Masterthesis

The protection motivation and protective behaviour of people towards the risk of burglaries; the influence of perspective taking and knowledge of neighbour help

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Enschede

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Preface

Een samenleving is altijd onderhevig aan veranderingen, zo ook de Nederlandse samenleving. Deze veranderingen brengen ook maatschappelijke problemen met zich mee. Ik heb me met zulke problemen altijd erg betrokken gevoeld en ben daarom erg blij dat ik met mijn onderzoek een kleine bijdrage heb kunnen leveren aan de maatschappij.

Voor u ligt mijn scriptie, dit is het eindproduct van mijn onderzoek naar het beïnvloeden van threat appraisal en coping appraisal om daarmee de protectie motivatie en het protectieve gedrag van de Nederlandse burger ten opzichte van het risico op woninginbraken te verhogen. Met dit onderzoek sluit ik mijn Master Psychologie van Conflict, Risico en Veiligheid aan de Universiteit Twente af.

Het laatste onderdeel van mijn studie, het uitvoeren van een eigen onderzoek, was niet gemakkelijk. Het heeft even geduurd, maar ik heb er ontzettend veel van geleerd. Ik ben erg blij dat ik hierbij de begeleiding heb gekregen van mijn eerste begeleider, Jose Kerstholt. Haar enthousiasme voor het onderwerp en haar creativiteit in het schrijven van artikelen hebben mij aangemoedigd en plezier gegeven bij het uitvoeren van mijn onderzoek en het schrijven van mijn scriptie. Daarnaast wil ik graag mijn tweede begeleider, Marije Bakker, bedanken voor haar kritische blik op mijn onderzoek. Zowel tijdens de opzet van mijn onderzoek als tijdens het zo duidelijk en leesbaar mogelijk schrijven van mijn scriptie.

Verder wil ik Tim Boers en Inge Hoogland bedanken voor hun frisse blik op mijn scriptie, hierdoor heb ik mijn artikel echt kunnen perfectioneren tot iets waar ik ontzettend trots op ben. Uiteraard wil ik ook mijn vriend Stefan Hessels bedanken voor zijn kritische kijk op mijn teksten en zijn morele steun tijdens de momenten dat ik het erg goed kon gebruiken. Daarnaast wil ik mijn ouders bedanken voor de steun en lange gesprekken tijdens mijn gehele studietijd, zij staan altijd voor mij klaar en dat heeft mij helpen brengen tot het punt waar ik nu ben, bedankt hiervoor.

Als laatste wil ik uiteraard alle mensen bedanken die hebben meegedaan aan mijn onderzoek en mij hebben geholpen het aantal respondenten te verzamelen die ik nodig had om mijn onderzoek succesvol af te ronden. Ontzettend bedankt.

Iris Boers

Abstract

Introduction. Dutch citizens show negligent behaviour towards the risk of burglaries. Interventions to create awareness specifically for burglaries and thefts appear not to be effective enough in decreasing the amount of reported burglaries. Rogers' (1983) Protection Motivation Theory learns us that the psychological processes '*threat appraisal*' and '*coping appraisal*' are essential in the process leading to protection motivation and protective behaviour towards risks. It was expected that by letting people take the perspective of the burglar and creating awareness of what your neighbours can do to help you protect your home against burglars, protection motivation and protective behaviour would increase.

Method. A 3 (risk awareness) * 2 (time) design was used. Risk awareness was manipulated by giving basic advice on preventive measures, taking the perspective of the burglar and giving advice on what you can do with your neighbours. The second part of the design, 'time', was carried out by conducting two questionnaires: two weeks after the first questionnaire the respondents were asked to fill in the second one. A total of 124 respondents completed both questionnaires.

Results. Self-efficacy and fear had a significant influence on the protection motivation and protective behaviour of people towards the risk of burglaries. The manipulations did not have a significant effect on both protection motivation and protective behaviour. Also threat appraisal and coping appraisal were not significantly influenced by the manipulations.

Discussion. The manipulations in this study did not show the expected effect on protection motivation and protective behaviour. Although not influenced by the manipulations, *'self-efficacy'* and *'fear'* appeared to be important in influencing protection motivation and protective behaviour towards the risk of burglaries. This finding emphasizes the importance of both threat appraisal and coping appraisal in the protection motivation and protective behaviour towards the risk of burglaries.

Samenvatting

Inleiding. Nederlandse burgers laten nalatig gedrag zien ten opzichte van het risico op woninginbraken. Interventies om burgers bewust te maken van het risico blijken niet effectief genoeg in het verminderen van het aantal geregistreerde woninginbraken. Rogers' (1983) Protectie Motivatie Theorie leert ons dat de psychologische processen *'threat appraisal'* en *'coping appraisal'* essentieel zijn in het proces dat leidt tot protectie motivatie en protectief gedrag ten opzichte van risico's. Er werd verwacht dat door mensen het perspectief van de inbreker te laten innemen en bewustzijn te creëren over wat buren kunnen betekenen in het beschermen van je huis tegen inbrekers, de protectie motivatie en het protectief gedrag zouden toenemen.

Methode. Een 3 (risicobewustzijn) * 2 (tijd) design is gebruikt. Risicobewustzijn is gemanipuleerd door het geven van basis advies over preventieve maatregelen, het perspectief nemen van de inbreker en het geven van advies over welke maatregelen je kunt nemen samen met je buren. Het tweede deel van het design, 'tijd', is uitgevoerd door het afnemen van twee vragenlijsten: twee weken na de eerste vragenlijst werden de respondenten gevraagd om de tweede vragenlijst in te vullen. Een totaal van 124 respondenten heeft beide vragenlijsten volledig ingevuld.

Resultaten. Zelf-effectiviteit en emoties van angst hebben een significante invloed op de protectie motivatie en het protectief gedrag van mensen ten opzichte van het risico op woninginbraken. De manipulaties van risicobewustzijn hebben geen significant effect gehad op zowel protectie motivatie als protectief gedrag. Ook threat appraisal en coping appraisal zijn niet significant beïnvloedt door de manipulaties.

Discussie. De manipulaties in dit onderzoek hebben niet het verwachte effect gehad op de protectie motivatie en het protectief gedrag. Alhoewel *'self-efficacy'* en *'angst'* niet zijn beïnvloedt door de manipulaties, blijken ze wel belangrijk voor het beïnvloeden van protectie motivatie en protectief gedrag ten opzichte van het risico op woninginbraken. Deze bevinding benadrukt het belang van threat appraisal en coping appraisal in zowel de protectie motivatie als het protectieve gedrag ten opzichte van woninginbraken.

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1 Introduction

The Netherlands is in a transition from welfare state to participation state. Citizens are urged to be more active in solving societal problems (van de Wijdeven, de Graaf, Hendriks & van der Staak, 2013). There are two explanations for this transition. The first concerns the ideology of the Netherlands, which is focused more on norms and values, as compared to the past (Veldheer, Jonker, van Noije & Vrooman, 2012; Van de Wijdeven et al., 2013). With the increased focus on norms and values, the focus on taking responsibility for your own life has been increasing as well. The second explanation concerns the budget cuts the government has made and still has to make as a consequence of the ongoing financial crisis (Van de Wijdeven et al., 2013). Because of these cuts less money can go to projects and interventions that help solve several societal problems. The Dutch King, Willem-Alexander, acknowledged these societal changes (Rijksoverheid, 2013) and emphasized the necessity of independence and self-reliance of the Dutch citizens. The responsibility of solving societal problems not only concerns the State, but citizens as well. This active citizenship is necessary to maintain their current level of safety and welfare.

