crime that people have, can in some way's be related to real numbers showing the number of crimes that happen on public transport. However it is often found that women fear crime more than men, even though men are more often the victim of crime (Gardner et al., 2017). Smith & Clarke (2000), discuss two different ways of looking into the risk of crime. One is by calculating the risk that someone has to become a victim of a crime, the other is by survey questions. Due to the fact that this is based on surveys it can go into more detail about the users, something that the reports from either transport authorities and or police do not always include. This method looks into the amount of time users have become victims and compares this to other users to see if they can find a certain profile for the people

that are under greater risk than others, as well as making it possible to see who is more likely to report a crime.

1.4. Gender, Fear of Crime and Safety on Public Transport

As mentioned in short above, there is a difference in the way that men and women use public transport. This difference is the result of the impact that the different psychological factors have on the different genders. These psychological factors have different influences on the different genders due to their different desires and uses of public transport (Yavuz & Welch, 2010). The fear of crime is a reason for people to not use public transport. This due to the fact that the fear of crime has as a psychological factor a different influence on men and women. It is believed that the fear of crime is one of the reasons for women to avoid using public transport (Neupane & Chesney-Lind, 2014; Smith & Clarke, 2000). Especially young women believe that the using public transport is unsafe (Gardner et al., 2017). This fear however does not come out of nowhere. Women are less often than men the victim of violence and verbal abuse while waiting for public transport (Buehler & Pucher, 2012; Cresswell & Uteng, 2008; Schmucki, 2002; Yavuz & Welch, 2010). However, they are more likely to change their behaviour as a result of a fear of crime or violence (Gardner et al., 2017; Neupane & Chesney-Lind, 2014; Smith & Clarke, 2000). The fact that women make up the majority of people using public transport (Chapman, 2007; Dulal et al., 2011), makes that this is an interesting fact when looking into the reasoning for people not to use public transport. Especially in a time where the promotion of public transport is needed to fight climate change and congestion (Ben-Elia & Ettema, 2011; Chapman, 2007; Dulal et al., 2011). Another interesting point to make here is that even though women are the main users of public transport, men still try to enforce their monopoly on it. This monopoly is enforced by them through harassment of women (Neupane & Chesney-Lind, 2014). The question then remains how big is the impact of this fear or its perception on the choice for public transport.

1.4.1. Harassment & Crime

One of the reasons women have a different perception of safety on public transport, is their fear of abuse. One way of abuse is that of sexual harassment, which by some is seen as one of the big challenges of the move towards the use of public transport by women (Gardner et al., 2017; Neupane & Chesney-Lind, 2014). It is believed that overcrowding of public transport can be seen as one of the instigators of sexual assault, or harassment (Smith & Clarke, 2000). In general harassment is classed into three different groups, gender harassment, sexual coercion and unwanted sexual attention. Under *gender harassment* we see offensive sexual behaviours that have a negative effect on girls and women in general. *Sexual coercion* happens when sex is demanded for social goals. Lastly *unwanted sexual attention* encompasses uninvited, unwanted and non-reciprocal sexual attention (Neupane & Chesney-Lind, 2014). Another way of classifying sexual harassment can be into *confrontational* and *non-confrontational*. In which in the last the offender keeps at a distance from the victim, while the first includes following the victim and sexual assault (Gardner et al., 2017). These two different classifications already show that classification of harassment on public transport is difficult (Gardner et al., 2017; Neupane & Chesney-Lind, 2014). However it is believed that most harassment on public transport can be classified as non-confrontational and thus includes leering, offensive and sexual slurs and requests for one's name (Gardner et al., 2017). The most common forms of sexual harassment on public transport are however, touching, rubbing and exposure to sexual and offensive slurs. Rape itself is rarely reported (Smith & Clarke, 2000).

Harassment in public transport is a problem that is found worldwide and mostly affects young women. School and university students are the group that are affected the most. However scaling harassment in public transport into one of the three groups mentioned above is difficult, as it takes on many forms (Neupane & Chesney-Lind, 2014). Looking back at the mention earlier of the fears that follow from losing control of a situation, harassment can be classified as a form of intruding someone's personal space, thus resulting in anxiety and physiological stress (Currie et al., 2010; Neupane & Chesney-Lind, 2014). Though this research is linked to the idea to promote the use of public transport as a way to fight congestion and environmental changes our society is facing at the moment, sexual harassment in public transport

enforces another cause as well. Neupane & Chesney-Lind (2014), point towards the fact that sexual harassment also enforces the patriarchy and as a result of that, gender inequalities around the world.

Not only has harassment led to a fear of harassment for women, it also leads to a growing fear of crime on public transport (Gardner et al., 2017). Crime on public transport can be a result of several different factors, and due to the vast different modes of public transport, people using it as well as the outside environments that public transport moves through, it is difficult to pinpoint a list of factors that result into crime on public transport (Newton, 2004). Though the factors that result to the crime are difficult to pinpoint, Smith & Clarke (2000), have listed different kinds of crime that can happen on public transport:

- Robbery;
- Assault;
- People being pushed under trains;
- Vandalism;
- Fare evasion;
- Theft, and lastly
- Sexual assault.

These different crimes can be subdivided into two different groups, namely the ones that are the result of a lack of supervision on public transport and the ones that are the result of overcrowding of public transport. In the list above the first five (robbery, assault, people being pushed under trains, vandalism and fare evasion) fall into the category of crimes that, according to Smith & Clarke (2000), are the result of a lack of supervision in public transport. Possible solutions, besides getting more people to supervise on stations as well as carriages, are putting up more barriers and visible CCTV.

The last two (theft and sexual assault), fall into the category of crimes that are the result of overcrowding both of stations as well as carriages. This due to the fact that because of the big crowd victims are often less aware of theft. When it comes to sexual assault it often surprises victims in such a way that they do not know how to respond to it in the crowd. Possible solutions are more surveillance, the spread of crowding as well as creating specific female carriages to make sexual assault more difficult. This last solution however is hard to maintain due to results which shows that there is not enough interest in special female carriages (Smith & Clarke, 2000).

Fear of crime in general can be linked to five different factors, namely *victimization*, *physical vulnerability*, *social vulnerability*, *social disorder* and *social networks* (Vilalta, 2011). The factor of *victimization* can similarly be found when it comes to harassment, as shown earlier. However one does not have to have experience with crime on public transport to fear it (Neupane & Chesney-Lind, 2014). This shows that harassment can be interlinked with the fear of crime. The factor of *physical vulnerability* explains how some groups are more vulnerable for crime, mostly women. However this theory paradoxes as it is proven that often women suffer less from actual crime, however their fear of crime is higher than that of men (Gardner et al., 2017; Neupane & Chesney-Lind, 2014; Vilalta, 2011). Vilalta (2011) found that (in his research of Mexico city) the fear of crime is not influenced by the transport mode, it increases over the duration of ones journey on public transport and the fact that people with the lowest levels of fear were less likely to suffer from crime while using public transport.

1.5. Behavioural change and the Future

Mentioned previously by Levy (2013) and Gardner, Cui & Coiacetta (2017) women are more likely to change their behaviour surrounding public transport as a result of their perceived fear. One of the ways in which women change their behaviour to feel more safe while using public transport is avoiding using it in the late evening. Reason for this is the concern for a lack of surveillance at that time of the day. As well as the frequency of which they use public transport is influenced by this, and the fact that women avoid using public transport on their own (Gardner et al., 2017).

Besides behavioural change that the women enforce themselves to, research has also been done

on solutions that might help. These mostly focus on environmental solutions, such as the presence of good lightning at stations, reducing the number of entrances, widening staircases, the possibility of closing off certain areas and moving waiting areas closer to one another (Gardner et al., 2017; Smith & Clarke, 2000). Unfortunately research has shown that these environmental solutions have a limited effect on people's perception of fear. Surveillance and the presence of police officers has seen to have the biggest positive effect on people's perception of fear. This can be either done by putting CCTV cameras in or by having more surveillance staff at stations or on trains (Gardner et al., 2017). Another way of combining this with environmental solutions is for example the placement of service booths near entrances (Smith & Clarke, 2000). Though take into account here that CCTV has little to no effect on the reduction of fear or crime in general. Another solution is raising awareness on sexual harassment on public transport. A strategy that has seen a rise in the reporting of cases as well as empowering women to stand in their own rights. From this also results the need to make reporting harassment in general easier. Lastly a highly criticized solution could be the introduction of women only carriages on public transport, however this would again reinforce inequalities between men and women (Gardner et al., 2017; Smith & Clarke, 2000). Other solutions to reduce the fear of crime are to publicize the real risks that people take while using public transport, a more sophisticated way of reporting by the media as well as reducing incivilities earlier on (Smith & Clarke, 2000). These different solutions show that the main point here is to reassure people about their personal safety (Newton, 2004). However policies do not only focus on reassuring users. Policies often focus either on reducing the actual crime numbers or making passengers feel safer. However these objectives can also be combined within the different policies at use (Smith & Clarke, 2000).

Another struggle that might occur in the future is the low number of staffing that is available on public transport. This can be both related to the cut in costs that we have seen over the years (Joewono & Kubota, 2006; Schmucki, 2002) as well as the fact that new developments and designs for public transport often focus on having the lowest number of staff possible to reduce costs. As seen earlier the lack of supervision can be seen as a direct influence on the number of incidents that are happening on public transport (Smith & Clarke, 2000). Crowding is seen as an element that helps to create an environment in which opportunities for harassment arise (Gardner et al., 2017; Smith & Clarke, 2000). Something that needs to be taken into serious account when trying to plan public transport for our future. If we want more people to use public transport, we need to make sure that crowding will not lead to more feelings of unsafety among the people that are using public transport, which in the end will discourage people from using it all together. However other research (Newton, 2004) tells us that when usage number rise, people feel safer when using public transport. This feeling of safety seems to be just an appearance as different numbers show that crime often happens on the busier moments on public transport (Newton, 2004).

1.6. Conceptual Framework

To be able to explain all the different theories and concepts that we have encountered above, *figure 1.2.* shows how all of them relate to one another. The figure shows the combination of how the different choice models as well as fear influence once choice. It includes TPB (which includes attitudes towards public transit, perceived behaviour control and subjective norms), TAM (including perceived usefulness, perceived ease and attitudes toward public transit), habits, past behaviour and the fear of crime. The concepts of fear of crime are zoomed in on, as they will help explain the influence of the fear of crime further, since this is the main influence that this research will be looking into. However as seen above it is not possible to single-out one certain influence and all other influences need to be taken into account when researching once choice of behaviour. The conceptual framework that is provided below was created with the help of the frameworks provided by Ajzen (1991), Chen & Chao (2011), Elias & Shiftan (2012) and Vilalta (2011). The different aspects that were found to be off influence on someone's fear of crime in the literature previous explained are found within the blue rectangle. To make sure that all concepts are clear, they will be explained in further detail below. *Victimization*, here means that someone has been a victim of a crime while using public transport. So either waiting at a stop or station, or while on the vehicle. *Demographic*

information, points towards the influence that one's gender, age, family background, income and other personal statistics can have on someone's fear of crime. With *social disorder*, we look into the risk calculation that can be made for someone when they are using public transport. Lastly looking into *social networks* we will dive deeper in the opinion that users have on the surveillance level that is present on their public transport travels (Vilalta, 2011).

