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**Faculty of Behavioural Management and  
Social Sciences (BMS)**

Master Thesis

**Experiences of resilience after  
participation in the FIRST training**

M.P.A. Oude Groeniger

S1795430

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**Supervisors:**

**Dr.ir. P.W. de Vries**

**Dr. J.M. Gutteling**

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## **Abstract**

With terroristic attacks getting closer, as in Brussels and Paris, it might be important to make individuals more resilient. In order to prepare individuals for threatening situations training can be offered. A training that is developed to learn to cope more effectively with unexpected, risky and stressful situations is the Functional Intuitive Replication Scenario Training (FIRST) training. This is a qualitative study of effects on resilience levels after participation in the FIRST training. Through in depth-interviews, the following research question is answered: How do participants experience their level of resilience after participation in the FIRST training? In total, 12 participants between 25 and 45 years of age have been interviewed. The overall results show that participants felt more resilient after following the training. Most of the respondents state they would act differently in a threatening situation after the training. The results suggest that protective factors contributing to resilience were present on different levels within all the participants. Furthermore, the results show that all participants experienced cognitive effects of the training. The emotional and behavioural effects were experienced by more than half of the participants but were not that obvious. Finally, most of the respondents experienced physical effects of the training. On the other hand, it should be noted that two respondents felt less resilient after participation in the FIRST training. The training made them feel more aware, but not more capable of dealing with a threatening situation. For future research, it might be interesting to see the effects of further training, especially regarding the participants who felt less resilient. This might as well increase their feelings of resilience after more training. It would further be interesting to study the effect across different age groups, to see if the effects will be the same with older participants and physical less capable participants.

## Samenvatting

Met de terroristische aanslagen die dichterbij komen, zoals in Brussel en Parijs, is het belangrijk om individuen weerbaarder te maken. Om individuen voor te bereiden op bedreigende situaties worden er trainingen aangeboden. Een training die ontwikkeld is om effectiever te leren omgaan met onverwachte, risicovolle en stressvolle situaties is de Functional Intuitive Replication Scenario Training (FIRST). Het huidige onderzoek is een kwalitatief onderzoek naar de effecten van weerbaarheid na deelname in de FIRST training. Door middel van diepte-interviews is de volgende onderzoeksvraag beantwoord: Hoe ervaren participanten hun niveau van weerbaarheid na deelname in de FIRST training? In totaal zijn er 12 participanten tussen de 25 en 45 jaar geïnterviewd. De resultaten laten zien dat participanten zich weerbaarder voelden na het volgen van de training, waardoor zij zich anders zouden gedragen in een bedreigende situatie. De resultaten laten ook zien dat beschermende factoren die bijdragen aan weerbaarheid aanwezig waren in alle participanten. Daarnaast laten de resultaten zien dat alle participanten cognitieve effecten van de training hebben ondervonden. De emotionele en gedragsmatige effecten waren minder duidelijk, deze zijn ervaren door meer dan de helft van de respondenten. Tot slot hebben de meeste respondenten fysieke effecten van de training ervaren. Aan de andere kant is het belangrijk te benoemen dat twee respondenten zich minder weerbaar voelden na het volgen van de FIRST training. De training heeft de respondenten bewuster gemaakt, maar ze voelden zich nog niet bekwaam genoeg om te handelen in een bedreigende situatie. Voor vervolgonderzoek zou het interessant zijn om te kijken naar de effecten na meer training, vooral voor de respondenten die zich minder weerbaar voelden. Meer training zou de gevoelens van weerbaarheid kunnen verhogen. Daarnaast zou het interessant zijn om de effecten van de training te onderzoeken in verschillende leeftijdscategorieën, om te kijken of de effecten hetzelfde zijn bij oudere participanten en lichamelijk minder capabele participanten.

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## 1. Introduction

With the terroristic attacks in Paris in November 2015 and in Brussels in March 2016, the Islamic State (IS) shows that terroristic acts also targeted Europe. In 2015 the European Union (EU) has suffered major attacks with large numbers of casualties (Interpol, 2016). On the 22nd of May 2017, an attack by a concert in Manchester and on the 3rd of June 2017 on London Bridge show that the terroristic attacks are still going on (NRC, 2017). So far, there has not been any major attack in the Netherlands. In the Netherlands, the government works with a system of threat levels, which indicates the chance of a terroristic attack. At the moment the threat level in the Netherlands is level four, substantial, which means that the chance on a terroristic attack in the Netherlands is realistic, but there are no concrete clues for preparations for a terroristic attack (Ministerie van Veiligheid en Justitie, 2017).

Striking fear into the hearts of citizens is considered a major goal of terrorists' acts. Linders (2017) studied the relationship between the psychological distance to four terroristic attacks and the extent to which Dutch Tweets show fear. The results suggest that in reactions to attacks with small psychological distance as the attacks in Brussels and Paris greater fear was found, than in reactions to attacks with a large psychological distance, as in attacks in Bagdad or Beirut. Consequently, fear can lead to more terrorism, because terroristic groups are aware of the fear and will use it to create even more fear (Bakker, 2012). In a national survey on the stress reactions after the September 11th terrorist attacks, a higher stress level among civilians was found. Almost half of the adults reported that they had at least one of the five substantial stress symptoms since the attacks. In addition, 90% of the adults reported to having low-stress symptoms (Schuster et al., 2001).

In order to reduce the negative effects of terrorism such as fear and stress, resilience is an important factor. Resilience has a large positive effect on the well-being of individuals (Mayordomo, Viguer, Sales, Satorres & Meléndez, 2016). Resilience is a protective factor in the perspective of contra-terrorism, which can reduce the negative impact of terrorism on individuals in a society. A resilient society is able to recover easier from extreme events such as a terroristic attack. Furthermore, terrorist attacks targeting a resilient society will have a lesser effect. For those reasons, resilience can be seen as opposite factor of the paradigm of vulnerability for terrorism (Bakker, 2012). In addition, a study on the positive emotions and resilience after the terroristic attack in the United States on September 11th shows that some people experienced positive emotions to a larger degree than others. These were mainly individuals with high pre-existing levels of resilience. Finally, positive emotions seemed important for helping resilient people getting through the emotional states after the attack (Fredrickson, Tugade, Waugh & Larkin, 2003).

To better prepare individuals for threatening situations, training can be offered. A training that is developed to teach more effective coping, with unexpected, risky and stressful situations is the Functional Intuitive Replication Scenario Training (FIRST). This is a training that might increase the

level of resilience of civilians. The content of the training focuses on verbal, physical and armed aggression. During this training, the participants focus on analysing situations and picking up cues that might indicate danger. In the case when an attack happens, the person is better able to respond. The FIRST training has been tested on police officers and is proven to be more effective than current police training (Renden, Savelsbergh & Oudejans, 2016). This study aims to examine the effects on the resilience of civilians after following the FIRST training. The research question of this study is: What are the effects of the FIRST training on the resilience of civilians in the Netherlands?

## 2. Theoretical framework

Over the years several authors have defined the term resilience. Fraser, Richman & Galinsky (1999) used three aspects to describe resilience. The first aspect is being successful despite exposure to high risk. The second aspect is sustaining competence under high pressure, such as adapting successfully to high risk. The last aspect is recovering from trauma, such as adjusting successfully to negative life events. Another description of resilience is a phenomenon that enables positive outcomes in spite of serious threats (Masten, 2001). One of the more common descriptions in literature to describe resilience is the positive side of individual differences in people's response to stress and adversity (Rutter, 1985). Furthermore, the term resilience is more focused on the recovery from negative events, than invulnerability to stress. It can also be defined as normal development under hard conditions (Olsson, Bond, Burns, Vella-Brodrick & Sawyer, 2003). In addition, the term resilience is a multidimensional feature that is gender, age, context, time, cultural origin and life circumstances within the individual dependent (Connor & Davidson, 2003). Finally, the term resilience is conceptualized as a process that is dynamic and interacting between protective and risk factors (Olsson et al., 2003; Masten, 2001). In summary, there are several aspects describing resilience. Resilience will be conceptualized in this study as a process with antecedents such as risk- and protective factors, which provides competence and positive outcomes in spite of serious threats, stress and adversity.

### 2.1 Resilience Framework

To give more insight into processes and factors contributing to resilience, the resilience framework of Kumpfer (1999) will be elaborated upon. The resilience framework focuses on six major constructs. The framework (figure 1) shows the six constructs divided into four domains of influence and two transactional aspects (highlighted with stripes) between the two domains.

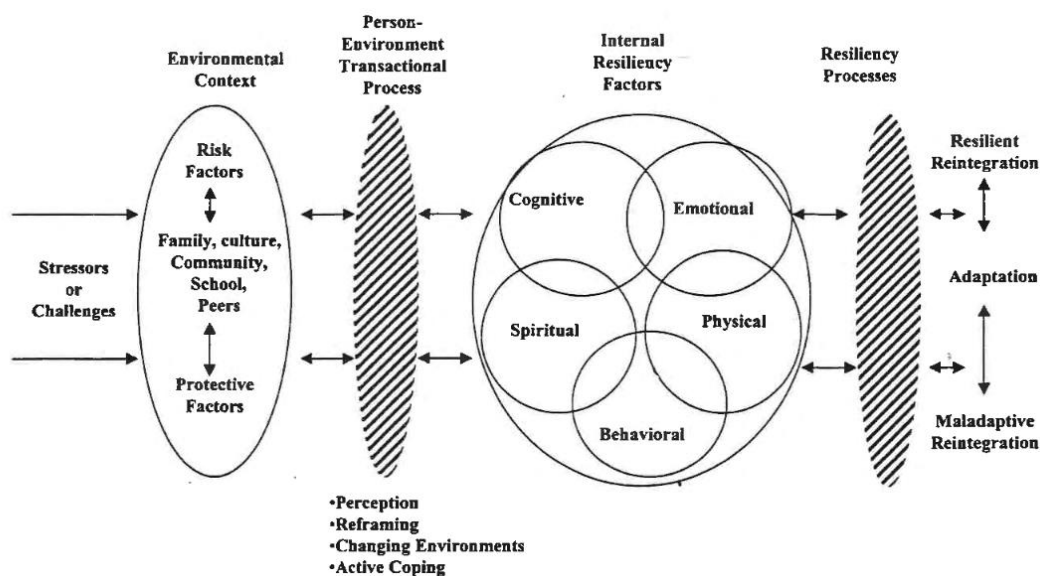


Figure 1: Resilience Framework (Kumpfer, 1999).

