ETHNIC STEREOTYPING IN THE MEDIA

An experimental study into the influence of negative and positive stereotypic information on attitudes towards ethnic groups and the memory of perpetrator information

Claryanne Okken – S1870297

Abstract

Context: After the terrorist attacks on the World Trade Center in New York on September 11th, 2001, terrorism gained a prominent position in the media. In recent years, again, terrorism became one of the major topics discussed by (Dutch) media since Europe was hit by several terrorist attacks. Media often provide (ethnic) characteristics of the perpetrators of terrorist attacks, who mostly are Muslims/people from the Middle East. This leads to the formation of stereotypes of Muslims and people from the Middle East as being a terrorist. Consequently, people develop strong anti-Arab attitudes. In addition, memory of stereotype-(in)consistent information becomes distorted.

Aim: The aim of this study is threefold. First, this study seeks to examine whether exposure to a news article concerning terrorism that either contained perpetrator information that is stereotype-consistent, stereotype-inconsistent, or neutral, leads to different attitudes (implicit and explicit) towards a certain stereotypical group. The second objective of this research is to explore the influence of positive stereotypic information on attitudes, while the respondents are already exposed to negative stereotypic information concerning this group. Finally, the last goal is to investigate whether there is a difference between the respondents' memory of the perpetrator in case the perpetrator information was stereotype-consistent or stereotype-inconsistent.

Method: Within a 3 (type of perpetrator information: stereotype-consistent vs. stereotype-inconsistent vs. neutral) x 2 (exposure towards positive stereotypic information vs. no exposure towards positive stereotypic information) between-subjects factorial design, respondents were exposed to different news articles. Subsequently, respondents' implicit attitudes towards Dutch White men and Arabic men from the Middle East were measured, as well as their explicit attitudes (perceived severity of the crime, feelings of hate towards the perpetrator, sentencing decisions, fear of crime and terrorism, distrust, prejudice, emotions), and memory.

Findings: Overall, findings of this study indicate that the different attitude components that were measured in this study (except from one) do not vary as a result of the type of perpetrator information respondents were exposed to. Secondly, exposure to positive stereotypic information does not seem to have any influence on respondents' attitudes. Finally, findings show that perpetrator information that was stereotype-consistent or stereotype-inconsistent does not influence memory.

Conclusions: It can be concluded that a news article including negative or positive stereotypic information does not influence people's attitudes towards members of a certain (ethnic) stereotypical group. This finding is contrary to findings of earlier studies. Presumably, exposure to only one news article is not sufficient to influence attitudes. Similarly, memory of perpetrator information does not differ as a result of stereotype-consistent or stereotype-inconsistent information.

Keywords   Criminal stereotypes · Media · Terrorism reporting · Stereotype-(in)consistent information · Attitudes · Memory

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1. Introduction

The terrorist attacks on the World Trade Center in New York on September 11th, 2001, dramatically changed the news coverage on terrorism. In recent years, again, terrorism became one of the major topics discussed by (Dutch) media after Europe was hit by several terrorist attacks (e.g., Bataclan theatre in Paris in November 2015; Bastille day of France in Nice in July 2016; Christmas market in Berlin in December 2016; concert Ariana Grande in Manchester in May 2017; La Rambla in Barcelona in August 2017).

When news media report about terrorist attacks, they mostly reveal names, pictures and other background characteristics of the suspect, often related to ethnicity. For instance, Morin (2016) argues that the identity of perpetrators of terrorist attacks is mainly discussed in terms of their religion (Islam). In a similar vein, Powell (2011) showed that the perpetrators of a terrorist attack are quickly labeled as Muslim/someone from the Middle East, even before there is certainty about the identity of the perpetrator. Additionally, the study revealed that the media highly focus on the possibility of future attacks in case the perpetrator is a Muslim, while they argue this threat to be low when the perpetrator does not have an Islam background. Mancini, Mears, Stewart, Beaver, and Pickett (2015) refer to this phenomenon as the 'racialization of crime', meaning "the increasingly prominent emphasis of race in discussions about offending" (p. 998).

The pervasive portrayal in the media of Muslims/people from the Middle East as perpetrators of terrorist attacks leads to the formation of stereotypes of Muslims and people from the Middle East as being a terrorist. Indeed, it has been shown that the audience highly associates Muslims and people from the Middle East with terrorism (e.g., D'Angelo & Kuypers, 2010; Doosje, Zebel, Scheermeijer, & Mathyi, 2007; Owala, Mohochi, & Indede, 2013; Saleem & Anderson, 2013; Skorinko & Spellman, 2013; Welch, 2016). To illustrate, Owala et al. (2013) investigated that terrorism reporting leads to a prejudice and distrust towards Muslims, because of the repeated link of terrorism and the Islam. Additionally, Doosje, Zebel et al. (2007) found that non-Islamic Dutch people perceive Muslims as a homogeneous group, of which all members support terrorist attacks. The consequence of this negative stereotyping is that Muslims are often considered as a cultural outgroup (Kalkan, Layman, & Uslaner, 2009) and that people develop strong anti-Arab attitudes (Park, Felix, & Lee, 2007). Even worse, the negative stereotyping can lead to Islamophobia, which is, according to the race equality research institute Runnymede Trust (1997), the unfounded hostility towards the Islam. Islamophobia can take various forms, including exclusion, discrimination, prejudice, and violence (Runnymede Trust, 1997).

The recent terrorist attacks in Europe have proven to increase Islamophobia in The Netherlands (Van der Valk, 2016). Therefore, although the fact that some crimes are disproportionally committed by a certain type of person, the question is to which extent the media should report on these (ethnic) characteristics of the perpetrator, since the frequent negative depiction of certain stereotypical groups in the media leads the public to adopt these negative stereotypes (e.g., Arendt, 2013; Dixon, 2008; Dixon & Linz, 2000a, 2000b; Gilliam & Iyengar, 2000; Mastro, Knight Lapinski, Kopacz, Behm-Morawitz, 2009).

This study aims at examining whether there is a difference between the attitudes (implicit and explicit) towards a certain stereotypical group, after being exposed to a news article concerning terrorism that either contained perpetrator information that is stereotype-consistent, stereotype-inconsistent, or neutral. Hence, the first research question is formulated as:

'To what extent is there a difference between attitudes (implicit and explicit) towards a certain stereotypical group after being exposed to perpetrator information that is either stereotype-consistent, stereotype-inconsistent, or neutral?'

Although the effect of negative stereotypic information included in news articles (i.e., information about the perpetrator of a terrorist attack) on people's attitudes towards people belonging to this (ethnic) stereotypical group has been widely studied, surprisingly, the effect of exposure to positive stereotypic information concerning members of a certain ethnic group has not been examined yet. Few studies have incorporated some elements regarding the influence of positive stereotypes. These studies focus on for instance the awareness of positive stereotyping (Sayama & Sayama, 2011) or the effect of the activation of positive stereotypes on one's evaluation of task performance (Clark, Thiem, & Kang, 2017). However, to the best of the author's knowledge, the role of exposure to positive stereotypic information on attitudes towards the stereotypical group in question is still underexplored. In other words, it is unknown whether positive news articles concerning a stereotypical group, rather than negative ones, in turn lead to either neutral or positive feelings towards members of these specific groups. Therefore, it will be investigated to which extent positive stereotypic information is able to change the implicit and explicit attitudes of respondents after they are already exposed to negative stereotypic information concerning this group. Hence, the second research question is formulated as:

'What is the effect of exposure to positive stereotypic information on the implicit and explicit attitudes towards this stereotypical group?'

Besides investigating the attitudes towards stereotypical groups after encountering stereotypic information, news, in line with people's existing stereotypes, can also affect the memory of people when receiving new information (Schneider, 2003). A number of studies suggest that people tend to remember stereotype-consistent information better compared to stereotype-inconsistent information (e.g., Lenton, Blair, & Hastie, 2001; Schechory, Nachson, & Glicksohn, 2010). So, once a stereotype has been formed, it is difficult to change these preexisting thoughts when contradictory information is encountered. This leads to distorted memory. The third research question will further explore this issue:

'To what extent is stereotype-(in)consistent information influencing memory?'

1.1 Relevance of this study
This research offers theoretical and practical relevance in several ways. First, although extensive research has been carried out on establishing the relationship between stereotype-(in)consistent information and memory of such information, as well as on the influence of stereotypic information on attitudes towards this stereotypical group, no study exists yet that combines those two elements. However, all these elements seem to be interrelated and should therefore be measured simultaneously. By doing so, this study will advance our understanding of the power of stereotypes and what happens to one's implicit attitudes, explicit attitudes, and memory in case he or she encounters either stereotype-consistent or stereotype-inconsistent information. Second, as the role of exposure towards positive stereotypic information on people's attitudes towards this stereotypical group seems to be understudied, the present research aims to fill this missing gap in existing literature. Finally, although previous studies have established that memory is affected by

the extent to which information is stereotype-consistent, these studies are limited to written recall or recognition tests. However, according to various scholars, facial cues are considered to be the most valuable source in identifying and categorizing stereotypes (e.g., Blair, Judd, & Fallman, 2004; Livingston, 2001; Livingston & Brewer, 2002; Mason, Cloutier, & Macrae, 2006). Therefore, this study will measure memory by means of selecting pictures of potential perpetrators, rather than using a recall or recognition test.

Next to this theoretical relevance, from a practical point of view, this study is interesting for news organizations and journalists producing articles concerning terrorism, since it will provide insights into the (un)conscious influence of stereotypes on the processing of such articles. As journalists have an increased awareness of the negative outcomes of their articles, they might become more cautious in revealing certain characteristics of the perpetrator of a crime. In turn, this may contribute to a decrease in stereotyping and prejudice.

2. Theoretical framework

This theoretical framework will provide an overview and discussion of the main concepts of this study. First, the concept of stereotyping will be defined and applied to the context of criminal stereotyping. Second, the effect of exposure to negative stereotypic information on attitudes towards this stereotypical group will be discussed. In addition, the difference between one's implicit and explicit attitudes will be reviewed. Furthermore, the (potential) moderating role of positive stereotypic information will be explored. The last section will discuss how stereotypes influence one's memory of incoming information regarding that stereotypical group.

2.1 Defining stereotyping

According to Andersen, Klatzky, and Murray (1990), a stereotype is "a social category [....] that functions to summarize a wide array of features of categorized persons" (p. 192). Similarly, Contreras, Banaji, and Mitchell (2012) describe stereotyping as making assumptions about a particular person, based on the social category to which he or she is perceived to belong to. This association leads to the assignment of certain attributes to members of this social group, regardless of whether this person indeed possesses these attributes (Greenwald, Banaji, Rudman, Farnham, Nosek, & Mellot, 2002). People hold stereotypes regarding several social groups, including for instance males/females, racial/ethnic groups, and young/elderly people (Schneider, 2004). Although in the context of this study, stereotyping is considered as a negative phenomenon (e.g., Crawford, Chiricos, & Kleck, 1998; Oliver, 1999), positive stereotypes exist as well. According to Czopp, Kay, and Cheryan (2015), a positive stereotype can be defined as "subjectively favorable beliefs about members of social groups that directly or indirectly connote or confer domain-specific advantage, favorability, or superiority based on category membership" (p. 451). Additionally, another positive feature of stereotypes is that they make life easier, since they provide us with mental shortcuts (Fiske & Taylor, 2013) and they serve as schematic knowledge structures that we can use to infer our behavior from (Otgaar et al., 2011).

In order to gain a better understanding of the concept of stereotyping, it is important to point out how the formation, activation, and application of stereotypes works. According to Martin, Hutchison, Slessor, Urquhart, Cunningham, and Smith (2014), stereotypes are often formed spontaneously as people repeatedly converse about the attributes and actions of people from other groups. Next to this interpersonal communication, (news) media seem to be a driven factor in the formation of stereotypes (Ramasubramanian, 2007). Once a stereotype has been formed, either through interpersonal communication or the media, it can be activated from one's memory. According to Kunda and Spencer (2003), stereotype activation refers to the extent to which one is able to access a certain stereotype in mind. The activation of stereotypes is an automatic process that is triggered by exposure to certain stereotypic cues, which can come from different sources, including facial cues (Mason et al., 2006), the media (Arendt, 2013), or just by encountering a member of a typical social group (Krieglmeyer & Sherman, 2012). Stereotype application might follow on stereotype activation. According to Kunda and Spencer (2003), stereotype application occurs when the specific stereotype that is activated is actually used to judge a member of the stereotyped group. Although stereotype application cannot exist without stereotype activation, stereotype activation does not necessarily lead to stereotype application (Devine, 1989; Gilbert & Hixon, 1991). This may be attributed to the fact that people try to avoid prejudice and therefore do not judge people

based on the activated stereotype (Kunda & Spencer, 2003). Nevertheless, the extent to which one is able to control stereotype application depends on both the capacity as well as the motivation to do so (Bodenhausen, Macrae, & Sherman, 1999).

2.2 Criminal stereotyping

Now the concept of stereotyping is clear, the focus of this study – the stereotyping of criminals - will be discussed in the upcoming parts. Several studies have investigated the association between certain stereotypical groups and criminal activities. These studies frequently focus on the stereotyping of ethnic groups, such as the idea that all Black people are criminals (e.g., Gordon, Bindrim, McNicholas, & Walden, 1988; Hurwitz & Peffley, 1997; Mancini et al., 2015), or that Muslims and people from the Middle East are terrorists (e.g., Skorinko & Spellman, 2013; Smalarz, Madon, Yang, Guyll, & Buck, 2016; Welch, 2016).