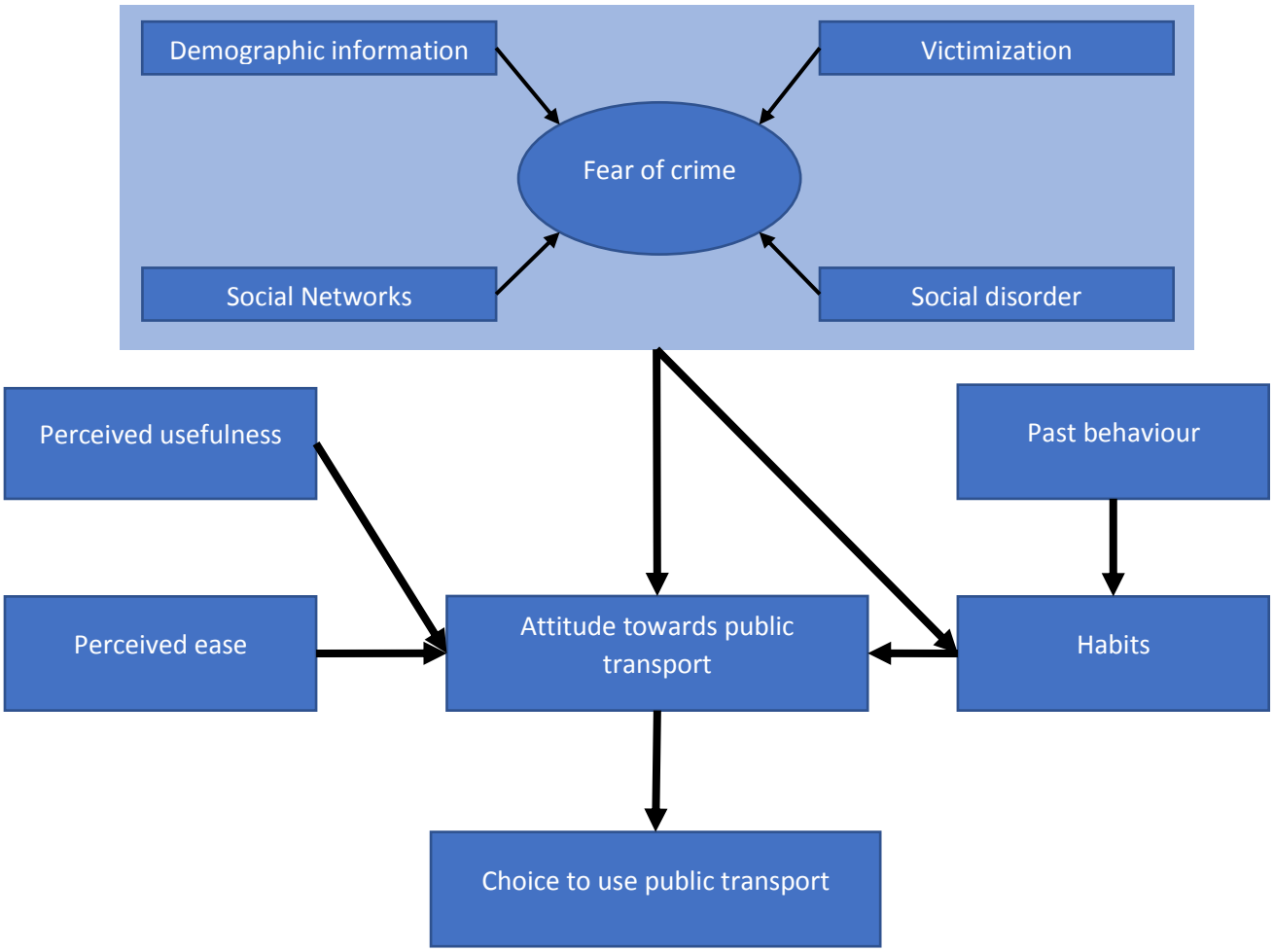

Figure 1.2. Conceptual Framework

2. Materials and methods

The geographic focus of the research will be the Netherlands and it will focus on young women, aged 18 till 30. This age group has been chosen due to the fact that within this age group all different kinds of students can be found. Students use public transport quit often and will generally do so at different times of the day and for different reasons (Muromachi, 2017). This is thought to be so because of their flexible lifestyles during their studies. Another reason for this age group is the fact that it is found that youths are slowly changing their perceptions on car use and ownership (Muromachi, 2017). Users of all different forms of public transport have been taken into account, this to be able to analyse all the data. The Netherlands is chosen as a country of focus due to the fact that most research on feelings of safety on public transport and the move towards using more public transport are done in countries which rely heavily on private cars. Something that is different in the Netherlands, where public transport and bicycles play a large role as well. Another reason which also links up to the target group is the fact that students in the Netherlands receive a form of free public transport from the government.

The aim would be to have at least 273 respondents on the survey, this number has to be reached to be able to do a feasible analysis of the collected data. This number of respondents that has been set as the goal for this research is the result of a sample size calculation. For this calculation the number of women in the Netherlands between ages 20 and 30 have been taken into account. The used confidence level was set at 90 percent and the margin of error on 10 percent. Together with a population of 1084435 (CBS, 2019) this leads to a sample size of 273. Though this population is not for the full age group that is part of the research, which can raise the population count, the question whether this full population group uses public transport cannot be answered. This leads us to believe that even though not the full population is used in the calculation, the numbers resulting from the calculation can still be seen as useful and an aim.

2.1. Data collection

The target group has been approached by spreading the survey on Facebook and WhatsApp and through this asking people to fill in the survey as well as share it. This way a wide range of people that fall into the target group will be able to see the survey, share it as well as fill it in. This is however based on the snowball technique. Which states that from one respondent to another respondent you will find people that fit within the target group. This brings some critique with it. Mainly the fact that it could lead to a focus on a certain part of the target group. In this example it could be critiqued that as it starts from someone in higher education, people who are following a different type of education, or are already working can miss out on coming across the survey and thus their data will be lost. Due to current conditions (the global COVID-19 pandemic) this is not fully preventable, however, by distributing the survey as well to people who do not fit in the target group and asking them to spread it further the reach of the survey will grow and this point of critique can be lessened and hopefully loose some of its strength. This is however not predictable, meaning that the fact that the target group could be focused on a certain part of that target group needs to be taken into account when analysing the results and using the results in the future for policies.

Another point of critique that could be raised here is the fact that by using this technique of distributing the survey, people that do not fit within the target group are able to fill in the survey as well. Again due to current conditions this cannot be fully prevented as it is momentarily not possible to get out and ask people to fill in the surveys from a face-to-face interaction. This means that in the message that comes with the survey as it is distributed online a clear instruction needs to be given on who are being targeted to fill out the survey. Within the survey and the results it is also possible to filter through people that are filling in the survey on their age, as this is a question that is included in the survey. However a check on whether it is just women that fill in the survey cannot be done. This needs to be taken into account when analysing the results from the research as well as when listing the recommendations, that can be deducted from the research. Dealing with this is difficult however, as long as this is taken into account while analysing and discussing the results a big step is already made. Things that can be done, to clean the data collected

thoroughly and being careful about the assumptions that result from the research need to be done with extra care.

To make the survey Qualtrics is used. This is a platform on which an online survey can be created. This way the survey can be spread widely on social media and through email. The choice for Qualtrics can be explained due to the fact that it provides the possibility of creating your own survey's, which can be used on mobile devices as well. Another reason for the use of Qualtrics is the fact that one can use branching in this format making the survey flow better and being able to adjust the survey to the answers given by the different respondents (Qualtrics LLC, 2020). Other reasons are the way that privacy is regulated when using it. This includes two factor authentication for people that want to look at the data that is being collected. Another reason is the fact that Utrecht University provides a license and also a template to use while creating the survey. This makes it easy to create the survey as well as creating a good lay out and creating visibility for the university (Utrecht University, 2020).

The survey (see Appendix 1) will consist of general demographic questions, as well as some open-ended questions about ones regular travel time on a typical day. Further more questions included will focus on the different uses and times that one uses public transport. As well as questions which will be focused on the satisfaction of the public transport that the respondents use. The questions surrounding satisfaction will be Likert scale questions, whereas the questions on the different reasons and motives to use public transport, as well as the times when public transport is used, will be multiple choice questions. Besides using the theory that was collected for the theoretical framework to base the survey questions on, other research and surveys that have been carried out and are similar to this research where used to create the survey. This way questions asked have been asked and tested before using them in this survey, which in turn strengthens the survey as they have already shown that they are well-established questions (Aloul et al., 2019; Kaufman et al., 2018; SurveyMonkey, n.d.; Whitzman et al., 2019).

Looking at the survey that has resulted from this it shows that it is build up out of five different sections. It is chosen to make the survey in Dutch due to the fact that the public transport sector within the Netherlands is the focus off the research, making it easier for citizens of the country to answer the questions. The survey starts with demographic questions. This way a good profile can be developed of the respondents while analysing the collected data. From this section, we move onto more topic specific questions surrounding peoples travel information. This is important to know, as it shows people's most used mode of public transport, the time they spend on public transport and their reasons to use public transport. It gives an insight in their travel behaviour, as well as it will give us the opportunity to make use of the risk calculation provided by Smith & Clarke (2000), as listed in the theoretical framework that was provided earlier.

The third section included in the survey is that of one's behaviour. The questions asked in this section try to get an insight in how one's feelings of safety can lead to a change in one's behaviour. Questions asked focus on whether people are willing to change their behaviour as well as their possibility of changing anything about their behaviour. The section ties back to the questions on whether or not people have fallen victim to any of the above listed crimes when it asks whether or not they have also changed their behaviour as a result of becoming a victim of any of the crimes. The idea that people change their behaviour after becoming a victim of one of these crimes comes from the works by Levy (2013) and Gardner et al. (2017), in which they list that women are more likely to change their behaviour as a result of crimes. Furthermore these questions will help fill out the conceptual framework further than just the main focus of the fear of crime and how to deal with this. Including these questions will give insight on respondents subjective norms, their attitudes towards public transport through their perceived usefulness and perceived ease, and lastly on their perceived behaviour control. The concepts of past behaviour as well as habits will be taken into consideration when asking about the respondents travel information.