1.1 Problem outline

Dutch citizens are facing several societal problems that need attention. One of these problems is the high amount of burglaries and thefts; around 500.000 burglaries and thefts and at least 300.000 attempted burglaries are committed every year (Preventiegids, 2014). This is an average of one in twenty houses in the Netherlands that has to deal with theft, burglary, or attempted burglary. The COB[1] studied the perspective of Dutch citizens on different societal issues (Van Noije, den Ridder and Posthumus, 2014), They discovered an increase in concern about the risk of crime. Respondents were asked to name the risks they worry about when thinking about their loved ones, and 'crime & antisocial' behaviour was mentioned by 26% of the respondents. In comparison, 'health & care' was mentioned by 50% of the respondents and 'work & income' by 27%. Other risks that were less of a concern to the Dutch citizens are, for example, 'traffic accidents and disasters'. Looking further into the risk of crime and antisocial behaviour; burglary, violence, robberies and theft are the focus of the concerns. Even though only mentioned by a few respondents, crime is seen as a collective social problem and the citizens as the key to a less violent society. Furthermore, in the research a

[1] Continu Onderzoek Burgerperspectieven (COB) is a project from the Sociaal en Cultureel Planbureau, which is an independent institute that carries out social scientific research. This project is being used to study the changes in opinions of Dutch citizens about several personal, political and societal problems. It is a report that is presented every quarter of the year.

division was made between voluntary and involuntary risks. With voluntary risks people choose to be exposed to this risk, for example with the risk of burglaries when people leave their front doors unlocked or their windows open. For involuntary risks people cannot choose to be exposed to the risk, for example the risk of a natural disaster. Both low educated and high educated, low skilled and high skilled respondents see the voluntary risks as their own responsibility in general, but they see an informing role for the government as well. It is possible that people see the risk of burglaries as an involuntary risk which is not their responsibility and therefore they do not show the needed protection motivation and protective behaviour towards this risk. It is also questionable if the Dutch citizens perceive the risk of burglaries as severe as well.

In order to promote active citizenship in decreasing the risk of crime, several interventions have been implemented, such as 'Burgernet[2]' or 'Meld Misdaad Anoniem[3]'. With these interventions people can anonymously report crime when they notice something suspicious. This kind of citizenship does not ask for an interference in the situation, but only to report it, and it appears successful. However, success decreases when there is a risk involved for the civilians to become a victim themselves. This is the case for the intervention 'Pak de overvaller, pak je mobiel', which has been stimulated by the government since 2011. Citizens are asked to make a photograph or film of an offender when they see him or her committing a crime. However, as making a photograph or film is highly visible, people need to take some risks. Though some of the interventions are successful in reporting crimes and criminal behaviour (Meld Misdaad Anoniem, 2014), specifically for burglaries and thefts the interventions do not appear to be effective enough in decreasing the amount of reported burglaries. In order to address the problem of burglaries more thoroughly, a further look should be taken into the reasons underlying the occurrence of burglaries.

Various research was conducted on burglaries. The police conducted a research on the behaviour of burglars and the majority of the burglaries appeared to be occasional, not organized (Politiekeurmerk, 2014). The same research showed that burglars do not have a preference for specific kinds of houses. Easy ways to get into a house are focal points for a burglar, such as a back door where no neighbours can see someone break into a house. The police did not only study the behaviour of burglars, but of the victims as well; a lot of

[2] 'Burgernet' is a cooperation between civilians, municipalities and the police to increase the safety of the work- and living environment. They use the telephone network from civilians and employees from companies.
[3] 'Meld misdaad anoniem' is an independent organisation with a hotline civilians can use anonymously to report crime.

residents leave windows open and doors unlocked. Often the front door has been secured properly while other entrances are forgotten. Residents also believe that, when they are out, their neighbours will call the police when they see something suspicious. Furthermore, the Amsterdam police discovered a huge increase in burglaries during New Year's Eve (Parool, 2013). People are busy looking at the fireworks, wishing neighbours a happy new year and meanwhile leaving their front door open. The noise of the fireworks is a good cover up for the noises a burglar makes. Also there are is the group of 'new neighbours': people who just moved into the neighbourhood. It appears that these people have a lower estimation of the risk of burglaries compared to people who live in the neighbourhood for a longer period of time (Salm & Vollaard, 2014). It can be concluded that citizen behaviour explains a major part in the risk of burglaries. How can this be changed? In order to answer this question, a psychological theoretical background will be given in the next chapter.

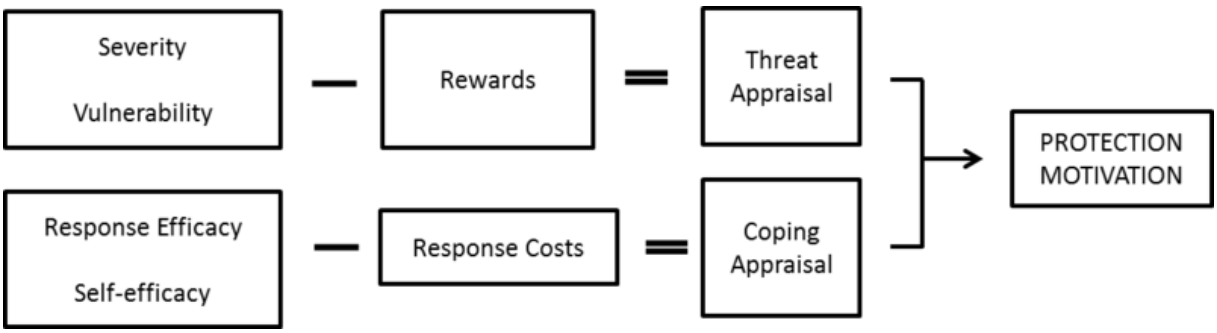
2 Theory

When explaining protective behaviour against a risk, different social and cognitive factors can be taken into account. These factors can explain why a person does or does not take the precautions that are needed to protect him- or herself against a certain risk. It is difficult to measure actual protective behaviour, therefore a lot of models on this subject explain the protective motivation. In this chapter two similar models developed to explain protection motivation will be discussed. Furthermore the most important components of these models are highlighted and applied to the risk of burglaries in order to form research questions and hypotheses.

Protection Motivation Theory. A commonly used model that clearly displays the factors influencing protective motivation is the Protection Motivation Theory (PMT) by Rogers (1975), which was created initially to explain the effects of fear appeals in the domain of health. The behaviour that is analysed in the PMT is the estimation of an individual to perform certain behaviour and take the risk on the one hand or avoid the risk by taking preventive measures against the risk on the other. A few years later the model was adjusted to improve generalizability (Rogers, 1983). The adjusted PMT model describes two 'pathways of appraisal': pathways that lead to a certain kind of estimation, which together lead to a certain level of protection motivation. Six factors describe these two pathways, as displayed in Figure 1. For the path of threat appraisal the values of perceived severity and vulnerability are taken together and then the positive effects of taking the risk, the rewards, are being

subtracted. For example, with the risk of getting diseases like polio, people can choose to protect themselves with immunisations (injections that help prevent certain diseases). When people do not think they will be exposed to the risk or they do not think the risk is severe, threat appraisal can be low and therefore no preventive measures are taken. The remaining three factors in the model together are named as coping appraisal. In this path the values of self-efficacy and response-efficacy are taken together and costs of the response are subtracted from that total. For the risk on diseases like polio, a person could think the injections are not effective or not know where to get these injections. Also the costs of the injections or the pain can outweigh the negative consequences of taking the risk, for which no protective behaviour is taken. When threat appraisal and coping appraisal are both high, an individual will experience a high motivation to protect himself. For experiencing a low threat appraisal and coping appraisal it is the other way around.

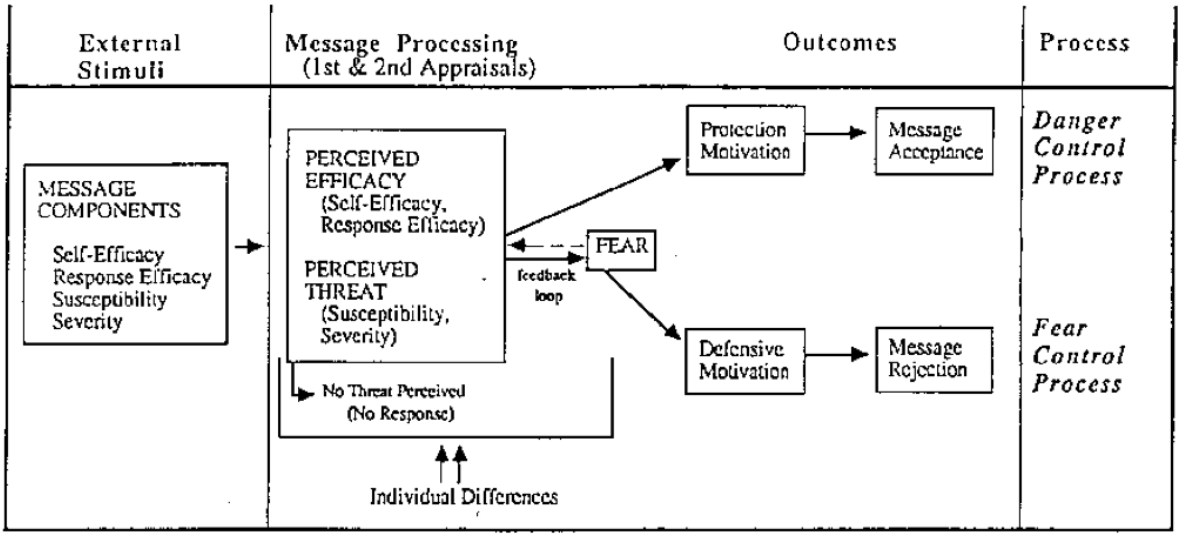
Figure 1: Adjusted Protective Motivation Theory (Rogers, 1983)



