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**Demonstrations against preventive corona measures in the Netherlands:
determinants of radicalization**

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Abstract

Preventive corona measures imposed by the Dutch government have resulted in a lot of turmoil and eventually in protests and demonstrations. This study aimed to link radicalization theory to the corona crisis. More specifically, the main objective was to find determinants of radicalization processes regarding attitudes about anti-corona measures demonstrations as well as participation in these demonstrations. Existing radicalization models were the basis of the study. A quantitative method was used, and results have been analysed statistically. The study found that group relative deprivation, trust in government officials and belief in conspiracy theories regarding the coronavirus significantly predicted attitudes towards (participation in) anti-corona measures demonstrations. The use of online news sources significantly predicted attitudes towards participation in anti-corona measures demonstrations as well.

Key words: self-radicalization, anti-corona measures demonstrations, relative group deprivation, conspiracy beliefs, trust in government officials, Internet usage

Acknowledgment

Throughout my Bachelor's degree as well as my Master's degree I have developed a deep interest into radicalization studies. My choice to study determinants of radicalization in the context of the corona crisis for this master thesis is therefore a conscious one. My work on the topic of radicalization in anti-corona measures demonstrations has provided me with a very interesting approach towards the corona crisis. Through writing this thesis, I have learned a lot about what drives people into extreme thoughts and actions from a multidisciplinary perspective. I have highly enjoyed combining a range of fields, from social psychology to politics and international relations. Also, I gained a valuable understanding of what it is like to work on such a substantial piece.

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This master thesis completes my master Crisis and Security Management at Leiden University. With its finalization I hope to have obtained my first MSc degree. I have enjoyed writing my thesis and I hope you have as much joy reading it.

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1. Introduction

Over the past year, the corona crisis has dominated the daily lives of many, if not all, people in the Netherlands. In order to control the virus, the Dutch government has introduced many restrictive and preventive rules and measures. Because of the second peak in October 2020, restrictions that had been relaxed in the months before have been tightened again. As of October 15, all bars and restaurants are closed, events are prohibited, and the maximum number of visitors allowed in one's house is lowered to one (Rijksoverheid, 2020). These are only a few examples of the implemented measures at the current moment.

Numerous Dutch citizens have criticized the size and scope of these implemented rules and measures. People believe the measures are disproportionate and cause more harm than good (NOS, 2020). The criticism has resulted in agitation and turmoil. Eventually, the opposition to the governmental policies regarding the corona crisis has resulted in people participating in anti-corona measures demonstrations and protests across the country. Dutch groups that have organized such demonstrations are for example 'Viruswaarheid', 'StopLockdownNu' and 'Integer Nederland' (Rosman, 2020). Most participants of these demonstrations share the opinion that the lockdown costs society an excessive amount of money. Furthermore, the protestors feel deprived of their freedom (Rosman, 2020). Freedom of demonstration is an important law in the Netherlands. However, recently many demonstrations have not progressed peacefully. For instance, several police officers have been besieged during a demonstration in the Hague last August (Haspels, Dollen & Riem, 2020, August 20). Additionally, people were often not wearing face masks or keeping any distance, and therefore generally opposing guidelines set by the Dutch government (Hart van Nederland, 2020). After the curfew was introduced on the 23rd of January, the number of demonstrations has increased extremely. Furthermore, the demonstrations have intensified and have become a lot more violent. Mayors of various cities argue that protestors intended to use violence against police officers (Volkskrant, 25 January 2021). Indeed, violence used has increased in the demonstrations that have taken place over the past months and many people have been arrested (NOS, 20 March 2021).

By pure definition, radicalization implies that people's beliefs and opinions become more extreme (Koehler, 2014). Essentially, people participating in an anti-corona measures demonstration have, to a certain extent, radicalized. Radicalization theories have long tried to explain how people become involved with extreme thoughts and ultimately turn these thoughts into (violent) actions. Lately, these theories are slowly expanding. The focus is

shifted from only Jihadi radicalization, which is where these theories mostly stem from, to a broader range of fields (Aly et al., 2017). Moreover, the Internet, which has acted as a great facilitator of radicalization processes, has become an important research topic (Koehler, 2014; Jiries, 2016). Over the past decades, the Internet has been of tremendous influence as one of the biggest transformative technologies of our time (Aly et al., 2017). It has made information flows quickly and cost-effective (Jiries, 2016). In this sense, the Internet is a great mechanism for radicalization as it allows for extremely fast communication and a perceived sense of anonymity by its users (Neumann, 2013). According to Koehler (2014) “the Internet appears as the most important element driving individual radicalization processes” (p. 131). As such, the Internet has acted as a facilitator for people to mobilize into anti-corona measures demonstrations (Kuiper, 2020). Social media platforms, such as Facebook and Twitter, provide a place for people to discuss and debate their views and thoughts about the corona crisis and specifically the governmental approach towards managing the crisis. Certainly, these social media platforms are not the only place where people gain extreme thoughts and opinions about, in this case, the corona crisis and implemented rules and measures. However, it is useful to study to what extent people do get persuaded and form an opinion on social media platforms.