Earlier studies already showed how people associate crimes with certain ethnic groups. For instance, Sunnafrank and Fontes (1983) found that mugging, grand-theft auto, assault on a police officer, and soliciting are typically associated with Blacks, while fraud, embezzlement, child molestation, rape, and counterfeiting are considered as stereotypic White crimes. Vehicular manslaughter turned out to be a non-stereotypic crime. Further, the study of Gordon et al. (1988) showed that burglary and robbery are perceived as stereotypical crimes for African Americans (Blacks), while crimes such as embezzlement and fraud are significantly linked to European Americans (Whites). In a similar vein, Willis Esqueda (1997) found that embezzlement, fraud, tax evasion, counterfeiting, bribery, and forgery are crimes perceived as committed by European Americans. On the other hand, violent and victim crimes were linked to African and Hispanic Americans. Additionally, African Americans were most associated with property and drugs crimes as well. Finally, participants mainly linked Asian Americans to crimes involving drug trafficking and possession.

More recent studies expanded the previous research by including a wider range of crimes. Skorinko and Spellman (2013) listed 55 crimes and asked participants which group they thought the society would consider as the most likely to commit this specific crime. They found three ethnic groups – Black people, White people, and people from the Middle East – that have crimes that are unique to them. Accordingly, Blacks are perceived to be more likely to commit assault, auto theft, burglary, crack cocaine usage, gang activity, intentional murder, mugging, rape, and robbery. Regarding Whites, participants significantly indicated that they perceive this group to be more likely to commit arson, child molestation, credit fraud, driving under the influence, ecstasy usage, embezzlement, hate crimes, insurance fraud, plagiarism, prescription drug abuse/fraud, public nudity, research fraud, and stalking. Finally, people from the Middle East are linked more to biological and/or chemical warfare, falsifying documents, and terrorism. In addition to these stereotypic crimes, they also found some non-stereotypic, or neutral crimes, including hit and run, perjury, slander, speeding, adultery, blackmail, curfew violation, gambling, identity fraud, joyriding, kidnapping, marijuana, public intoxication, trespassing, and vehicular manslaughter. Likewise, Smalarz et al. (2016) created a list of 20 crimes linked with 5 characteristics that best describe the perpetrator of the crime according to the participants. For 13 out of the 20 crimes, ethnicity was one of the main characteristics used to describe the perpetrator. 'African American' was linked to auto theft, bank robbery, carrying concealed weapon, drive-by shooting, drug deal, and graffiti, while 'Caucasian' (i.e., White)

was linked to child molestation, custodial kidnapping, date rape, driving while intoxicated, serial murder, and stalking. Finally, 'Middle Eastern' was associated mostly with terrorism.

The criminal stereotypes people have developed influence one's information processing and memory. Several scholars have studied this effect and found mixed results. Oliver (1999) showed that people misidentify an offender as Black, while they were exposed to a news story in which he was actually White. Oliver and Fonash (2002) also found evidence for the misidentification of Blacks, but this was only true for violent, not for non-violent crimes. Further, Oliver, Jackson, Moses, and Dangerfield (2004) showed that people remembered significantly more Afrocentric features compared to Eurocentric features when they were exposed to a news story concerning a violent crime. Moreover, Dixon (2009) found that in case the suspect of a crime was unidentified, participants were more likely to identify the suspect as Black rather than White. However, Skorinko and Spellman (2013) found contradictory results. They showed that participants actually remembered the defendant significantly more often as being White than as being Black.

2.3 Stereotyping and attitudes

Stereotyping can influence the attitudes people develop towards others that are perceived to belong to a certain stereotypical group. Specially, if one is exposed to negative stereotypic information, it leads to more negative attitudes towards members of this stereotypical group (Arendt & Northup, 2015). The concept of attitudes has been defined in the literature for decades. For instance, according to Allport (1935), an attitude is "a mental and neural state of readiness, organized through experience, exerting a directive and dynamic influence upon the individual's response to all objects and situations with which it is related" (p. 810). In a similar vein, Krech and Crutchfield (1948) refer to an attitude as an "enduring organization of motivational, emotional, perceptual, and cognitive processes with respect to some aspect of the individual's world" (p. 152). More recently, Eagly and Chaiken (1993) define attitudes as a "psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (p. 1).

People develop both implicit as well as explicit attitudes towards an attitude object (Gawronski & Bodenhausen, 2006). Although these two attitude types can coexist, they might differ from each other (e.g., Arendt & Northup, 2015; Park et al., 2007). Before discussing this in more detail, it is important to define the two concepts. According to Gawronski and Bodenhausen (2006), implicit attitudes can be referred to as "automatic affective reactions resulting from the particular associations that are activated automatically when one encounters a relevant stimulus" (p. 693). In contrast, explicit attitudes are not derived automatically, but can be described as "evaluative judgments that are based on syllogistic inferences derived from any kind of propositional information that is considered relevant for a given judgment" (Gawronski & Bodenhausen, 2006, p. 694). The authors argue that people refer their explicit attitudes from their automatic affective reactions. So, in case one dislikes a certain object, this will lead to a negative affective reaction towards this object. However, it is also possible that implicit attitudes are rejected as a basis for an expressive judgment, leading to a difference in one's implicit and explicit attitudes. Namely, according to Gawronski and Bodenhausen (2006), people often reject their implicit attitudes when evaluating members of certain social groups, as they do not want to appear prejudiced. Indeed, other existing studies recognize the fact that automatic negative reactions towards a specific social group are often suppressed and altered in a more positive way to avoid prejudice (e.g., Devine, 1989; Fazio & Dunton, 1997). All these

studies suggest a difference in implicit and explicit attitudes due to a social desirability bias (Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005). Accordingly, implicit measures are generally not influenced by social desirability concerns, whereas the opposite is true for explicit measures. Consequently, this often leads to low correlations between implicit and explicit measures.

H1 Exposure to negative stereotypic information leads to higher negative implicit and explicit attitudes towards this stereotypical group.

H2 Explicit attitudes towards a certain stereotypical group will be relatively more positive compared to implicit attitudes due to a social desirability bias.

2.4 Exploring the moderating role of positive stereotypic information

Although the effect of negative stereotypic information has been widely studied, considerably less studies have investigated the influence of positive stereotypic information on attitudes. Only few scholars incorporated some elements related to positive stereotypes in their studies. For instance, Sayama and Sayama (2011) found that in general, people are more aware of negative stereotyping as opposed to positive stereotyping toward targets from different cultures. Further, Clark et al. (2017) focused on the role of positive stereotypes on one's evaluation of task performance. They showed that when a positive stereotype was activated after fulfilling a test, participants felt more certain about their performance. Moreover, Cheryan and Bodenhausen (2000) found that making a positive stereotype salient prior to task performance (e.g., Asians have proper mathematical skills) might actually decrease the actual task performance of this stereotyped group due to the high expectations pressure. These studies show evidence for the power of positive stereotypes, however, none of these studies have focused on the effects of exposure to positive stereotypic information on attitudes regarding that specific stereotypical group. As there is evidence that exposure to negative stereotypic information leads to more negative attitudes (Arendt & Northup, 2015), it is likely to assume that subsequent exposure to positive stereotypic information improves such attitudes and that this might be able to 'reset' existing negative attitudes. In order to explore this, the following research question is formulated:

RQ1 To what extent does exposure to positive stereotypic information, in addition to negative stereotypic information, moderate the attitudes towards this stereotypical group?

2.5 The influence of stereotype-(in)consistent information on memory

The stereotypes that people hold toward certain groups can influence their memory of incoming information regarding that stereotypical group (Schneider, 2003). This can be explained by the fact that stereotypes are stored in one's schema, a system that organizes information in mind and categorizes the relationships between those information pieces (DiMaggio, 1997). When being exposed to new information, the interpretation of that information is influenced by the already existing schema regarding that topic (Scheufele, 2000). New incoming information can either fit the beliefs people have of a certain social group (stereotype-consistent information) or does not fit existing beliefs (stereotype-inconsistent information). Numerous studies have examined the effect of stereotype-consistent and -inconsistent information on people's memory. In general, these studies suggest that stereotype-consistent information is better recalled compared to stereotype-

inconsistent information (e.g., Doosje, Spears, De Redelijkheid, & Van Onna, 2007; Fyock & Stangor, 1994; Schechory et al., 2010; Van Knippenberg & Dijksterhuis, 1996). This can be explained by the fact that people tend to use as minimal cognitive resources as possible and avoid effortful thinking (Doosje, Spears et al., 2007; Fiske & Taylor, 2013). Therefore, they rely on stereotypes when exposed to new information and as a consequence they better recall stereotype-consistent information (Doosje, Spears et al., 2007). Lenton et al. (2001) even showed that people falsely remember stereotype-consistent information that was actually never presented to them.

In contrast, Doosje, Spears et al. (2007) state that in some cases, stereotype-inconsistent information is better remembered, an explanation grounded in the figure-background model. They argue that attention is increased for inconsistent information (the figure), since this is seen as more distinctive than consistent information (the background). Several studies have explored the situations and factors that might influence the extent to which inconsistent information is better recalled than consistent information. For example, Dijksterhuis, Van Knippenburg, Kruglanski, and Schaper (1996) studied the effect of the need for closure on one's memory and found that people high in need for closure recall relatively more stereotype-consistent information, while people with low need for closure are able to recall more stereotype-inconsistent information. Sherman and Frost (2000) showed that the measurement tool used to assess the memory of information also affects what information is better remembered. When memory was tested by means of free recall, consistent information is better represented in memory, while a recognition test leads to a more thoroughly representation of inconsistent information. Further, it has been proven that one's processing capacity influences the memory of information. More specifically, under low processing capacity (i.e., when task demands are high), stereotype-consistent information is better recalled, while under circumstances of higher processing capacity (i.e., when task demands are low), stereotype-inconsistent information is in favor (Bodenhausen & Lichtenstein, 1987; Macrae, Hewstone, & Griffiths, 1993).

To conclude, generally, stereotype-consistent information is better represented in memory and consequently better recalled. Sometimes, this even leads to memory of stereotype-consistent information that was actually never encountered. Only under specific circumstances, however, stereotype-inconsistent information leads to better memory.

H3   Exposure to stereotype-consistent information leads to better memory compared to exposure to stereotype-inconsistent information.

If only neutral information rather than stereotype-consistent or stereotype-inconsistent information is given, it is likely that people will rely on the stereotype they have for the subject in question and that they will use this stereotype in a subsequent memory task. However, since people do not always apply the stereotypes that are activated in mind (e.g., Devine, 1989; Gilbert & Hixon, 1991; Kunda & Spencer, 2003), the following research question will investigate this issue in further detail:

RQ2   Which stereotypical group is most represented in a subsequent memory task if only neutral information is given?

In Figure 1, the research model of this study is illustrated.

Figure 1. Research model

Positive stereotypic information

Perpetrator information
(negative stereotypic information)

Consistent

Inconsistent

Neutral

RQ1

H1

H3

RQ2

Implicit attitudes

H2

Explicit attitudes

Memory
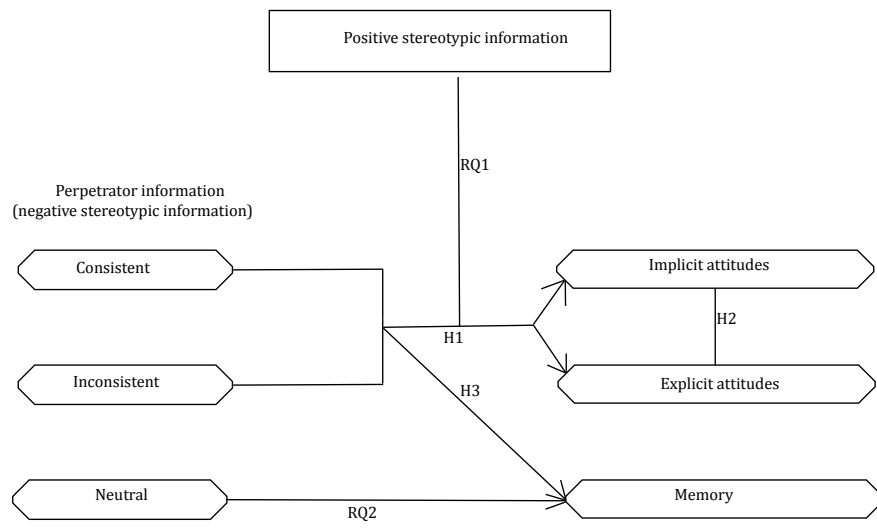
3. Methodology

3.1 Research design

The purpose of this study was to investigate the influence of stereotypic information on implicit attitudes, explicit attitudes (perceived severity of the crime, feelings of hate towards the perpetrator of the crime, sentencing decisions, fear of crime and terrorism, distrust, prejudice, emotions), and memory of perpetrator information. In order to test this, a 3 (type of perpetrator information: stereotype-consistent vs. stereotype-inconsistent vs. neutral) x 2 (exposure towards positive stereotypic information vs. no exposure towards positive stereotypic information) between-subjects factorial design was used. Table 1 shows the five different conditions of this study.