Extended Parallel Processing Model. Another commonly used model in the area of self-protective behaviour is the Extended Parallel Processing Model (EPPM) from Witte (1994), see Figure 2. This model was developed to analyse the behaviour of people when they are confronted with fear inducing stimuli, so called 'fear appeals'. This model is partially based on the PMT model of Rogers (1983) and has a similar purpose: explaining why people adopt healthy behaviour. The underlying factors are partly the same, even though the focus is not only on the cognitive processes but on the emotional processes as well. In the EPPM the same two paths are used as in the PMT. When threat appraisal is low, no action will be taken. When the threat appraisal is high, the appraisal of the coping starts. When coping appraisal is high, a high protective motivation is the result; this is the so called danger control process. When coping appraisal is low, a person will experience fear and maladaptive behaviour will appear, this is the so called fear control process. In the last case people use cognitive defence mechanisms (such as "*This is just too scary, I am not going to think about it*") instead of the

wanted defence mechanism ("*The risk is too high, I need to take preventive measures*"). In the EPPM threat appraisal results in fear, but the coping appraisal translates this fear in adaptive or maladaptive behaviour.

Figure 2: Extended Parallel Processing Model (Witte, 1994)



Risk of burglaries. Initially the PMT and EPPM were developed to explain self-protective behaviour against health risks. Since then, the PMT has also been used in other areas than health, for example the protection motivation against natural disasters like a forest-fire or flooding (Grothmann en Reusswig, 2006; Martin, Bender en Raish, 2007; Johnston en Warkentin, 2010). Both threat appraisal and coping appraisal appeared important in explaining the protection motivation of people against several natural disasters. However, articles on the protection motivation of people when faced with the risk of burglaries are limited. Cates, Dian and Schnepf (2003) studied the fear of crime in rural areas with the help of the PMT, but even though they emphasized the importance of both threat and coping appraisal, no protection motivation was found. Though, as threat and coping appraisal are both identified as important factors in explaining protection motivation, we will incorporate these processes in this study to explain the protection motivation and protective behaviour of the Dutch citizens against the risk of burglaries. Both threat appraisal and coping appraisal are important in this study and are expected to be essential for solving the problem of negligence of the Dutch citizens towards the risk of burglaries. Therefore we aim to answer the following research question in this study:

"How can threat appraisal and coping appraisal be influenced in order to increase the protection motivation and protective behaviour of people against burglaries?'

In order to answer this question, threat appraisal and coping appraisal will be discussed in the content of the risk of burglaries in §2.1 and §2.2 respectively.

2.1 Threat appraisal

In order to get a better understanding of threat appraisal, we will take a closer look into risk perception which functions as its basis (Yoon 2007). Threat appraisal is the assessment of risk on a cognitive level by using the individual (subjective) perception of the severity and susceptibility of a certain risk (Yoon, 2007). Interest in risk perception started with the rise of nuclear energy in the 1960s. Scientists calculated the risks of nuclear energy and stated it was safe and clean energy. Despite the opinion of experts, the public turned against the new technology. It appeared from several studies that the public does not make an objective estimation of the probability a risk would happen and the size of the impact in case an actual accident would occur (Surrey, J. & Hugget, C., 1976; Slovic, 1987; Kasperson et al., 1988;). From that moment on attention rose for the construct of 'risk perception'.

There are two ways of processing a risk (Slovic, Finucane, Peters & MacGregor, 2004). The first, processing through the analytic system, is a thorough way of processing the available information. This information consists of logic, reasoning and scientific deliberation. The second, processing through the experiential system, is a quicker way of processing information based on automatic, instinctive and intuitive reactions with emotions and limited conscious awareness. Slovic et al. (2004) are of the opinion that the two systems work parallel and cannot function without each other when forming a perception of a risk. Both systems have their advantages and disadvantages. A disadvantage of the analytic system is the amount of time that is needed, as in danger a quick estimation of the risk is essential. The main characteristics of the experiential system is its basis of affect and emotions, which has the disadvantage that this can turn into a bias in the judgement of a risk. To explain the bias, Slovic et al. (2000) present the following example; People in America buy guns out of fear for terrorists, to protect oneself. However, the chance on harming oneself when firing a gun at home is 22 times higher than harming the intruder. Therefore the preventive measures these people take, based on emotions such as fear, actually increase the risk of getting harmed. In this case the experiential system provides an estimation of the risk that does not result in the appropriate measures to decrease the risk of getting harmed. It is the other way around for the risk of becoming a victim of a burglary, people act negligent towards this risk instead of overly protective. In other words, they should protect themselves towards the risk because it is there, but people do not. As mentioned earlier, the systems work parallel and

sometimes the experiential system can be influenced by emotions such as fear and take over the behaviour towards a risk.

Using emotions, such as fear, in risk awareness campaigns is a common and effective strategy to reach the public in order to make them aware of a certain risk and move them towards protective behaviour (Witte & Allen, 2000; Johnston & Warkentin, 2010; Tannenbaum, 2013). Most of the risk awareness campaigns using fear in their messages were created for health risks. In the past few years this has changed and other areas of risk are studying this strategy as well (Johnston & Warkentin, 2010). This approach could work for the risk of burglaries.

Making people aware of the ease a burglar has to break into their home can make them see the risk as severe and feel like it could happen to them, or in other words: a higher threat appraisal. As the burglar is the 'expert' in this case, he knows best what to look for in a house in order to assess if it is easy enough and worth it to break into. By taking the perspective of the burglar people see their home through his eyes and see the weak spots of their home. This perspective taking could help change the perception of the Dutch citizens towards the risk of burglaries. Besides that, it can help to identify what needs to be done in order to make their house less attractive for burglars to break into it. Therefore the following hypotheses will be tested:

1a. Taking the perspective of a burglar has a positive influence on the protection motivation of people against burglaries.

1b. Taking the perspective of a burglar has a positive influence on the protective behaviour of people against burglaries.

Threat appraisal is an important part in the process that leads to a certain level of protection motivation and eventually protective behaviour. It is expected that taking the perspective of the burglar positively influences the protective behaviour and protection motivation of people. Therefore, it can also be expected that perspective taking has a positive relation with threat appraisal as well. On top of that it is expected that threat appraisal has a positive relation with protective behaviour and protection motivation. In other words, threat appraisal could have a mediating role in the relation between perspective taking and protective behaviour and protection motivation towards the risk of burglaries. In order to test these assumptions the following hypotheses are used:

2a. Threat appraisal has a mediating role between perspective taking and the protection motivation of people against burglaries.

2b. Threat appraisal has a mediating role between perspective taking and the protective behaviour of people against burglaries.

2.2 Coping appraisal

As explained earlier, people need to see the preventive measures as effective (response-efficacy) and they need to think they are able to take these measures (self-efficacy). When people are given fear inducing information in order to create awareness of a certain risk, it is necessary to give them information about how the risk can be decreased (Witte, 1994; Witte & Allen, 2000; Tannenbaum, 2013). So, if both threat appraisal and coping appraisal increase, risk awareness will increase as well and adaptive behaviour against the risk of burglaries will be shown. The question remains how coping appraisal can be increased in the light of the risk of burglaries.

As discussed in the problem outline, active citizenship is becoming more and more important in the Netherlands. For this reason, citizens are expected to be more responsible as well. The Dutch market research agency TNS NIPO studied the view of the Dutch civilians on societal participation of civilians and related it to demographic characteristics (TNS NIPO, 2013). They revealed a division between neighbourhoods where people have a lot of contact with each other, so called active neighbourhoods, and neighbourhoods where this is not the case. Civilians living in neighbourhoods with high neighbourhood activity are more willing to participate (e.g. cleaning the streets, helping the needy, maintain problems with parking and approach people who show maladaptive behaviour). The opposite is the case for neighbourhoods with low neighbourhood activity. It is possible that neighbourhoods with high activity levels, result in residents judging themselves as more capable to take on problems in the neighbourhood. What if people are made aware of the preventive measures they can take together with their neighbours to protect their home towards burglaries? Could it make them aware of the fact that they have neighbours that can actively do something to help? The knowledge about the help neighbours could give, could increase protection motivation and protective behaviour towards the risk of burglaries. In line with these thoughts, the following hypotheses will be tested:

3a. 'Knowledge of neighbour help' positively influences the protection motivation against burglaries.