The next section included in the survey is based on people's own experiences when it comes to crime on public transport and the consequences this has for people's feeling of safety on public transport. This will give us an insight in the number of actual victims and the ways in which our respondents fell victim

to the different sorts of crimes that are being recorded on public transport. Not only do we ask here about whether or not the respondents have fallen victim to crime, it is also asked whether or not they have reported this. Questions on this are included due to the fact that Smith & Clarke (2000), noticed that women more often report a crime than men. However even when women report crimes more often they also noted that still many crimes are not reported at all by the victims. This is interesting to look into for targeted audience. The crimes that are included in the questions are a result of the list that was provided by Smith & Clarke (2000);

- Robbery;
- Assault;
- People being pushed under trains;
- Theft, and lastly
- Sexual assault.

As it might show, the list that is included in the theoretical framework also includes fare evasion. In the survey this form of crime is left out of the questions due to the fact that this is not a crime that one does to others. From here the survey moves on to dive deeper into the research itself. This is done through statements about one's feelings of safety both while on public transport as well as while they are at public transport stations or stops. These Likert scales can then be used to look into whether people feel safe while using public transport and/or while they are waiting at public transport stations and stops. It is important here to make a division between one's feelings of safety while on public transport and while at transport stations and stops. This due to the fact that the literature background provided in the theoretical framework shows that both of these elements of public transport can be off influence on one's feeling of safety. However they both influence one's feelings of safety in different ways as well as having different aspects that influences one's feelings of safety. The statements used in this section are a result of the compilation of research which is listed in the theoretical framework. The main concepts used in the statements are supervision, crowding, physical attributes and awareness (Currie et al., 2010; Delbosc & Currie, 2012; Gardner et al., 2017; Gatersleben & Uzzell, 2007; Neupane & Chesney-Lind, 2014; Schmucki, 2002; Smith & Clarke, 2000; Vilalta, 2011). The last section included in the survey focusses on prevention of crimes and the different solutions that are being proposed in the theoretical framework. Here again, just as in the section that focusses on people's feelings of safety, a difference is made between solutions that can work for feelings of safety while on the vehicle as to solutions that can work for stations and stops. This again due to the fact that there are different solutions proposed in earlier research and focusses on the concepts of supervision, crowding, physical attributes and awareness (Gardner et al., 2017; Joewono & Kubota, 2006; Levy, 2013; Newton, 2004; Smith & Clarke, 2000). The solutions are put in statements and make use of a Likert scales. This provides a score to each different solution that is provided. As well as the Likert scales, each of the two sections on prevention are being closed off with a question whether any of the solutions provided might be a reason for respondents to change their way of using public transport. Making this section circle back towards the section that focusses on people's behaviour. The survey will be closed with an open question, giving people the opportunity to give their own views on possible solutions and prevention against crime on public transport as well as enhancing people's feeling of safety. This question is also an opportunity for respondents to show whether or not they are actively thinking about their safety and what could enhance their safety. The full survey can be found in *appendix 1.*

2.2. Data analysis

The data collected with the survey will be analysed with the help of R and SPSS. The first step to be taken in analysing the data is to run descriptive statistics on the collected data. This shows the response and can give a better view into the basic ideas that are important when looking further into the data. Before analysing the data any further, it has to be cleaned according to the different variables that will be used during the further processes of the analysis. This means that missing data needs to be filtered out, as well as answers that do not fit with the data. For example the data collected from someone that does not fit the

target group due to not falling into the correct age group that is selected for this research.

The first step in the analysis is the cleaning of the data and running descriptive statistics. After this both an ANOVA linear regression was as well as a Mann-Whitney test. The ANOVA test was used to see whether there was any influence from different demographic variables, being a victim or not and the travel time on a respondents safety score. The variable S*afety Score* results from combining the different variables that resulted from the statements asked surrounding the respondents feelings of safety while using public transport as well as while they are waiting at the station or stop (see Q70 and Q73 in *Appendix 1*). Combining these different statements into a safety score results in a score from 1 to 5, with a score of 1 referring to the respondent feeling safest and a score of 5 to the respondent feeling unsafe. Looking at the other variables used in this regression, the variable *Victim* was formed out of the answers of the respondents on whether or not they had ever been a victim to any of the crimes listed (see Q30, Q38, Q46, Q54 and Q62). It was chosen here to not divide this into the different types of crimes, this due to the fact that in other research this divide has also not been explicitly made (Neupane & Chesney-Lind, 2014; Newton, 2004; Vilalta, 2011). The demographic variables included in this regression are those of *Education*, *Daily Occupation* and A*ge*. The variable of *Age* could be used without any changes. For the two other variables dummies were made. Resulting in three dummy variables for both, dividing education (see Q4) in low (the first two options), middle (the third option) and high (the last two options). For daily occupation (see Q5) there were also three dummy variables, namely work (the first two options), study (the third and fourth options) and other (the last option). For *Education* the dummy used as a base was that of lower education and for *Daily Occupation* the base was the dummy for work. The variable *Travel Time* (see Q12), the travel time in minutes was used, as given by the respondents.

With the 2-tailed Mann-Whitney test the means of the *Safety score* of people who have become a victim of crime were compared to the means of people who had not become a victim. This was done to see whether or not they would show a significant difference, which would then imply that there is a difference in the safety score of people who have become a victim and to those who have not. For this the variables of *Safety score* and *Victim* were used in the same form as they were for the ANOVA test, explained previously.

After these tests which helped explain people's feeling of fear and what influences this, the next step to be taken was to see how people's behaviour is influenced (partly by the findings from the previous tests). The goal of the research is to create a model which can explain the respondents behaviour. To do this the theory of planned behaviour is used as a basis of a Logit Regression Model. The choice for a Logit Regression Model can be explained due to the fact that some form of relation can be found in the way that people perceive their safety. The questions asked in the survey lead to binary variables which makes the use of a Logit Regression Model suited for analysing the influences of the different variables on the willingness of the respondents to change their behaviour. With the help of the model different outcomes and probabilities can be explained. It also enables the possibility to point out specific points of improvement, or certain patterns.

In the survey there are two questions that refer to people's willingness to change their behaviour, the first one asks whether or not respondents would change their travel behaviour to feel safer if that would be possible for them (Q21), and the second one asking respondents if they would change the time of the day on which they travel to make them feel safer (Q24). These two questions make it possible to create two Logit Models as they both result in binary variables, to try and explain the answers given to them. The first model focusses on the will of people to change their travel behaviour if that would be possible. The variables used to try and explain the model are *Age* (Q1)*, Education* (Q4)*, Daily occupation* (Q5)*, Most used transport type* (Q8)*, Possibility of other transport* (Q20)*, Safety score while on vehicle* (Q70)*, Safety score while at a stop/station* (Q73) and *Victim of a crime while using public transport* (Q30, Q38, Q46, Q54 and Q62). The variable *Age* was used in the same way as asked to the respondents as well as *Possibility of other transport*, the other variables have been changed slightly to fit into the model. For *Education* this means that a divide was made between higher (the last three answer options) and lower education (the first two answer

options). *Daily occupation* has also been changed into a binary variable with the options being either work (first two options) or study (last three options), here the option other was taken up into the study category as it had no responses. For most used transport type it showed from the literature that having access to a private vehicle is of importance (Muromachi, 2017), leading to dividing this variable in using either public transport (the third up to sixth options) or using private transport (the first two and last two options). The two different variables of safety score used in this model were formed in the same way as previous, however now making a distinction between the *Safety score while on a vehicle* (Q70) and the *Safety score while at a stop/station* (Q73). The variable *Victim of a crime while using public transport* also remains unchanged from the one used for the ANOVA test and Mann-Whitney test.

For the second model the dependent variable was whether or not someone would change the time of day for their travel (Q24). The variables used to try and explain the model are *Age* (Q1)*, Education* (Q4)*, Daily occupation* (Q5)*, Most used transport type* (Q8)*, Average travel time* (Q12)*, Safety score traveling during the day* (Q70, statement 11)*, Safety score while at a stop/station during the day* (Q73, statement 13) and *Victim of a crime while using public transport* (Q30, Q38, Q46, Q54 and Q62). The variables *Age, Education, Daily occupation, Most used transport type* and *Victim of a crime while using public transport*, were all used in the same way as for the first model. The variable *Average travel time* was used in the same way as during the ANOVA test and Mann-Whitney test, using average travel time in minutes. The variables of *Safety score traveling during the day*, and *Safety score while waiting at a stop/station during the day* were taken directly from the score (1 to 5) given at the statements that were used.

3. Results

The survey got a response of 221. After cleaning the collected data this however went down to a response of 166.

3.1. Demographic information

Analysing the data on the demographic information of the respondents it shows that the mean age of the respondents was 22.5 years (SD = 2.923). Looking closer at respondents use of transport in general, it shows that the most used mode of transport is the bike (54.5%), followed by the train (16.8%). For public transport it shows that the most used mode of public transport is the train (73.1%), followed by the bus (16.2%). When asked what other mode of public transport the respondents use, it showed that the bus (53.3%) came in first followed by the train (19.8%). Making these modes of transport the two main modes of transportation used for our focus group. Travel time and travel frequency shows that the mean travel time comes in just under an hour, 58 minutes (SD = 47.224). With most respondents using public transport for journeys that take 15 to 60 minutes. As well as that most respondents use public transport either on a daily (36.5%) or a weekly basis (36.5%).

3.2. Victimization and its influence on safety

In the survey five different types of crimes have been highlighted. The results from the survey show however that none of the respondents has ever been the victim of a robbery, as a result this type of crime will not be included in the following overview on victimization.

3.2.1. Victims

Starting with theft, it shows that only four respondents have been the victim of theft while using public transport. The place where the theft happened differs for all incidents that happened, and did not result in a change of behaviour for the respondents that experienced it. Looking more closely at pushing, in such a way that it makes the respondents feel less safe, it shows that 39 of the respondents have been a victim of this. Here a change of behaviour has been reported for a small portion of the respondents. Examples of these changes are making use of a different stop, a different mode of public transport or choosing a different time of the day to use public transport. 40% of the respondents have been a victim of harassment while using public transport. Changes in behaviour are either to change the time of use of public transport, to no longer travel alone or to make sure that they are never alone in a carriage, with an extra focus on making sure that other women are present in the carriage. The last type of crime included in the research is that of sexual assault. It shows that this happened to only four of the respondents, within different time frames. Though the previous types of crimes discussed showed that at least one of the victims had reported the incident, none of the victims of sexual assault has reported the incident. The incidents recollected here show that only one happened on an actual mode of transport (the bus) while the other incidents happened either at stations or stops. None of the incidents has led to a change in behaviour by the victims.