Table 1. Conditions

		Perpetrator information		
		Stereotype-consistent	Stereotype-inconsistent	Neutral
Positive stereotypic information	Yes	*Condition 1*	*Condition 3*	-
	No	*Condition 2*	*Condition 4*	*Condition 5*

3.2 Procedure

The procedure of this study consisted of several steps. First, a short introduction was provided to the respondents. In order to reduce the threat of guessing the goal of this study, respondents were only informed that the study focused on gaining insight into how people interpret news articles. After giving their consent to fill in the questionnaire voluntarily, respondents were exposed to either one of three versions of a news article concerning a terrorist attack, to which they were randomly assigned. The basis of each article was the same for each group, however, one of the articles contained stereotype-consistent information about the perpetrator, one of the articles contained stereotype-inconsistent information about the perpetrator, and the last article provided only neutral information about the perpetrator. Next to the news article about the terrorist attack, half of the respondents within the groups that were exposed to either stereotype-consistent or stereotype-inconsistent information regarding the perpetrator of the terrorist attack were also exposed to an article containing positive stereotypic information about the same stereotypical group as they were exposed to in the initial article. Only in the neutral information condition, none of the respondents was exposed to a positive article since this condition did not focus on a specific stereotypical group. After exposure to the article containing positive stereotypic information, a few questions concerning this article were asked. On the one hand, these questions were aimed at controlling whether the respondents have read the article correctly. Additionally, the questions served as distraction from the goal of the stimulus. After reading the news article(s), respondents had to complete an implicit association test, aimed at measuring the implicit attitudes towards White men and Arabic men. Next, a number of items, which were aimed at measuring the explicit attitudes, were presented to the respondents. Next, a Q-sort task was presented to the respondents in order to test the memory of perpetrator information by means of a set of eighteen pictures of potential perpetrators. Respondents were asked to select two men they considered to be the most likely perpetrators, as well as four men whom they considered to be a likely perpetrator as well. Subsequently, respondents had to select two men they considered to be the least likely perpetrators, as well as four men whom they considered to be an unlikely

perpetrator as well. Figure 2 provides a timeline that illustrates the procedure the respondents completed.

Figure 2. Timeline of procedure
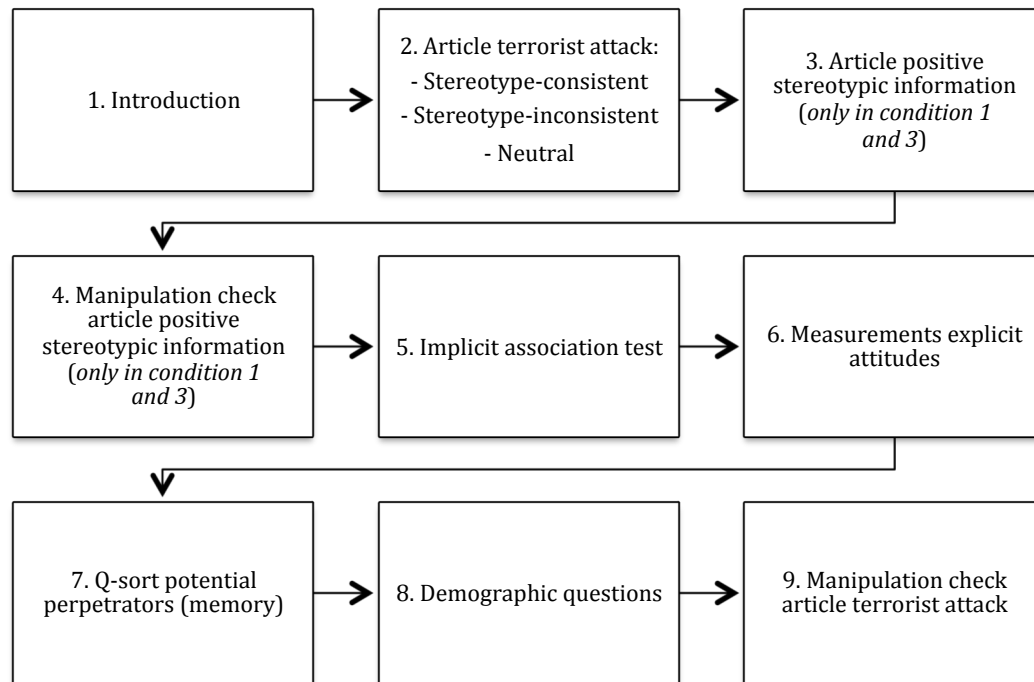
3.3 Stimulus material

A news article concerning a terrorist attack was produced and manipulated for the aim of this study (Appendix A). The article was constructed based on original articles (ANP, 2017; RTL Nieuws, 2016) and contained information about a suspect who has been arrested for preparing a terrorist attack at Schiphol[1]. In order to manipulate the identity of the perpetrator of the crime described in the news article, it was either mentioned that the perpetrator was an Arabic man from the Middle East (stereotype-consistent information) or a Dutch White man (stereotype-inconsistent information). The neutral information condition provided only neutral information about the perpetrator. In order to control for variables other than race, all other informational elements were kept constant in the different article versions (e.g., gender of the perpetrator, length of text, crime scene).

Next to the article concerning a terrorist attack, an article providing positive stereotypic information was developed. This article contained positive stereotypic information regarding the same stereotypical group as respondents were exposed to in the initial article. For instance, the article included positive stereotypic information about Arabic men from the Middle East in case the perpetrator of the crime was also an Arabic man from the Middle East. The article (Appendix B) contained information about a study into the comparison of people from different ethnicities concerning the care they take of their parents. The article was the same for each condition, but only the ethnicity (that scored the highest on elderly care) was altered to fit the ethnicity of the perpetrator of the crime to which respondents were exposed.

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[1] An article about a planned terrorist attack, rather than an attack that was actually committed, was chosen in order to reduce the threat that people might have existing knowledge about the incident.

3.3.1 Pretest

As described in the theoretical framework, several existing studies have established some common associations people make between certain crimes and the ethnicity of the perpetrators of such crimes. However, since these studies are not focused on a Dutch population, a pretest was conducted on a small sample (n=10), aimed at discovering which ethnicity Dutch people link to the perpetrators of terrorist attacks and other main crimes[2]. A list of 19 common crimes was selected from the CBS (Centraal Bureau van de Statistiek, 2017). The respondents of the pretest were asked to rank six types of people, based on ethnicity (Black, White, Middle East) and on gender (man, woman) on the basis of the likelihood of conducting each crime (on a scale from 1 to 6). Based on these results, an average ranking was calculated for each crime, as shown in Table 2.

Table 2. Overview means pretest

Crimes	Black man	White man	Black woman	White woman	Man from the Middle East	Woman from the Middle East
	M	M	M	M	M	M
Robbery	4.6	3.2	3.2	3.4	4.1	2.4
Burglary	4.6	4.8	2.2	2.3	5.0	2.1
Fraud	3.6	5.7	3.0	3.6	3.8	1.4
Money laundering	3.9	5.4	1.8	3.3	4.3	2.2
Fencing	4.7	4.8	2.6	2.3	4.8	1.8
Blackmail	4.6	5.7	2.1	2.6	4.4	1.7
Hacking	3.8	5.9	2.3	3.3	4.1	1.6
Discrimination	3.2	5.4	1.9	3.7	4.1	2.7
Arson	4.4	5.3	2.9	3.3	3.8	1.2
Maltreatment	4.9	4.8	2.8	2.4	4.8	1.3
Intimidation	4.3	5.0	2.7	2.6	4.6	1.9
Stalking	4.0	4.8	2.4	3.7	4.3	1.8
Rape	4.9	5.6	2.4	2.1	4.6	1.4
Rape of a child	4.7	5.8	2.3	2.1	4.6	1.6
Hostage	4.2	4.7	2.8	2.3	5.1	1.9
Human trafficking	3.8	5.6	1.8	2.4	5.0	2.4
Murder	5.2	4.9	2.9	1.9	4.9	1.2
Terrorist attack	5.8	2.9	3.0	1.2	6.0	4.0
Drug deal	4.0	5.3	2.6	3.7	4.1	1.3

Since a man from the Middle East turned out to be the type of person that was associated mostly with terrorism, this stereotype was selected to include in the stereotype-consistent information condition. A White woman appeared to be the least likely perpetrator of a terrorist attack, however, in order to control for gender, a White man, rather than a White woman, was chosen to include in the stereotype-inconsistent information condition.

In addition to the pretest concerning criminal stereotypes, a second pretest was conducted in order to select the most fitting pictures to include in the Q-sort task. Namely, as people might have different ideas about the physical appearance of a man from the Middle East, twelve pictures of such men were presented to ten respondents. These twelve

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[2] The main underlying focus of the pretest was on terrorist attacks, but the additional crimes were added to the pretest as extra, exploratory cases and provided a backup in case the contrast between the rankings of perpetrators of a terrorist attack was not enough.

pictures had comparable backgrounds and compositions. The respondents were asked to indicate which six men they considered to be a man from the Middle East. The six men who were selected most frequently in the pretest were chosen to include in the final study.

3.4 Measurements
The dependent variables of this study included the respondents' implicit attitudes, explicit attitudes, and memory of perpetrator information. In order to measure these variables, several (existing) measurement instruments were used.

3.4.1 Implicit attitudes
The implicit association test (Greenwald, McGhee, & Schwartz, 1998) aimed at discovering the underlying attitudes of respondents concerning men from the Middle East and White men after being exposed to the stimulus material. For the purpose of this measurement, respondents were exposed to several images[3] (target concepts), followed by a positive and negative word (attributes), of which the respondents were asked to select the positive word only. The speed at which respondents were able to identify the positive word after exposure to a certain target concept reveals something about the strength of the automatic association between the target concept and the attribute (Greenwald et al., 1998). The underlying idea of the test is that in case the response to one combination (e.g., White man and a positive attribute) is faster than the response to another combination (e.g., man from the Middle East and a positive attribute), it indicates that this combination is more consistent. Thus, the implicit attitude towards the White man is more positive compared to the implicit attitude towards the man from the Middle East.

In total, four pictures including a White man, four pictures including a man from the Middle East, as well as five images of other people and objects were included in the implicit association test (Appendix C). The five additional images were added in order to avoid cueing the goal of the test. The target concepts as well as the attributes included in the implicit association test were randomized in order to overcome bias resulting from the order in which the target concepts and attributes were presented. The positive and negative words (attributes) that were used for the implicit association test were adopted from previous studies using this procedure (Maison, Greenwald, & Bruin, 2001; Park et al., 2007).

3.4.2 Explicit attitudes
In order to measure the explicit attitudes of the respondents, both some single-item measures as well as five-point Likert scales (Spector, 1992) were used. The three single-item measures, as presented in Table 3, were aimed at measuring the attitudes towards the crime and its perpetrator.

Table 3. Overview of main constructs single-item measures

Construct	Item
Perceived severity of the crime	'On a scale of 0 to 10, how severe is this crime in your opinion?'
Feelings of hate	'On a scale of 0 to 10, how much hate do you feel regarding the perpetrator of the crime?'
Sentencing decisions	'In your opinion, what should be the sentencing of the perpetrator of this crime? (in years of imprisonment)'

Regarding the Likert scales, all the items included were adopted from already existing scales that were originally in English and were translated into Dutch. For each construct, one or more reverse worded items were added in order to control for the response style threat

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[3] All images used for the implicit association test were bought royalty free from Shutterstock.

(Dooley, 2001). Additionally, although highly similar to the original items, some items have been revised a little to fit the specific purpose of this study. Respondents were asked to indicate to which extent they agreed with a certain statement, ranging from (1) strongly disagree to (5) strongly agree. 'Emotions' was measured on a scale ranging from (1) not at all to (5) very much. Table 4 provides an overview of the main constructs that were measured by means of Likert scales, some example items, the scale upon which the items are based and the Cronbach's alpha for each scale and subscale. In appendix D, a complete overview of the questionnaire is presented.

Table 4. Overview of main constructs Likert scales and Cronbach's alpha

Construct	Example items	Source	Cronbach's alpha
Fear of crime and terrorism	'In general, I am concerned about crime.' 'Fear of criminal victimization prevents me from doing things I would like to do.'	Huddy, Feldman, Capleos, & Provost (2002); May, Harden, & Kline (2008); Williams, McShane, & Akers (2000)	α = .83
Distrust	'Most Dutch White men cannot be trusted.' 'Most Arabic men from the Middle East try to benefit from you.'	Hooghe, Reeskens, Stolle, & Trappers (2009); Yamagishi & Yamagishi (1994)	α = .81 Subscale distrust towards Dutch White men α = .68 Subscale distrust towards Arabic men from the Middle East α = .63
Prejudice	'Dutch White men easily resort to violence.' 'I respect Arabic men from the Middle East living in The Netherlands.'	Ciftci (2012); Pettigrew & Meertens (1995); Savelkoul, Scheepers, Tolsma, & Hagendoorn (2010)	α = .78 Subscale prejudice towards Dutch White men α = .47 Subscale prejudice towards Arabic men from the Middle East α = .62
Emotions	'On a scale of 1 to 5, how much do you feel each of the following emotions towards Dutch White men/Arabic men from the Middle East?'	Tejada, Luque, Rojas, & Moreno (2011)	α =.71 Subscale emotions towards Dutch White men α = .65[a] Subscale emotions towards Arabic men from the Middle East α = .72[a]

Note. [a] The item 'onverschilligheid' was removed from the scale to reach a higher alpha.

3.4.3 Memory

In order to measure the memory of stereotype-(in)consistent perpetrator information, respondents were exposed to a set of eighteen pictures of potential perpetrators[4] (Appendix E). The selection of respondents was entered into a Q-sort distribution, ranging from -2 'least potential perpetrator' to +2 'most potential perpetrator'. The potential perpetrators had different ethnicities, including White, Middle East, Black, Asian, and Hispanic. It was made sure that all pictures were comparable in background, composition and facial expression as much as possible. The pictures were randomized in order to overcome bias that can result from the order the pictures were presented in.