3b. 'Knowledge of neighbour help' positively influences the protective behaviour against burglaries.

However, what is the role of coping appraisal in the process leading to protection motivation and protective behaviour?? In other words, the role of self-efficacy and response-efficacy? It has been discovered that interventions that include feedback on the performances of others influence self-efficacy positively (Ashword, Edmunds & French, 2010). This finding was done in a study on promoting physical activity, it is possible that this effect could work for behaviour relating to the risk of burglaries as well. Besides that, it is likely that response-efficacy will increase as well; as the amount of preventive measures against the risk of burglaries that can be taken, will increase when a person is given information about what neighbours can do to help. On top of that, it can be expected that coping appraisal has a positive relation with protective behaviour and protection motivation, according to the PMT from Rogers (1983) and the EPPM from Witte (1994). Combining these assumptions, it is expected that coping appraisal has a mediating role in the relation between neighbour help and protective behaviour and protection motivation towards the risk of burglaries. In order to test these assumptions the following hypotheses are used:

4a. Coping appraisal has a mediating role between 'knowledge of neighbour help' and the protection motivation of people against burglaries.

4b. Coping appraisal has a mediating role between 'knowledge of neighbour help' and the protective behaviour of people against burglaries.

Threat appraisal and coping appraisal are essential constructs in our research and are the focus of our research question. With perspective taking and knowledge of neighbour help we will try to influence these constructs and increase the protection motivation and protective behaviour of people towards the risk of burglaries. In the next chapter the method will be discussed that is used to answer the research question and test the hypotheses.

3 Method

In this study a 3 (risk awareness) * 2 (time) experimental design was used. Risk awareness was manipulated by (1) giving people basic advice on what preventive measures can be taken in order to decrease the risk of a burglary in all of the three conditions. And (2) letting people take the perspective of the burglar, which is used in the second and third condition. The last manipulation (3) is giving people advice on what measures they can take with the help of their neighbours.

Respondents were approached by an email with the request to take part. They were asked to fill in one online questionnaire right away, and a second online questionnaire two weeks later. The respondents filled in the questionnaires on their own computer after they read the information on the research and confirmed the informed consent, see Appendix 1. Afterwards they were thanked for their participation and they could register their email-address if they wanted to receive the results of the study.

3.1 Respondents

Respondents were selected on the condition that they were a homeowner or lived in their rental home for a period of more than 5 years. Email addresses were collected with the help of personal connections and the forthcoming snowball effect. A total of 149 respondents started participating in this study, of which 7 did not meet the conditions, 10 respondents did not complete the first questionnaire and 8 of the respondents did not fill in the second questionnaire. Eventually 124 respondents completed both the questionnaires successfully. Of the remaining 124 people 51% is male (N = 63) and 49% is female (N = 61). The average age is 50 years (ranging from 24 years up to 71 years, N = 121, SD = 10.42). Most of the respondents completed University of Applied sciences[4] (46%, N = 57), Vocational Education (27%, N = 34) or University of Science (20%, N = 25). The two most common total income levels of a household in this study are 'more than one and a half times the average' (36%, N = 40) and 'one and a half times the average' (35%, N = 39). This average was based on the average gross income in the Netherlands in 2014, which was 34.500 euros per person per year.

Besides the general demographics of the respondents, three other characteristics were collected as well: the kind of home they lived in, the amount of years they lived in their home and their experience with burglaries. Most of the respondents are homeowners who lived in their home for a period of longer than 5 years (77%, N = 95), others lived in their home between 2 and 5 years or less than 2 years (16%, N = 20). The group of respondents living in a rental home is small (7%, N = 9). Another characteristic is their experiences with burglary; most of the respondents had never experienced a burglary (76%, N = 94), the remaining respondents had experienced a burglary more than two years ago (15%, N = 19), between one and two years ago (7%, N = 8) or less than a year ago (2%, N = 2).

[4] University of Applied Sciences is similar to the HBO degree in the Netherlands, for Vocational Education this is MBO and University of Science is WO.

To compare the effects of the three manipulations, analyses were conducted to ensure that gender ($X^2(2, 124) = 0.02$, $p = .99$), age ($H(2, 121) = 0.46$, $p = .80$), education ($H(2, 124) = 3.32$, $p = .19$), income ($H(2, 112) = 0.91$, $p = .63$), kind of home ($H(2, 124) = 4.04$, $p = .13$), years living in home ($H(2, 115) = 0.48$, $p = .79$) and experience ($H(2, 123) = 0.48$, $p = .79$.) could be excluded as an alternative explanation.

3.2 Materials

As explained earlier, the respondents filled in two questionnaires. The demographics were collected in the first questionnaire and, as described in the previous paragraph, contained questions about the gender, age, income, education, living situation, kind of home, years living in home and experience with burglaries. Furthermore the first questionnaire contained the manipulation (§3.2.1), a question about the protection motivation and the past protective behaviour (§3.2.2) and questions about the threat appraisal, coping appraisal and emotions (§3.2.3). The content of the second questionnaire is quite similar with questions about the protection motivation, threat appraisal, coping appraisal and emotions. Furthermore questions were asked about the protective behaviour of the past two weeks (§3.2.2).

3.2.1 Manipulation

Basic advice. In all of the three conditions basic advice was given about what preventive measures could be taken in order to decrease the risk of burglaries, for example: 'Hang keys in a hidden spot in your home and make sure that no brand marked car key chain is hanging on your keys'. This advice is based on information from InfoNu (2008) where the several steps a burglar goes through when breaking into a home, are described. These steps are transformed into basic advice. An overview of the information given can be found in appendix 3.

Perspective taking. Perspective taking is the manipulation that is used in the conditions 2 and 3, on top of the basic advice that is given. In this manipulation the respondents judged their own house as if they were a burglar who wants to break in. With the help of several questions people walked through the stages a burglar goes through when he looks critically at houses to break in at that moment. Such questions are: *'It appears to be the case that no one is home, what is the best way to break into the house? Is there an open window I can climb into?'*. The steps that are taken in the questions are based on the basic advice. See Appendix 3 for an overview of the full text.

Knowledge of neighbour help. Knowledge of neighbour help is the manipulation that is used in condition 3, on top of the basic advice and the perspective taking. In order to make people aware of what neighbours can do to help prevent burglaries, advice was given on several measures that could be taken by neighbours when you are not at home. An example is *'When you are away from home for several nights you could ask your neighbours to close the curtains at night and open them in the morning to give the impression that someone is at home every day'*. See Appendix 3 for an overview of the rest of the advice.

With the help of a questions at the end of every manipulation part in the questionnaire it was tested if the respondents understood what was meant with the manipulations. This was done for all of the three manipulations; the basic advice, the perspective taking and the knowledge of neighbour help.

3.2.2 Dependent variables

The dependent variables in this study were the protection motivation and protective behaviour of people towards the risk of burglaries. All of the questions about protection motivation and protective behaviour had a response scale from 1 to 7, with 1 being 'totally not agree' and 7 being 'totally agree'.

Protection motivation. The protection motivation was measured with one question, asked in both the questionnaires: '*To what extent do you have the intention to take preventive measures in the next year to protect your home with belongings from burglars?*'.

Protective behaviour. Protective behaviour, against the risk, in the past was measured with a single question in the pre-test: '*To what extent have you taken preventive measures to decrease the risk of burglaries?'*. In the post-test the protective behaviour was measured with six questions about their protective behaviour in the past two weeks, after the pre-test. The six questions about protective behaviour in the post-test were developed for this study specifically. An example of such a question is *'I have searched for information about protective measures that can be taken to prevent burglaries'*. In order to check the validity of this scale, a factor analysis was carried out. All of the six items have a positive and acceptable factor loading. The reliability of the scale is high (α=.90). With this information the decision was made to use all of the six items and turn them into one scale. The reason for not asking the same six questions about protective behaviour in the first questionnaire, was to prevent priming effects.

3.2.3 Mediating variables

Threat appraisal and coping appraisal were measured with the help of the Risk Behaviour Diagnosis Scale which is developed by Witte, McKeon, Cameron and Berkowitz (1995). Originally this scale was developed to measure the threat and coping appraisal of health risks and certain specific preventive measures against these risks, with a 5 point Likert scale. For this study these questions were transformed to measure the threat appraisal of the risk on a burglary and the coping appraisal of preventive measures against burglaries with the same 7 point Likert scale as is used with protection motivation and protective behaviour.