Looking into the more geographical side of victimization it shows that most incidents occurred within the provinces with the highest number of respondents. When looking at the rate, which combines the number of respondents per province and the incidents per province, Gelderland shows the highest rate. Putting this into perspective with both Utrecht and Zuid-Holland, the provinces with the highest response rate, it shows that they have a rate of 0.6 and 0.7. Another aspect is the mode of public transport on which the different types of crimes occurred. Here it shows that from the total number of 114 incidents that were recorded during this research the largest parts of these incidents took place on the train. It also shows that most incidents in fact happen while on the vehicle, with a much smaller number of incidents happening while people are waiting at stops and stations.

Questions were also asked whether people would change their behaviour if they would ever experience any type of the crimes listed above. The question reveals that 31.7% of respondents think that they would change their mode of transport after becoming the victim of theft. This percentage rises for

becoming the victim of a robbery (88.6%) as well as for becoming the victim of pushing (70.7%). The percentage is lower when looking at harassment (7.8%) and sexual assault (31.1%).

3.2.2. Safety feeling

For the research different statements were tested to see what impacts people's feelings of safety while using public transport. It is interesting to highlight the two best and worse influences of these feelings of safety to create a better picture of the full situation before modelling what is in fact of influence of people's feelings of safety and their changing behaviour as a result of it.

The different aspects that can increase someone's feelings of safety have shown that when people make noise it is seen as something that makes people feel less safe while on public transport. For this aspect 42.5% of the respondents said that they "disagreed" with the statement. Another aspect that makes people feel less safe is when large groups of people get onto the vehicle at the same time. Though this aspect does not show a large percentage of people disagreeing with it (25.7%), it also shows a lot of neutral responses (43.7%). Looking at the other side of the spectrum, respondents showed that travelling with other (known) people in fact makes for a safer feeling. In fact, 49.1% of the respondents said that they "totally agreed" with this statement. For traveling during the day, another clear aspect that made people feel safer, 58.1% of the respondents said that they "agreed" as well as 24.0% saying that they "fully agreed".

Doing the same thing for the feelings of safety at stops and stations the data shows that again the aspect of people making noise at a station or stop makes people feel less safe. 43.7% of the respondents "disagreed" with the statement. As well as the noise aspect playing a role here, again the presence and or entrance of a large group of people is also seen as something that makes the respondents feel less safe. The percentage of people that "disagree" is 32.3%, and just as with this aspect for safety on a vehicle there is a very large group that stays neutral on this matter (37.7%). Looking into the aspects that make people feel safer at stops and stations, it shows that good lighting plays an important role in this, 53.9% of the respondents "agree" and 37.7% "fully agree". The other aspect that was found to have a positive impact on respondents feelings of safety is when people are able to wait and travel with other people that they know. Here 51.5% "agreed" and 32.3% "fully agreed" to this being of a positive impact on their feelings of safety as well as no one disagreeing with the statement.

3.2.3. Solutions

Focusing on possible solutions for creating a better feeling of safety on public transport itself, it shows that people would feel safer if they know when someone is looking at the CCTV footage actively. 50.3% of the respondents answered this statement that they in fact "agree" with the idea, additionally another 20.4% of the respondents even say that they "fully agree" with the statement. Another aspect that can increase the safety feeling is the presence of more surveillance on the vehicles. 53.8% of the respondents "agree" with this statement, adding another 13.8% of the respondents who "fully agree" with it. Looking closer at the solutions that might not be as helpful, it shows that a designated carriage for women, as well as less media coverage on crime happening on public transport are seen as aspects that might not do much to increasing people's feelings of safety.

Moving on to possible solutions for stops and stations it shows that here better lightning, and CCTV footage which will be looked at in an active manner would increase people's feeling of safety. 54.5% of the respondents "agree" with the idea that better lightning would help, and an additional 24.6% even "fully agree". The solution of people looking actively at CCTV footage also sees high levels of agreement by the respondents, 47.9% "agree" and 24.6% "fully agree". Looking at solutions proposed to the respondents that came out to not be received as good as these two. Being made aware of where to be able to report a crime and the less media coverage are not seen as solutions that would increase one's feeling of safety.

3.3. Influences on safety and behaviour

3.3.1. Victims and feelings of safety

To see whether or not experience with any type of crime has an influence on the feeling of safety, a safety score compelled out of the information gathered from the statements surrounding one's feelings of safety has been created. This score was created by adding all the different scores for the statements surrounding safety feelings together. This then gives a score per respondent between 1 and 5, with a score of 5 indicating that the respondent feels rather unsafe while using public transport and 1 indicating that the respondent feels safe. This score then makes it possible to compare the safety feelings from victims to those to people who never have been a victim of any type of violence or assault while using public transport. These new variables show us that out of the 165 responses received on whether or not someone has been a victim of any type of crime, 88 respondents said they had been (52.7% of the questioned). The safety score shows a mean of 2.48 (SD = 0.42), with a score of one feeling the safest and a score of five feeling least safe. The maximum score was 3.21 and the minimum 1.11. It is chosen to measure the safety score like this due to the fact that there is no theoretical evidence that any of the different aspects measured are of a bigger influence on one's feeling of safety than the others. Using this way of modelling the safety score gives all the aspects measured in the survey an even weight, as there is no evidence that one (or some) of the aspects need to weigh more.

To answer the sub question above a linear regression can be created, the outcome of this then shows what the influence is of people that have fallen victim to any type of crime while using public transport on their feeling of safety. In this the dependent variable is the S*afety score*, and the independent variables used are *whether or not someone has fallen victim*, *age*, *education level*, *one's daily occupation* and *one's travel time*. These variables have been chosen due to their demographic information as well as the fact that the none demographic variables are often used to calculate the risk that people have while being on public transport. This leads to think that they would be of influence on whether or not someone would feel safe while using public transport or not. Testing for linearity and a normal distribution of the dependent variable shows that both linearity and normal distribution can be assumed and thus makes it possible to run a multiple linear regression. The ANOVA test shows that the full model that results from running a linear regression is not significant (p = 0.955). The demographic variables and whether or not someone has been a victim of a crime while using public transport can thus not significantly explain someone's safety score (see *Table 3.1.*).

Table 3.1. Linear regression of the influence of being a victim on ones feeling of safety

Model **ANOVA**	**Sum of squares**	**Df**	**Mean Square**	**F**	**Sig**
Regression	0.387	7	0.055	0.293	0.955
Residual	22.435	119	0.189		
Total	22.822	126			
Model **Linear regression**		**Unstandardized Coefficients**		**p-value**	
		Beta	**Std. Error**		
(Constant)		2.233	0.573	0.000	
Victim		0.006	0.079	0.935	
Education (Middle)		0.109	0.318	0.733	
Education (High)		0.036	0.319	0.911	
Daily occupation (Study)		0.056	0.096	0.560	
Daily occupation (other)		0.353	0.315	0.264	
Age		0.006	0.021	0.768	
Travel time		9.757E-5	0.001	0.905	
N		127			
R^2		0.017			

Interesting to look into then is whether or not becoming a victim of a crime has any influence on one's feelings of safety. To do this the following hypothesis can be tested: *people who have been a victim of any type of crime on public transport score lower on feeling safe while using public transport.* Running a 2-tailed Mann-Whitney test it shows that the safety score for people who have been a victim of a crime on public transport (mean = 2.51) does not significantly differ from the safety score of people who have not been a victim of a crime on public transport (mean = 2.45). p = 0.095. This then results in overthrowing the hypothesis, *people who have been a victim of any type of crime on public transport score lower on feeling safe while using public transport.*

3.3.2. Changing behaviour

As the information provided above paints a more broader picture of the different experiences measured with the survey that has been conducted, the theoretical framework given earlier gives us the hypothesis that someone's fear of crime is of influence on their choice to use public transport. However as seen this fear of crime is formed out of different aspects and is not the only influence on people's choice to use public transport. This then leads to it being best analysed by creating a model to see in what way these different aspects as mentioned in the theoretical framework are of influence on people's choice. In this research there are two questions related to whether or not people would make a different choice surrounding their transport behaviour. These are their type of transport, due to feeling unsafe and uncomfortable as well as the option to choose a different moment to travel with public transport. This then leads to the following hypothesis':

1. *People's fear of crime is of influence on whether people would change their mode of transport if this is possible for them.*
2. *People's fear of crime is of influence on whether people would change the moment during the day in which they use public transport.*

As seen in the theoretical framework earlier on, different variables are of interest when looking into whether people would change their behaviour. The most important of these different variables and the demographic variables were used to create an Logit Regression Model to see in which way they influence the choice of people to change their mode of transport if this would be possible. The dependent variable in this regression is whether or not people would change their behaviour is this would be possible and is a binary variable. The independent variables that have been tested can be found in *Table 3.2*. Out of the variables that came directly from the data two new variables were created for this model. Namely the *safety score while on a vehicle* and the *safety score while at a stop/station*. The safety score while on a vehicle shows a mean of 2.32 (SD = 0.43), with a score of one feeling the safest and a score of five feeling least safe. The maximum score was 3.21 and the minimum 1.00. The *safety score while at a stop/station* shows a mean of 2.18 (SD = 0.39), with a score of one feeling the safest and a score of five feeling least safe. The maximum score was 2.88 and the minimum 1.00. The created model shows that both whether or not a persons most used transport type is public or private transport (p = 0.0167) and whether or not people have a possibility to use other modes of transport (p = 0.0041) have a significant effect on whether or not people would change their behaviour to feel safer if this would be possible. The different independent variables, where chosen as a result of the theory (Vilalta, 2011) which showed that one's fear of crime evidently influences once choices to use public transport, as well as the fact that someone's habits also influence one's choice to use public transport. The independent variables used are all in some sort related to these theoretical concepts.

This means that when someone uses public transport more than private modes of transport this has a positive effect on that person changing their behaviour surrounding their way of traveling to make them feel safer. The chances of someone changing their behaviour is bigger while using public transport then when that person is using private modes of transport. Looking at the second variable that is of

influence it shows that if people have the possibility to use any other mode of transport than their current most used mode of transport this also has a positive effect on that person changing their behaviour. The created model has an explained variance of 24.5% (R^2 = 0.245) and can thus be seen as a medium strong model to explain whether or not people would change their behaviour to feel safer.