In order to measure whether the memory of the respondents was correct, the physical characteristics of the two men who were selected as most potential perpetrators were compared to the characteristics as described in the article included in this study. In case both men who were selected matched the characteristics of the perpetrator as described in the article (i.e., Dutch White man or Arabic man from the Middle East), memory was rated as correct. In contrast, in case at least one of the two men who were selected did not match the characteristics of the perpetrator as described in the article, memory was rated as incorrect. The neutral information condition explored whether there is a difference between the ethnicity that is most or least represented as perpetrator.

3.5 Sample

In the period of 15 till 23 January 2018, respondents of this study were initially recruited from the researcher's own network (i.e., convenience sampling). Each respondent was given the option to recruit someone from his or her own network to participate as well, creating snowball sampling. Additionally, three mornings were spent to recruit respondents at the Openbare Bibliotheek Amsterdam (public library) in Amsterdam. In total, 152 respondents participated in this study, of which 67 (44,1%) were male and 83 (54,6%) were female. Gender of two respondents was unverified. The majority of respondents (57,2%) were aged

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[4] All pictures for the memory test were bought royalty free from Shutterstock.

between the 18 and 25 years and lived in the province of Noord-Holland (39,5%). Table 5 provides the complete overview of the sample characteristics of the respondents within the different conditions of this study. As can be noticed from Table 5, the distribution of demographic characteristics of the respondents within the five conditions is highly similar, as there are no major outliers. Consequently, the comparability between the conditions increases.

Table 5. Sample characteristics

Demographic characteristic	Condition 1		Condition 2		Condition 3		Condition 4		Condition 5		Total	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Gender												
Male	8	27,6	15	45,4	14	45,2	13	46,4	17	54,8	67	44,1
Female	21	72,4	17	51,5	16	51,6	15	53,6	14	45,2	83	54,6
Unknown	0	0	1	3	1	3,2	0	0	0	0	2	1,3
Age												
18-25 years old	14	48,3	24	72,7	15	48,4	20	71,4	14	45,2	87	57,2
26-33 years old	7	24,1	1	3	2	6,5	0	0	11	35,5	21	13,8
34-41 years old	2	6,9	1	3	3	9,7	2	7,1	1	3,2	9	5,9
42-49 years old	0	0	3	9,1	3	9,7	0	0	2	6,5	8	5,3
50-57 years old	2	6,9	1	3	3	9,7	0	0	1	3,2	7	4,6
58-65 years old	4	13,8	0	0	4	12,9	6	21,4	0	0	14	9,2
66-73 years old	0	0	2	6,1	1	3,2	0	0	2	6,5	5	3,3
74 years and older	0	0	1	3	0	0	0	0	0	0	1	0,7
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Place of residence												
Groningen	9	31	7	21,2	9	29	7	5	8	25,8	40	26,3
Friesland	1	3,4	1	3	1	3,2	1	3,6	1	3,2	5	3,3
Drenthe	1	3,4	2	6,1	6	19,4	3	10,7	3	9,7	15	9,9
Overijssel	2	6,9	5	15,2	3	9,7	3	10,7	1	3,2	14	9,2
Gelderland	0	0	2	6,1	0	0	0	0	0	0	2	1,3
Flevoland	1	3,4	0	0	0	0	0	0	0	0	1	0,7
Utrecht	0	0	1	3	1	3,2	2	7,1	2	6,5	6	3,9
Noord-Holland	14	48,3	10	30,3	10	32,3	12	42,9	14	45,2	60	39,5
Zuid-Holland	0	0	1	3	1	3,2	0	0	1	3,2	3	2
Noord-Brabant	1	3,4	1	3	0	0	0	0	0	0	2	1,3
Limburg	0	0	2	6,1	0	0	0	0	1	3,2	3	2
Zeeland	0	0	0	0	0	0	0	0	0	0	0	0
Unkown	0	0	1	3	0	0	0	0	0	0	0	0
Etnicity												
Dutch	20	69	26	78,8	24	77,4	22	78,6	23	74,2	115	75,7
Other	2	6,9	1	3	2	6,5	1	3,6	4	12,9	10	6,6
Unknown	7	24,1	6	18,2	5	16,1	5	17,9	4	12,9	27	17,8
Religion												
Christian	4	13,8	5	15,2	7	22,6	3	10,7	4	12,9	23	15,1
Roman Catholic	1	3,4	1	3	1	3,2	1	3,6	0	0	4	2,6
Muslim	1	3,4	0	0	2	6,5	0	0	0	0	3	2
Jewish	1	3,4	0	0	0	0	1	4,6	0	0	2	1,3
None	22	75,9	27	81,8	20	64,5	20	1,4	25	80,6	114	75
Other	0	0	0	0	1	3,2	2	7,1	2	6,5	5	3,3
Unkown	0	0	0	0	0	0	1	3,6	0	0	1	0,7
Education[a]												
Low	2	6,9	0	0	1	3,2	0	0	2	6,5	5	3,3
Medium	11	37,9	13	39,4	14	45,2	16	57,1	10	32,3	64	42,1
High	16	55,2	20	60,6	16	51,6	12	42,9	19	61,3	83	54,6
Unkown	0	0	0	0	0	0	0	0	0	0	0	0
Total	29	100	33	100	31	100	28	100	31	100	152	100

Note. [a]Low education = Basisschool, LBO,VMBO/MAVO; Medium education = MBO, HAVO, VWO; High education = Bachelor, Master.

3.6 Data cleaning

Prior to data analysis, data was screened and cleaned by following several steps. First, data was checked for outliers by inspecting the minimum and maximum score for each variable (Pallant, 2005). Scores of all variables were found to fall within the range of possible scores corresponding to that specific variable. Second, partial responses were identified. From the 199 respondents, 41 did not complete the questionnaire and were therefore removed from analysis. Additionally, six respondents were aged under eighteen, what is against the formal rule of the Ethics Committee of the University of Twente, which states that respondents should have an age of at least eighteen. For this reason, these respondents were removed as well, resulting in 152 usable surveys. Finally, all the reverse worded items included in the questionnaire were recoded into the same direction as the other items.

3.7 Manipulation check

In order to test the internal validity of this study, a manipulation check question was included at the end of the questionnaire. All respondents had to answer a multiple choice question in which they had to indicate, based on the article they were exposed to in the

beginning of the study, which person they considered to be the perpetrator of the crime. Table 6 shows the number of respondents that correctly answered the manipulation check question. As can be seen from Table 6, in total, 72% of the respondents were able to correctly answer the manipulation check question. In order to find out whether this percentage is statistically significant, a Chi-square test of independence was performed. Although the majority of respondents correctly recognized the manipulation, this percentage was not significant, x^2 (2, N = 150) = 1,765, p = .414. In other words, the manipulation was not statistically supported.

In addition to the first manipulation, respondents of condition 1 and 3 were also exposed to an article containing positive stereotypic information, in which the article in condition 1 provided positive stereotypic information about Arabic men from the Middle East, while the article in condition 3 provided positive stereotypic information about Dutch White men. A manipulation check question was included for this stimulus material as well. Respondents were asked which ethnic group achieved the highest results according to the study that was discussed in the article. The number of respondents that correctly answered the manipulation check question regarding positive stereotypic information is also provided in Table 6. As can be seen, 96,6% of the respondents were able to correctly answer this question. Results of a one sample Chi-square test showed a significant result (x^2 (1, N = 59) = 51.271, p < .001), indicating that this manipulation was statistically supported.

Table 6. Results manipulation check

Manipulation	Correct		Incorrect	
	Frequency	%	Frequency	%
Stereotype-consistent perpetrator information	42	68,9	19	31,1
Stereotype-inconsistent perpetrator information	46	78	13	22
Neutral perpetrator information	20	66,7	10	33,3
Total	108	72	42	28
Positive stereotypic information	57	96,6	2	3,4
Total	57	96,6	2	3,4

4. Results

4.1 Descriptive statistics

First, the mean scores on the dependent variables have been calculated. Table 7 provides the means and standard deviations of the main dependent variables that were measured in this study.

Table 7. Descriptive statistics of the dependent variables

	Severity of crime	Feelings of hate	Sentencing decisions	Fear crime and terrorism	Distrust White men	Distrust Arabic men	Prejudice White men	Prejudice Arabic men	Emotions White men	Emotions Arabic men	IA[b] White men	IA[b] Arabic men
Conditions[a]	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
1: Consistent x Positive	9.31 (1.49)	6.86 (3.18)	11.82 (12.34)	2.60 (0.77)	2.63 (0.78)	2.66 (0.71)	2.03 (0.44)	2.17 (0.69)	2.62 (0.47)	2.81 (0.65)	2.14 (0.91)	2.03 (0.92)
2: Consistent x No positive	9.33 (1.34)	7.06 (1.90)	12.71 (9.72)	2.41 (0.66)	2.41 (0.67)	2.53 (0.66)	1.94 (0.46)	2.23 (0.55)	2.58 (0.42)	2.84 (0.41)	2.04 (0.89)	2.28 (0.93)
3: Inconsistent x Positive	9.23 (1.59)	7.52 (2.92)	20.40 (24.32)	2.42 (0.57)	2.50 (0.52)	2.59 (0.55)	2.12 (0.37)	2.39 (0.41)	2.50 (0.41)	2.74 (0.44)	1.97 (0.77)	2.34 (1.13)
4: Inconsistent x No positive	8.79 (1.89)	7.21 (3.07)	13.55 (21.17)	2.45 (0.73)	2.49 (0.64)	2.62 (0.67)	2.05 (0.57)	2.33 (0.67)	2.53 (0.47)	2.74 (0.53)	2.04 (1.28)	2.01 (1.20)
5: Neutral x No positive	9.03 (1.30)	7.26 (2.82)	13.50 (19.16)	2.28 (0.73)	2.52 (0.50)	2.70 (0.60)	1.98 (0.38)	2.32 (0.63)	2.35 (0.44)	2.81 (0.55)	2.01 (1.07)	2.13 (0.96)
Total	9.15 (1.52)	7.18 (2.77)	14.69 (18.60)	2.43 (0.69)	2.51 (0.62)	2.62 (0.63)	2.02 (0.45)	2.29 (0.59)	2.51 (0.45)	2.79 (0.51)	2.04 (0.98)	2.16 (1.03)
Perpetrator information												
Stereotype-consistent	9.32 (1.40)	6.97 (2.56)	12.28 (10.93)	2.50 (0.71)	2.51 (0.72)	2.59 (0.68)	1.98 (0.45)	2.20 (0.61)	2.60 (0.44)	2.83 (0.53)	2.09 (0.89)	2.16 (0.93)
Stereotype-inconsistent	9.02 (1.74)	7.37 (3.07)	17.50 (23.08)	2.43 (0.64)	2.50 (0.58)	2.60 (0.60)	2.09 (0.47)	2.36 (0.55)	2.51 (0.44)	2.74 (0.48)	2.00 (1.04)	2.18 (1.17)
Neutral	9.03 (1.30)	7.25 (2.82)	13.50 (19.16)	2.28 (0.73)	2.52 (0.50)	2.70 (0.60)	1.98 (0.38)	2.32 (0.63)	2.35 (0.44)	2.81 (0.55)	2.01 (1.07)	2.13 (0.96)
Positive stereotypic information												
Yes	9.27 (1.53)	7.20 (3.04)	16.77 (20.43)	2.50 (0.68)	2.56 (0.66)	2.63 (0.63)	2.07 (0.41)	2.28 (0.57)	2.56 (0.44)	2.77 (0.55)	2.05 (0.84)	2.19 (1.04)
No	9.07 (1.52)	7.17 (2.59)	13.26 (17.22)	2.38 (0.72)	2.47 (0.60)	2.62 (0.63)	1.99 (0.47)	2.29 (0.59)	2.48 (0.45)	2.80 (0.50)	2.03 (1.07)	2.15 (1.02)

Note. Severity of crime and feelings of hate are measured on an 11-point rating scale (from 0 to 10). Sentencing decisions are given in years of imprisonment. The scores of IA refer to the number of seconds needed to select the positive word in the Implicit Association Test. The remaining variables are measured on a 5-point rating scale. [a]Consistent = Stereotype-consistent perpetrator information; Inconsistent = Stereotype-inconsistent perpetrator information; Neutral = Neutral perpetrator information; Positive = exposure to positive stereotypic information; No positive = no exposure to positive stereotypic information. [b]IA = Implicit Attitudes.

4.2 Univariate analysis of variance

A univariate analysis of variance was performed in order to explore the impact of perpetrator information (stereotype-consistent, stereotype-inconsistent, neutral) and exposure to positive stereotypic information (yes or no) on perceived severity of the crime, feelings of hate regarding the perpetrator, sentencing decisions, general fear of crime and terrorism, distrust, prejudice, emotions, and implicit attitudes. First, a Levene's test for equality of variances was performed in order to test whether the variability of the scores for each group is similar. It was found that the p-values were higher than the significance level α (0.05) and therefore it was assumed that the variances for the groups are equal. The main outcomes of the univariate analysis of variance are shown in Table 8. The following section discusses the results of the analysis, as presented per dependent variable.

4.2.1 Perceived severity of the crime

The main effect of perpetrator information on perceived severity of the crime was not found to be significant ($F_{(2, 146)} = .632$, $p = .533$, $\eta^2 = .009$), neither was the main effect of positive stereotypic information ($F_{(1, 146)} = .578$, $p = .449$, $\eta^2 = .004$). Regarding the interaction effect between perpetrator information and positive stereotypic information, again, no significant result was found ($F_{(1, 146)} = .709$, $p = .401$, $\eta^2 = .005$).