Threat appraisal. For threat appraisal there were three questions about severity and three about susceptibility. An example of a question that measures severity is: *'I think a burglary has serious negative consequences'*. For susceptibility an example is: *'It is possible that I become a victim of burglary'*. In order to check validity and reliability several analyses were conducted. In the pre-test severity has factor loadings that were 0,88 and higher, for the post-test this was 0,88 and higher. For susceptibility the factors loadings in the pre-test were 0,73 and higher, and in the post-test this was 0,76. Following the guidelines from the Risk Behaviour Diagnosis Scale, severity and susceptibility were taken together into one scale that measures threat appraisal. For the pre-test this scale of six items was moderately reliable (α=.65), for the post-test the reliability was moderate as well (α=.61). In conclusion, all of the items of threat appraisal were used and turned into one scale.

Five questions were asked to estimate the emotional state of the respondent towards the risk on burglaries (e.g. *'I am scared that I will become a victim of burglary'* and *'I feel safe in my own house'*). The five questions that measure the emotional state of the respondent were specifically developed for this study. Before checking the validity and reliability of the emotion scale, two of the items needed to be rescaled because of their positive nature whereas the other three questions have a negative nature. In the pre-test factor loadings started from 0,60 and up, for the post-test it was 0,43 and up. The reliability of the scale in the post-test was high (α=.72), this was the same for the post-test (α=.70). Therefore all items were used in the scale that measured the emotional state of the respondents towards the risk on burglaries.

Coping appraisal. For coping appraisal there are three questions about response-efficacy and three about self-efficacy. An example of a question that measures response-efficacy is: *'Preventive measures against burglars, I am les exposed to the risk on becoming a victim of burglary'*. The factor loadings of the three questions about the response-efficacy in the pre-

test were 0,87 and higher, in the post-test this was 0,86 and higher. For self-efficacy an example of a question is: *'I am able to secure doors and windows with multiple locks in order to prevent a burglary'*. In the pre-test, the factor loadings for the questions about self-efficacy were 0,81 and higher, and in the post-test this was 0,85 and higher. Following the Risk Behaviour Diagnosis Scale the total of the items of response-efficacy and self-efficacy were taken together and stand for coping appraisal. For the pre-test this scale of coping appraisal had a high reliability (α=.80), this was the same for the post-test (α=.80). In conclusion, all of the items of coping appraisal were used and turned into one scale.

The questionnaires were made with the help of the online program 'Qualtrics'. The data collected with the online questionnaire was easily transported in to SPSS. In the next chapter a description of the data with SPSS analyses is given.

4 Results

The results of this study are divided into two parts; the descriptive statistics (§4.1) and the inferential statistics (§4.2). The descriptive statistics give an indication of the possible relations between the variables in this study by displaying the means, standard deviations and correlations of the different variables in this study. In the inferential statistics actual testing will be done with the data to check for significant relations between the variables.

4.1 Descriptive statistics

Correlations. To find possible relations between the demographics, protection motivation and protective behaviour, several correlation analyses were conducted. The highest correlation found is between the protection motivation in the past, before this study, and in the past two weeks, between the two questionnaires, $r = .61$, $p < .01$. Another notable correlation is between the protective behaviour in the past, before the study, and the protective behaviour in the past two weeks, right after the first test, $r = .52$, $p < .01$. Furthermore there are indications that age and the sort of house the respondent lives in relates to the protective behaviour in the two weeks after the first questionnaire, respectively $r = .19$, $p < .05$ and $r = .21$, $p < .05$. Another indication is the influence of amount of years living in a home as the homeowner, that negatively relates to the protection motivation in the post-test, $r = -.21$, $p < .05$. In Table 1 an overview of all the correlations between demographics, experience, protection motivation and protective behaviour is given. This overview contains the data of all of the respondents ($113 < N > 125$).

Table 1 *Correlations between demographics, protection motivation and protective behaviour*

	M	SD	9.	10.	11.	12.	13.
Demographics & experience							
1. Gender	1.49	0.50	.10	.08	-.01	.07	.09
2. Age	50.38	10.42	.11	.19*	-.00	-.12	-.14
3. Education	3.84	.83	.06	-.02	-.05	.03	.10
4. Living Situation	3.24	.96	-.05	.08	.08	.03	-.06
5. Income	3.16	1.11	-.00	.11	-.04	.03	.07
6. House	2.93	.26	.13	.21*	.10	.07	-.03
7. Years in home, homeowners	2.76	.57	-.05	.06	-.09	-.21*	-.13
8. Experience	1.61	1.14	.08	.08	-.08	-.07	.01
Protective behaviour and motivation							
9. Behaviour in the past (pre-test)	4.09	1.63	-				
10. Behaviour in past two weeks (post-test)	3.85	1.64	.52**	-			
11. Protection motivation (pre-test)	2.77	1.54	.30**	.35**	-		
12. Protection motivation (post-test)	2.72	1.55	.16	.20*	.61**	-	
13. Difference PM pre-test and post-test	-.06	1.37	-.17	-.17	-.44**	.45**	-

* = significant correlation $p<0.05$ (2-sided) Note ($113<N<125$)
** = significant correlation $p<0.01$ (2-sided)

Threat appraisal and coping appraisal. In the theoretical part of this paper the importance of the psychological processes threat appraisal and coping appraisal in the process of estimating a certain risk was discussed. Table 2 gives an overview of the means and standard deviations of the conditions.

Table 2 *Means and standard deviations of the mediating variables; threat appraisal and coping appraisal*

	Condition 1 (N = 39)		Condition 2 (N = 40)		Condition 3 (N = 45)		
	M	SD	M	SD	M	SD	Items
Threat appraisal (pre-test)	4.87	.70	4.90	.84	5.03	.73	6
Threat appraisal (post-test)	4.91	.75	4.88	.71	5.02	.70	6
Coping appraisal (pre-test)	5.44	.71	5.61	.70	5.37	.95	6
Coping appraisal (post-test)	5.47	.57	5.75	.69	5.48	1.03	6

Note The scores in this table are based on a 7 point Likert scale, a high score stands for high threat appraisal or coping appraisal towards the risk on a burglary.

Dependent variables. The two dependent variables, protective behaviour and protection motivation, are measured both in the pre-test and the post-test. In table 3 an overview is given of all of the means and standard deviations of the dependent variables in the pre-test and post-test over the three conditions.

Table 3 *Means and standard deviations of the dependent variables; protective behaviour and protection motivation*

	Condition 1 (*N* = 39)		Condition 2 (*N* = 40)		Condition 3 (*N* = 45)		
	M	SD	M	SD	M	SD	Items
Protection motivation (pre-test)	2.62	1.35	2.47	1.54	3.18	1.63	1
Protection motivation (post-test)	2.62	1.39	2.57	1.50	2.93	1.72	1
Protective Behaviour in the past (pre-test)	3.82	1.47	4.00	1.63	4.40	1.74	1
Protective Behaviour in past two weeks (post-test)	3.75	1.57	4.04	1.53	3.78	1.81	6

Note The scores in this table are based on a 7 point Likert scale, a high score stands for high protective behaviour or protection motivation.

4.2 Inferential statistics

Threat appraisal and coping appraisal. As mentioned before, threat appraisal and coping appraisal are essential parts in the process of the estimation of a risk that leads to certain level of protection motivation and eventually protective behaviour. Therefore, first the influence of these variables on the protection motivation and protective behaviour were tested. Table 4 gives an overview of fear and the several components of threat appraisal (severity, susceptibility) and coping appraisal (self-efficacy and response-efficacy). As can be seen, self-efficacy significantly influences protection motivation and so does fear. The five variables together explain 17% of the variance in protection motivation on the post-test.