The first level of the model is the stressor or challenge. The incoming stimuli activate the resilience process and create an imbalance in the individual and the environment of the individual. The level of stress of the individual depends on several aspects such as perception, cognitive appraisal and interpretation of the stressor as aversive or threatening. For instance, a youth may decide to train and enter a marathon, but it might be possible that during the training the youth gets injured; this can be seen as a stressor/challenge. The second level of the model is focused on the environmental context. This includes the risk and protective factors in the important domains of the individual's environment such as family, community and peers, which have an impact on the socialization process of the youth. When acute or chronic stressors occur, the environmental context can buffer or worsen the negative impact on the youth. So the environment of the youth will have an influence on how the youth will deal with the stressor/challenge. The next level in the model is an interactive process between person and environment. It shows how the individual and their environment try to either actively or passively face threats or challenges in order to create a more protective environment. For instance, the youth does not have any supporting friends, which might lead to searching for friends who will support his goals. Furthermore, the internal resiliency factors are an important aspect of the model. These include cognitive, emotional, physical, behavioural and spiritual strengths needed to be resilient. For instance, motivation (spiritual), self-esteem (cognitive), humour (emotional), problem-solving skills (behavioural) and physical talents (physical) may contribute to the resilience of the youth. Furthermore, resiliency processes are another interactive process in the model. Those are learned resilience or stress-coping processes for coping with stressors or challenges. The final aspect of the model is focused on individual and choice of outcomes. As the framework shows there are three possible outcomes: resilient reintegration, adaption or maladaptive reintegration. Positive outcomes or successful life adaption will increase the likelihood of a more resilient individual. A positive outcome will also make it easier for the individual to reintegrate after disruption or stress (Kumpfer, 1999).

## **2.2 Protective and risk factors**

In order to get a better understanding of the factors contributing to resilience, a distinction can be made between protective and risk factors. First, protective factors describe to what degree the individual evaluates the adaption or developmental outcome as positive. This evaluation can be done on both external criteria, such as academic achievement and internal development criteria such as psychological well-being (Masten, 2001). According to Olsson et al. (2003) and Prince-Embury and Saklofske (2011), a distinction of resilience protective factors can be made in three areas, individual-level factors, social-level factors and societal-level factors. Protective factors are individually, situationally and contextually bound and might be more beneficial for some individuals. For example, the same protective factor leads to positive outcomes in one situation may not lead to positive outcomes for the same person in another situation (Earvolino-Ramirez, 2007). Second, the risk factors describe the threat side. Necessary conditions for resilience in individuals are risk factors. Individuals



are not considered resilient if there has never been a threat to their development (Masten, 2001). For successful adaption of resilience, it is important to understand the processes of protective and risk factors (Olsson et al., 2003; Prince-Embury & Saklofske, 2011).

### **2.2.1. Protective factors**

The individual level factors are for example protective processes such as skills, competencies, talents and resources (Olsson et al., 2003). Different authors mentioned several aspects as protective factors within individuals, which can be categorised in control-related characteristics, personal attributes and mental capacity. The first category, control-related characteristics, consists of factors such as impulse control (Reivich, Seligman & McBride, 2011; Werner, 2000; Meredith et al., 2011) and flexibility (Reivich, Seligman & McBride, 2011). Furthermore, different authors mention personal attributes in relation to resilience such as, sense of humour, sense of personal worthiness (Earvolino-Ramirez, 2007), optimism, empathy (Reivich, Seligman & McBride, 2011), ‘easy’ engaging temperament, low distress/low emotionality (Werner, 2000), self-efficacy (Earvolino-Ramirez, 2007; Reivich, Seligman & McBride, 2011) and disclosure are factors to seemingly increase resilience. In order to cope with an adverse event like a terrorist attack, the need for disclosure is important as well (Orehek et al., 2015). Finally, another aspect that is mentioned by different authors is mental capacity. For example, intelligence is noted as contributing factor. An above average intelligence seems to be a promoting factor to resilience. Besides, academic achievement, planning and decision-making are noted as factors having a positive influence on resilience (Werner, 2000; Olsson et al., 2003.)

The second area social- level factors are focused on the family and peer network of the individual. A protective factor on the social level is having an informal social support network and positive relationships. For example, having cohesion and care within the family (Earvolino-Ramirez, 2007; Olsson et al., 2003; Meredith et al., 2011). Most children identified as resilient have a least one person in their lives who provides them with appropriate and adequate attention in the first year of life (Werner, 2000). Besides, individuals who are more resilient seem to be more active in social groups and in their neighbourhood (Mann et al., 2015). Furthermore, other factors related to the social level that seemingly increase resilience are supportive peers, material resources and success (Olsson et al., 2003).

Finally, the societal-level factors are related to the environment and community of the individual. People who are active in the community seem to be more resilient (Mann et al., 2015). Community level factors as belongingness, cohesion, connectedness and collective efficacy are described as contributing factors to resilience (Meredith et al., 2011). In addition, a resilient society is able to recover easier from extreme events such as a terroristic attack (Bakker, 2012). In order to create resilience in societal aspects such as flexibility, decision-making skills and trust in sources are important factors (Rivera & Kapucu, 2015). All these resilience protective factors described above could attribute to a successful intervention in increasing resilience (Olsson et al., 2003).

### **2.2.2 Risk factors**

The other dynamic factors in resilience, besides protective factors, are risk factors. Risk factors can be described as a predictor with a chance on a negative outcome, based upon the evidence that the probability of a negative outcome will be higher in the future. When the basic human adaption system of the individual works well, then in case of adversity development is robust. When the adaption system is impaired than the risk for developmental problems is much higher (Masten, 2001). Risk factors are biological and environmental factors that increase the chance of the development or maintenance of various problems and can, therefore, be seen as possible risk factors in relation to resilience (Fraser, 1997). Environmental factors such as negative circumstances within the family are mentioned as a risk factor by several authors. Factors within the family, which seem to have negative effects on the resilience of individuals are parental substance abuse (Mann et al., 2015; Werner, 2000), family dysfunction (Doll & Lyon, 1998), exposure to maltreatment, violence, abuse (Masten, 2001; Werner, 2000), divorce (Werner, 2000), low socio-economic status (Masten, 2001) and poverty (Doll & Lyon, 1998; Werner, 2000). Further, environmental risk factors can be traumas of war and natural disasters (Masten, Cultuli, Herbers & Reed, 2009). Besides the many environmental factors, a genetic risk factor in relation to resilience is premature birth (Masten, Cultuli, Herbers & Reed, 2009) and the predisposition for a mental illness (Mann et al., 2015; Werner, 2000).

## **2.3 Cognition, emotion and behaviour**

Cognition, emotion and behaviour are three of the internal resiliency factors, of the Resilience Framework of Kumpfer (1999) and categorized by Mann et al. (2015) to define resilience in the light of social psychology. The three aspects cognition, emotion and behaviour are related to each other. If an individual feels less bound to a certain group or community (emotion), the individual will also be less active in the group or community (behaviour). If someone is flexible to redefine and put situations in perspective (cognition), the person will also be more self-determined and feel more positive emotions (Mann et al., 2015).

### **2.3.1 Cognition**

Cognition relates to all the mental processes in connection with resilience. A module of the master resilience training of the U.S. Army focuses on mental toughness and effective problem-solving. Aspects such as the minimizing catastrophic thinking, fighting back at counterproductive thoughts, deeply held beliefs, and thinking traps are discussed in order to improve mental toughness (Reivich, Seligman & McBride, 2011). Another mental process as described above and mentioned by four of six authors in the resilience concept analysis of Earvolino-Ramirez (2007) is flexibility. The term is defined by Earvolino-Ramirez (2007, p. 77) as: “flexibility captures the essence of adaptability, being able to roll with changes, being cooperative, amiable, and tolerant, and having an easy temperament.” Furthermore, an effective coping style and ability for cognitive re-interpretation are two aspects that

can be seen as a part of flexibility. Another cognitive aspect is the level of cognitive closure. After major terrorist attacks, the level of stress and fear increases within individuals. Which in turn leads to feelings of insecurity. Two interrelated components to these feelings of insecurity are lack of safety and uncertainty. Feelings of lack of safety would lead to the need for safety and feelings of uncertainty would lead to the need for disclosure. Another indicator of resilience is the need for closure, which indicates the need for an individual for manifest knowledge without ambiguity. When the need for cognitive closure is low, the more resilient an individual is (Orehek et al., 2010).

### **2.3.2 Emotion**

The second aspect of resilience is emotion. Stressful situations seem to be inherent with high emotions of individuals. The framework of Troy & Mauss (2011) focuses on emotion regulation ability. Individuals with high emotion regulation ability show higher resilience after stressful situations than individuals with low emotion regulation ability. The framework explains that it is not especially the situation that causes the emotions, but the appraisal of the situation that makes the individuals feel the emotions. Several authors mention that positive emotions and laughter are important aspects to increase resilience (Bonnano, 2004; Tugade & Fredrickson, 2004; Connor & Davidson, 2003). Tugade and Fredrickson (2004) found in their study that high-resilient individuals tend to experience positive emotions even during stress. Besides that, self-esteem and self-efficacy are important aspects in relation to resilience. Individuals with high self-esteem and self-efficacy will have more active problem-focused coping strategies. On the other hand, individuals with low self-esteem and self-efficacy will develop passive-avoidant coping styles focused on emotions (Dumont & Provost, 1999). The same relation has been found in a study of Mayordomo et al. (2016), where problem-focused coping positively predicts resilience and emotional-focused coping negatively predicts resilience. Finally, another emotion-focused aspect of resilience is self-determination. Individuals with high self-determination are not easily overwhelmed by feelings of hopelessness. Those individuals have stronger internal beliefs that whatever life brings that they will survive (Earvolino-Ramirez, 2007; Connor & Davidson, 2003).

### **2.3.3 Behaviour**

The last important factor in resilience, described by Mann et al. (2015) is behaviour. One of the behaviours that is important to increase resilience is the maintenance of positive relations with others. In several studies with children, the attachment with parents is found as an important predictor of a high level of resilience. Besides, that for adults it is important to have meaningful relationships and social support to increase resilience. In particular, not only the relationship is important, but also specifically the quality of the relationship is important for increased resilience (Earvolino-Ramirez, 2007; Connor & Davidson, 2003). According to Rutter (1985), secure relationships in the early ages are important for feelings of high self-esteem and self-efficacy. This, in turn, will lead as described

above to a higher resilience. Another aspect that seems to be important in relation to resilience is effective communication (Earvolino-Ramirez, 2007). Finally, Connor & Davidson (2003) describe in their resilience scale several resilient behaviours like adapting to change, dealing with whatever comes, best effort no matter what, achievement of goals, taking the lead in problem-solving, making unpopular or difficult decisions, acting on a hunch, being in control of your life and working to attain your goals.