Besides social media usage, various models discuss radicalization processes and aim to predict violent radicalization. King & Taylor (2011) discuss five models of Jihadi radicalization and find several commonalities and differences between these models. On the basis thereof, they list three psychological factors that, according to them, are evident in the radicalization process. First of all, research suggests that radicalized individuals often share certain personality characteristics. Essentially, most radicalized individuals are identified as young and outgoing males in the search for adventure and sensation. Secondly, radicalized individuals generally experience feelings of relative group deprivation. Identity conflicts is identified as a third psychological factor contributing to radicalization. King & Taylor (2011) also explore the effect of social media usage upon radicalization. They mostly stress the important role of the Internet in the radicalization process but recommend more research needs to be done to draw meaningful conclusions.

The current study aims to test whether the factors that, according to King & Taylor (2011) contribute to Jihadi radicalization, can predict participation in anti-corona measures demonstrations in the Netherlands. Essentially, participation in anti-corona measures demonstrations is in this sense argued to be the result of radical thoughts and ideas. Individuals participating in these demonstrations have gone through a certain form of self-

radicalization. The main research question that the current study aims to answer is formulated as: *Which factors predict people's self-radicalization processes and their attitudes towards participating in anti-corona measures demonstrations in the Netherlands?*

Several sub-questions have been defined on the basis of the paper by King & Taylor (2011) and applied to the topic of this study. These have been listed below:

1. Can personality characteristics and sociodemographic variables predict the extent to which a person has radical attitudes?
2. Can feelings of relative deprivation predict the extent to which a person has radical attitudes?
3. Can social media usage predict the extent to which a person has radical attitudes?

A few studies have already been conducted regarding compliance with preventive corona measures. Several scholars have found that belief in conspiracy theories lowers comply levels with preventive corona measures (Allington, & Dhavan, 2020; Banai, Banai & Mikloušić, 2020). Moreover, trust in governmental officials was found to be a moderator in the same study. Essentially, Banai et al. (2020) established that low levels of trust in government officials was an indicator for low levels of compliance with preventive corona measures. To explore these effects in the present study, the final two sub-questions have been formulated as follows:

4. Can trust in governmental officials predict the extent to which a person has radical attitudes?
5. Can belief in conspiracy theories predict the extent to which a person has radical attitudes?

In order to answer the research question as well as the sub-questions, this study employed a quantitative design. Online questionnaires were the basis of this research. Statistical analysis was performed to analyse the data.

1.1 Societal relevance

Economic security as well as social and political stability are security interests that were quite recently included in the Dutch National Security Strategy (NCTV, 2019). When these vital security interests get compromised, it may lead to social disruption. As such this can cause harm to the democratic rule of law (NCTV, 2019). The ongoing anti-corona measures demonstrations can be defined as such a threat. As such, the ongoing demonstrations exceed

usual 'activism', and even lead to extremism and security breaches. Besides the clear physical form of violence that compromise safety and security, political stability is disrupted. Clearly, many people oppose governmental policies regarding the corona crisis and feel that the only means left is to proceed to (violent) demonstration. It is very important to study which factors and trends may contribute to radicalization in order to restrain violence and ensure political stability.

1.2 Academic relevance

The Dutch General Intelligence and Security Service (AIVD) plays an important role in signalling trends in the radicalization process of individuals (AIVD, 2018). However, there remains much to be learned from academic research. Conway (2017) has identified six suggestions for progressing research on the role of various factors, amongst which the Internet, in radicalization into extremism. One of those suggestions is to widen the study of radicalization. In this sense, it is important to shift the current academic focus from solely Jihadi propaganda to a wider range of radicalization topics. The present study is therefore very relevant. Moreover, it is interesting to add to the academic community and test theories in a broader range of fields.