Table 4 *Influence of different variables on the protection motivation (post-test)*

	B	SD	Beta	t	*p*	R^2	Items
Severity	-.23	.14	-.15	-1.70	.09	.17	3
Susceptibility	.06	.13	.04	.45	.65		3
Self-efficacy	.34	.13	.23	2.58	.01		3
Response-efficacy	-.18	.15	-.11	-1.18	.24		3
Fear	.55	.15	.33	3.60	.00		6

For the relation between threat appraisal and coping appraisal with the protective behaviour that was measured in the post-test, the same calculations were made, see Table 5. As with protection motivation, self-efficacy and fear appear to be significantly related to

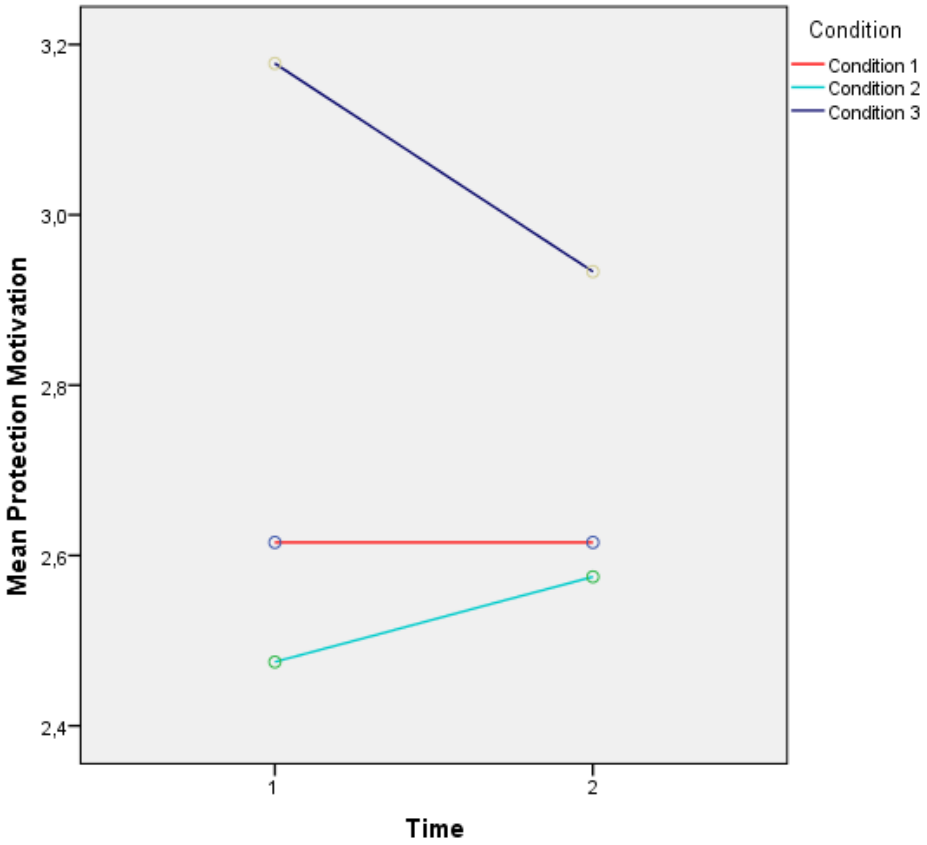
Table 5 *Influence of different variables on the protective behaviour in past two weeks (post-test)*

	B	SD	Beta	t	*p*	R^2	Items
Severity	.08	.13	.05	.61	.55	.32	3
Susceptibility	-.22	.12	-.15	-1.83	.07		3
Self-efficacy	.53	.13	.34	4.19	.00		3
Response-efficacy	.31	.15	.18	2.17	.03		3
Fear	.81	.15	.46	5.54	.00		6

protective behaviour. On top of that response-efficacy significantly influenced the protective behaviour. The five variables together explain 32% of the variance in protective behaviour.

Protection motivation. The Repeated Measures ANOVA is used to test for significant differences in protection motivation between the conditions, because protection motivation was measured in the pre-test and post-test. No significant differences were found between the means in protection motivation in the three conditions, F (2, 124) = 1.84, *p* = .16. The results are plotted in Figure 3, note that the mean protection motivation scale goes from M = 2.4 to M = 3.2.

Figure 3 *Plot of difference in means of protection motivation in the three conditions, in the pre-test and post-test*

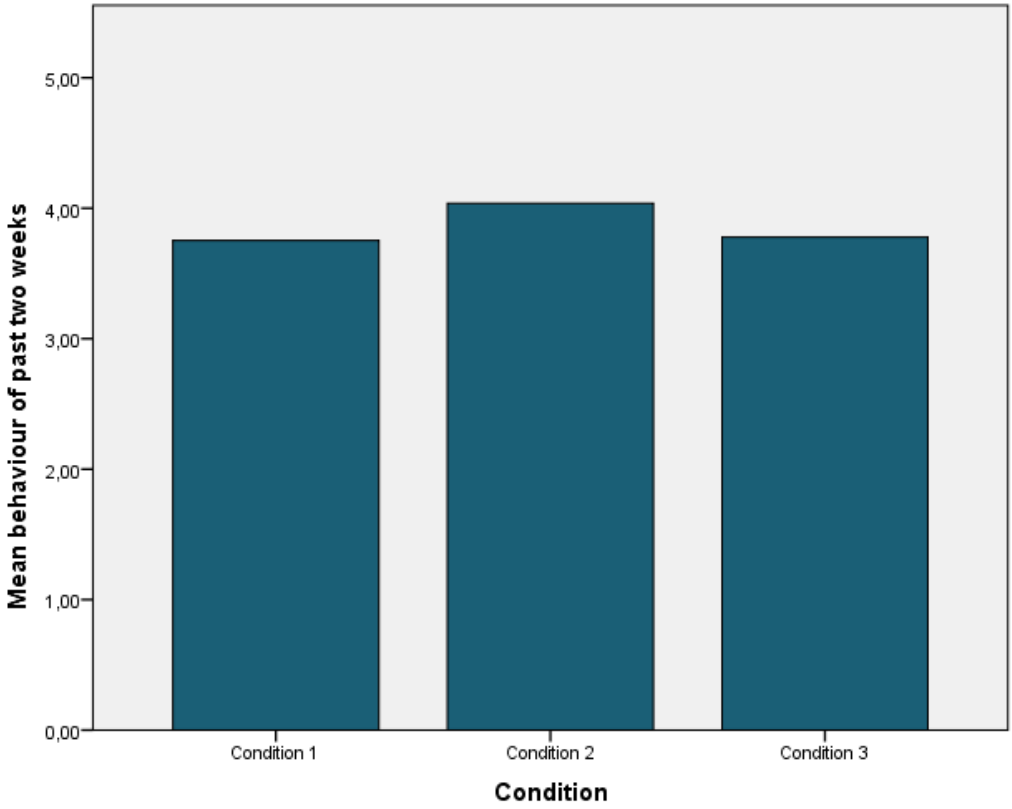


Protective behaviour. With the one-way ANOVA the relation between the protective behaviour and the conditions was tested. Figure 4 gives an image of this relation and shows the differences in protective behaviour between the three conditions. The protective behaviour in the three conditions does not differ significantly, F (2, 124) = 0.37, *p* = .69.

Protection motivation & covariates. Several significant correlations were found between different demographics and the protective behaviour in the past two weeks and the protection motivation of the post-test. To test if these demographics have influenced the relation between

the conditions and the dependent variables, protection motivation and protective behaviour, they are added as covariates. The influence of the conditions on the difference in protection motivation between the pre-test and post-test stayed non-significant when adjusted for age , $F(2, 121) = 1.53$, $p = .22$. When this relation between the different conditions and the difference in protection motivation was adjusted for the sort of house they lived in, rental or own house, no significant effect was found either, $F(2, 124) = 2.32$, $p = .10$. The same relation was adjusted for the years a homeowner lived in their home and appeared non-significant, $F(2, 115) = 2.79$, $p = .07$.