4.2.2 Feelings of hate towards perpetrator

Regarding feelings of hate towards the perpetrator of the crime, a similar pattern emerged. There was no main effect of perpetrator information ($F_{(2, 147)} = .339$, $p = .713$, $\eta^2 = .005$), nor there was a main effect of positive stereotypic information ($F_{(1, 147)} = .01$, $p = .919$, $\eta^2 = 0$). The interaction effect was also not found to be significant ($F_{(1, 147)} = .242$, $p = .624$, $\eta^2 = .002$).

4.2.3 Sentencing decisions

For sentencing decisions, respondents were asked to indicate what they considered to be the best fitting sentencing of the perpetrator (in years of imprisonment). However, some respondents did not answer the question in years of imprisonment, but stated that they considered life imprisonment (n = 9) or (forced) therapy (n = 2) as the most suitable

sentence. Also, some respondents argued that they did not know (n = 1), felt not able to make this decision (n = 3), were neutral (n = 1), or suggested a sentencing corresponding to the law (n = 1). As these answers are not numerical, they were excluded for the analysis of variance.

The analysis showed that perpetrator information did not have a significant influence on sentencing decisions (F (2, 123) = .778, p = .461, η^2 = .012). Similarly, positive stereotypic information also did not have a significant impact (F (1, 123) = .619, p = .433, η^2 = .005). Finally, no interaction effect was found (F (1, 123) = 1.044, p = .309, η^2 = .008).

Table 8. Results of the univariate analysis of variance

Independent variable	Dependent variable	df	Error df	F	p	η^2
Perpetrator information	Severity of crime	2	146	.632	.533	.009
	Feelings of hate	2	147	.339	.713	.005
	Sentencing decisions	2	123	.778	.461	.012
	Fear crime and terrorism	2	144	.608	.546	.008
	Distrust White men	2	147	.132	.877	.002
	Distrust Arabic men	2	147	.419	.659	.006
	Prejudice White men	2	145	.794	.454	.011
	Prejudice Arabic men	2	144	1.062	.348	.015
	Emotions White men	2	143	2.823	.063	.038
	Emotions Arabic men	2	143	.402	.669	.006
	Implicit attitudes White men	2	147	.121	.886	.002
	Implicit attitudes Arabic men	2	147	.007	.993	0
Positive stereotypic information	Severity of crime	1	146	.578	.449	.004
	Feelings of hate	1	147	.01	.919	0
	Sentencing decisions	1	123	.619	.433	.005
	Fear crime and terrorism	1	144	.402	.527	.003
	Distrust White men	1	147	1.005	.318	.007
	Distrust Arabic men	1	147	.209	.649	.001
	Prejudice White men	1	145	.79	.375	.005
	Prejudice Arabic men	1	144	0	.984	0
	Emotions White men	1	143	.002	.968	0
	Emotions Arabic men	1	143	.042	.838	0
	Implicit attitudes White men	1	147	.004	.95	0
	Implicit attitudes Arabic men	1	147	.041	.84	0
PI * PSI[a]	Severity of crime	1	146	.709	.401	.005
	Feelings of hate	1	147	.242	.624	.002
	Sentencing decisions	1	123	1.044	.309	.008
	Fear crime and terrorism	1	144	.752	.387	.005
	Distrust White men	1	147	.854	.357	.006
	Distrust Arabic men	1	147	.479	.49	.003
	Prejudice White men	1	145	.005	.943	0
	Prejudice Arabic men	1	144	.295	.588	.002
	Emotions White men	1	143	.174	.677	.001
	Emotions Arabic men	1	143	.023	.88	0
	Implicit attitudes White men	1	147	.204	.652	.001
	Implicit attitudes Arabic men	1	147	2.375	.125	.016

Note. [a]PI * PSI = interaction effect between perpetrator information and positive stereotypic information.

4.2.4 Fear of crime and terrorism

The effect of perpetrator information on fear of crime and terrorism was not significant (F (2, 144) = .608, p = .546, η^2 = .008), indicating that fear of crime and terrorism does not vary as a function of perpetrator information. The main effect of positive stereotypic information was also not significant (F (1, 144) = .402, p = .527, η^2 = .003). Again, no interaction effect could be observed (F (1, 144) = .752, p = .387, η^2 = .005).

4.2.5 Distrust

The differences in distrust towards Dutch White men between the three types of perpetrator information did not yield significant results (F (2, 147) = .132, p = .877, η^2 = .002). Likewise, differences in distrust towards Arabic men from the Middle East between

the three types of perpetrator information were not significant (F (2, 147) = .419, p = 659, η^2 = .006). These results suggest that distrust towards Dutch White men and Arabic men from the Middle East remain constant within the different groups, irrespective of the perpetrator information respondents were exposed to. The main effect of positive stereotypic information on distrust towards Dutch White men (F (1, 147) = 1.005, p = .318, η^2 = .007) and on distrust towards Arabic men from the Middle East (F (1, 147) = .209, p = .649, η^2 = .001) were both not significant. Finally, there was no interaction effect for distrust towards Dutch White men (F (1, 147) = .854, p = .357, η^2 = .006) or for distrust towards Arabic men from the Middle East (F (1, 147) = .479, p = .49, η^2 = .003).

4.2.6 Prejudice
For prejudice, a similar pattern emerged. No significant difference in prejudice towards Dutch White men between the three types of perpetrator information could be observed (F (2, 145) = .794, p = .454, η^2 = .011), neither for prejudice towards Arabic men from the Middle East (F (2, 144) = 1.062, p = .348, η^2 = .015). Regarding positive stereotypic information, there was also no main effect on prejudice towards Dutch White men (F (1, 145) = .79, p = .375, η^2 = .005), or on prejudice towards Arabic men from the Middle East (F (1, 144) = 0, p = .984, η^2 = 0). No interaction effects were found (F (1, 145) = .005, p = .943, η^2 = 0) and (F (1, 144) = .295, p = .588, η^2 = .002).

4.2.7 Emotions
Emotions were also measured both regarding Dutch White men as well as Arabic men from the Middle East. The main effect of perpetrator information on emotions towards Dutch White men was not statistically significant on an alpha level of .05, but was significant on an alpha level of .10 (F (2, 143) = 2.823, p = .063, η^2 = .038). Post hoc comparisons indicate that perpetrator information that is stereotype-consistent induced higher levels of negative emotions towards Dutch White men (M = 2.60, SD = 0.44) compared to perpetrator information that is neutral (M = 2.35, SD = 0.44, p = .063). In contrast, the main effect of perpetrator information on emotions towards Arabic men from the Middle East was not significant (F (2, 143) = .402, p = .669, η^2 = .006). The main effect of positive stereotypic information on emotions towards Dutch White men (F (1, 143) = .002, p = .968, η^2 = 0) and on emotions towards Arabic men from the Middle East (F (1, 143) = .042, p = .838, η^2 = 0) were both not significant. Finally, no interaction effects were found found (F (1, 143) = .174, p = .677, η^2 = .001) and (F (1, 143) = .023, p = .88, η^2 = 0).

4.2.8 Implicit attitudes
Regarding implicit attitudes, there was no significant effect of perpetrator information on implicit attitudes towards Dutch White men (F (2, 147) = .121, p = .886, η^2 = .002). Neither a significant difference could be observed between the groups on implicit attitudes towards Arabic men from the Middle East (F (2, 147) = .007, p = .993, η^2 = 0). Likewise, there was no main effect of positive stereotypic information on implicit attitudes towards Dutch White men (F (1, 147) = .004, p = .95, η^2 = 0) and towards Arabic men from the Middle East (F (1, 147) = .041, p = .84, η^2 = 0). There were also no significant interaction effects (F (1, 147) = .204, p = .652, η^2 = .001) and (F (1, 147) = 2.375, p = .125, η^2 = .016).

4.3 Exploring the moderating role of gender
An analysis of covariance was conducted in order to discover the potential relationship between gender of the respondents and the dependent variables of this study. The other demographic characteristics that were included in the study are not taken into account in

this analysis, since respondents are not equally divided between the groups regarding these characteristics. Table 9 shows the main outcomes of the analysis of covariance.

Table 9. Results of the analysis of covariance

Covariate	Dependent variable	df	Error df	F	p	η^2
Gender	Severity of crime	1	143	1.399	.239	.01
	Feelings of hate	1	144	3.59	.06	.024
	Sentencing decisions	2	121	.268	.605	.002
	Fear crime and terrorism	1	141	24.912	.000	.150
	Distrust White men	1	144	1.538	.217	.011
	Distrust Arabic men	1	144	4.222	.042	.028
	Prejudice White men	1	142	.381	.538	.003
	Prejudice Arabic men	1	142	.086	.77	.001
	Emotions White men	1	140	.439	.508	.003
	Emotions Arabic men	1	140	6.180	.014	.042
	Implicit attitudes White men	1	144	5.701	.018	.038
	Implicit attitudes Arabic men	1	144	4.594	.034	.031

As can be seen from Table 9, a significant relationship was found between gender and fear of crime and terrorism (F (1, 141) = 24.912, p = .000, η^2 = .150). Post hoc comparisons indicate that women have higher levels of fear of crime and terrorism (M = 2.68, SD = 0.68) compared to men (M = 2.12, SD = 0.58, p = .000). The effect of gender on distrust towards Arabic men from the Middle East was also significant (F (1, 144) = 4.222, p = .042, η^2 = .028). Specifically, women showed a higher distrust towards Arabic men from the Middle East (M = 2.72, SD = 0.61) compared to men (M = 2.51, SD = 0.63, p = .042). Likewise, there was a significant relationship between gender and emotions towards Arabic men from the Middle East (F (1, 140) = 6.180, p = .014, η^2 = .042). Women showed to have higher negative emotions towards Arabic men from the Middle East (M = 2. 89, SD = 0.51) compared to men (M = 2.68, SD = 0.49, p = .042). Finally, gender had a significant effect on both the implicit attitudes towards White men (F (1, 144) = 5.701, p = .018, η^2 = .038) as well as on the implicit attitudes towards Arabic men (F (1, 144) = 4.594, p = .034, η^2 = .031). However, contrary to the differences in explicit attitudes (i.e., fear of crime, distrust, and emotions), in this case, the attitudes of men were more negative compared to the attitudes of women. More specifically, post hoc comparisons indicate that men have higher negative implicit attitudes towards White men (M = 2.23, SD = 1.17 vs. M = 1.87, SD = 0.77, p = 0.38) as well as towards Arabic men (M = 2.37, SD = 1.10 vs. M = 1.99, SD = 0.95, p = .034). No interaction effect between gender and perpetrator information or gender and positive stereotypic information was found.

4.4 Q-sort
Based on the pictures of the men who were selected as the most and least potential perpetrators, a Q-sort was developed. In total, five different Q-sorts (one for each condition) were made, providing the average results of the respondents included in that specific condition. The pictures in the Q-sort are ranked from -2 'least potential perpetrator' to +2 'most potential perpetrator'. The final Q-sorts are presented in Figure 3 to Figure 7.

When closer inspecting the Q-sort of condition 1, all of the men who were selected as most potential perpetrators are Arabic men from the Middle East, as corresponds with the information provided in the article of this condition. In the middle of the distribution, two White men are represented, as well as four men of other races (i.e., Asian, Hispanic). From the six least potential perpetrators, four men are White, and two are of other races (i.e., Asian, Black). The Q-sort of condition 2 is almost identical to the Q-sort of condition 1,

as respondents in this condition were also exposed to stereotype-consistent information about the perpetrator. Again, all of the most potential perpetrators are Arabic men from the Middle East. Four White men and two men of other races (i.e., Asian, Hispanic) are represented in the middle of the distribution. All of the least potential perpetrators, except from one (Black), are White men.

Regarding the Q-sorts of condition 3 and condition 4, in which the perpetrator was described as a Dutch White man, all of the most potential perpetrators are indeed White men. When looking at the middle of the distribution, four out of the six men are Arabic, while the other two men have other races (i.e., two Hispanics for condition 3, one Hispanic and one Asian for condition 4). In condition 3, all of the least potential perpetrators have mixed races (i.e., Hispanic, Asian, or Black). In condition 4, one of the least potential perpetrators is Arabic, while the remaining five least potential perpetrators have mixed races.

Finally, the Q-sort of condition 5 shows the distribution of potential perpetrators in case nothing was mentioned about the ethnicity of the perpetrator in the article. As can be seen, the six most likely perpetrators are Arabic men, while all of the least likely perpetrators, except from one (Black), are White men. In the middle of the distribution, six men of mixed races (i.e., Asian, Black, Hispanic) are represented.

4.5 Memory

Memory was measured by means of the selection of pictures of potential perpetrators (i.e., whether the men who were selected as most potential perpetrator matched the characteristics of the perpetrator as described in the article). It was expected that memory of the perpetrator was more correct in case the respondents were exposed to stereotype-consistent information. To test this hypothesis, memory of the perpetrator of respondents in the stereotype-consistent information conditions (condition 1 and condition 2) was compared to memory of the respondents in the stereotype-inconsistent information conditions (condition 3 and condition 4). Respondents of condition 5 have been omitted from this analysis, since only neutral information about the perpetrator was included in this condition, making it impossible to measure the memory of these respondents.

From the 62 respondents that were exposed to perpetrator information that was stereotype-consistent, memory of 17 respondents (27,4%) was incorrect (i.e., at least one of the two most potential perpetrators that were selected did not match the description of the perpetrator as provided in the article). From the 59 respondents that were exposed to perpetrator information that was stereotype-inconsistent, memory of 22 respondents (37,3%) was incorrect. In order to find out whether the proportion of incorrect memory of respondents in one of the stereotype-consistent information conditions significantly differed from the proportion of incorrect memory of respondents in one of the stereotype-inconsistent information conditions, a Chi-square test of independence was performed. Results of the test showed no significant relationship between stereotype consistency and memory, x^2 (1, N = 121) = .934, p = .332. In other words, there was no significant difference in respondents' memory of perpetrator information across the conditions.