## **2.4 FIRST training**

The basis of the FIRST training is focused on the area of Survival Stress Reaction (SSR). The definition used to describe SSR is "a state where a 'perceived' high threat stimulus automatically engages the sympathetic nervous system" (Laur, 2002, p. 3 ). Once the sympathetic nervous system is activated, it is difficult to control it. SSR has both physiological and psychological effects on the individual; it can lead to a negative perception of the threat and as a consequence will lead to the indication of response options (Laur, 2002). There are several physiological and psychological effects of SSR, these will be described below. First of all, it can lead to an increased heart rate. This increased heart rate will make people lose their ability to perform skills, the higher the heart rate the more difficult to complete the skill. Second, SSR affects the visual system. A higher heart rate can lead to tunnel vision, due to narrowing of the vision. Besides, visual tracking and focusing on a certain target become more difficult. Furthermore, the auditory system will be affected. At approximately 145 beats per minute (BPM) the auditory system will shut down. Finally, SSR will also affect the brain. The phenomenon "Critical Stress Amnesia" is known when people do not remember what happened after a critical incident. Another phenomenon that is common during SSR is 'hypervigilance', in this state people are not able to scream, move or yell (Laur, 2002).

The higher the heart rate of an individual, the more SSR will affect one's perception of a threat. As described above, this will indicate one's response options. The heart rate of an individual can move from 70 BPM to 220 BPM in less than half a second during a combat or emergency situation. Besides, the reaction time in performing will have its optimal effect between 115 BPM and 145 BPM. The following aspects can make sure that the heart rate will stay between 115 BPM and 145 BPM to reach maximum performance. First of all, skill confidence, this will take place through mental and physical training. Second, experience through dynamic simulation training, in order to create familiarity with the stimulus. Furthermore, visualization, the more one uses imagination, the more the body is tuned to perform the task. Consequently, breathing is an important aspect. A correct breathing can decrease the heart rate of an individual up to 30% in 40 seconds. Also, the value of life has its impact on heart rate, injuries or killing is not internalized in one's belief system. For this reason, it is important to get a grip on these issues in order to decrease heart rate. Besides, one should believe in the mission, when not there will be hesitation in combat, which in turn will lead to injuries. Next, the

faith system will minimize fear of dying and will, in turn, decrease heart rate. Finally, training is important to decrease heart rate (Laur, 2002).

One of the models used in the FIRST training is the Awareness, Suddenness, Aggression and Proximity of Threats model (A-SAP model). It describes how an opponent impacts a person's tactical choices. The model begins with awareness and is followed up by consent and skill. Consent means the permission of a person to himself to 'act'; skill is the learned capacity or talent to carry out pre-determined results. In turn, this is affected by speed/suddenness, aggression and proximity of the threat. Finally, this will trigger a primal, protective and tactical response of the person. The primal response is also referred to as 'the flinch' that is triggered by a stimulus introduced too quickly that makes persons protect themselves. The protective response is the second stage, in which the person should always push the danger away. Finally, the tactical response is responding with a manoeuvre (E. van Beek, personal communication, March 13, 2017).

When combining the defining and explaining factors of resilience as discussed above to the theories of the FIRST training a relation can be expected. The first level of Resilience Framework of Kumpfer (1999) is the stressor or challenge. This can be seen in line with the first aspect of the A-SAP model, which is awareness, an important factor to notice the stressor. In the FIRST training, participants learn to be aware to prevent danger or respond faster and more effective to danger. Furthermore, the protective- and risk factors of the participant might have an influence on the effects of the FIRST training. The internal resiliency factors of the resilience framework such as cognitive, physical, behavioural, spiritual, and emotional might relate to the Survival Stress Reaction (SSR) in the following way. First, the mental training during the FIRST training could have a cognitive effect on the participants, for example, participants give themselves consent to act. Second, the practical or physical part of the FIRST training might have an influence on the physical resilience factor. Next, a behavioural factor that can relate to the FIRST training is the control of breathing, but as well the protective or tactical responses of the participants. Furthermore, an emotional factor, which could have an influence on resilience, is belief in the mission. Finally, a spiritual factor, which can relate to the FIRST training, is that participants learn to have faith in the mission to minimize fear. Overall, the training relates to different factors explaining resilience. In order to examine resilience in relation to the FIRST training, the experiences of participants of the FIRST training will be studied. This is a qualitative study of effects on resilience levels after participation in the FIRST training. Through in-depth interviews, the following research question is answered. How do participants experience their level of resilience after participation in the FIRST training?

### **3. Method**

This study is part of a more extensive study to examine the effects of the FIRST training on the resilience of civilians in the Netherlands. The main study is divided into three different studies. First of all, a questionnaire was conducted in order to measure the level of resilience after participating in the FIRST training (De Witte, 2018). Further, an observational study is done during an ambush situation to examine the behavioural effects before and after following the FIRST training (Willemsen, 2018). This study examined the experiences of the participants of the FIRST training on their level of resilience by conducting in-depth interviews.

#### **3.1 Participants**

The research population for the entire study are Dutch civilians. In total 70 civilians of the Netherlands participated in the FIRST training. The participants of the total study are gathered by convenience sampling. Participants who signed up for the training have been asked by e-mail to sign up for participating in the interview. A total of 12 participants have been interviewed over two days. Six participants have been interviewed after the first day and six participants have been interviewed after the second day of the FIRST training. The age of the respondents in the sample varies between 25 and 45. Furthermore, the gender of the respondents was equally divided and therefore consisted of six women and six men. Consequently, the education of the respondents was divided equally, four participants studied at MBO, four at HBO (University of Applied Science) and four at University. The first 12 participants who signed up for the interviews were interviewed, so the equal distribution can be attributed to coincidence. In addition, to participate in the study participants should be familiar with the Dutch language, be at least 18 (years of age), are physically capable of performing activities, participate on a voluntary basis and give permission for anonymous processing of results.

#### **3.2 Procedure**

In order to gather the participants for the study flyers (Appendix A) have been made and sent out 45 days before the start of the study. The participants were able to sign up for two Saturdays in October, the 21st of October or the 28th of October. Two different dates are selected in order to give the participants another opportunity to participate if they were not able to participate on a certain date. Once signed up the participants received a confirming e-mail about the purpose of the study (Appendix B), the confidentiality terms and the notice that they would receive a second e-mail with final information (Appendix C). In the first e-mail, the participants were asked who was willing to participate in an interview of approximately 30 minutes after participation in the training in return for a small reward. The participants could sign up for the interview by e-mail. A maximum of six interviews per day was handled due to time constraints. An overview of the activities and a time schedule of the training days can be found in Appendix D. The maximum amount of participants who

could sign up for the main study was 80 participants on each day, due to the limits of the training space and the availability of trainers.

The participants arrived at 09:45 at CrossFit Studio 020 in Amsterdam. The participants were welcomed and were asked to sign the informed consent paper (Appendix G). After this they were asked to fill in the first questionnaire, taking around 10 minutes. Around 10:00 the coming day was explained to them by one of the trainers. During the introduction, 11 participants were randomly chosen for the ambush situation. In the ambush situation, the participants were asked to walk into the parking garage where they were surprised by an actor who said 'hey' in a loud voice and walked up to the respondent as close as possible, in order to observe the behaviour of the respondent. After the observation part, the theoretical part of the training started. In the theoretical part, the basics of the FIRST training were discussed. Theory on the primary responses of humans such as the flinch response and tactical coping strategies for those responses was discussed. When the theoretical part was finished, the practical part of the study started. Here the participant learned to convert their primary reflexes into tactical responses to achieve effective reactions. In this part, the participant experienced the primary reflexes such as the flinch response and learned effective tools to effectively cope in threatening situations, for example, protect the face in an attack with the arms in front of their face (elbows bend) and to push the danger away. When finished with the practical part, half of the respondents were asked to fill out the questionnaire for the second time, taking approximately 10 minutes. Consequently, the participants were debriefed and were thanked for their participation in the training. In the debriefing, the participants got an explanation of the purpose of the activities they have been through that day and there was a possibility to ask questions. The first three participants who signed up for the interviews were asked to meet up with the interviewers, the other three were asked to have a drink and wait for their turn.

The interviewers accompanied the participants to the separate rooms where the interviews were conducted. Information was gathered through structured in-depth focused interview questions taking around 30 minutes. The following seven aspects of Kvale (1996) are taken into account by conducting the in-depth interviews: thematizing, designing, interviewing, transcribing, analyzing, verifying and reporting. First of all, thematizing and designing are the phases to develop the interview scheme; a concept model was used to develop the interview questions (Appendix F). After conducting the interviews, the interviews were transcribed, analyzed, verified with the participants and reported. In order to increase the reliability of the results, a structured interview was conducted. Because three different researchers conducted the interviews, there was a possibility for the researchers to clarify answers of respondents, in order to gather the information needed for the study. In the introduction part of the interview, the participants were granted full anonymity and confidentiality. The participants were fully informed about the research, the interview topics, and audio recording before consenting taking part in the interviews. The participants were not in any way subjected to discomfort, deception or coercion and they agreed vocally on the discussed terms. The interview was focused on gathering

the experiences of the participants in their own words. The participants were encouraged to speak openly about their experiences of the FIRST training in relation to resilience. The following definition was used to give the participants a context for sharing their resilience experiences after following the FIRST training: *‘The extent to which you are able to cope with or to restore from adversity in daily life.’* The definition of resilience in this study has been adjusted to the level of the participants. In the interview several questions regarding resilience were asked, such as: “On a scale from 1 to 10 how resilient do you feel after following the training?” and “What makes you give yourself this grade?” Another questions asked during the interview was: “If now, after following this training, a threatening situation would appear, would you act differently now than before following the training?” and “Could you elaborate in what way?” An overview of the interview scheme can be found in Appendix E. After finishing the interview questions the respondents were thanked for their participation in the interview and they were offered a small present as compensation for their time. Once the interviews were transcribed, they were sent back to participants for review to ensure accuracy.

### **3.3 Data-analysis**

The programs used to perform the data-analysis were Word and Excel. The data-analysis was performed by a combination of the basics of carrying out qualitative analysis (Ritchie, Spencer & O’Connor, 2003) and the seven-step approach of Colaizzi (1978). First of all, the audio recordings of the interviews were transcribed in Word. The transcribed interviews were sent back to the participants to correct any information that is noticed by them as incorrect. Second, initial themes and concepts were identified from the data. Followed by the extraction of significant statements from the transcriptions. Significant statements were recognized as statements directly related to the research question. After this, meaning was assigned to the significant statements by coding. Besides, every significant statement is numbered. After that, the addressed meanings were sorted by theme or concept. The final stage of data management involved summarising or synthesizing the original data.