Figure 4 *Histogram of the relation between the conditions and the mean of the protective behaviour of the past two weeks*



Note: condition 1 = basic advice (control group), condition 2 = basic advice & perspective taking, condition 3 = basic advice, perspective taking & neighbour help

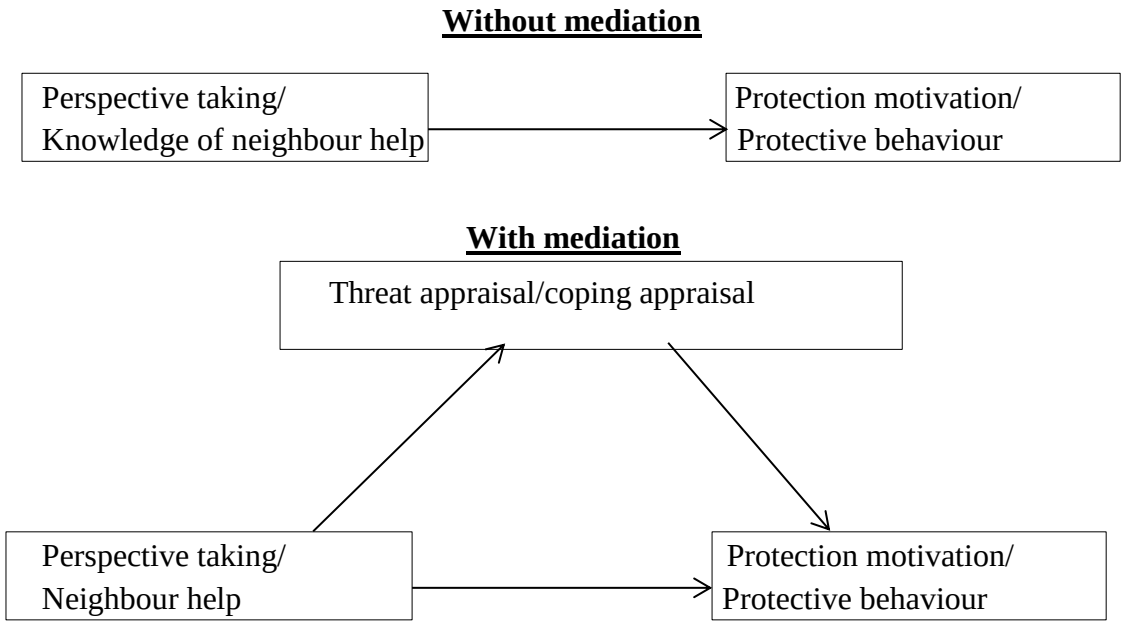
Protective behaviour & covariates. For the relation between the conditions and the protective behaviour in the weeks between the first and second questionnaire the same covariates were added as well. The protective behaviour was not significantly influenced by the conditions when adjusted for age, $F (2, 121) = 0.32$, $p = .73$. When the relation was adjusted for the kind of home the respondent lived in, no significance appeared as well, $F (2, 115) = 0.24$, $p = .79$. Also adjusting the relation between the conditions and the protective

behaviour for the years a homeowner lives in his/her home, did not result in significance, F(2, 124) = 0.38, *p* =.68.

As the protective behaviour in the pre-test was measured with different questions than the protective behaviour in the post-test, the repeated measures ANOVA could not be used to test differences in protective behaviour. Therefore the protective behaviour measured in the pre-test is added as a covariate as well. It appeared that, when adjusting for protective behaviour shown before this study, the conditions did not significantly influence the protective behaviour of the respondents in the two weeks between the pre-test and post-test, F(2, 124) = 1.24, *p* = .30.

Mediation. In figure 5 a schematic overview is given of the expected mediation between perspective taking & neighbour help and protective behaviour & protection motivation. According to the requirements of a true mediation relation from Baron and Kenny (1986), the

Figure 5 *Model of mediation*



Note: Perspective taking/ Neighbour help = predictor, Threat appraisal/ coping appraisal = mediator, Protective behaviour/ protection motivation = dependent variable.

predictor should influence the dependent variable, which is not the case here as described previously in this chapter. In other words there is no significant relation between perspective taking & neighbour help and the protection motivation & protective behaviour, this is also the 'without mediation' part of figure 5. Besides that, the manipulations did not significantly influence threat appraisal (F (2, 124) = .11, *p* = .89) and coping appraisal (F (2, 124) = .19, *p*

= .83). This means that threat appraisal and coping appraisal did not influence the relation between perspective taking & neighbour help and protection motivation & protective behaviour and are therefore no mediating variables in this study.

With the descriptive statistics gave an idea of what the data looks like. The analyses in the second part of this chapter showed us that there was no significant influence of the manipulations on the mediating and dependent variables. However self-efficacy, response-efficacy and fear significantly influenced protection motivation and protective behaviour. In the next chapter we will discuss these results in the light of our assumptions and also look at possible explanations for the results. Furthermore the limitations of this study will be discussed as well as advice for future studies on this subject.

5 Discussion

The purpose of this study was to find a way to influence threat appraisal and coping appraisal in order to increase the protection motivation and the protective behaviour of people against burglaries. Two manipulations were developed in order to influence this motivation and behaviour: (1) perspective taking and (2) neighbour help. It appears from literature that threat appraisal and coping appraisal are very important psychological processes that lead to protection motivation and eventually protective behaviour (Rogers, 1983; Witte, 1994). Emotions, and especially fear, are essential in these processes. The results showed a significant influence of self-efficacy and fear on protection motivation. Protective behaviour is significantly influenced by self-efficacy, response-efficacy and fear. This, again, confirms the importance of emotions in the process that leads to the estimation of a risk which has been found in several previous studies (Witte & Allen, 2000; Johnston & Warkentin, 2010; Tannenbaum, 2013). With these findings our theoretical framework is partially confirmed.

Perspective taking. The first manipulation, perspective taking, was expected to influence threat appraisal and fear by creating awareness of the risk of burglaries. Logically perspective taking was expected to influence protection motivation and protective behaviour as well. However, none of these expectations are confirmed by the results. Also when adjusting for the effect of demographic variables and for protective behaviour shown in the past, no significant relation was found. As described before, fear significantly influenced protection motivation and protective behaviour. However the manipulation did not influence the emotions of people in such a way they experience fear for the risk of burglaries. It is possible that this emotion

was not activated by the manipulation because people passively read a text and not actively took the perspective of a burglar and walked around their home.

Another possible explanation for these results could be the fact that some people move into houses that are already protected well against burglars. This information was not collected in this study and could therefore not be taken into account when testing the data. It is possible that people realize, when taking perspective of the burglar, that their house is better protected than initially thought. For future studies it would be wise to collect more detailed information on the kind of protective behaviour shown in the past and on the protection of the house when they moved in.

Knowledge of neighbour help. The second manipulation, knowledge of neighbour help, was thought to influence coping appraisal and logically protection motivation and protective behaviour as well. No effect of this manipulation was found. After adjusting the effect for demographic variables, the results stayed the same. As both self-efficacy and response-efficacy influenced protection motivation and protective behaviour significantly, it can be concluded that the manipulation was not adequate. It is possible that the manipulation was too passive and did therefore not influence self-efficacy and response-efficacy. Perhaps people need more active processing of the information in order for it to have an influence. Also, the characteristics of the neighbourhood the respondents lived in could be an explanation for the lack of significance. TNS NIPO (2013) has revealed a division between neighbourhoods, active ones and less active ones. Perhaps our sample contained a lot of people who live in an active neighbourhood and therefore are not influenced by the manipulation.

This finding also emphasizes the need for more detailed information on preventive measures in future research. It is possible that people have already taken preventive measures with the help of their neighbours. This was even mentioned by some of the respondents : *"We already have agreements with our neighbours for when we are not around, we even have a messaging group".*

Mediation. The psychological processes threat appraisal and coping appraisal are important in the process that leads to protection motivation and eventually protective behaviour. However, the manipulations did not have a significant effect on threat appraisal, coping appraisal and fear. Therefore, threat appraisal and coping appraisal are no mediating variables in this study. This is, however, not surprising as the manipulations did not have their wanted effect.

Limitations. This study has a few limitations that should be noted. Our sample consists of people that have shown a reasonable amount of protective behaviour in the past. This could be an explanation for the low protection motivation in both the pre-test and the post-test. Another characteristic of the sample that needs to be addressed is the high level of income, with two-thirds of the people earning more than the average each month. Another limitation could be the language barrier. In this study it was assumed that people understood the meaning of perspective and of protective measures. After approaching some of the respondents the opinions differed about this matter and educational levels were not the cause of these differences. Though no actual conclusion can be drawn from these findings, it would be best to explain such important words in the questionnaires or replace them by other words. A last limitation is the time frame in which the respondents filled in the two questionnaires. After two weeks they got a similar questionnaire in order to test for effects of the manipulations. It is possible that people got used to the questions and practice effects occurred. However the limitations and limited results, this study is a start in expanding the amount of literature on protective behaviour against the risk of burglaries and how this can be changed.

Conclusion. The main goal of our research was to make a contribution to the solution of the high amount of burglaries, by making people more aware of the risk and activate them to protect oneself against it. As response to the high numbers of burglaries and thefts the Ministry of Safety and Justice started a campaign in order to make people aware of the risk of burglaries by using television- and radio commercials (Ministerie van Veiligheid en Justitie, 2015). In these commercials they try to make people aware of how easy burglars can break into your home when you, for example, leave your front door unlocked. The results of this campaign are not known yet as it started at the end of 2014 and is still running, but the idea is comparable with the idea of our study. As described in this chapter, our study did not find the expected effects of the manipulations, it is questionable if the campaign of the government has the wanted effect of breaking through the negligence of the Dutch citizens. The need for strategies to influence the protective behaviour of Dutch citizens towards the risk of burglaries is evident and a good solution has not been found yet, therefore more research on this subject is essential in decreasing the amount of burglaries.