Figure 3. Q-sort condition 1
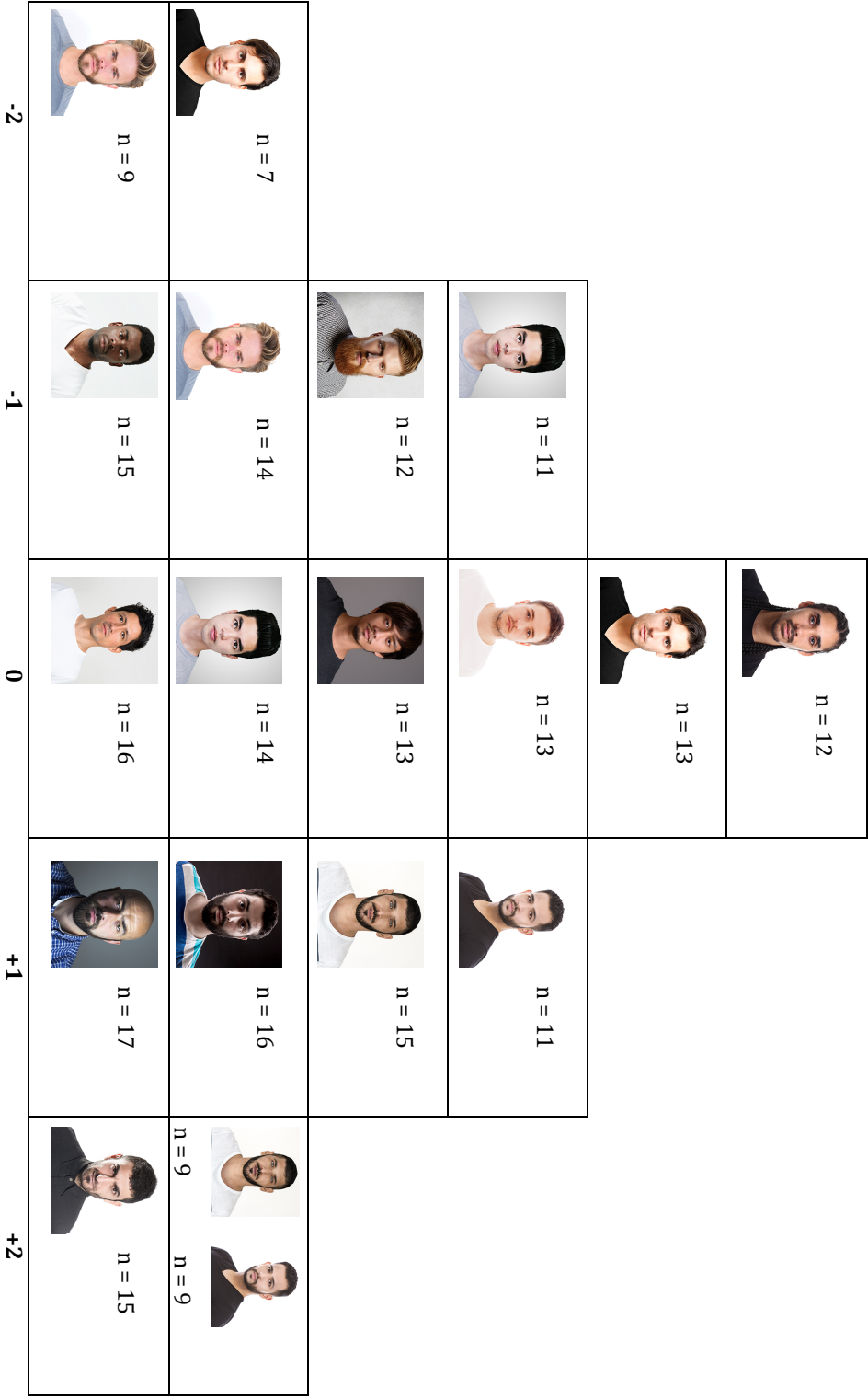
Note. Some pictures appear more than once in the Q-sort, since this Q-sort provides a general distribution of all respondents in condition 1.

Figure 4. Q-sort condition 2

-2	-1	0	+1	+2
n = 9	n = 11	n = 12	n = 14	n = 9
n = 9	n = 12	n = 13	n = 15	n = 9
	n = 12	n = 13	n = 16	n = 13
	n = 15	n = 13	n = 18	
		n = 14		
		n = 14		

Note. Some pictures appear more than once in the Q-sort, since this Q-sort provides a general distribution of all respondents in condition 2.

Figure 5. Q-sort condition 3

-2	-1	0	+1	+2
		n = 15		
		n = 15		
	n = 10	n = 15	n = 13	
	n = 11	n = 16	n = 14	
n = 13	n = 11	n = 18	n = 15	n = 10
n = 13	n = 13	n = 19	n = 15	n = 10
				n = 16

Note. Some pictures appear more than once in the Q-sort, since this Q-sort provides a general distribution of all respondents in condition 3.

Figure 6. Q-sort condition 4

-2	-1	0	+1	+2
n = 13	n = 12	n = 17	n = 13	n = 14
n = 13	n = 12	n = 13	n = 11	n = 8
	n = 10	n = 13	n = 10	
	n = 9	n = 11	n = 10	
		n = 11		
		n = 11		

Note. Some pictures appear more than once in the Q-sort, since this Q-sort provides a general distribution of all respondents in condition 4.

Figure 7. Q-sort condition 5

-2	-1	0	+1	+2
		n = 12		
		n = 13	n = 12	
	n = 11	n = 14	n = 13	
n = 9	n = 11	n = 15	n = 14	n = 11
n = 16	n = 14	n = 16	n = 17	n = 12
	n = 15	n = 19		

Note. Some pictures appear more than once in the Q-sort, since this Q-sort provides a general distribution of all respondents in condition 5.

4.6 Analysis of open-ended questions

After completing the Q-sort, respondents were asked to shortly explain the reason behind their selection of the most and least potential perpetrators. An inductive coding strategy (Denzin & Lincoln, 2011) was used to analyze the qualitative data. An objective second coder was asked to participate in the coding process. First, the researcher and the second coder both independently read through the answers, after which they formulated a few possible coding categories. Next, the possible coding categories were discussed and the researcher and second coder agreed upon twelve main categories, of which eleven applied both to the answers concerning the most potential perpetrators, as well as to the answers concerning the least potential perpetrators. Each category was provided with criteria to illustrate the conditions an answer should fulfill in order to fit a specific category. In the next step, the researcher and second coder independently classified each answer into one of the categories. An interrater reliability test was performed in order to determine the level of consistency between the two coders. Results of the test showed a Cohen's kappa of 0.70 for the answers concerning the selection of the most potential perpetrators and a Cohen's kappa of 0.78 for the answers concerning the selection of the least potential perpetrators, which are both considered to be a satisfactory level of intercoder agreement (Cohen, 1960). Table 10 and Table 11 show the different categories that resulted from the analysis, each combined with the number of answers that have been provided with this code and an example answer.

The categories as presented in Table 10 and Table 11 have been critically reviewed and clustered into six overarching themes. Answers of the respondents clearly indicated a distinction between (1) physical characteristics (appearance, attractiveness, (facial) expression), (2) emotions (anger, friendliness, aggressiveness), (3) feelings of trust and intuition (trustworthiness, intuition), (4) characteristics based on ethnicity and religion (ethnicity, religion), (5) information about the perpetrator that was provided in the article. Some remaining responses that do not fall into one of these categories are labeled as (6) 'other'. The following part will elaborate on these six main themes.

Table 10. Categories most potential perpetrators

Category name	Frequency[a]	Example
Information provided in article	52	'Corresponds to the description in the article.'
Ethnicity	27	'This appearance matches the appearance of a person I consider to be a terrorist. Terrorist attacks are most likely to be associated with men who have 'Arabic' looks.'
(Facial) expression	26	'Their facial expression is indifferent and sad.'
Appearance	13	'Because of their beard/appearance.'
Anger	9	'They look suspicious and angry.'
Aggressiveness	8	'They look threatening.'
Other	8	'I actually have no idea.'
Religion	6	'Most attacks in Europe are committed by Muslim extremists, so I have chosen for two men whom I think are Muslim.'
Trustworthiness	6	'Because I get an unreliable feeling with these men.'
Friendliness	5	'I find these men difficult to gauge, they do not look friendly.'
Intuition	3	'Intuition.'

Note. [a]The total number of frequencies (n = 163) is higher than the total number of answers (n = 133). This is caused by the fact that some answers belong to more than one category.

Table 11. Categories least potential perpetrators

Category name	Frequency[a]	Example
Ethnicity	32	'You never hear that an Asian commits an attack.'
Information provided in article	30	'Because the article was about a Dutch White men.'
(Facial) expression	20	'Innocent look.'
Friendliness	15	'They look friendly.'
Appearance	13	'Men who are mainly concerned with appearance.'
Intuition	9	'They do not look like criminals. That is a feeling.'
Other	9	'Because I felt forced to choose based on ethnicity and I do not want to do so.'
Religion	5	'Many terrorists commit an attack from a religious perspective. These men look like Western men. In the West, many people are atheist or at least have less religious beliefs that can lead to an attack.'
Attractiveness	4	'Handsome.'
Trustworthiness	4	'These men look most successful and therefore they have more to lose compared to the other men.'
Anger	3	'Both men do not express anger, but rather joy. I think they would be indignant if something like that (e.g., terrorist attack) would happen.'
Aggressiveness	2	'They do not look violent.'

Note. [a]The total number of frequencies (n = 146) is higher than the total number of answers (n = 131). This is caused by the fact that some answers belong to more than one category.

4.6.1 Physical characteristics

The physical characteristics of the men included in the Q-sort seem to play a major role in the respondents' selection of the most as well as the least potential perpetrator. More specifically, a neat appearance (e.g., neat hairstyle) is for some respondents an indicator that this man is not a likely perpetrator. Likewise, for a small number of respondents, the attractiveness of a certain man was the reason for selecting him as least potential perpetrator: 'I think these men are beautiful. When I look at their eyes I think they are very kind' (respondent 130). Another reason for selecting someone as least potential perpetrator that emerged several times was (facial) expression. For instance, respondent 23 argued: 'They look innocent; they look much more like a normal citizen than a terrorist.' Another respondent stated: 'They express positivity by means of an open look in their eyes' (respondent 71). Appearance and (facial) expression were considered as an indicator of most potential perpetrator as well. Regarding appearance, several respondents (n = 8) mentioned someone's beard as one of the main reasons to select him as most potential perpetrator. An 'unhappy facial expression' (respondent 97) and 'a strange look in his eyes' (respondent 52) are some of the reasons that were given regarding (facial) expressions.

4.6.2 Emotions

'Emotions' seems to be another important factor that caused the respondents to choose someone as most or least potential perpetrator. Some recurrent emotions were anger, friendliness, and aggressiveness. As can be expected, if a person looks anger or aggressive, he is considered to be a most potential perpetrator. To illustrate, respondent 132 argued: 'They look like angry men.' Another respondent stated: 'They have an aggressive appearance. They are alert' (respondent 62). On the other hand, in case a person lacks anger or aggressiveness, but rather expresses friendliness, this offers a reason to select him as least potential perpetrator: 'The first man has a friendly face. He has a sympathetic glance in his eyes. A hippie look reinforces this. The second man looks determinedly, but his facial expression does not reflect that this man is used to violence or that he would use violence himself' (respondent 32).

4.6.3 Feelings of trust and intuition

A number of respondents used their intuition to perform the Q-sort task. A 'gut feeling', is how some of the respondents explained their choices. In addition, the trustworthiness of the men,

either based on a physical characteristic or on the respondents' feeling, was an indicator of suspicion: 'He has special eyes that I do not trust,' argued respondent 97.

4.6.4 Characteristics based on ethnicity and religion

'Characteristics based on ethnicity and religion' is another major theme that emerged from the analysis. Regarding ethnicity, it appeared that when making a selection for the Q-sort task, some respondents compared the ethnicity of the men included in the Q-sort to the ethnicity of men that recently committed terrorist attacks. For instance, respondent 85 stated: 'Terrorist attacks recently have been committed by men who are Arabic and/or men who have an Arabic appearance, as these men have.' Similarly, respondent 4 argued: 'It looks like these men originate from a country from the Middle East. [...] They support the belief of perpetrators of terrorist attacks.' The media seem to contribute to this particular perspective of Arabic men as terrorists, as was argued by some of the respondents: 'In case of terrorist attacks, there is often the association with men who have an Eastern/Arabic appearance. This image is provided by the media' (respondent 47). Likewise, respondent 127 stated: 'In recent years, it are often young men with an Eastern-European appearance who are in the media'. Regarding religion, some respondents used the Islamic religion as indicator of suspicion. Specifically, respondent 152 argued: 'I choose the ones from whom I expect they have the Islamic religion. Nowadays, it are the supporters of Islam who are inspired to behave according to Jihad by means of terrorism.' Another respondent stated: 'They look like Muslims. Unfortunately, many attacks are committed by extremists of Islam.'