Table 1.2. Logit Regression Model to explain changing behaviour if this would be possible

Model	**Unstandardized Coefficients**		**p-value**
	Beta	**Std. Error**	
(Constant)	-2.9633	3.3127	0.3710
Age	-0.0890	0.1309	0.4968
Education	0.4523	1.3053	0.7289
Daily occupation	0.9535	0.6746	0.1575
Most used transport type	-1.2944	0.5407	0.0167
Possibility of other transport	1.8039	0.6281	0.0041
Safety score while on vehicle	1.3907	0.9925	0.1611
Safety score while at stop/station	-0.6157	1.1142	0.5805
Victim of a crime while using public transport	0.8233	0.5478	0.1328
N	147		
R^2	0.245		

Looking at the second hypothesis given above, *people's fear of crime is of influence on whether people would change the moment during the day in which they use public transport,* another Logit Regression Model can be made to see of this is correct. Just as in the earlier Logit Regression Model not only the demographic variables have been taken into account but also the independent variables that can be linked closest to the other factors that where shown to be of influence on one's behavioural choices in the theoretical framework. The dependent variable of this model is whether or not people would change the time of the day on which they travel with public transport and is a binary variable. The independent variables that have been tested for the model can be found in *Table 3.3.* The independent variables chosen in this model are a result of the idea that habits and past behaviour are of influence on one's fear of crime and choice to use public transport. Other variables are closer related to the idea that traveling during the day is one of the aspects asked to see whether or not people feel safer while doing so, and it is then also related to the time of day one is traveling at. As can be seen in *Table 3.3.,* none of the independent variables have a significant effect on whether or not people would change the time of day on which they travel with public transport ($p \geq 0.05$).

Table 3.3. Logit Regression Model to explain changing travel time if possible

Model	**Unstandardized Coefficients**		**p-value**
	Beta	**Std. Error**	
(Constant)	-0.6691	1.7847	0.7077
Age	-0.0051	0.0849	0.9520
Education	0.8118	0.9860	0.4103
Daily occupation	0.1458	0.4350	0.7374
Most used transport type	-0.5395	0.3788	0.1544
Average travel time	0.0039	0.0036	0.2769
Safety score traveling during the day on vehicle	-0.1928	0.3507	0.5826
Safety score waiting at a stop/station during the day	0.4607	0.4228	0.2759
Victim of a crime while using public transport	-0.0404	0.3492	0.9078
Response	147		
R^2	0.053		

4. Discussion

As found in the literature of Levy (2013) and Gardner et al. (2017), women are thought to be more likely to change their behaviour as a result of feeling unsafe or fearing certain situations. The results from the survey show a contradictory in this. Respondents said that if they would ever fall victim to the different types of crimes mentioned in the survey, they would most likely change their behaviour. However looking at the respondents that have in fact fallen victim to these types of crimes, only a small number of the respondents have in fact changed their behaviour as a result of falling a victim to one of the crimes. The only crime listed in the survey that did report a change in behaviour from the victims was pushing, which also shows the highest percentage (of the four crimes that respondents had been victimized by) of respondents thinking that they would change their behaviour if they would fall victim. The fact that none of the sexual assault victims reported the assault is in line with the expectations of Smith & Clarke (2000), who said that though it is one of the crimes that has the largest impact on young women, it is also the crime that gets reported by officials the least. The fact that victimization through harassment scored highest in the survey is supported by the fact that most victims of harassment worldwide are young women (Neupane & Chesney-Lind, 2014), which is a direct connection to the group targeted with this research. Interesting is that Gardner et al. (2017) pointed out that harassment is a big beneficiary in increasing fear for women on public transport, which then in result should be expected to lead to a change in behaviour. However the survey showed that not many respondents actually changed their behaviour. The results also showed that there is no proof that becoming a victim of one of the crimes listed above has an influence on how safe the women in the target group feel while using public transport. Even when looking at the wider aspects that influence one's fear of crime, none of the main variables showed to be of a proven influence to increase someone's feeling of safety. This in return can be explained due to the relative small number of respondents, as well as the fact that the theory by Vilalta (2011), is based on research in Mexico City.

4.1. Victimization and reporting

Looking closer at the aspects that resulted into a greater feeling of unsafety for the respondents and how this could be explained by the literature presented earlier on it shows that most of the explanation is linked to the idea of overcrowding and evidently to crowd control. As people say that both loud noises and large groups entering either the vehicle or the station and/or stop create a feeling of unsafety it could be assumed from the literature that this is related to the idea that busy places and crowds are incubators for harassment and small theft (Gardner et al., 2017; Smith & Clarke, 2000). Another aspect that was found to play a role in this as well are the environmental aspects, which in the literature have received a large span of attention when it comes to possible solutions, as most of those are based on environmental changes to the station and/or stop as well as the vehicles themselves (Gardner et al., 2017; Smith & Clarke, 2000). However not all aspects can be related to these two findings. What was found to help create a greater feeling of safety was for respondents to travel with other people that they know. This in return can be related to the idea that one's social network was an influence on fear of crime and eventually trickle down to one's attitude towards public transport as well as a change in behaviour (Vilalta, 2011). The survey also allowed to test whether a victim of a crime on public transport feels less safe while using public transport than someone who has not been victimized. However the idea that this has an influence on women in this age group can be pushed aside. A possible reason for this could be the fact that men are still more often a victim than women (Gardner et al., 2017).

4.2. Solutions

Possible solutions have also been discussed with the respondents. As mentioned previously here, as well as in the literature found, most solutions that respondents levitated towards are focused on environmental changes. This means that these solutions are focused on changing, for example, the layout of the station and/or stop (Gardner et al., 2017; Smith & Clarke, 2000).

4.2.1. Environmental solutions

Aspects mentioned in the survey are an increase in CCTV camera's as well as getting better lighting at stations. Though the literature suggest that the first aspect, increasing CCTV coverage, would not be of any help in increasing people's feeling of safety (Gardner et al., 2017). Surprisingly the way that media cover stories about crime on public transport, something that according to Smith & Clarke (2000) is of influence on one's feeling of safety, is for the respondents not something that would increase their feeling of safety. Similar to this the suggestion by Gardner et al. (2017) and Smith & Clarke (2000), that said that women's-only carriage could be a solution to increase women's feelings of safety while using public transport. These women only carriages could be seen as a rather good solution against sexual assault as men would not be allowed in the carriage, making sexual assault performed by a man on a women almost impossible. As this was an already highly debated solution in the literature, our survey confirmed the idea that this kind of a solution would not be of any use. The fact that this type of solution would also reinforce the patriarchy and the monopoly that men have claimed on public transport, could be seen as one of the reasons why this solution might not be as appealing to people as thought when it was first introduced (Gardner et al., 2017; Neupane & Chesney-Lind, 2014).

The solutions derived from the survey have one thing in common, which is the fact that they do not necessarily focus on crowd control. Looking back at what was said earlier, that harassment is the crime that most of the respondents have once fallen victim to, can be related back to overcrowding. It is surprising that none of the solutions that scored high to increasing a feeling of safety can be directly related to crowd control. As crowd control is seen by Gardner et al. (2017) and Smith & Clarke (2000), as a good solution to increase people's feeling of safety it is interesting to see that for the respondents of this survey that link is either not made, or they do not think that it is that big off an influence. However it is probably the case that the respondents do not link the different solutions that can be executed to control crowds better to their fear of large groups entering either their vehicle or station and/or stop. Crowd control is not the only solution that can be linked to harassment. From the solutions that have been discussed above one that stands out is that of reporting a crime or harassment easier. By the respondents this is not seen as something that would increase their feeling of safety. However according to Gardner et al. (2017) this could actually be a good solution. Another interesting point is the fact that at the point where respondents could give their own opinion or further additions people said that not so much being made more aware of where to report the crimes, but much rather a quick way to report anything in the moment would indeed make them feel safer. To reduce theft on public transport Smith & Clarke (2000) have suggested an increase in the amount of surveillance that takes place both on vehicles as well as on stations and/or stops. This solution has also been found to be seen as a good possibility for the respondents. It is thus not so much for the respondents about that they need to know better on where to report, but reporting needs to happen with a quicker and almost immediate response, solving the situation in the moment that it happens.

4.2.2. Root solutions

As said earlier there was also space for respondents to leave their own recommendations. One of the more prominent recommendations made by the respondents is that even though all the solutions that were listed in the survey might be able to help, it will not be enough in the long run. To create a real change in the feeling of safety for women on public transport they acknowledge the fact that the problems need to be tackled at the root and not halfway through. With this they mean that men need to be made aware of the consequences their behaviour has on women and their feeling of safety. This can also be linked back to the ideas of the patriarchy and monopoly as pointed out by Neupane & Chesney-Lind (2014), by only coming up with solutions for the crimes that are happening and not looking at why the crimes are happening and the people that are behind the crimes we let these patriarchy ideas and the male monopoly on public transport exist.

To tackle these ideas one needs to educate men on their behaviour and the consequences and influences their behaviour has on others. As this is opted by the respondents a critical note to this needs to be given as well, as it might not be the case that men are always the cause or the guilty one in the different

types of crimes included in this research. It could just as much be a women who is stealing, pushing, harassing or sexually assaulting another women. Another thing is the fact that this solution, which focuses on men only, also does not give any help to the number of men that have fallen victim over the years. Though this research does not focus on them, solutions opted here should be made in such a manner that it has a positive effect on women, but also keeping in mind to not have a negative effect on men or other demographic groups. The effect on men needs to be either neutral or positive as well for the possible solutions to be able to taken into account, as it is not wishful to push another demographic group out of public transport while working on making public transport more accessible to others. This is also important due to the fact that men are still more likely to become a victim of a crime on public transport than women (Gardner et al., 2017).

4.3. Behavioural changes

As this research wants to focus on what moves respondents behavioural changes when using public transport, it was first of all necessary to understand where respondents' fear of crime originated from and with that it was interesting to also discuss possible solutions. Some solutions have to be implemented by either the government or by transport organisations. As mentioned previous it was shown that being a victim of a crime does not have to increase one's feeling of unsafety. This was explained by the fact that men are currently still more victimized than women. However another possible explanation to this could be the fact that women in general are thought to be more likely to change their behaviour as a result of an increase in fear, without necessarily being a victim of a crime (Buehler & Pucher, 2012; Cresswell & Uteng, 2008; Gardner et al., 2017; Neupane & Chesney-Lind, 2014; Schmucki, 2002; Smith & Clarke, 2000; Yavuz & Welch, 2010).