## 4. Results

In this chapter, the results of the in-depth interviews with the participants of the FIRST training are presented. In total twelve participants were interviewed on several topics focusing on the theoretical framework of chapter 2 to answer the following research question. How do participants experience their level of resilience after participation in the FIRST training? The data is quantified where possible on the number of respondents quoting on the same topic. On some topics respondents had multiple quotes, so, for this reason, the number of quotes will be mentioned between brackets. One respondent had experiences with the FIRST training and will be mentioned separately.

### 4.1 Protective factors

In order to get insight into the protective factors of resilience on an individual level, respondents were asked to describe their characteristics as a person. In the table below the description of characteristics of every participant is shown.

Table 2:

*Characteristics respondent's own description of characteristics*

Respondent	Nr. Data file	Characteristics
1	43	Social, Sportive, <b>Friendly</b> , Introvert, Technical, Short-tempered
2	83	<b>Being kind, Humour, Warm</b>
3	24	<b>Calm, Persistent</b>
4	64	<b>Humour, Optimistic</b> , Naïve, <b>Driven, Enjoying, Laid-back</b> , Work-minded
5	54	<b>Open</b> , Reliable, <b>Friendly</b>
6	5	<b>Purposeful</b>
7	29	<b>Determined, Caring</b> , Around people, Forgetting themselves
8	55	Curious, <b>Open-minded</b> , Growth-oriented
9	39	Persistent, Broad interested, Social, Assertive, <b>Being kind, Smart</b> , Curious, <b>Connecting</b> , Hygenic, Sportive
10	67	<b>Open</b> , Naïve, <b>Energetic, Enthusiastic</b>
11	53	Short-tempered, <b>Open, optimistic</b> , Active, <b>Inquisitive</b> , Humour
12	33	<b>Determined</b> , Transparent, Direct, <b>Affection</b>

Note1: Respondent 12 is the expert

Note2: Characteristics highlighted in bold are in line with the theoretical framework

Several participants mentioned the same characteristics such as, social [2], curious [2], sportive, [2], short-tempered [2], open [3], naïve [2], sense of humour [3], being kind [2], optimistic [2], determined

[2] and persistent [2]. All of the respondents seem to have a characteristic (highlighted in bold) that is in line with the protective factors of resilience described in paragraph 2.2.1 of the theoretical framework. So it seems that there are protective factors contributing to resilience within all individuals.

### *Self-efficacy*

During the interview, participants were asked to describe to what extent they felt confident about their ability to act in threatening situations after participation in the training. First of all, eight respondents mentioned feeling confident about their ability to act in threatening situations. Besides, two respondents did not know if they felt more confident in their ability to act. Finally, two respondents mentioned not to feel more confident. The reasons for their confidence to act differ. One respondent gained knowledge how to respond, one mentioned the realisation after the training, another mentioned the feeling of chance on winning, a respondent felt physically more capable, another one had more trust in his/her own instinct and two mentioned being calmer. On the other hand, the reasons for not feeling confident to act are described as follows. Two respondents stated that reality would be different from the training, two other respondents mentioned that they would not be able to effectively respond and someone mentioned the fear of losing control. Finally, the expert mentioned that the scenario training was the reason for feeling more confident (this part was not present in the training given).

## **4.2 Motivation training**

Another topic of the interview was regarding the motivation of the participants for following the FIRST training. Half of the respondents mentioned as a reason for following the training their own benefit to become more resilient. In line with these findings, one of the mentioned reasons of participants for following the training is learning to defend themselves [5] and the awareness of dangerous situations [2]. Furthermore, other reasons were mentioned by respondents for following the training such as is the interest in the research [4], practising Crossfit on the location where the training was held [4], the importance for sharing the information of the training [2] and finally the interest for learning new things [3].

## **4.3 Experiences**

Another topic of the interview was the experience of a threatening situation. The results show that nine out of the twelve interviewees had experienced at least one threatening situation some time in their life and two participants did not experience any threatening situation. The expert experienced many threatening situations.

The participants were asked to describe a threatening situation they experienced and the way in which they responded to this situation. Six participants, who experienced a threatening situation,

experienced this situation in public. Five respondents experienced violence and one a theft. Four of the participants experienced this situation at work, one experienced violence and three experienced a robbery. The reactions of the respondents to this experience were different. Some participants handled the situation in a more indirect way such as avoiding [3], freezing and being scared. Other participants tried to talk about it [2], stayed calm or undertook action [2]. Furthermore, other participants reacted angrily [2] or physically. Overall, six of the participants explained that they were not satisfied with the way they responded in that situation. One of the participants explained the following: “*But I was not proud how I responded, I don’t know how else I could have responded really, but it was like I don’t know what to do, and I can’t, I just then you know, kind of ran away [...]*” (54.14).

Different reasons have been mentioned for the response of the respondent in the threatening situation such as; own fault, a different response than expected and own choice. The expert mentions the difference in mindset when a threatening situation appears in personal life or at work.

#### 4.4 Resilience

During the interview, the participants were asked to assess their feelings of resilience. The participants were asked to give themselves a grade on a scale from 1 to 10 on their feelings of resilience before and after following the training. The results can be found in table 3 below.

Table 3:

*Respondent’s grade on resilience before and after the FIRST training.*

Respondent	Nr. Data file	Resilience before training	Resilience after training
1	43	4.5	7
2	83	5	6.5 (6/7)
3	24	5	6
4	64	6	8
5	54	6.5	7.25 (7+)
6	5	7	6
7	29	7	8
8	55	7.5	8.5
9	39	8	8.5
10	67	8	7.75 (8-)
11	53	8.5 (8/9)	9
12	33	9	9
Average		6.8	7.6

Note: Respondent 12 is the expert

As shown in table 3 the average grade of the respondents on their feelings of resilience is higher after the training. Ten participants felt more resilient after following the training. On the other hand, two participants did not feel more resilient; they even felt less resilient after following the training. The repeated- measures ANOVA showed a significant effect before and after the training,  $F(1, 11) = 8.18$ ,  $p = .02$ , *Wilks' Lambda* = .57 (before training  $M = 6.83$ ,  $SD = 1.47$  versus after training  $M = 7.63$ ,  $SD = 1.07$ ).

Different reasons were mentioned for the increase in feelings of resilience. Three respondents mentioned knowledge on how to defend themselves was an important aspect, another aspect mentioned by eight respondents was awareness. Finally, five respondents mentioned the learned techniques as a reason for their increased feelings of resilience. Overall, in order to keep this increased grade respondents indicated the importance of repetition. The reason for the two respondents who did not feel more resilient was that they felt more aware, but not capable of dealing with a threatening situation. To illustrate this a respondent mentioned the following: “[...] *I think I went little more to aware, but not capable (5.40)*”. Of the two respondents who felt less resilient, one was male and one was female. In the questionnaire, the participants were asked to describe what they imagined in a certain picture, in order to examine their levels of optimism or pessimism in life (De Witte, 2018). The picture could be interpreted as very positive, positive, neutral, negative and very negative. One description of the respondent was neutral and the other description of the respondent was positive. Furthermore, in the questionnaire, several questions were asked regarding the topic risk perception (De Witte, 2018). The answers of the two respondents were quite average on risk perception. On a five-point (Likert scale) one respondent scored a little above average 3.3 and the other respondent scored a little below average 2.3. An aspect mentioned by both participants to increase the feelings of resilience was more training.

In addition, the respondents were asked about what characteristics influence the grade before following the training. Table 4 shows the characteristics of the respondents, which influence the grade before following the training.

Table 4:

*Characteristics respondents in relation to grade before training.*

Respondent	Nr. Data file	Characteristics
1	43	Introvert, Avoiding conflict, Not Aggressive
2	83	Being kind
3	24	Waiting
4	64	Awareness, Naive
5	54	Vulnerable, Positive, Friendly, Reliable
6	5	Purposeful, Letting go
7	29	Aware of boundaries
8	55	Curious
9	39	Letting go, Relaxing
10	67	Positive
11	53	Solution oriented, Proud, Controlling
12	33	Observing, Awareness

Note: Respondent 12 is the expert

Some respondents mentioned the same characteristics as letting go [2], positive [2] and awareness [2]. Beside characteristics, some respondents mentioned circumstances for influencing the grade such as violent past, sporting, social contacts and never having fought. Finally, the respondents were asked if certain characteristics got stronger or weaker what made them give themselves the grade after following the training. Six respondents mentioned that their self-esteem increased and three respondents mentioned increased awareness. On the other hand, one respondent mentioned that the self-esteem decreased. Further, three respondents mentioned that their earlier mentioned characteristics changed, such as being naive. Consequently, one respondent did not know if something changed.

#### 4.5 Cognitive effects

The cognitive effects of the training were another topic on which questions were asked. The participants were asked in which way the training had an effect on their way of thinking. All the respondents mentioned that the training had an effect on their way of thinking. The respondents mentioned different aspects in which way the training had an effect on their way of thinking. The answers can be divided into insight and knowledge. First of all, insight. Half of the respondents mentioned that the training made them more aware. A respondent mentions the following about this: “*Well yeah, I think it is good. I think it is partly becoming aware and this I think is nice*” (67.51). Furthermore, four different respondents explained that they got the insight that martial arts are not that

effective. Besides, two respondents mentioned their insight in taking control in threatening situations. Finally, three respondents mentioned the insight in the permission to act. The knowledge that respondents gained was mainly focused on the primal reaction. Five respondents mentioned this aspect. *“Yes, mostly the realization, that in certain reflexes, that you do not repress them, but that you can use them”* (43.36). Consequently, for one respondent the theory, which was discussed, gained no new insights.

#### **4.6 Emotional effects**

To get insight into the emotional effects of the training, the participants were asked if the training had an effect on the way they cope with emotions in threatening situations after the training. First of all, four participants did not have the feeling that the training had an effect on the way of coping with emotions. Further, two participants did not know if the training had any effect on their coping with emotions. Finally, six participants explained that the training had an effect on their coping with emotions. Several reasons have been mentioned as to why the training did not have an effect on emotions. The participants expect no change in their emotions [2], an impulsive reaction [3], a difference in reality and an effect would be too early [2]. The reasons that were mentioned by the respondents why the training had an effect on coping with emotions were being calmer, more aware, the insight in theory, confidence and accepting emotions. The expert mentions to be calmer, but experienced no change in emotion as quoted by: *“Because you just stay afraid, at least I do”* (33.31).