1.3 Reading guide

The remainder of this study is structured as follows. First, a theoretical framework is outlined. The theory discussed contains an elaboration upon radicalization theories and models that aim to explain the process of radicalization. Consecutive, the main contributors of radicalization described in these models are explained. Lastly, hypotheses are formulated that stem from the theory discussed. Secondly, the methodology of the study is explained. The key variables of the study are operationalized, and a methodological explanation is provided. Following, the procedure, data collection and data analysis methods are discussed. The methodological section ends with an elaboration upon the participants of the study and assessment of the reliability of the scales that were used. The fourth chapter contains the results of the study. In the fifth chapter, a discussion is set out in which results are discussed, limitations of the study are provided and suggestions for future research are made. The paper ends with a conclusion, in which the answers to the research question and sub-questions are provided.

2. Theoretical Framework

As the corona crisis is currently one of the biggest crises worldwide, it has become an important research field and topic for academic literature. However, the topic of the current study, radicalization processes, has thus far not been applied to the corona crisis. Therefore, the present research is positioned in the general body of knowledge around racialization theory. In this sense, different conceptions regarding the definition of the term radicalization are summarized. Hereafter, several radicalization theories are set out and discussed. The article written by King & Taylor (2011), titled *'Review of Theoretical Models and Social Psychological Evidence'* serves as a base. Although, the focus of the article by King & Taylor (2011) is upon homegrown Jihadi terrorists, it is still helpful in explaining 'homegrown' radicalization in the current study. King & Taylor (2011) identify three psychological factors that appear as contributors to radicalization: personality characteristics, group relative deprivation and identity conflicts. The first two are used in this study. Furthermore, King & Taylor (2011) describe the Internet and social media platforms as a possible incubator of radicalization. Social media usage is therefore studied and observed as another determinant of radicalization in the current study. Lastly, trust in the government and belief in conspiracy theories is examined (Banai et al., 2020). Hereafter, the terms used in this study are conceptualized and the chapter ends with hypotheses that were formulated following the theory.

2.1 Radicalization theory

Radicalization is a concept which is widely debated in terms of its exact definition amongst scholars but also amongst government officials and practitioners. Although, many people generally link radicalization to extremism, these concepts are not the same. According to the AIVD, radicalization is the growth into extremism (AIVD, 2019). Nonetheless, radicalization does not necessarily excel in extremism.

A distinction between violent radicalization, radicalization that leads to violence, and non-violent radicalization, radicalization that does not lead to violence, is often made (Jiries, 2016). The latter is sometimes described as activism instead of radicalism, though the line between these two types is often not as strict as it may seem at first glance (Fernandez & Alani, 2018; AIVD, 2019).

Radicalization, in itself, is not a crime. In democratic societies, people are free to express their thoughts and beliefs. In this sense, radicalization may bring about social change.

However, violent radicalization is a criminal offense (Fernandez & Alani, 2018). Koehler (2014) describes radicalization as “a process of individual de-pluralization of political concepts and values (e.g., justice, freedom, honor, violence, democracy) according with those concepts employed by a specific ideology” (p. 125). Striking about this definition is that Koehler (2014) views radicalization in terms of core political norms and values. However, the definition remains rather broad and vague. Schmid (2013) has formulated a very comprehensive definition of radicalization, which includes both violent and non-violent forms. He states that radicalization can be seen as:

“an individual or collective (group) process whereby, usually in a situation of political polarization, normal practices of dialogue, compromise and tolerance between political actors and groups with diverging interests are abandoned by one or both sides in a conflict dyad in favour of a growing commitment to engage in confrontational tactics of conflict-waging” (Schmid, 2013, p. 18).

Essentially, this definition states that radicalization involves a shift from ‘normal’ practices to a confrontation between individuals or groups. Disagreement about a certain course of action or belief causes this shift. It is, however, very important to be conscious of the individual or institution that determines the initial state of ‘normality’. Nonetheless, the definition by Schmid (2013) covers a very broad range of radicalization practices and will therefore be used in this study.

Root causes of radicalization are often divided into three groups: micro-level, or the individual level, meso-level, the wider radical milieu, and macro-level causes, mainly focusing on the role of government and society (Fernandez & Alani, 2018). Based upon these different levels, numerous theories that aim to explain radicalization processes have been identified. A few of these theories are discussed in a later chapter.