As people are becoming less depended on private cars, and especially university students (Muromachi, 2017), their possibilities on different modes of travel are decreasing. Through a Logit Regression Model that was created previous it was found that people who have more possibilities for their mode of travel are more likely to change their behaviour (Beta = 1.8039, see *table 3.2.*). A decrease in the number of young people that have access to private cars can thus as a result lead to less people changing their modes of transport. However it is also shown that people who use public transport more often are also more likely to change their behaviour if that would make them feel safer (Beta = -1.2944, see *table 3.2.*). This new trend which sees young people having less travel options can thus lead to conflicting results. However looking at the different variables and their influence on people changing their behaviour to feel safer, it shows that the lack of other possibilities weighs heavier than the variable of people using public transport. This then means that when young people have less options to travel with, but are also using public transport more often, their will to change their behaviour is smaller than when they have more options for modes of transport, but use a private vehicle as their main mode of transportation. An ideal situation for the young women in this survey would be having more options on transport modes as well as using public transport as their main mode of transportation. To reach this, they do however need to have access to a private vehicle as well. So where the fact that these young women are now more likely to not own a private car might seem like a positive influence on getting them to use public transport more often (Muromachi, 2017), in reality this idea, which was also opted by Bilbao Ubillos & Fernández Sainz (2004), Shaaban & Kim (2016) and Zhou (2012), also decreases the chances that these women would change their behaviour to feel safer while traveling. Which then in return could have big influences on their own safety.

Looking at a more specific change in behaviour that could lead to the women feeling safer while using public transport, a focus was brought to changing the time of day on which people use public transport. This was done from the believes found that women feel less safe while traveling during the evening (Gardner et al., 2017). When testing for this however nothing came up to prove the idea that one's feelings of safety during the day influence the will of people to change the moment of day that they travel on. Possibilities to explain this could be the difference in the demographic group which took part in the

research done by Gardner et al. (2017) and the one included in this research. Other possibilities are the way that certain questions are asked, the geographic location or the way variables are being measured.

4.4. Research limitations and importance

The outcomes of the statistical tests and the answers given by the respondents on whether or not they would change the behaviour, as well as their answer to whether or not they did change their behaviour after becoming a victim are contrasting each other. Explanations for this could be sought in the fact that the number of respondents for this research was on the lower side of what would normally be used for a research to lead to significant findings. Another aspect, is the fact that there might be more of a psychological side to the influence that becoming a victim of a crime has on someone's behaviour. A side that needs to be looked at by someone who has more experience with psychology and knows how to measure this better. Another important aspect that hangs over the whole of this research is the timing in which the research took place, during the worldwide Covid-19 pandemic. This resulted in a different way of using public transport in the Netherlands, and many people, who would normally use public transport to either travel to work or university, no longer using public transport as they worked from home.

The worldwide Covid-19 pandemic did not only influence people's travel behaviour but it also influenced the way this research has been carried out. As a result of the situation, the survey had to be taken online instead of face to face with people near transport hubs. This in the end has both influenced the focus of the geographical location, as well as the number of responses and the usefulness of these responses. Taking a survey on the internet makes it easier for people to skip through questions or to stop halfway through the survey making their response unusable. It also decreases the amount of people that have a chance of seeing the survey, as we were dependent on others to share it online and to spread it in an unconventional way. The influence this has had on the research makes that there are limitations in making the research into general findings to be used in policies. However the findings can still give a direction for future research as to what is important and whether or not the response might change in the future. What is important though is the fact that, as stated earlier in the theoretical framework, this research has shown that it is difficult to tackle the behaviour of people even while looking at a specific group. Different people turn up with different reasons that explain their behaviour, making it difficult to create a more general statement on what does and what does not influence once behaviour when it comes to public transport.

Even though the circumstances of the research have not been optimal, the research can still be seen as useful. This due to the fact that it is one of the first researches in the field that focuses on this certain group within the Netherlands. As a result the research can be used as an example for further research to see what is important and to learn from the results of this research to help create better research in the future, with results that can be used in a wider aspect than the once gathered from this research. Another new focus is the fact that the combination of the age group with just the female gender has not been done explicitly. More often, research focused solely on the age group including both experiences for men and women. The fact that this research solely focused on women, created a space for women to have their voice heard in a different way than they otherwise would have been when male voices would be in the picture as well.

5. Conclusion

The aim of this research has been to find aspects that influence young women's feeling of safety on public transport, as well as finding ways to deal with these aspects to get young women to use public transport more.

5.1. Social networks and the fear of crime

From the literature the different aspects of fear of crime where conducted, namely *demographic information, victimization, social networks* and *social disorder* (Vilalta, 2011). It is believed that these factors play a role in one's perception of safety and fear of crime. The results from the survey showed us that the demographic information for this specific group of respondents did not bring a significant influence on a person's fear of crime. Similar to this, victimization also turned out to be insignificant to look at to have an influence on the fear of crime. *Social disorder*, was harder to capture in such a way that it could be tested, as there was not enough data available to calculate a risk measurement. Similar for *social networks*, this due to the fact that when one would ask for this certain questions in the survey would have been too similar to the one's related to whether or not someone would feel safe in a certain situation, causing for confusion by the respondents. However the questions that where asked about surveillance, social network and their relation to feeling safe or not can still be used to get a more general feeling as to see in what way *social networks* influence this specific group of respondents. Looking at this, it needs to be taken into account that these findings where not tested and are only an interpretation of the descriptive statistics that were run. These variables give us a form of an idea surrounding *social networks,* it shows that increasing surveillance would be seen by the respondents as something that would increase their feeling of safety. Similarly to the fact that traveling with a friend would also increase their feeling of safety. There were no significant factors found that make up one's perception of safety. However when asking people's opinion on what possible solutions they would implement to create a greater feeling of safety many answered with increasing surveillance. This then leads to think that *social networks* do play an important role in one's perception of safety on public transport.

As was already shown above, being a victim of a certain crime did not come up as a significant influence on one's feeling of safety. Another test that has been executed surrounding this topic also showed that there is no significant difference between the safety score that people who have been a victim give as opposed to people that have not been a victim on public transport. Looking into whether or not becoming a victim has an influence on one changing their behaviour surrounding public transport, the descriptive statistics stated that many respondents indeed said that they would change their behaviour if they would ever fall victim to any of the crimes asked about in this research. The two different models created to test this both showed that being a victim of a crime that happened while using public transport did not show any significant influence on whether or not a person would change their travel behaviour. These findings are conflicting with each other, as the respondents create the idea that they in fact would change their behaviour as a direct result from becoming a victim. However when looking at the people who have in fact fallen victim, only a small number of them replied by saying that they changed their behaviour as a result of it. Though to look into this, it would probably be necessary to dive deeper into the psychological influences that becoming a victim has on a person, something which this research does not do.

Experience with violence or assault while using public transport does not significantly influence one's perception of safety or behaviour regarding public transport. As mentioned above, the conflicting results are probably influenced by several psychological factors that come into play once one becomes a victim of a certain crime. So to be able to fully understand these answers further research from a more psychological point of view should be executed. This then in the end could help and support either this research or further research into creating a greater feeling of safety for people while using public transport.

5.1.1. Behaviour and perception of safety

As shown, different aspects can be found to play a role in one's perception of safety, based on the literature. Looking at the literature to try and explain in what way perception of safety influences young women's choices it shows that fear of crime is expected to be off influence on people's attitude towards public transport. This attitude, formed out of fear of crime, perceived usefulness, perceived ease and habits, then influences a person's choice on whether or not to use public transport, as seen in the *conceptual framework* (Ajzen, 1991; Chen & Chao, 2011; Elias & Shiftan, 2012; Vilalta, 2011).

These four different aspects have been taken into account when creating two models to see in what way they influence young women's choice for public transport in the Netherlands. Looking at the results that came out of these models, it showed that the fear of crime as it is made up in the conceptual framework does not have a significant influence on young women's choice, in the Netherlands, to change their behaviour surrounding public transport. The models created did however show that having different transportation options and using public transport over private car use has a significant influence on whether or not young women in the Netherlands change their behaviour surrounding public transport. Translating this back to the conceptual framework that was created, it can be said that these two aspects can fall within different aspects of this framework. Namely, perceived usefulness, perceived ease as well as habits.

5.2. Future research

As stated in the introduction and in the theoretical framework as well, the world is changing in a rapid manner to keep up with sustainable developments and public transport plays an important role in this. Not only is the world currently struggling with this, the ongoing Covid-19 pandemic also has a big influence on the way in which we plan our lives and the space we use. Though the focus of this research is not on the influence that the pandemic has on the way we use public transport, it is impossible to think that while filling in the survey, respondents did not take this into account in some kind of way. The fact that both of these influences have coincided in this research might have pushed the focus away from the first challenge that we as people are facing at the moment. Worldwide the attention has shifted to how to deal with a new way of living, doing things from home instead of going out. This also results in a different way of looking at sustainable development. Was the focus first on how to get people to use public transport more often, this might now have changed, or still is changing to see in what way people can work from home. This then leads to a totally different conversation and new research as to what to expect in the future.

For future research into this topic it is important to pay attention to the psychological aspects that were not fully discovered and explained in this research. To do so, the focus of the research might have to shift away from a geographical point of view and focus more fully on the psychological aspects of fear on public transport. Further research could also focus on different age groups or on the effects of fear on men while using public transport. Besides broadening the different demographic groups that can be used in a similar type of research, research in the future should also take the recent changes that happened due to the Covid-19 pandemic into account. This pandemic could have lead people to have new fears and put emphasis on different aspects to feel safe while using public transport. As to the fact that the research was also a way to come up with small solutions which would slowly help people to move towards public transport and make more conscious decisions surrounding sustainable lifestyles, the recent developments in the world, due to the Covid-19 pandemic, have had an influence in the way people go to work and university. Changing the landscape in which new sustainable solutions need to be created. Solutions that seemed useful before the pandemic might not be seen in a similar way after the pandemic or in current times, while we are still going through it. New insights into this need to be found to see how, even though we might have changed our travel behaviour out of force, we will return to our old habits once the world fully reopens and if the changes that have come with the pandemic stick around in some way.

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Appendix 1 – Survey

Vrouwen en veiligheid in het openbaar vervoer

De volgende enquête focust op het gevoel van veiligheid van vrouwen in het openbaar vervoer. Het onderzoek wordt uitgevoerd voor een master thesis van de Universiteit Utrecht en heeft als doel inzicht te verkrijgen in de rol dat het gevoel van veiligheid speelt op de keuze om gebruik te maken van het openbaar vervoer. Door middel van vragen gerelateerd aan zes onderwerpen hopen we een beter inzicht te krijgen in de rol die veiligheid speelt in het maken van keuzes.
Bedankt voor uw medewerking!