#### **4.7 Behavioural effects**

During the interview, participants were asked the following question: “Do you think after following the training that you will behave differently in threatening situations?” First of all, two respondents thought that they would not behave differently. Further, two respondents thought that they might behave differently. Finally, eight respondents thought that they would behave differently. Different reasons were mentioned to indicate the reasons for not showing different behaviour such as feeling less capable, no change in behaviour [3], it depends on the situation and the information of the training will fade away. On the other hand, reasons for showing different behaviour are the learned techniques [5], being more aware [6], giving themselves permission to act [3], taking more control in a situation [5], being more confident and listening to the situation. The expert mentioned behaving differently due to being more aware and the techniques learned in the training. Further, two respondents were part of the ambush situation in the research. One respondent mentioned being able to show different behaviour and one respondent not being able to show different behaviour during the ambush situation.

#### **4.8 Physical effects**

Another aspect examined during the interviews was the physical effects of the training. The respondents were asked if they had the feeling after following the training to be physically more capable to act in threatening situations. Ten respondents mentioned to be physically more capable, one respondent was not sure and one respondent did not think that the training had a physical effect. The reasons mentioned for being physically more capable is the learned techniques/exercises [7] and being able to train on a male [1]. The person with doubts and the respondent who did not think to be physically more capable both mentioned not feeling sure about using the learned tools. The expert mentions the basic posture and the clear steps, which made him feel physically more capable after following the training.

#### **4.9 Different response**

One of the final questions regarding the effects of the training was: “If now, after following this training, a threatening situation would appear, would you act differently compared to before following the training?” “Could you elaborate in what way?” Ten respondents mentioned that they would act differently, one respondent did not know and one respondent did not think to act differently. The nine respondents mentioned different reasons for responding differently such as, keeping hands free [2] and acting more forward [4]. To illustrate this, a respondent mentioned the following about this: “*I would go more forward than before*” (53,39). The respondent described here one of the tactics learned in the training. Other reasons mentioned were being more aware [2], being in control [2] and giving themselves permission to act [1]. The reason mentioned for not acting differently was the awareness of danger. Two conditions were mentioned for not acting differently: the skill level and the situation [2]. Finally, the expert mentioned the use of the protocol as a reason for acting differently in threatening situations.

#### **4.10 Miscellaneous**

In the end of the interview, some general questions about the training were asked. The first question dealt with the parts of the training, which have been important for the respondent, how to react in threatening situations. Nine respondents mentioned that the awareness of the theory was important for them to react to threatening situations. Further, two respondents mentioned in general the importance of the practical part and seven respondents mentioned the importance of the learned techniques. A follow-up question asked was: What can be changed to improve this? Eight respondents mentioned that the practical part of the training was too short and five respondents mentioned the importance of repeating the training. The expert mentioned as well aspects such as the learned techniques and the practical part being too short. Furthermore, the expert mentioned scenario training as being very important, but this was not part of the training given.

The final question asked during the interview was: “What are the experiences of following the training?” The following experiences have been mentioned by the respondents: nice [7], being more aware [2], informative [3], importance of training, interesting [5], useful [2], positive [3], good structure [4], very good, feeling more resilient. Finally, more general tips of the respondents were: the Venn diagram in the presentation was incorrect, better time management [3], adjusting to the audience [2], longer practical training [4], longer training [5], training with different persons [2], more theory and finally a warmer location.

Table 5, below, shows an overview of all the factors that contribute to resilience. All expected factors have been listed; the factors retrieved from the interviews are indicated by an X.



Table 5:

*Overview expected factors – factors after FIRST training*

Expected factors	Results interviews after FIRST training
Protective factors individual	
• Impulse control	X
• Flexibility	
• Decision making	
• Sense of humour	X
• Sense of personal worthiness	
• Optimism	X
• Empathy	X
• Easy engaging temperament	X
• Low distress/ emotionality	X
• Self-efficacy	X
• Closure	
• Above average intelligence	X
• Academic achievement	X
• Planning	
Cognitive factors	
• Mental toughness	X
• Problem-solving	
• Flexibility	
• Closure	
Emotion	
• Emotion regulation ability	
• Positive emotions	X
• Laughter	X
• High self-esteem	X
• High self-efficacy	X
• Self-determination	X
Behaviour	
• Positive relations	
• Effective communication	
• Adapting to change	
• Dealing with whatever comes	X
• Best effort no matter what	X
• Achievement of goals	X
• Taking the lead in problem-solving	
• Making unpopular or difficult decisions	
• Acting on a hunch	
• Being in control of your life	X
• Working to attain your goals	X
Physical	
• Control heart rate	

Note: The factors with an X behind represent the factors mentioned by respondents in the interviews.

## 5. Discussion

The current study was part of a more extensive study in order to examine the effects of the FIRST training on the resilience of Dutch civilians. Twelve participants between the age of 25 and 45 described how they experienced their level of resilience after participating in the FIRST training. The overall results show that participants felt more resilient after following the training. Most of the respondents state they would act differently in a threatening situation after the training. The results suggest that protective factors contributing to resilience were present on different levels within all the participants. Furthermore, it was clear that all the participants experienced cognitive effects of the training. The emotional and behavioural effects on the participants were experienced by more than half of the participants however, they were not that obvious. Finally, most of the respondents experienced physical effects of the training. On the other hand, it should be noted that two respondents felt less resilient after participation in the FIRST training. The training made them feel more aware, but not capable enough to deal with a threatening situation. An aspect mentioned by both participants to increase the feelings of resilience was more training.

### 5.1 Explanations of the findings and suggestions for future research

#### *Protective factors and risk factors*

Overall, however, on different levels, protective factors are present within all participants. Most of the individual factors found in literature were also found in the interviews with the participants. Characteristics mentioned by respondents such as being purposeful, persistent, determined and driven are in line with the control-related characteristics such as impulse control (Reivich, Seligman & McBride, 2011; Werner, 2000; Meredith et al., 2011). Furthermore, different authors mentioned personal attributes in relation to resilience such as sense of humour, sense of personal worthiness (Earvolino-Ramirez, 2007), optimism, empathy (Reivich, Seligman & McBride, 2011), ‘easy’ engaging temperament, low distress/low emotionality (Werner, 2000). Different respondents attributed the following characteristics: sense of humour, optimism, being kind and laid-back. Other characteristics in line with the findings were caring, being calm, friendliness, warmth, enjoyment, openness, being energetic, enthusiasm, open-mindedness, affection and connecting. The protective factors within all the participants might explain the increased feelings of resilience after the training, but it does not explain the two participants feeling less resilient. It might be that respondents were contributing themselves more positive attributes, which are more related to protective factors, because of social desirability.

Another aspect that is mentioned by different authors is mental capacity such as intelligence, academic achievement, planning and decision-making which are noted as factors having a positive influence on resilience (Werner, 2000; Olsson et al., 2003). In relation to mental capacity, being smart

and inquisitive were mentioned. In addition, all the participants completed middle to higher education. This might indicate the positive effect on the resilience of the participants.

Important personal attributes in relation to resilience are self-efficacy and self-esteem (Earvolino-Ramirez, 2007; Reivich, Seligman & McBride, 2011; Dumont & Provost, 1999). Individuals with high self-esteem and self-efficacy seem to have more active problem-focused coping strategies. More than half of the respondents had higher feelings of self-efficacy and half of the respondents mentioned an increase in self-esteem, which might increase when respondents feel more capable by practising more. Further, respondents mentioned an increase in awareness and self-esteem, which is in line with the first two steps awareness and skill confidence of the A-SAP model. The increase in self-esteem and self-efficacy might contribute in this way into the increase in resilience.

A protective factor on social level is having an informal social support network and positive relationships (Earvolino-Ramirez, 2007; Olsson et al., 2003; Meredith et al., 2011). Characteristics mentioned by several respondents were being social and around people. On the other hand, risk factors might also affect resilience. According to different authors, risk factors within the family such as exposure to maltreatment, violence and abuse (Masten, 2001; Werner, 2000) seem to have negative effects on the resilience of individuals. Although this was not a specific topic of the questionnaire, one respondent mentioned the influence of violence in the past on the feelings of resilience. Overall, most of the respondents felt more resilient after following the training, but it is hard to state which characteristics mentioned beforehand have positive effects on the resilience of individuals.

#### *Cognitive, emotional, behavioural and physical effects*

In a certain way, the training had an effect on the cognition of participants. First of all, the A-SAP model used in the training begins with awareness. Half of the respondents mentioned that the training made them more aware. This awareness is followed up by consent, which is as well found in the answers of the respondents, described as permission to act. Thus, the training seems to have a cognitive effect on the level of awareness and the insight in the permission to act of the participants. Furthermore, aspects to improve mental toughness can be seen back in the answers of the respondents such as: being more aware, insight ineffectiveness of martial arts, insight in taking control and insight in the permission to act. These aspects are in line with the findings of Reivich, Seligman and McBride (2011) aspects such as the minimizing catastrophic thinking, fighting back at counterproductive thoughts, deeply held beliefs and thinking traps are discussed in order to improve mental toughness.

In some ways, the training had emotional effects on the participants. When looking for a theoretical point of view several authors mention that positive emotions and laughter are important aspects to increase resilience (Bonnano, 2004; Tugade & Fredrickson, 2004; Connor & Davidson, 2003). As described in the section protective factors and risk factors, this is in line with the characteristics of respondents such as sense of humour, optimism, being kind, caring, friendly, warmth, enjoying, openness, energetic, enthusiasm and affection. Another emotion-focused aspect of

resilience is self-determination (Earvolino-Ramirez, 2007; Connor & Davidson, 2003). In line with those findings earlier mentioned characteristics such as purposefulness, persistence, determination and drive might indicate the increase in resilience. Overall, the effects of the training on the emotions of the participants were not very clear. A reason for this might be that participants find it hard to imagine how they would cope with emotions because most of them did not experience a threatening situation (ambush situation of observation research) after the training. In addition, emotions might be unconscious processes and hard to describe. Further, the question: “Do you think the training had an effect on the way you cope with emotions in threatening situations?” was not formulated in line with the theoretical framework, the theoretical framework suggests that the participants with positive emotions are more resilient. This might explain the difference in answers. The results are in line with the theory due to another question.

Most of the respondents expect to behave differently after following the training. When comparing the behavioural effects of the training with the theory, the following can be noticed. Answers of respondents are more focused on the behaviours described by Connor and Davidson (2003) such as dealing with whatever comes, best effort no matter what, achievement of goals and being in control of your life. The respondents’ answers giving themselves permission to act and take more control in situations are in line with the theory of Connor & Davidson. Other behavioural aspects were more focused on the learned techniques, awareness and confidence. All those aspects are in line with the A-SAP model of the training. Other aspects in the theoretical framework were mentioned by respondents such as positive relations with others (Earvolino-Ramirez, 2007; Connor & Davidson, 2003), adapting to change, taking lead in problem solving, making unpopular or difficult decisions and acting on a hunch (Connor & Davidson, 2003), and effective communication (Earvolino-Ramirez, 2007). This might be since the answers of the respondents were more focusing on the behaviour regarding the training and not regarding the resiliency behaviours in general.