This study is a first step towards more information on what can be done to influence behaviour towards risks of burglaries. Our theoretical framework was partly confirmed; fear and self-efficacy significantly influence protection motivation and protective behaviour. For the latter response-efficacy had an significant influence as well. Strategies focused on more

active processing of the information could be the answer, by for example letting people really act like a burglar and break into their own home. Another strategy could be to let people who have experienced burglaries to tell their story, this could activate more emotions in people. Future studies should focus on emotions, self-efficacy and response-efficacy and find the right strategies that do influence them. With more research and data there is a chance on changing the lack of protective behaviour of the Dutch citizens towards the risk of burglaries.

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Appendix 1 – Information research & Informed consent

Information research

Dear Sir/Madam,

For my masterthesis I am conducting a research about the risk perception of people of burglaries and the preventive measures that can be taken to protect their home against burglars. In the Netherlands there is a change going on; the country is transitioning from a welfare State into a participation State. It becomes financially more difficult for the Netherlands to work on problems in the society and the responsibility of these problems is placed more and more in the hands of the Dutch citizens themselves. The Dutch citizens need to take matters into their own hands more often in order to solve these societal problems, an example of such a problem are burglaries. That is why I am curious about the perception of people of burglaries and the preventive measures that can be taken to protect their home against burglars.

This study consists of two parts, in a moment you will receive the first questionnaire and two weeks from now you will receive the second questionnaire. It is important to write down your email address on the next page of this online questionnaire so I can send you the second questionnaire. All of the data will be processed anonymously, with confidentiality and will not be distributed to third parties. The data will not be processed individually, but will be taken together as a whole.

If you have questions about this study, than I ask you to contact me, Iris Boers:
i.boers@student.utwente.nl

Informed consent

I hereby declare to be informed clearly about the nature, method and purpose of the study. I am aware of the fact that the data will be processed anonymously, with confidentiality and will not be distributed to third parties. And I know that the data will not be processed individually, but will be taken together as a whole.

I vote voluntary with my participation in this study. I know I have the right to end my participation, anytime in this study and without reason.

By filling in my email address below, I confirm I understand the above and agree to this.

Appendix 2 – The questions

Demographics

- What is you gender? [man, woman]
- What is your age?
- What is your highest level of education? [Primary school, secondary school, vocational education, University of applied sciences, University of Science]
- What is your living situation? [alone, with partner, with children, with partner and children, with roommates]
- What is your level of income? [below average, average, one and a half times average, two times average]
- You live in a …? [student home, rental home, home you are the owner of]
- How many years are you living in your rental home? [less than five years, more than five years]
- What is your postal code?
- Have you been a victim of a burglary in the past? [no, less than a year ago, between one and two years ago, more than two years ago]

Protection motivation (1 = no measures/ no intention, 7 = a lot of measures/ a high intention)

- To what extent have you taken preventive measures to protect your home towards burglaries in the past?
- To what extent do you plan on to take preventive measures to protect your home towards burglaries?

Threat appraisal – severity (1 = totally disagree, 7 = totally agree)

- I think that burglaries are serious
- I think that burglars have serious negative consequences
- I think that a burglary is extremely harmful

Threat appraisal – susceptibility (1 = totally disagree, 7= totally agree)

- It is likely that I become a victim of a burglary
- I am at risk on becoming a victim of a burglary
- It is possible that I become a victim of a burglary

Fear (1 = totally disagree, 7 = totally agree)

- I feel scared when I think about the risk of becoming a victim of a burglary.
- I always leave my home with feelings of ease.
- I am scared that I will become a victim of a burglary.
- I feel safe in my own house.
- I am more scared for the risk of becoming a victim of a burglary than the people in my surroundings.

Coping appraisal – response efficacy (1 = totally disagree, 7 = totally agree)

- Taking preventive measures towards burglaries is effective
- Taking preventive measures towards burglaries work
- When I take preventive measures towards burglaries, I am less exposed to the risk on becoming a victim of burglary

Coping appraisal – self efficacy (1 = totally disagree, 7 = totally agree)

- I am able to take preventive measures towards burglaries
- I have the skills to take preventive measures towards burglaries
- I can easily take preventive measures towards burglars to prevent burglaries from happening

Demographics (1 = totally disagree, 7 = totally agree)

The following statements are about to what extent you have taken preventive measures against burglars in the past two weeks. Give an indication to what extent you disagree or agree with the statements.

- I have thought about taking preventive measures against burglaries
- I have checked my house for weak spots that could increase the risk on a burglary
- I have spoken with people around me and talked with them about taking preventive measures against burglaries
- I have made arrangements with my neighbours about preventive measures that we can take together when I am away from home
- I have searched for information on preventive measures against burglaries
- I have spoken to experts, with the police for example, about preventive measures that I can take against burglaries.

Appendix 3 – Manipulation

Tips (Condition 1, 2 and 3)

Read the advice described below carefully.

1. Try, where it is possible, to clear the view on windows and doors from bushes and trees. Make sure your house looks inhabited. Put a glass of water on the table and connect a light in the living room with a time switch. Also make sure that enough light shines on the doors. Put valuable things out of sight when you leave your home.
2. Be aware or inform the police when someone comes to your door and tells a strange story about a person he/she looks for or a weird kind of charity he/she needs money for.
3. Try and make it as difficult as possible for a burglar:
    a. Install good quality door locks and use a special night lock.
    b. When you have a mailbox in your door, close this one and install a mailbox outside of the house.
    c. Close windows and doors when you leave the house. .
    d. Put special hinges on the windows in order to prevent a burglar from unscrewing a window with a screwdriver.
    e. Place a anti burglary strip at the sealing seam of the door.
    f. Put ladders and bins away.
4. Be sure to, when you have one, lock the fence door when your leaving your house. Locking the fence makes it harder for a burglar to move belongings out of the house and escape quickly
5. Make sure that big bags and suitcases are in an invisible and secure place.
6. Seek for unique hiding spots for your valuable things. So do not put money under your mattress but between the pots and pans in your kitchen cabinet.
7. Hang keys in a hidden spot in your home and make sure that no brand marked car key chain is hanging on your keys.

Perspective burglar (Condition 2 and 3)

It is wise to empathize with course of action of a burglar in order to check if your home is protected well against burglaries. Pretend like you are the burglar that walks through your street and walks towards your home. Try to empathize with this situation by using the questions below.

1. How does the location looks like? Is there a lot of green around the house whereby I will be less visible and can easily break in? Is there a door or window which is not visible for neighbours or others on the street? Is there a lot of lighting?
2. There are no people at home as far as I can see. Hey, do I see valuable things in the living room?
3. I do not want unexpected company so I will first ring the bell, what kind of excuse will I tell when someone opens the door?
4. Apparently no one is home, what is the best way to break into the house? Can I use a wedge through the mailbox in the door in order to open the door itself. Is there a little window, for example of the restroom, where I can go through? Can I open the front-

or back door with a plastic card? Is there a ladder or bin available on which I can stand and use to climb through a window of the first floor?

5. Now I am inside the house, I do not want people looking into the house so I will close the curtains. How can I ensure that unwanted homeowners have a hard time coming into the house and what is an easy way out of the house for me?
6. Is there an empty suitcase or bag somewhere in which I can put all the goods?
7. Is there any mail lying around with bank details? Or cards or passports? Is there cash lying somewhere by any chance?
8. Where are the keys? Perhaps in the kitchen or the hallway? And a car key? If so, is there a branded keychain of the car?

Advice neighbours (Condition 3)

1. By informing your neighbours about, for example, your holiday plans, they can react more quickly when they see something suspicious.
2. To make sure that a burglar does not think your away on, for example, a holiday you can ask the neighbours to empty your mailbox. This takes away clues for burglars that shows them if homeowners are away for a longer period of time.
3. You can also ask your neighbours to close the curtains in the night and open them in the morning, this gives the impression that there is someone home on a daily basis.
4. You can ask your neighbours to water the plants when your gone for a longer period of time. Dried out plants can be a sign for a burglar that the homeowners could be away for longer period of time.
5. The last advice, when your own driveway stays empty when you are on a holiday, you could ask your neighbours if they park their car at your home.