Ondanks dat de huidige situatie anders is dan normaal vragen we u de vragen te beantwoorden zoals u zou doen voor COVID-19. De informatie die verzameld wordt door middel van deze enquête, wordt volledig anoniem verzameld en gebruikt. Er wordt zorgvuldig met uw gegeven omgegaan en de informatie zal enkel gebruikt/gezien worden door de onderzoeker.

Persoonlijke informatie

Q1 Wat is uw leeftijd?

_____

Q2 Wat is uw nationaliteit?

- ○ Nederlands
- ○ Turks
- ○ Marrokaans
- ○ Surinaams
- ○ Antilliaans
- ○ Anders

Q3 Als u hierboven ‘anders’ heeft geantwoord, wat is uw nationaliteit?

_____

Q4 Wat is uw hoogst afgeronde opleiding?

- ○ Basisonderwijs
- ○ Vmbo, havo-onderbouw, vwo-onderbouw, mbo-1
- ○ Havo, vwo, mbo 2-4
- ○ Hbo-, wo-bachelor
- ○ Hbo-, wo-master, doctor

Q5 Wat doet u in het dagelijks leven?

- ○ Ik werk full-time
- ○ Ik werk part-time
- ○ Ik studeer
- ○ Ik ben een scholier
- ○ Anders

Q6 Als u hierboven ‘anders’ heeft ingevuld, kunt u aangeven wat u dan doet?

_____

Q7 In welke provincie woont u?

- ○ Groningen
- ○ Friesland
- ○ Drenthe
- ○ Overijssel
- ○ Flevoland
- ○ Gelderland
- ○ Utrecht
- ○ Noord-Holland
- ○ Zuid-Holland
- ○ Zeeland
- ○ Noord-Brabant
- ○ Limburg

Gebruik van openbaar vervoer

De volgende vragen gaan over welke vormen van openbaar vervoer u gebruikt en wat uw ervaringen hier mee zijn.

Q8 Wat is het meest gebruikte vervoer voor uw dagelijks gebruik?

- ○ Auto
- ○ Fiets
- ○ Bus
- ○ Trein
- ○ Tram
- ○ Metro
- ○ Te voet
- ○ Anders

Q9 Als u hierboven ‘anders’ heeft ingevuld, kunt u dan aangeven van welk vervoersmiddel u gebruik maakt?

_____

Q10 Voor welke doeleinde maakt u het meest gebruik van het openbaar vervoer?

- ○ Werk
- ○ Studie
- ○ Recreatie
- ○ Vakantie
- ○ Anders

Q11 Als u hierboven 'anders' heeft ingevuld, voor welk doeleind maakt u dan gebruik van het openbaar vervoer?

_____

Q12 Wat is uw gemiddelde reistijd wanneer u gebruik maakt van het openbaar vervoer? In minuten.

_____

Q13 Op welke moment van de dag maakt u over het algemeen gebruik van het openbaar vervoer? *Meerdere antwoorden zijn mogelijk.*

- ○ Ochtendspits (06:00 – 09:00)
- ○ Ochtend (09:00 – 12:00)
- ○ Middag (12:00 – 16:00)
- ○ Avondspits (16:00 – 19:00)
- ○ Avond (19:00 – 0:00)
- ○ Nacht (00:00 – 06:00)

Q14 Welke vorm van openbaar gebruikt u het vaakst?

- ○ Bus
- ○ Tram
- ○ Metro
- ○ Trein
- ○ Anders

Q15 Als u hierboven 'anders' heeft ingevuld, welke vorm van openbaar vervoer gebruikt u het meest?

_____

Q16 Welke vorm van openbaar vervoer gebruikt u hierna het vaakst?

- ○ Bus
- ○ Tram
- ○ Metro
- ○ Trein
- ○ Anders

Q17 Als u hierboven 'anders' heeft ingevuld, welke vorm van openbaar vervoer gebruikt u dan?

_____

Q18 Hoe vaak maakt u gebruik van het openbaar vervoer?

- ○ Dagelijks
- ○ Wekelijks
- ○ Maandelijks
- ○ Anders

Q19 Als u hierboven 'anders' heeft ingevuld, met welke frequentie maakt u dan gebruik van het openbaar vervoer?

_____

Gedrag

De volgende stellingen gaan over hoe u uw gedrag aanpast naar uw eigen ervaring in het openbaar vervoer en uw gevoel van veiligheid in het openbaar vervoer.

Q20 Ik heb de mogelijkheid om gebruik te maken van een andere vorm van vervoer (anders dan openbaar vervoer)?

- ○ Ja
- ○ Nee

Q21 Ik zou mijn manier van reizen, keuze van vervoer, veranderen als dat zou kunnen? *Het gaat hier om het idee van veiligheid en niet om gemak.*

- ○ Ja
- ○ Nee

Q22 De reden hiervoor is: *meerdere antwoorden zijn mogelijk.*

- ○ Tijd
- ○ Kosten
- ○ Gemak
- ○ Veiligheid
- ○ Anders

Q23 Als u hierboven 'anders' heeft ingevuld, welke andere reden heeft u?

_____

Q24 Ik zou het moment van reizen met het openbaar vervoer wijzigen als dat mogelijk zou zijn?

- ○ Ja
- ○ Nee

Q25 Ik zou liever reizen in de

- ○ Ochtend (06:00 – 12:00)
- ○ Middag (12:00 – 18:00)
- ○ Avond (18:00 – 0:00)
- ○ Nacht (0:00 – 06:00)

Q26 Openbaar vervoer is mijn handigste vervoersmiddel voor mijn dagelijks woon/werk verkeer?

- ○ Ja
- ○ Nee

Q27 Ik zou mijn vervoersmiddel wijzigen als ik slachtoffer was geweest van een van de volgende misdaden: *Meerdere antwoorden zijn mogelijk.*

- ○ Diefstal
- ○ Overval
- ○ Duwen
- ○ Lastig vallen
- ○ Aanranding

Q28 Wanneer ik met het openbaar vervoer reis onderneem ik de volgende handelingen om me veiliger te voelen: *Meerdere antwoorden zijn mogelijk.*

- ○ Ik reis overdag
- ○ Ik reis met iemand
- ○ Ik vermijd bepaalde routes
- ○ Ik vermijd bepaalde haltes/stations
- ○ Ik vermijd het dragen van bepaalde kledingstukken
- ○ Anders

Q29 Als u hierboven 'anders' heeft ingevuld, welke handelingen onderneemt u dan?

_____

Gevoel van veiligheid en eigen ervaringen

De volgende vragen gaan over uw gevoel van veiligheid en of u zelf ervaring heeft met een vorm van criminaliteit in het openbaar vervoer die uw veiligheid in gevaar bracht. De daarop volgende uitspraken gaan over de ervaring van veiligheid wanneer u gebruik maakt van het openbaar vervoer. De uitspraken zijn verdeeld in twee onderdelen. De eerste helft gaat over wanneer men in het openbaar vervoer zit, dit kan de bus zijn, de trein, etc. Het tweede gedeelte gaat over het gevoel van veiligheid terwijl u aanwezig bent op een station, of bushalte.

Q30 Ik ben slachtoffer geweest van een diefstal?

- ○ Ja
- ○ Nee

Q31 Dit gebeurde in de afgelopen…

- ○ Week
- ○ Maand
- ○ Half jaar
- ○ Jaar
- ○ Meer dan een jaar geleden

Q32 Ik heb hier aangifte van gedaan?

- ○ Ja
- ○ Nee

Q33 Ik deed aangifte bij

- ○ De politie
- ○ Het vervoersbedrijf
- ○ Zowel bij de politie als het vervoersbedrijf

Q34 In welke vorm van openbaar vervoer gebeurde het?

- ○ Bus
- ○ Tram
- ○ Trein
- ○ Metro
- ○ Bushalte
- ○ Tramhalte
- ○ Treinstation
- ○ Metrostation
- ○ Anders

Q35 Als u hierboven 'anders' heeft ingevuld, in welke vorm van openbaar vervoer bent u slachtoffer geworden?

_____

Q36 Ik heb een andere keuze gemaakt ten aanzien van mijn reis nadat ik slachtoffer ben geweest van diefstal?

- ○ Ja
- ○ Nee

Q37 Welke aanpassing(en) heeft u gemaakt?

_____

Q38 Ik ben slachtoffer geweest van een overval?

- ○ Ja
- ○ Nee

Q39 Dit gebeurde in de afgelopen…

- ○ Week
- ○ Maand
- ○ Half jaar
- ○ Jaar
- ○ Meer dan een jaar geleden

Q40 Ik heb hier aangifte van gedaan?

- ○ Ja
- ○ Nee

Q41 Ik deed aangifte bij

- ○ De politie
- ○ Het vervoersbedrijf
- ○ Zowel bij de politie als het vervoersbedrijf

Q42 In welke vorm van openbaar vervoer gebeurde het?

- ○ Bus
- ○ Tram
- ○ Trein
- ○ Metro
- ○ Bushalte
- ○ Tramhalte
- ○ Treinstation
- ○ Metrostation
- ○ Anders

Q43 Als u hierboven 'anders' heeft ingevuld, in welke vorm van openbaar vervoer bent u slachtoffer geworden?

_____

Q44 Ik heb een andere keuze gemaakt ten aanzien van mijn reis nadat ik slachtoffer ben geweest van een overval?

- ○ Ja
- ○ Nee

Q45 Welke aanpassing(en) heeft u gemaakt?

_____

Q46 Ik ben slachtoffer geweest van duwen in het openbaar vervoer? *(Op zo'n manier dat ik me onveilig voelde of dat het me in gevaar bracht)*

- ○ Ja
- ○ Nee

Q47 Dit gebeurde in de afgelopen…

- ○ Week
- ○ Maand
- ○ Half jaar
- ○ Jaar
- ○ Meer dan een jaar geleden

Q48 Ik heb hier aangifte van gedaan?

- ○ Ja
- ○ Nee

Q49 Ik deed aangifte bij

- ○ De politie
- ○ Het vervoersbedrijf
- ○ Zowel bij de politie als het vervoersbedrijf

Q50 In welke vorm van openbaar vervoer gebeurde het?

- ○ Bus
- ○ Tram
- ○ Trein
- ○ Metro
- ○ Bushalte
- ○ Tramhalte
- ○ Treinstation
- ○ Metrostation
- ○ Anders

Q51 Als u hierboven 'anders' heeft ingevuld, in welke vorm van openbaar vervoer bent u slachtoffer geworden?

_____

Q52 Ik heb een andere keuze gemaakt ten aanzien van mijn reis nadat ik slachtoffer ben geweest van duwen?