4.6.5 Information about the perpetrator that was provided in the article

A major proportion of the respondents referred to the article they were exposed to as the main reason for selecting someone as most or least potential perpetrator. It appeared that they were looking for physical characteristics that match the characteristics (e.g., White or Arabic) which were provided in the article. For example, respondent 60 stated: 'According to the article, it was a Dutch White man. These men seem to meet this description.'

4.6.6 Other

Some responses did not belong to one of the above-described themes. Therefore, these responses were labeled as 'other'. Some example answers that fall into this category are the following: 'Because I had to make a decision. I think it is difficult and also ethically incorrect to choose perpetrators based on pictures' (respondent 125), 'It has worked. I thought the first article was about a Dutch White man, but I am not sure anymore whether this was only the case in the second article' (respondent 20), 'Because I felt forced to choose based on ethnicity and I do not want to do so' (respondent 135).

5. Discussion and conclusion

The following section serves to critically discuss the research results, providing an answer to the main research questions of this study, formulated as (1) '*To what extent is there a difference between attitudes (implicit and explicit) towards a certain stereotypical group after being exposed to perpetrator information that is either stereotype-consistent, stereotype-inconsistent, or neutral?'*, (2) '*What is the effect of exposure to positive stereotypic information on the implicit and explicit attitudes towards this stereotypical group?'*, and (3) '*To what extent is stereotype-(in)consistent information influencing memory?'.* In addition to discussing the research results, theoretical and practical implications deriving from this study will be highlighted. Finally, the study's limitations will be discussed and suggestions for future research are presented.

5.1 Discussion of research results

5.1.1 Stereotyping and attitudes

When reviewing the research results, surprisingly, the only main effect (on an alpha level of .10) that could be observed was that of perpetrator information on emotions towards Dutch White men. Specifically, it was found that perpetrator information that is stereotype-consistent (i.e., an Arabic man from the Middle East) induced higher levels of negative emotions towards Dutch White men, compared to perpetrator information that is neutral (i.e., no ethnic characteristics were mentioned). This finding is somewhat surprising, since one would expect higher negative emotions towards Arabic men from the Middle East rather than towards Dutch White men in case one is exposed to stereotype-consistent information (i.e., an Arabic man from the Middle East). However, it appears that the opposite was true. Based on this result, it could be argued that when being exposed to negative information concerning one stereotypical group, emotions towards another stereotypical group become more negative. This is contrary to findings of previous studies (e.g., Arendt & Northup, 2015; Park et al., 2007), which have suggested that exposure to negative stereotypic information concerning a certain stereotypical group leads to more negative attitudes towards this specific stereotypical group. The observed increase in negative emotions towards Dutch White men may be explained by the fact that the risk of social desirability for this study was high, leading respondents to react more favorable towards certain items concerning Arabic men from the Middle East and not to Dutch White men.

Furthermore, this study did not detect any evidence for a significant difference between perpetrator information (stereotype-consistent, stereotype-inconsistent, neutral) and exposure to positive stereotypic information (yes or no) on all of the other dependent variables included in this study. In other words, the several attitude components that were measured remained constant within the different groups, irrespective of the type of perpetrator information respondents were exposed to (thus rejecting H1) or whether they did or did not encounter positive stereotypic information (RQ1). These results are not in agreement with those obtained by earlier findings, which demonstrated that a negative depiction of certain stereotypical groups in the media leads the public to adopt these negative stereotypes (e.g., Arendt, 2013; Dixon, 2008; Dixon & Linz, 2000a, 2000b; Gilliam & Iyengar, 2000; Mastro et al., 2009). There are several possible explanations for this rather contradictory result. First, it must be noticed that 28% of the respondents did not correctly recognize the manipulation regarding perpetrator information, making the manipulation not statistically significant. Consequently, the manipulation did not have the power as intended, what could have influenced the results of this study. Second, exposure to only one news article might not be sufficient to influence attitudes, since attitudes are considered as relatively stable memory structures (Tourangeau, 1992). These

attitudes become automatic and are therefore relatively difficult to change (Olson & Fazio, 2006). Thus, as respondents' preexisting attitudes towards Arabic men from the Middle East and Dutch White men are stable, they seem to be unaffected by one such intervention as was the case in this study. Another issue relating to attitudes that might have influenced the results of this study is the fact that, according to several scholars (e.g., Schuman & Presser, 1981; Tourangeau & Rasinski, 1988) attitude measurement is highly context dependent. Consequently, minor factors in for instance the wording of the items included in the study could influence the outcomes. Arguably, other (wording of the) items might have led to other results. Furthermore, measuring attitudes towards ethnic groups is specifically complex, since the risk of socially desirable answers is high (Hofmann et al., 2005). This potential tendency of responding in a socially desirable way could have biased the results of this study. However, this does not explain the fact that respondents' implicit attitudes also remained stable across the different conditions of this study (thus rejecting H2).

Regarding the absence of a relationship between positive stereotypic information and attitudes, it could be argued that the content of the article containing positive stereotypic information (i.e., men of a certain stereotypical group provide the best care for their elderly parents) does not outweigh the impact of the content of the article regarding the terrorist attack. This makes it unlikely that the attitudes regarding the stereotypical group in question improve as a result of exposure to this positive stereotypic information.

5.1.2 Stereotyping and memory

In addition to measuring the attitudes towards Arabic men from the Middle East and Dutch White men as a result of exposure to the stimulus material of this study, the respondents' memory of the perpetrator's identity was another main variable that was measured. Although memory was less correct in the conditions containing stereotype-inconsistent information compared to the stereotype-consistent information conditions (an incorrect memory of 37,3% of the respondents vs. an incorrect memory of 27,4%), results of a Chi-square test indicated that this difference was not significant. Thus, H3 must be rejected. This outcome differs from findings as presented by a large body of literature (e.g., Doosje, Spears et al., 2007; Fyock & Stangor, 1994; Schechory et al., 2010; Van Knippenberg & Dijksterhuis, 1996), which suggest that memory of stereotype-consistent information is better compared to memory of stereotype-inconsistent information. In an attempt to explain this conflicting finding, potentially, the time period between encountering the information presented in the article and measuring the respondents' memory was too short. More precisely, there were only a few questions between reading the article and performing the Q-sort (in which memory was measured). Apparently, this made it less likely that memory was incorrect, regardless of what information (i.e., stereotype-consistent or stereotype-inconsistent information) the respondents have read.

5.1.3 The moderating role of gender

As an additional analysis, the moderating effect of gender on the dependent variables was explored. Results show that women have higher levels of fear of crime and terrorism compared to men, what is consistent with previous findings in the literature (e.g., Cops & Pleysier, 2011; Fetchenhauer & Buunk, 2005; Smith, Torstensson, & Johansson, 2001). According to Fetchenhauer and Buunk (2005), this phenomenon can be explained by the fact that men favor risk-taking, while women are more cautious. In a similar vein, compared to men, women showed to have a higher distrust towards Arabic men from the Middle East, as well as higher negative emotions towards Arabic men from the Middle East. This finding suggests that attitudes towards

the other sex (in the direction of women's attitudes towards men) are more negative compared to attitudes towards the same sex (men's attitudes towards men). However, as the difference can only be noticed in attitudes towards Arabic men from the Middle East and not towards Dutch White men, ethnicity seems to play a role in this process as well. This supports previous research into the attitudes towards Muslims/people from the Middle East (e.g., Doosje, Zebel et al., 2007; Owala et al., 2013; Park et al., 2007). Although women were significantly more negative towards multiple components of explicit attitudes, men showed to have higher negative implicit attitudes towards both White men as well as to Arabic men from the Middle East, assuming that the automatically activated attitudes (i.e., implicit attitudes) of men included in this study differed from their explicit ones. As such, it seems that the implicit attitudes of men are not used when expressing their explicit attitudes. This result reflects various previous findings (e.g., Devine, 1989; Fazio & Dunton, 1997; Hofmann et al., 2005) and can be explained by the fact that people suppress or alter their implicit attitudes when evaluating members of certain social groups in order to avoid prejudice (Gawronski & Bodenhausen, 2006).

5.1.4 Findings of the Q-sort
When comparing the Q-sorts of the different conditions, a few things stand out. First, overall, the men who have been selected as most potential perpetrator seem to correspond to the characteristics of the perpetrator as was described in the article included in the study (i.e., Arabic men for condition 1 and 2, White men for condition 3 and 4). However, as can be noticed, a different pattern emerged for the remaining distribution of the Q-sorts. Specifically, in condition 1 and 2, in which the perpetrator was an Arabic man from the Middle East, the majority of the least potential perpetrators were White men. In contrast, in condition 3 and 4, in which the perpetrator was a Dutch White man, the majority of the least potential perpetrators were men of mixed races (i.e., Asian, Hispanic, Black), rather than men from the Middle East. Thus, it can be concluded that on average, men from the Middle East score higher on the Q-sort ranking compared to White men. This finding seems to be consistent with previous studies suggesting that people highly associate Muslims and people from the Middle East with terrorism (e.g., Skorinko & Spellman, 2013; Smalarz et al., 2016; Welch, 2016). Further, closer inspection of the Q-sort of condition 5, in which only neutral information was given about the perpetrator, a clear distinction arises between the men who are chosen as least potential perpetrator and the men who are chosen as most potential perpetrator. Particularly, White men are highly represented as least potential perpetrator, while men from the Middle East are solely represented as most potential perpetrator (RQ2). Men of other races are included in the neutral position of the Q-sort. As respondents did not have any prior information about the perpetrator in condition 5, this perfectly illustrates the stereotypes people have developed towards perpetrators of terrorism. In other words, this research finding shows that people highly associate terrorism with people from the Middle East. Also, it seems that social desirability no longer plays a role in case people do not have any information regarding the ethnicity of the perpetrator.

5.1.5 Outcomes of open-ended questions
The open-ended questions that were aimed at gaining insights into the reasons behind respondents' selection of the most and least potential perpetrators, offer valuable contributions that are worth a discussion. First, the results of the measurements of attitudes towards Dutch White men and Arabic men from the Middle East indicated that respondents appear to be unprejudiced regarding one's ethnicity. However, findings of the open-ended questions reveal

that ethnicity actually played a role when selecting the potential perpetrators of a terrorist attack. For instance, several respondents argued that they based their selection of potential perpetrators on the belief that people from the Middle East are terrorists. This result confirms the findings of previous studies arguing that people have developed a strong association between terrorism and Muslims/people from the Middle East (e.g., D'Angelo & Kuypers, 2010; Doosje, Zebel et al., 2007; Owala et al., 2013; Saleem & Anderson, 2013; Skorinko & Spellman, 2013; Welch, 2016). In addition, this finding proves the phenomenon of stereotyping, since it appears that people make assumptions about a particular person based on the social category to which he or she is perceived to belong to. This is in line with the definition of stereotyping as provided by Contreras et al. (2012). Furthermore, the answers of some of the respondents show that the media seem to be a major contributor to the belief that people from the Middle East are terrorists, since they argued that they based their selection of potential perpetrators on the image of terrorists as provided by the media. Previous scholars have also highlighted the media's influence on the development of the association between terrorists and people from the Middle East (e.g., Morin, 2016; Powell, 2011). To conclude, this research supports the findings of previous studies regarding the relationship between terrorism and people from the Middle East and stereotypes as a result of exposure to news articles concerning terrorist attacks.

5.2 Theoretical and practical implications

Findings of the present study offer valuable contributions to existing literature in various ways. First, as the influence of positive stereotypic information on attitudes seemed to be understudied, this study made an attempt to explore this issue. Second, this study created a basis for further research into the stereotyping of criminals in The Netherlands. Namely, although there are several studies into criminal stereotyping in foreign countries, there was a lack of available data concerning this issue that was focused on The Netherlands. Therefore, to make a first step in exploring this issue, a small pretest was conducted to discover the stereotypes of 19 common crimes in The Netherlands. Further, although a large body of literature proved the impact of news articles on attitudes, findings of this study showed the opposite, which sheds new light on this issue.

The results of this study also reveal several practical implications. First, although the news articles included in this study did not have a significant effect on the dependent variables, the open-ended questions belonging to the Q-sort showed that the media actually do play a role in the development of negative associations with people from the Middle East, as some of the respondents argued that they based their selection of potential perpetrators on the current media coverage. Again, as this frequent negative depiction of people from the Middle East leads to negative associations and finally to an increase in Islamophobia (Van der Valk, 2016), the media should reconsider to what extent it is necessary to report on the ethnic characteristics of perpetrators of terrorist attacks (and other crimes). Another relevant implication arising from this study is the fact that it turned out that, in today's society, ethical issues as presented in this study are extremely sensitive for some people. This became clear as some of the respondents stated, either by means of the open-ended questions at the end of the Q-sort, or by telling the researcher in person, that they did not want to judge people based on ethnicity. For potential future researchers and other institutions, it is important to carefully open up a discussion about this topic.

5.3 Limitations

Several limitations of this study should be acknowledged. First, it is unknown whether the manipulation regarding positive stereotypic information succeeded as indented. Namely, although the manipulation check showed that the majority of respondents correctly read the article (i.e., they correctly indicated which ethnic group achieved the highest results according to the study described in the article), this does not necessarily mean that they actually experienced the content of the article as positive, as was the goal of the manipulation. To ensure that this was indeed the case, an additional question should have been included regarding the extent to which respondents truly experienced the article as positive.

Second, the answers of some of the respondents on the question why they selected a particular person as most or least likely perpetrator of the criminal incident they were exposed to revealed that they either were aware of their prejudices or that they did not want to select people based on ethnic characteristics. Consequently, they argued that they therefore selected another person as potential perpetrator than they were initially intended to do, or that they just randomly selected people. This awareness of respondents might have influenced the results of this study. It can be stated that it appears to be difficult to do empirical research on this subject.