Overall it can be concluded that most of the respondents had the feeling that the training had physical effects. One of the aspects of the A-SAP model is skill. In line with this one of the aspects to decrease heart rate based on the SSR is skill confidence, this will take place through mental and physical training (Laur, 2002). The aspects skill and skill confidence are found in the answers of the respondents. The reasons mentioned for feeling physically more capable are the techniques/exercises and training on a male. The person who had doubts and the respondent who did not think to be physically more capable both mentioned not feeling sure about using the learned tools. It might be possible that with more training those participants feel more confident about how to use the learned tools. For this reason, it could be interesting to see the effects with those participants after more training.

### *Response to threatening situation*

Another topic of the interview was the experience of a threatening situation. It is hard to say if the experience has a relation to resilience because both participants who did and did not experience a threatening situation scored higher on resilience after following the training. Furthermore, the participants were asked to describe a threatening situation they experienced and the way in which they responded to this situation. The reactions of the respondents to this experience were different. Several participants handled the situation in a more indirect way such as avoiding, freezing and being scared. Other participants tried to talk about it, stayed calm or took action. Furthermore, other participants reacted angrily or physically. Overall, half of the participants explained that they were not satisfied with the way they responded in that situation. In the end of the interview, the respondents were asked if they would act differently in a threatening situation after following the training. When comparing the responses of the participants before and after following the training it can be noticed that overall the respondents expect to act more actively. Before having attended the training, participants acted in a more indirect way, which has been changed to a more effective coping style such as keeping hands free and acting more forward after they received the training. In addition, the mental aspects such as awareness, having control over the situation and giving themselves permission to act were mentioned. Those differences in acting are in line with an effective coping style (having control over the situation) and ability for cognitive re-interpretation (awareness and giving themselves permission to act), which are two aspects that can be seen as a part of flexibility, which is a promoting factor for resilience (Earvolino-Ramirez, 2007).

### *Feeling less resilient*

As described earlier two respondents mentioned to feel less resilient after following the training. So the training made them feel more aware and not capable enough, however, this did not have any effect on their level of optimism in life. Furthermore, risk perception is conceptualised as a pillar of social resilience (Bradford et al., 2012). The answers of the two respondents were quite average on risk perception, on a five-point (Likert scale) one respondent scored a little above average and the other respondent scored a little below average. Therefore, it cannot be concluded that there were extremes in risk perception, which could explain the decreased feelings of resilience. An explanation for the feelings of the respondents might be in line with the Extended Parallel Processing Model (De Witte & Allen, 2000). The incoming stimuli, in this case, the information of the training, made the participants more aware, so the participants probably experienced the perceived threat as high. Further, the response efficacy and self-efficacy seem to be low, because they did not feel capable enough of dealing with a threatening situation. This will, according to the model, lead to emotion focused-coping instead of problem-focused coping. Finally, an aspect mentioned by both participants to increase the feelings of resilience is more training.

### *Future research*

Taking into account the explanations for the results as described above, some suggestions for future research can be formulated. First, the protective factors on social level and societal-level and risk factors might be interesting to study in combination with the FIRST training. As the Resilience Framework of Kumpfer (1999) suggests it is an important aspect of the resilience of individuals. To gain more insight into the characteristics of individuals and factors in their social network contributing to higher feelings of resilience after training. On top of that, it might be interesting to further examine the emotional factors contributing to resilience, for example by letting participants experience a threatening situation by virtual reality glasses. This could be done in an experimental room with cameras to be able to track the facial expression and to measure the heart rate of the participant. The participant can be asked to fill in a questionnaire on emotions before and after the threatening situation. In this case, it might be easier for the participant to think of their response while confronted with a threatening situation and easier to describe their emotions. Next, for future research, it should be kept in mind to increase the response-efficacy and self-efficacy of the respondents to develop a problem-focused coping style. Another aspect that could be worthwhile studying is the balance between awareness and skill confidence. It seems that the skill confidence is not high enough. It would be interesting to see after how much training the skill confidence would be high enough. In addition, it would be interesting to see what the effects are after the scenario training, the expert mentioned in the interview. It would further be interesting to study the effect across different age groups, to see if the effects will be the same with older participants and physically less capable participants.

### **5.2 Strengths and limitations**

The strengths and limitations of this study should be noted. One of the merits lies in the diversity of the sample, which enabled identification of commonalities across different backgrounds, education level, gender and the experiences with threatening situations.

Besides the strengths, the study has its limitations. First of all, the sampling method might have its limitations. The participants volunteered to participate in the interview, therefore, the participants might be more enthusiastic to participate and give more positive answers regarding the training. Further, the sample was small (12 participants), although it was the highest possible; it makes it hard to draw conclusions. There is a possibility that results could be attributed to social desirable answers. Next, the variation in the age of the respondents is limited, which may not give a clear representation of the Dutch civilians. Older people might be physically less capable and this might result in consequences for the generalization of the results. Another limitation of the study might be the motivation for the training. Some participants mentioned practising CrossFit at the location of the training. According to Nezhad and Besharat (2010), resilience and hardiness are positively associated with sports achievement. This might indicate that Crossfit might have a direct or an indirect effect on the resilience of the participants. In addition, another limitation of the research might be social

desirability, because some participants know the trainer personally which might have led to answers in favour of the effectiveness of the training. Consequently, the interviews are done directly after the training. This might have had an effect on the feelings of resilience, due to a positive vibe after the training the respondents might have felt more resilient at the time. This feeling might be different after a few days, which is also mentioned by different respondents. The importance of repeating the training should be noted to let the feeling of resilience last. Finally, the questions asked during the interview were as the results show not always on the same level as the participants. This might have led to a different interpretation of the questions, for example, the cognitive effects of the training were more generally described by the respondents than expected. In addition, it might be hard to imagine how one would respond in certain situations, such as coping with emotions in a threatening situation.

Recapitulating, it can be stated that the FIRST training had positive effects on the resilience of the participants. Several limitations have to be taken into account before generalising the results. For future research, it might be interesting to further examine the effects of emotions after following the training. Furthermore, it might be interesting to study the effects across different age groups, to see if the effects will be the same with older participants and physically less capable participants.

## References

- Bakker, E. (2012). *Naar meer weerbaarheid en veerkracht in contraterrorismebeleid*. Retrieved from: [https://drive.google.com/drive/folders/0B\\_3yB9UVCaluWGY3LXhmeWFucnM](https://drive.google.com/drive/folders/0B_3yB9UVCaluWGY3LXhmeWFucnM)
- Bonanno, G.A. (2004). Loss, trauma and human resilience. Have we underestimated the human thrive after extremely aversive events? *American Psychologist*, 59 (1), 20-28. doi: 10.1037/0003-066X.59.1.20
- Bonanno, G.A., Galea, S., Bucciarelli, A., & Vlahov, D. (2007). What Predicts Psychological Resilience After Disaster? The Role of Demographics, Resources, and Life Stress. *Journal of Consulting and Clinical Psychology*, 75 (5), 671-682. doi: 10.1037/0022-006X.75.5.671
- Colaizzi, P. (1978). *Reflections and Research in Psychology: A Phenomenological Study of Learning*. Dubuque, IA: Kendall/Hunt.
- Connor, K., & Davidson, J.R.T. (2003). Development of a new resilience scale: the Connor- Davidson resilience scale (CD-RISC). *Depression and anxiety*, 18, 72-82.
- De Witte, K., & Allen, M. (2000). A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health Education and Behavior*, 27(5), 591-615.
- De Witte, L.M. (2018; forthcoming). *Resilience in relation to the FIRST self-defence training*. University of Twente: Master thesis.
- Doll, B., & Lyon, M.A. (1998). Risk and resilience: implication for the delivery of educational and mental health services in schools. *School psychology review*, 27 (3), 348-363.
- Dumont, M., & Provost, M.A. (1999). Resilience in Adolescents: Protective Role of Social Support, Coping Strategies, Self-Esteem, and Social Activities on Experience of Stress and Depression. *Journal of Youth and Adolescence*, 28 (3), 343-363.
- Earvolino-Ramirez, M. (2007). Resilience: A Concept Analysis. *Nursing Forum*, 42 (2), 73- 82. doi: 10.1111/j.1744-6198.2007.00070.x
- Fraser, M. W. (1997). *Risk and resilience in childhood: An ecological perspective*. Washington, DC: National Association of Social Workers Press.
- Fraser, M.W., Richman, J.M., & Galinsky, M.J. (1999). Risk, protection, and resilience: toward a conceptual framework for social practice. *Social Work Research*, 23 (3), 131-143.
- Fredrickson, B.L., Tugade, M.M., Waugh, E.C., & Larkin, G.R. (2003). What Good Are Positive Emotions in Crises? A Prospective Study of Resilience and Emotions Following the Terrorist Attacks on the United States on September 11th, 2001. *Journal of personality and social psychology*, 84 (2), 365-376.
- Gemeente Amsterdam (2007). *Amsterdam tegen radicalisering*. Retrieved from <https://www.politieacademie.nl/kennisenonderzoek/kennis/mediatheek/PDF/45522.pdf>
- Interpol (2016). *TE-SAT 2016*. Retrieved from: <https://www.europol.europa.eu/activities-services/main-reports/european-union-terrorism-situation-and-trend-report-te-sat-2016>