- ○ Ja
- ○ Nee

Q53 Welke aanpassing(en) heeft u gemaakt?

_____

Q54 Ik ben lastig gevallen in het openbaar vervoer?

- ○ Ja
- ○ Nee

Q55 Dit gebeurde in de afgelopen…

- ○ Week
- ○ Maand
- ○ Half jaar
- ○ Jaar
- ○ Meer dan een jaar geleden

Q56 Ik heb hier aangifte van gedaan?

- ○ Ja
- ○ Nee

Q57 Ik deed aangifte bij

- ○ De politie
- ○ Het vervoersbedrijf
- ○ Zowel bij de politie als het vervoersbedrijf

Q58 In welke vorm van openbaar vervoer gebeurde het?

- ○ Bus
- ○ Tram
- ○ Trein
- ○ Metro
- ○ Bushalte
- ○ Tramhalte
- ○ Treinstation
- ○ Metrostation
- ○ Anders

Q59 Als u hierboven ‘anders’ heeft ingevuld, in welke vorm van openbaar vervoer bent u slachtoffer geworden?

_____

Q60 Ik heb een andere keuze gemaakt ten aanzien van mijn reis nadat ik ben lastig gevallen?

- ○ Ja
- ○ Nee

Q61 Welke aanpassing(en) heeft u gemaakt?

_____

Q62 Ik ben slachtoffer geweest van aanranding?

- ○ Ja
- ○ Nee

Q63 Dit gebeurde in de afgelopen…

- ○ Week
- ○ Maand
- ○ Half jaar
- ○ Jaar
- ○ Meer dan een jaar geleden

Q64 Ik heb hier aangifte van gedaan?

- ○ Ja
- ○ Nee

Q65 Ik deed aangifte bij

- ○ De politie
- ○ Het vervoersbedrijf
- ○ Zowel bij de politie als het vervoersbedrijf

Q66 In welke vorm van openbaar vervoer gebeurde het?

- ○ Bus
- ○ Tram
- ○ Trein
- ○ Metro
- ○ Bushalte
- ○ Tramhalte
- ○ Treinstation
- ○ Metrostation
- ○ Anders

Q67 Als u hierboven ‘anders’ heeft ingevuld, in welke vorm van openbaar vervoer bent u slachtoffer geworden?

_____

Q68 Ik heb een andere keuze gemaakt ten aanzien van mijn reis nadat ik slachtoffer ben geweest van aanranding?

- ○ Ja
- ○ Nee

Q69 Welke aanpassing(en) heeft u gemaakt?

_____

Gevoel van veiligheid in het voertuig

Q70 Geef aan wat van toepassing is voor u bij de volgende uitspraken:

	Helemaal eens	Eens	Neutraal	Oneens	Helemaal oneens
Ik voel me veilig in een druk voertuig.	O	O	O	O	O
Ik voel me veilig wanneer ik met andere (bekenden) mensen reis.	O	O	O	O	O
Ik voel me veilig wanneer de meerderheid van de mensen in mijn voertuig vrouwen zijn.	O	O	O	O	O
Ik voel me veilig wanneer een grote groep mensen instapt in mijn voertuig.	O	O	O	O	O
Ik voel me veilig wanneer mensen lawaai maken in het voertuig waarin ik me bevind.	O	O	O	O	O
Ik voel me veilig wanneer ik een conducteur heb gezien tijdens mijn reis.	O	O	O	O	O
Ik voel me veilig als ik weet dat er camera toezicht is.	O	O	O	O	O
Ik voel me veilig wanneer het voertuig schoon is.	O	O	O	O	O
Ik voel me veilig wanneer ik een goed overzicht heb over het voertuig.	O	O	O	O	O
Ik voel me veilig wanneer ik toegang heb tot reisinformatie.	O	O	O	O	O
Ik voel me veilig wanneer ik overdag reis.	O	O	O	O	O
Ik voel me veilig wanneer ik een bekend traject afleg.	O	O	O	O	O
Ik voel me veilig op een korte reis.	O	O	O	O	O
Ik voel me veilig wanneer ik kan zitten tijdens mijn reis.	O	O	O	O	O

Q71 Ik heb ongevraagde aandacht gehad terwijl ik gebruik maakte van het openbaar vervoer?

- ○ Ja
- ○ Nee

Q72 Ik zit liever aan het …

- ○ Raam
- ○ Gangpad

Gevoel van veiligheid terwijl u wacht op het station of de halte

Q73 Geef aan wat van toepassing is voor u bij de volgende uitspraken:

	Helemaal eens	Eens	Neutraal	Oneens	Helemaal oneens
Ik voel me veilig wanneer er andere mensen aanwezig zijn.	O	O	O	O	O
Ik voel me veilig wanneer het druk is.	O	O	O	O	O
Ik voel me veilig wanneer ik met andere vrouwen wacht.	O	O	O	O	O
Ik voel me veilig wanneer een grote groep aankomt.	O	O	O	O	O
Ik voel me veilig wanneer mensen lawaai maken terwijl ze wachten.	O	O	O	O	O
Ik voel me veilig wanneer ik met andere mensen reis (en wacht).	O	O	O	O	O
Ik voel me veilig wanneer ik mensen zie die surveilleren.	O	O	O	O	O
Ik voel me veilig wanneer ik weet dat er camera's zijn.	O	O	O	O	O
Ik voel me veilig wanneer de halte/station goed verlicht is.	O	O	O	O	O
Ik voel me veilig als ik ergens kan zitten.	O	O	O	O	O
Ik voel me veilig wanneer de halte/station schoon is.	O	O	O	O	O
Ik voel me veilig wanneer ik een goed overzicht heb over de halte/station.	O	O	O	O	O
Ik voel me veilig wanneer ik overdag reis.	O	O	O	O	O
Ik voel me veilig wanneer ik de halte/station ken.	O	O	O	O	O
Ik voel me veilig wanneer ik het gebied ken waarin de halte/station zich bevindt.	O	O	O	O	O
Ik voel me veilig wanneer de wachttijd korter is.	O	O	O	O	O
Ik voel me veilig wanneer er reisinformatie beschikbaar is.	O	O	O	O	O

Q74 Ik heb ongevraagde aandacht gehad op een station/halte?

- ○ Ja
- ○ Nee

Voorkomen en oplossen

De volgende vragen en stellingen gaan over het voorkomen en oplossen van misdaden in het openbaar vervoer en het zorgen voor een veiliger gevoel wanneer u gebruik maakt van het openbaar vervoer.

Oplossingen voor in het voertuig

Q75 De volgende stellingen gaan over oplossingen die kunnen helpen bij een groter gevoel van veiligheid in het voertuig. Geef aan in hoeverre u het hiermee eens bent.

	Helemaal eens	Eens	Neutraal	Oneens	Helemaal oneens
Ik zou me veilig voelen wanneer er meer surveillance plaats zou vinden.	O	O	O	O	O
Ik zou me veilig voelen wanneer er meer camera beveiliging zou zijn.	O	O	O	O	O
Ik zou me veilig voelen wanneer ik wist dat er actief naar camera beelden gekeken wordt.	O	O	O	O	O
Ik zou me veilig voelen wanneer de drukte verspreid is over het voertuig.	O	O	O	O	O
Ik zou me veilig voelen in een voertuig speciaal voor vrouwen.	O	O	O	O	O
Ik zou me veilig voelen als ik er in het voertuig op gewezen word hoe ik kan doen van misdaden.	O	O	O	O	O
Ik zou me veilig voelen wanneer de media minder over misdaden in het openbaar vervoer zou rapporteren.	O	O	O	O	O

Q76 Ik zou meer gebruik maken van het openbaar vervoer als deze oplossingen geïmplementeerd zouden worden: *De vraag maakt gebruik van een ranking. U kunt de antwoorden slepen met op 1 de optie die het meest geldt voor u.*

- Meer surveillance.
- Meer camera beveiliging.
- Verspreide drukte.
- Voertuig voor vrouwen.
- Informatie verstrekking over het doen van aangifte.
- Minder media rapportage over misdaden.
- Actieve camera beveiliging.

Oplossingen voor op het station/halte

Q77 De volgende stellingen gaan over oplossingen die kunnen helpen bij een groter gevoel van veiligheid op het station/halte. Geef aan in hoeverre u het hiermee eens bent.

	Helemaal eens	Eens	Neutraal	Oneens	Helemaal oneens
Ik zou me veilig voelen wanneer er meer surveillance plaats zou vinden.	O	O	O	O	O
Ik zou me veilig voelen wanneer er meer camera beveiliging zou zijn.	O	O	O	O	O
Ik zou me veilig voelen wanneer ik wist dat er actief naar camera beelden gekeken wordt.	O	O	O	O	O
Ik zou me veilig voelen wanneer de drukte verspreid is over het station/de halte.	O	O	O	O	O

	Helemaal eens	Eens	Neutraal	Oneens	Helemaal oneens
Ik zou me veilig voelen wanneer er minder ingangen waren tot het station/de halte.	O	O	O	O	O
Ik zou me veilig voelen wanneer er betere verlichting is.	O	O	O	O	O
Ik zou me veilig voelen als er bredere trappen en doorgangen waren.	O	O	O	O	O
Ik zou me veilig voelen wanneer de drukte beter gecontroleerd zou worden.	O	O	O	O	O
Ik zou me veilig voelen wanneer informatieloketten beter zichtbaar waren.	O	O	O	O	O
Ik zou me veilig voelen wanneer barrières doorzichtig waren.	O	O	O	O	O
Ik zou me veilig voelen als ik op het station/bij de halte erop gewezen word hoe ik aangifte kan doen van misdaden.	O	O	O	O	O
Ik zou me veilig voelen wanneer de media minder over misdaden op stations en bij haltes zou rapporteren.	O	O	O	O	O

Q78 Ik zou meer gebruik maken van het openbaar vervoer als deze oplossingen geïmplementeerd zouden worden: *De vraag maakt gebruik van een ranking. U kunt de antwoorden slepen met op 1 de optie die het meest geldt voor u.*

- Meer surveillance.
- Meer camera beveiliging.
- Verspreide drukte.
- Minder ingangen.
- Betere verlichting.
- Bredere trappen en doorgangen.
- Gecontroleerde drukte.
- Beter zichtbare informatieloketten.
- Doorzichtige barrières.
- Informatie verstrekking over het doen van aangifte.
- Minder media rapportage over misdaden.
- Meer actieve camera beveiliging.

Q79 Als laatste vragen wij ons af of u zelf nog mogelijke oplossingen weet die uwe gevoel van veiligheid in het openbaar vervoer zouden kunnen vergroten.

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