Another limitation concerns the fact that a few scales included in this study showed to have a relatively low reliability. However, this was only the case for the subscales (e.g., distrust towards Dutch White men and distrust towards Arabic men from the Middle East). The total scales all showed to have a satisfactory Cronbach's alpha.

Finally, it must be acknowledged that including the Q-sort as an online instead of offline research method led to a missed opportunity. Specifically, the answers on the open-ended questions that were aimed at discovering the reasons behind the choices made in the Q-sort, provided interesting insights. However, as the Q-sort was online, there was no chance to ask follow-up questions. In case the Q-sort was offline and in presence of the researcher, more in depth-data could have been obtained.

5.4 Future research directions

Based on this study's results and limitations, several suggestions for future investigations will be presented in the following paragraph. First, as has been argued, exposure to only one news article might not be sufficient to influence attitudes. To develop a complete picture of the influence of news articles containing information regarding a certain ethnic group on attitudes, additional studies could focus on the effect of multiple articles, rather than only one article.

Second, as it is questionable whether the manipulation of the positive stereotypic information succeeded as intended, it is worthwhile to further investigate this effect in future research, since the influence of exposure to positive stereotypic information still seems to be understudied in existing literature. In such a potential study, the challenge is to make sure whether the positive stereotypic information was indeed experienced as positive.

Moreover, as one source of weakness in this study was the fact that the Q-sort was performed in an online setting, further examination using an offline Q-sort regarding this topic is recommended. This could shed light on more details and background information on this somewhat difficult topic.

5.5 Conclusion

The present study was designed to examine whether there is a difference between attitudes (implicit and explicit) towards a certain stereotypical group, after being exposed to perpetrator information that was stereotype-consistent, stereotype-inconsistent, or neutral. In order to answer the first main research question of this study, overall, findings suggested that the

different attitude components that were measured in this study (except from one) did not vary as a result of the type of perpetrator information respondents were exposed to. The second aim of this study was to explore the influence of positive stereotypic information on attitudes, while the respondents are already exposed to negative stereotypic information concerning this group. In this specific investigation, this did not seem to have any influence on respondents' attitudes, providing an answer on the second main research question. The final research question of this study focused on whether there was a difference in the memory of stereotype-consistent, compared to stereotype-inconsistent information. Results of this investigation showed that memory did not differ as a result of whether the perpetrator information was stereotype-consistent or stereotype-inconsistent.

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Appendices

Appendix A News article terrorist attack

1. Stereotype-consistent information condition

Verdachte opgepakt wegens voorbereiden terroristische aanslag op Schiphol

Een man uit Amsterdam is afgelopen maandag opgepakt omdat hij wordt verdacht van het voorbereiden van een terroristische daad. De verdachte -een Arabische man oorspronkelijk afkomstig uit het Midden-Oosten- wilde een bom tot ontploffing brengen op Schiphol. In het huis en bijbehorende kelderbox van de verdachte werden een machinegeweer, munitie en explosieven aangetroffen.

2. Stereotype-inconsistent information condition

Verdachte opgepakt wegens voorbereiden terroristische aanslag op Schiphol

Een man uit Amsterdam is afgelopen maandag opgepakt omdat hij wordt verdacht van het voorbereiden van een terroristische daad. De verdachte –een Nederlandse blanke man- wilde een bom tot ontploffing brengen op Schiphol. In het huis en bijbehorende kelderbox van de verdachte werden een machinegeweer, munitie en explosieven aangetroffen.

3. Neutral information condition

Verdachte opgepakt wegens voorbereiden terroristische aanslag op Schiphol

Een man uit Amsterdam is afgelopen maandag opgepakt omdat hij wordt verdacht van het voorbereiden van een terroristische daad. De verdachte wilde een bom tot ontploffing brengen op Schiphol. In het huis en bijbehorende kelderbox van de verdachte werden een machinegeweer, munitie en explosieven aangetroffen.

Appendix B News article positive stereotypic information

1. Positive stereotypic information Arabic men from the Middle East

'Arabische man zorgt het best voor zijn ouders'

Uit onderzoek van de Universiteit Utrecht naar ouderenzorg in Nederland is gebleken dat van alle mensen in Nederland, Arabische mannen uit het Midden-Oosten het best zorgen voor hun ouders op leeftijd.

In het onderzoek werden mensen van verschillende etnische groepen met elkaar vergeleken. In vergelijking met mannen en vrouwen met een Nederlandse, Aziatische, Afrikaanse, of andere etniciteit blijken Arabische mannen uit het Midden-Oosten het vaakst bij hun ouders langs te gaan, de meeste energie te steken in goede voorzieningen van hun ouders en ook neemt deze groep hun ouders het vaakst in huis wanneer zij niet meer op zichzelf kunnen wonen. Ze scoorden hiermee op alle punten van het onderzoek het hoogst.

### 2. Positive stereotypic information Dutch White men

'Nederlandse man zorgt het best voor zijn ouders'

Uit onderzoek van de Universiteit Utrecht naar ouderenzorg in Nederland is gebleken dat van alle mensen in Nederland, autochtone Nederlandse mannen het best zorgen voor hun ouders op leeftijd.

In het onderzoek werden mensen van verschillende etnische groepen met elkaar vergeleken. In vergelijking met mannen en vrouwen met een Arabische, Aziatische, Afrikaanse, of andere etniciteit blijken autochtone Nederlandse mannen het vaakst bij hun ouders langs te gaan, de meeste energie te steken in goede voorzieningen van hun ouders en ook neemt deze groep hun ouders het vaakst in huis wanneer zij niet meer op zichzelf kunnen wonen. Ze scoorden hiermee op alle punten van het onderzoek het hoogst.

Appendix C Implicit association test

1. Target concepts implicit association test[5]

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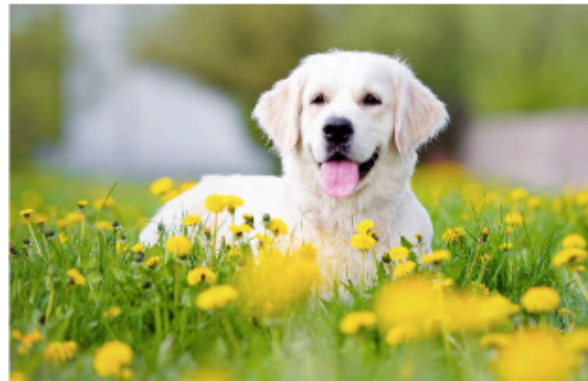
[5] Sources from left to right and from top to bottom: g-stockstudio (n.d.), Otsphoto (n.d.), Syda Productions (n.d.), LuckyImages (n.d.), Guillem (n.d.), Jung (n.d.-a), Rawpixel (n.d.-a).

2. Attributes implicit association test

Positive words:
Diamant
Vrijheid
Eerlijk
Liefde
Loyaal
Gelukkig
Vrede
Regenboog
Plezier
Zon

Vakantie
Vriendschap
Uitstekend

Negative words:
Misbruik
Vuil
Kwaad
Verontreinigen
Armoede
Bedorven
Ziekte
Stank
Braken
Ongeluk
Gif
Oorlog
Teleurstellend

Appendix D Survey

Ernst van de misdaad

Op een schaal van 0 tot 10, hoe erg vond u de misdaad waarover u heeft gelezen? De antwoorden variëren van 0 'helemaal niet erg' tot 10 'zeer erg'.

Haatgevoelens tegenover dader

Op een schaal van 0 tot 10, hoeveel haatgevoelens ervaart u tegenover de dader van deze misdaad? De antwoorden variëren van 0 'helemaal geen haatgevoelens' tot 10 'zeer veel haatgevoelens'.

Veroordeling

Welke veroordeling zou de dader van deze misdaad volgens u moeten krijgen? Geef dit aan in jaren onvoorwaardelijke gevangenisstraf.

Angst voor criminaliteit en terrorisme

1. In het algemeen ben ik bezorgd om criminaliteit.

2. Ik ben bang om in de toekomst slachtoffer te worden van een misdaad.

3. In het dagelijks leven ben ik <u>niet</u> bang voor een terroristische aanslag. (reverse worded item)

4. Als ik 's avonds de straat op moet, neem ik het liefst iemand mee voor de veiligheid.

5. Ik ben bang dat ik, een vriend of een familielid, in de nabije toekomst slachtoffer word van een terroristische aanslag in Nederland.

6. Vanwege de huidige aanslagen in verschillende Europese landen bezoek ik minder vaak een Nederlands evenement dan voor de aanslagen.

7. De angst om slachtoffer te worden van een misdaad houdt me tegen om dingen te doen die ik eigenlijk graag zou willen doen.

8. Ik ben bang dat er in de nabije toekomst een terroristische aanslag in Nederland plaatsvindt.

Wantrouwen

1. De meeste Nederlandse blanke mannen kun je <u>niet</u> vertrouwen.

2. De meeste Arabische mannen uit het Midden-Oosten kun je vertrouwen. (reverse worded item)

3. De meeste blanke mannen zijn eerlijk. (reverse worded item)

4. De meeste Nederlandse blanke mannen proberen van je te profiteren.

5. De meeste Arabische mannen uit het Midden-Oosten zijn <u>on</u>eerlijk.

6. De meeste Arabische mannen uit het Midden-Oosten proberen van je te profiteren.

7. De meeste Nederlandse blanke mannen denken alleen aan zichzelf.

8. De meeste Arabische mannen uit het Midden-Oosten denken alleen aan zichzelf.

Vooroordelen

1. Ik denk dat Arabische mannen uit het Midden-Oosten die in Nederland wonen hun kinderen minder goede normen en waarden bijbrengen dan Nederlandse blanke mannen.

2. Ik respecteer Arabische mannen uit het Midden-Oosten die in Nederland wonen. (reverse worded item)

3. Ik denk dat Nederlandse blanke mannen hun kinderen minder goede normen en waarden bijbrengen dan Arabische mannen uit het Midden-Oosten die in Nederland wonen.

4. Nederlandse blanke mannen gebruiken snel geweld.

5. Ik respecteer Nederlandse blanke mannen. (reverse worded item)

6. Arabische mannen uit het Midden-Oosten gebruiken snel geweld.

7. Ik denk dat de meeste Nederlandse blanke mannen terrorisme goedkeuren.

8. Ik denk dat de meeste Arabische mannen uit het Midden-Oosten terrorisme goedkeuren.

Emoties

Geef op een schaal van 1 tot 5 aan in hoeverre u deze emotie ervaart tegenover Nederlandse blanke mannen. De antwoorden variëren van 1 'helemaal niet' tot 5 'helemaal wel'.

- Bewondering (reverse worded item)
- Wantrouwen
- Ongemak
- Vriendelijkheid (reverse worded item)
- Respect (reverse worded item)
- Onveiligheid
- Onverschilligheid

Geef op een schaal van 1 tot 5 aan in hoeverre u deze emotie ervaart tegenover Arabische mannen uit het Midden-Oosten. De antwoorden variëren van 1 'helemaal niet' tot 5 'helemaal wel'.

- Bewondering (reverse worded item)
- Wantrouwen
- Ongemak
- Vriendelijkheid (reverse worded item)
- Respect (reverse worded item)
- Onveiligheid
- Onverschilligheid

Demografische vragen

1. Wat is uw geslacht?

- Man
- Vrouw

2. Wat is uw leeftijd?
- < 18 jaar
- 18-25 jaar
- 26-33 jaar
- 34-41 jaar
- 42-49 jaar
- 50-57 jaar
- 58-65 jaar
- 66-73 jaar
- 74 jaar of ouder

3. In welke provincie woont u?
- Groningen
- Friesland
- Drenthe
- Overijssel
- Gelderland
- Flevoland
- Utrecht
- Noord-Holland
- Zuid-Holland
- Noord-Brabant
- Limburg
- Zeeland

4. Wat is uw etniciteit?

5. Wat is uw religie?
- Christen
- Rooms-Katholiek
- Moslim
- Joods
- Ik heb geen religie
- Anders, namelijk ...

6. Wat is uw hoogst afgeronde opleiding? (Indien geen van deze antwoorden juist is, kies dan het antwoord dat het meest overeenkomt)
- Basisonderwijs
- LBO
- VMBO/MAVO
- MBO
- HAVO
- VWO

- Bachelor
- Master

Manipulatie check

Denkt u nog eenmaal terug aan het artikel over een terroristische aanslag dat u aan het begin van deze vragenlijst heeft gelezen. Welke van de onderstaande personen was volgens u de dader van deze misdaad?

- Een Nederlandse blanke man
- Een Arabische man uit het Midden-Oosten
- Dit werd niet vermeld
- Weet ik niet

Welke etnische groep behaalde de hoogste resultaten volgens het onderzoek?

- Aziatische mannen
- Afrikaanse vrouwen
- Arabische mannen
- Nederlandse blanke mannen
- Dit werd niet vermeld
- Anders, namelijk …

Appendix E Pictures potential perpetrators

1. Pictures of White men[7]

[7] Sources from left to right and from top to bottom: Minerva Studio (n.d.), Dolgikh (n.d.), Warulik (n.d.), Mimagephotography (n.d.), Africa Studio (n.d.), WAYHOME studio (n.d.-a).

2. Pictures of Arabic men from the Middle East[8]

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3. Pictures of men of other ethnicity[9]

[9] Sources from left to right and from top to bottom: WAYHOME studio (n.d.-b), Hlawprasert (n.d.), Ranta Images (n.d.-a), Ranta Images (n.d.-b), Djomas (n.d.), Drobot (n.d.).