- Kirby, L. D., & Fraser, M. W. (1997) *Risk and resilience in childhood*. In M. Fraser (ed.), *Risk and resilience in childhood: An ecological perspective*. Washington, DC: NASW Press.
- Kumpfer, K.L. (1999). *Factors and processes contributing to resilience. The resilience framework*. New York: Kluwers Academic/Plenum Publishers.
- Kvale, S. (1996). *Interviews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks, CA: Sage.
- Laur, D. (2002). *The anatomy of fear and how it relates to survival skills training*.
- Linders, M. (2017). *The relationship between the psychological distance to four terrorist attacks and the extent to which Dutch tweets in response to these attacks show fear and humor*. Bachelor Thesis: Radboud University Nijmegen.
- Mann, L., Doosje, B., Konijn, E. A., Nickolson, L., Moore, U., & Ruigrok, N. (2015). *Indicatoren en manifestaties van weerbaarheid van de Nederlandse bevolking tegen extremistische boodschappen: een theoretische en methodologische verkenning*. Amsterdam: Universiteit van Amsterdam.
- Masten, A. S. (2001). Ordinary magic: Resilience processes and development. *American Psychologist*, 56, 227–238.
- Masten, A.S., Cultuli, J.J., Herbers, J.E. & Reed, M.J. (2009). *The Oxford Handbook of Positive Psychology*. Oxford: University Press.
- Mayordomo, T., Viguer, P., Sales, A., Santorres, E., & Meléndez, J.C. Resilience and Coping as Predictors of Well-Being in Adults. *The journal of psychology*, 150 (7), 809-821.
- Meredith, L.S., Sherbourne, C.D., Gaillot, S.J., Hansell, L., Richard, H.V., Parker, A.M., & Wrenn, G. (2011). Promoting Psychological Resilience in the U.S. Military. *Rand Health Quarterly*, 1 (2).
- Ministerie van Veiligheid en Justitie (2017). *Aanslag dreiging in Nederland*. Retrieved from: [https://www.nctv.nl/organisatie/ct/dtn/aanslagdreiging\\_in\\_Nederland.aspx](https://www.nctv.nl/organisatie/ct/dtn/aanslagdreiging_in_Nederland.aspx)
- Nezhad, M.A.S., & Besharat, M.A. (2010). Relations of resilience and hardiness with sport achievement and mental health in a sample of athletes. *Procedia Social and Behavioral Sciences*, 5, 757–497.
- NRC (2017). *IS eist verantwoordelijkheid voor aanslag Londen op*. Retrieved from <https://www.nrc.nl/nieuws/2017/06/04/zeker-zes-doden-en-dertig-gewonden-bij-terreuraanvallen-londen-a1561664>
- Olsson, C.A., Bond, L. Burns, J.M., Vella-Brodrick, D.A., & Sawyer, S.M. (2003). Adolescent resilience: a concept analysis. *Journal of Adolescence*, 26, 1-11.
- Orehek, E., Fishman, S., Dechesne, M., Doosje, B., Kruglanski, A. W., Colee., ... Jackson, T. (2010). Need for closure and the social response to terrorism. *Basic and Applied Social Psychology*, 32, 279–290. doi: 10.1080/01973533.2010.519196

- Prince-Embury, S., & Saklofske, D.H. (2011). *Resilience Interventions for Youth in Diverse Populations*. New York: Springer. doi: 10.1007/978-1-4939-0542-3
- Reivich, K.J., Seligman, E.P., & McBride, S. (2011). Master resilience training in the U.S. Army. *American Psychologist*, 66 (1), 25-34. doi: 10.1037/a0021897.
- Renden, P.G., Savelsbergh, G.J.P., & Oudejans, R.R.D. (2016). Effects of reflex-based self-defence training on police performance in simulated high-pressure arrest situations. *Ergonomics*, 60 (5), 669-679. doi:10.1080/00140139.2016.1205222
- Ritchie, J., Spencer, L., & O'Connor, W. (2003). *Qualitative research practice. A guide for Social Science Students and Researchers*. SAGE publication: London, Thousand Oaks & New Delhi.
- Rivera, F.I., & Kapucu, N. (2015). *Disaster Vulnerability, Hazards and Resilience*. Switzerland: Springer International Publishing.
- Rutter, M. (1985). Resilience in the face of adversity: Protective factors and resistance to psychiatric disorder. *British Journal of Psychiatry*, 147, 598–611. doi: 10.1192/bjp.147.6.598
- Rutter, M. (1999). Resilience concepts and findings: implications for family therapy. *Journal of Family Therapy*, 21, 119-144
- Schuster, M. A., Stein, B.D., Jaycox, L.H., Collins, R.L., Marshall, G.N., Elliott, M.N... Berry, M.A.(2001). National survey of stress reactions after the September 11, 2001, terrorist attacks. *The New England Journal of Medicine*, 346 (20), 1507-1512. doi: 10.1056/NEJM200111153452024
- Troy, A.S., & Mauss, I.B. (2011). *Resilience and mental health*. Cambridge: University Press.
- Tugade, M.M., & Fredrickson, B.L. (2011). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of personality and social psychology*, 82 (2), 320-333. doi: 10.1037/0022-3514.86.2.320
- Werner, E. (2000). *Handbook of Early childhood intervention*. Cambridge: University Press.
- Willemsen, L.M.A. (2018). *The effects of the FIRST training on the behavior of people in an unexpected, threatening situation*. Enschede, University of Twente: Master thesis.

## Appendix

### Appendix A - Flyer



UNIVERSITY OF TWENTE.

Special guest: Rico Briedjal

## Weerbaarheid vergroten?

Wil jij weten en leren wat je kunt doen als je in een gewelddadige situatie terecht komt? Doe dan mee aan de FIRST training op 21 oktober of 28 oktober! De training zal beginnen om 9.45 uur en uiterlijk eindigen om 14.00 uur. Hiermee help je niet alleen ons, door mee te doen aan een weerbaarheidsonderzoek van Universiteit Twente, maar ook jezelf en jouw omgeving!

Ben jij minimaal 18 jaar (of 14+ met toestemming van jouw ouders) en lichamelijk fit? **Geef je dan nú op!**

Stuur een e-mail vóór 16 oktober met jouw voorkeursdatum naar:  
utweerbaarheidsonderzoek@hotmail.com



**De training zal bestaan uit een klein theoretisch gedeelte en fysiek gedeelte!**



**CrossFit**

De training vindt plaats bij Reebok CrossFit 020:  
Hoogoorddreef 3  
1101 BA Amsterdam-Zuidoost

De deelname is vrijwillig en door je op te geven, geef je automatisch toestemming voor deelname aan een onderzoek en het anoniem verwerken van de onderzoeksresultaten.

**GRATIS  
TRAINING  
T.W.V. €250,- P.P.**

## **Appendix B - First e-mail signing up training**

Hi,

Thank you for signing up for the FIRST training and the research of the University of Twente.  
In this e-mail, we will introduce ourselves and give you further information.

We are three students of the University of Twente: Linda, Lara and Megan. At the moment we are doing our master Psychology 'Conflict, Risk and Safety'. We are studying resilience and in order to do this, we need you. We are very happy with your participation and we hope you will feel more resilient after following the training.

What will be the schedule for the day? The day starts at 09:45. First of all, we will ask you to sign the informed consent paper, where you agree on the general conditions for participation in the study. The first half hour/hour of the training will be focused on the theoretical background of the training. After this, the practical part will start. The training will be finished around 13.00. Afterwards, interviews will be conducted with several participants. For this, we are looking for volunteers. The interviews will take around 30 minutes and in return, you will receive a small reward. Do you want to help out with the interviews, please send us an e-mail. This means that when you participate in the interview you will be finished that latest 14.00.

You will receive further information about the day by e-mail.

If you have any further questions, please let us know.

With kind regards,

Lara, Megan en Linda.

## **Appendix C – Second e-mail information participants**

Hi,

Thanks, participation in the F.I.R.S.T. training. In this e-mail, you will receive further information.

We would like to welcome you on 28th of October on 09:45 at Reebok Crossfit 020. The address is: Hoogoorddreef 3, 1101 BA Amsterdam-Zuidoost.

Are you planning to come by car? That is no problem! It is possible to park the car in parking garage P9. This parking garage is next to Reebok Crossfit 020. We can offer you a discount on the parking costs. Besides, the location is easy to reach with public transport.

Finally, we would ask you to wear sports clothes and to bring a bottle of water. We also would like to ask you to bring your own lunch; it is possible to buy healthy snacks at the location.

If there are any people in your network who would like to participate as well, please let us know. It is still possible to sign up!

We hope you are excited to participate in the training. We look forward to seeing you on the 28<sup>th</sup> of October.

If you have any further questions, please let us know.

With kind regards,

Lara, Megan en Linda.

## Appendix D: Overview activiteiten training day

Eerste trainingsdag (21 oktober):

<b>09.45</b>	Verzamelen bij de sportschool – Inloop met koffie/thee.
<b>10.00</b>	Toestemmingsverklaringformulier laten invullen, vragenlijst (kwantitatief onderzoek) en ambush bij enkele respondenten (observatie onderzoek).
<b>10.45</b>	Start training.
<b>12.45</b>	Einde training. Vragenlijst laten invullen (kwantitatief onderzoek) en debriefing.
<b>13.00</b>	Drie respondenten worden geïnterviewd.
<b>13.30</b>	Drie respondenten worden geïnterviewd.
<b>14.00</b>	Einde trainingsdag.

Tweede trainingsdag (28 oktober):

<b>09.45</b>	Verzamelen bij de sportschool – Inloop met koffie/thee.
<b>10.00</b>	Toestemmingsverklaringformulier laten invullen, vragenlijst (kwantitatief onderzoek).
<b>10.15</b>	Start training.
<b>12.15</b>	Einde training. Vragenlijst laten invullen (kwantitatief onderzoek), ambush bij enkele respondenten (observatie onderzoek) en debriefing.
<b>13.00</b>	Drie respondenten worden geïnterviewd.
<b>13.30</b>	Drie respondenten worden geïnterviewd.
<b>14.00</b>	Einde trainingsdag.

### **Appendix E - Interview scheme:**

The three basic parts of the interview guide are the fact sheet, interview questions and post-interview comment sheet.

#### **The fact sheet**

The fact sheet, which is used to record the time, date, and place of the interview, special conditions or circumstances which may affect the interview, and demographic information about the respondent being interviewed.

<b>Respondent nr.</b>	<b>Demografische gegevens</b>	<b>Naam interviewer</b>	<b>Plaats interview</b>	<b>Tijdstip interview</b>	<b>Speciale condities/omstandigheden</b>

## Interview questions

### Introductie

Allereerst, wat fijn dat je mee wilt werken aan dit interview. Ik zal beginnen met het uitleggen van de hele bedoeling van dit interview. Zoals je dus misschien al eerder hebt gelezen en gehoord doen wij onderzoek naar de effecten van de FIRST training op de weerbaarheid van individuen. Door middel van een aanmelding via e-mail heb je aangegeven mee te willen werken aan het interview. Ik ga straks beginnen met zeven algemene vragen hierna volgen dertien vragen die gaan over jouw weerbaarheid in relatie tot de training. Met als doel om je ervaringen in kaart te brengen in relatie tot de training. *Vandaag zullen 6 mensen worden geïnterviewd en volgende week ook 6 mensen*, hierna zullen alle gegevens worden verwerkt. Hiermee proberen wij in januari 2018 klaar te zijn en de masterthesis te publiceren. Hier kan ik je naar verwijzen, als je meer van het onderzoek zou willen lezen.

Dan nog iets anders, ik zou graag een audiorecorder willen gebruiken voor het opnemen van je antwoorden. De gegevens die wij verzamelen zullen volstrekt anoniem worden behandeld. Niemand zal te weten komen, dat de antwoorden die je geeft van jouw afkomstig zijn. Dit interview zal na afloop worden uitgeschreven en worden toegestuurd en graag ontvang ik je toestemming over deze transcriptie of dit akkoord is. De opname zal alleen beluisterd worden, door de onderzoekers en zal na afloop worden vernietigd. Tot slot, heb ik een vragenlijst en je hoeft niet anders te doen dan op mijn vragen zo goed en volledig mogelijk antwoord te geven. Alles bij elkaar zal het interview ongeveer een half uur duren. Dat was alles, wat ik wilde zeggen, is dat zo duidelijk? En is het allemaal akkoord wat jouw betreft? \*\*\*\*\* Start opnemen\*\*\*\*\*

1. Hoe oud ben je?
2. Waar kom je vandaan?
3. Wat doe je in het dagelijks leven?
4. Welke eigenschappen omschrijven jou als persoon?
5. Wat heeft je getriggerd om deze training te volgen?
6. Heb je al eens een bedreigende situatie meegemaakt?
7. (Zo ja), hoe reageerde je dan in deze situatie?

*(Definitie bedreigende situatie: een situatie die nog niet is geëscaleerd, maar wel kan leiden tot escalatie. Bijv. Vernieling, mishandeling, moord etc.)*

Zoals eerder verteld doen wij onderzoek naar weerbaarheid. Binnen dit onderzoek gaan wij uit van de volgende omschrijving: *De mate waarin je in staat bent om te gaan met of te herstellen van tegenslagen in het dagelijks leven.*



8. Op een schaal van 1 tot 10 hoe weerbaar voelde jij jezelf voor het volgen van de training? En wat maakt het dat je jezelf dit cijfer geeft?
  9. Welke eigenschappen vanuit jezelf beïnvloeden dit cijfer?
  10. Heeft de training effect gehad op jouw manier van denken? Kun je uitleggen op welke manier?
  11. Denk je dat de training invloed heeft gehad op het omgaan met emoties in bedreigende situaties? Kun je uitleggen op welke manier?
  12. Heb je door het volgen van de training het idee dat je je anders zult gedragen in bedreigende situaties? Kun je uitleggen op welke manier?
- Antwoord samenvatten*
13. In hoeverre voel je vertrouwen in je bekwaamheid om dan werkelijk te handelen? *In hoeverre ben je er gerust op dat je kunt handelen in bedreigende situatie?*
  14. Heb je het gevoel dat je na het volgen van de training lichamelijk gezien beter in staat bent te handelen in bedreigende situaties? Kun je uitleggen op welke manier?
  15. Op een schaal van 1 tot 10 hoe weerbaar voel jij jezelf na het volgen van de training? En wat maakt het dat jij jezelf nu dit cijfer geeft?
  16. Zijn er eigenschappen vanuit jezelf versterkt of verminderd die er voor zorgen dat je jezelf dit cijfer geeft?
  17. Als er nu na het volgen van de training een bedreigende situatie zich zou voordoen, zou je dan nu anders reageren als voor de training? Kun je uitleggen op welke manier.
  18. Welke onderdelen van de training zijn voor jou belangrijk geweest op jouw manier van reageren in bedreigende situaties? Wat zou er nog veranderd moeten worden om dit te verbeteren?
  19. In hoeverre kun je iets met je wat je geleerd hebt in de training?
  20. Wat zijn je ervaringen van het volgen van de training?

Hartelijk dank voor je medewerking aan het interview!

## *Introduction*

First of all, thank you for participating in this interview. First, we will explain what the purpose is of the interview. As you might have heard before, we do research on the effects of the F.I.R.S.T training on the resilience of individuals. By e-mail, you have signed up for participating in this interview. First, I will start with 7 general questions. After this, I will ask 13 questions about your resilience regarding the training. *Today we will interview in total six people, also next week six people will be interviewed*, after this, the results will be analysed. We hope to finish and publicise our master thesis in January 2018. It is possible to send you the link once the thesis is published.

I would like to use an audio recorder to record the answers. All the information we gather today will be processed anonymously. Nobody will know that the answers you give today come from you. After today, all the answers will be transcribed and send back to you for permission. The record will only be heard by the researchers and will be deleted after the thesis is published. Finally, I have a questionnaire in front of me and the only thing you have to do is answer my questions as good and complete as possible. In total, the interview will take around half an hour. That is everything I wanted to explain, is this clear for you? And do you give permission to proceed?

\*\*\*\*\* Start recording\*\*\*\*\*

1. How old are you?
2. Where are you from?
3. What do you do in daily life?
4. Which characteristics describe you as a person?
5. What triggered you to follow the training?
6. Have you ever experienced a threatening situation?
7. (In case of yes), how did you respond to this situation?

*(Definition threatening situation: a situation that has not escalated yet, but can lead to escalation. E.g. destruction, abuse, murder etc.)*

As discussed before this research is focused on resilience. In this research, we use the following description to describe resilience: *The extent to which you are able to cope with or to restore from adversity in daily life.*

8. On a scale from 1 to 10, how resilient did you feel before following the training? What makes you give yourself this grade?
9. Which characteristics of you influence this grade?
10. Did the training have an effect on your way of thinking? Please elaborate in what way.

11. Do you think the training had an effect on the way you cope with emotions in threatening situations? Please elaborate in what way.
12. Do you think after following the training that you will behave differently in threatening situations? Please elaborate in what way. *Antwoord samenvatten*
13. In how far do you feel confident about your ability to act in threatening situations?
14. Do you have the feeling after following the training that you are physically more capable to act in threatening situations? Please elaborate in what way.
15. On a scale from 1 to 10, how resilient do you feel after following the training? What makes you give yourself this grade?
16. Did characteristics of you get stronger or reduce which makes you give yourself this grade?
17. If now, after following this training, a threatening situation would appear, would you act differently compared to before following the training? Could you elaborate in what way?
18. Which parts of the training have been important for you how to react to threatening situations? What can be changed to improve this?
19. In what way is it useful for you what you have learned today?
20. What are the experiences of following the training?

Thank you so much for participating in this interview!

## Appendix F - Conceptual framework

How do participants experience their level of resilience after participation in the FIRST training?

Theoretical concept	Factors	Subfactors	Indicators	How to measure?
Resilience	Protective factors on individual level	Control related	Impulse control	Hoe zou jij jezelf omschrijven als persoon?
			Flexibility	Welke factoren vanuit jezelf maken dat je jezelf een ... geeft?
			Decision-making	Wat heeft je getriggerd om deze training te volgen?
		Personal attributes	Sense of humour	
			Sense of personal worthiness	
			Optimism	
			Empathy	
			Easy engaging temperament	
			Low distress/low emotionality	
			Self- efficacy	In hoeverre voel je je in staat om te handelen na het volgen van de training?
			Closure	
		Mental capacity	Above average intelligence	
			Academic achievement	
			Planning	

	Internal resiliency factors	Cognitive	Mental toughness	Heeft de training effect gehad op jouw manier van denken? Kun je uitleggen op welke manier?
			Problem solving	
			Flexibility	
			Closure	
		Emotion	Emotion regulation ability	Denk je dat de training invloed heeft gehad op het omgaan met emoties in stressvolle situaties? Kun je uitleggen op welke manier?
			Positive emotions	
			Laughter	
			High self-esteem	
			High self-efficacy	
			Self-determination	
		Behaviour	Positive relations	Heb je door het volgen van de training het idee dat je je anders zult gedragen in stressvolle situaties? Kun je uitleggen op welke manier?
			Effective communication	
			Adapting to change	
			Dealing with whatever comes	

			Best effort no matter what	
			Achievement of goals	
			Taking the lead in problem solving	
			Making unpopular or difficult decisions	
			Acting on a hunch	
			Being in control of your life	
			Working to attain your goals	
		Physical	Control heartrate	Heb je het gevoel dat je na het volgen van de training fysiek gezien beter in staat bent te handelen in stressvolle situaties? Kun je uitleggen op welke manier?

## Toestemmingsverklaringformulier

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**Titel onderzoek: Weerbaarheid vergroten**

**Verantwoordelijke onderzoekers:** Linda Willemsen, Megan Oude Groeniger en Lara de Witte

### *In te vullen door de deelnemer*

Ik verklaar op een voor mij duidelijke wijze te zijn ingelicht over de aard, methode, doel en de risico's en belasting van het onderzoek. Ik weet dat de gegevens en resultaten van het onderzoek alleen anoniem en vertrouwelijk aan derden bekend gemaakt zullen worden. Mijn vragen zijn naar tevredenheid beantwoord. Ik begrijp dat film-, foto, en videomateriaal of bewerking daarvan uitsluitend voor analyse en/of wetenschappelijke presentaties zal worden gebruikt. Ik stem geheel vrijwillig in met deelname aan dit onderzoek. Ik behoud me daarbij het recht voor om op elk moment zonder opgave van redenen mijn deelname aan dit onderzoek te beëindigen. Als ik verder informatie wil betreft het onderzoek nu of in de toekomst, kan ik contact opnemen met [utweerbaarheidsonderzoek@hotmail.com](mailto:utweerbaarheidsonderzoek@hotmail.com).

Naam deelnemer: .....

Datum: .....

Handtekening deelnemer: .....

Handtekening ouder/verzorgen (Leeftijd <18):.....

### *In te vullen door de uitvoerende onderzoekers*

Wij hebben een mondelinge en schriftelijke toelichting gegeven op het onderzoek. Wij zullen resterende vragen over het onderzoek naar vermogen beantwoorden. De deelnemer zal van een eventuele voortijdige beëindiging van deelname aan dit onderzoek geen nadelige gevolgen ondervinden.

Datum: .....

.....  
Naam onderzoeker                      Handtekening

.....  
Naam onderzoeker                      Handtekening

.....  
Naam onderzoeker                      Handtekening

## Informed consent

**Titel research:** Increasing resilience

**Responsible researchers:** Linda Willemsen, Megan Oude Groeniger en Lara de Witte

### *To fill in by the participant*

I hereby declare that I have been informed in a manner which is clear to me about the nature and method of the research as described in the aforementioned information. My questions have been answered to my satisfaction. I agree of my own free will to participate in this research. I reserve the right to withdraw this consent without the need to give any reason and I am aware that I may withdraw from the experiment at any time. If my research results are to be used in scientific publications or made public in any other manner, then they will be made completely anonymous. My personal data will not be disclosed to third parties without my express permission. If I request further information about the research, now or in the future, I may contact [utweerbaarheidsonderzoek@hotmail.com](mailto:utweerbaarheidsonderzoek@hotmail.com).

Signed in duplicate:

Datum: .....

.....  
Name participant                      Signature                      Signature parents/caretakers



*To fill in by the researchers*

I have provided explanatory notes about the research. I declare myself willing to answer to the best of my ability any questions which may still arise from the research.'

.....

Name researcher

Signature

.....

Name researcher

Signature

.....

Name researcher

Signature