2.1.1 Broadening the field

Multiple studies have aimed to explain radicalization processes as well as extremist thoughts and actions (Aly et al., 2017). However, a lot of emphasis has been put upon Islamist and religious radicalization and to a lesser extent upon the extremist right radicalization movement (NCTV, 2020; Hassan et al., 2018). As has been explained before, radicalization is a very broad term and can happen when thoughts about all kinds of topics become extreme. Therefore, it is important to broaden the field and expand the study of radicalization to a

wider range of topics. This has also been emphasized by Conway (2017) who argues that currently the focus of radicalization research is very narrow and mostly centred around Jihadi extremism and terrorism. She mostly highlights the importance to ‘widen’ the study of online radicalization and expand research to other fields and ideologies (Conway, 2017).

2.2 Radicalization models

In order to capture the process of radicalization, multiple models have been proposed in the literature. The majority of models concentrate around violent radicalization and the course towards a violent act. This is not the focus of the present study necessarily, however these models can still help explain certain paths of radicalization.

King & Taylor (2011) make a distinction between linear and non-linear radicalization models as well as emergent and progressive radicalization models (King & Taylor). The perception of the role of established extremist organizations differs per model. Some models find these groups actively promote the radicalization process whilst other models state that radicalized individuals mostly seek other individuals to form clusters. The latter view emphasizes a more passive role of established extremist organizations (King & Taylor). Most recent empirical evidence provides support for this view. However, according to many scholars, group dynamics continue to be essential in the radicalization process and should not be underestimated (Jiries, 2016). King & Taylor (2011) argue that the Internet, in a sense, has replaced the role of established extremist organizations. They state that firstly, the Internet provides ideological support. Secondly, it grants network opportunities. And thirdly, “the Internet supplies information and educational materials” (King & Taylor, 2011, p. 613).

The paper by King & Taylor (2011) describes five radicalization models: NYPD’s stages of Radicalization, Borum’s pathway, Wiktorowicz’s Theory of joining extremist groups, Moghaddam’s staircase to terrorism and Sageman’s four prongs. These are all briefly discussed below. Hereafter, the Self-Radicalization Model by Helfstein (2012) is also explained, because it has been constructed after the article by King & Taylor (2011) was published.

2.2.1 Stages of radicalization model

In 2007, the NYPD proposed a model describing a linear four-staged radicalisation process. The first stage or “pre-radicalization” can be seen as the status quo, in which most individuals do not have any criminal history or record (Fernandez & Alani, 2018). In the next stage, self-identification, individuals become interested in learning more about a certain ideology.

Indoctrination is described as the third phase of the radicalization model. Individuals will seek ways to help further the goals of the organization and actively participate. As such, they have totally internalized the core ideologies and beliefs of a certain organization (Aly et al., 2017). The actual planning and carrying out of an attack is only done in the last stage “jihadization” (King & Taylor, 2011). Fernandez and Alani (2018) argue that individuals do not necessarily pass through all the stages but can drop out at any point.

2.2.2 Borum’s pathway

The Model by Borum (2003) consists of four steps that outline the pathway with which a person develops an ideology that justifies terrorism. It is described as a linear and progressive model (King & Taylor, 2011). According to Borum (2003), individuals move from the initial stage, “it’s not right” to the second stage “it’s not fair” by comparing their undesirable personal condition to that of others. In this sense, the individual observes their position to be unequal compared to others and therefore illegitimate and unjust. The third stage, “it’s your fault”, is reached when an individual blames another person or group for their perceived illegitimate situation. The final stage is the resort to violence. This only happens when an outgroup has been targeted and dehumanized (King & Taylor, 2011).

2.2.3 Wiktorowicz’s theory of joining extremist groups

Wiktorowicz’s theory (2004) is very specifically focused upon the process of individuals joining an Islamic extremist group. King & Taylor (2011) argue it is an emergent and linear model. The model consists of four processes, the first one being “cognitive opening”. In this stage an individual lives through a personal crisis which makes them receptive to new ideas and world views. In the second stage, “religious seeking”, an individual considers the worldview promoted by extremist Islamic groups. When this view starts to coincide with the personal view, the individual arrives at the third stage “frame alignment”. In the final stage, “socialization and joining”, the individual “officially joins the group, embraces the ideology, and adopts the group identity” (King & Taylor, 2011, p. 606). The theory does not state anything about performing a violent act.

2.2.4 Moghaddam’s staircase to terrorism

Similar to Borum’s pathway model (2003), Moghaddam’s staircase to terrorism (2005) can be considered as linear and progressive (King & Taylor, 2011). The model, which uses a metaphorical staircase, consists of five stages or floors. Each time an individual moves up the

‘staircase’ it brings them closer to legitimizing terrorism.

Feelings of relative group deprivation are situated at the ground floor of the model. Individuals who feel like the group they adhere to is treated unequally and unfair, are motivated to improve their groups status (King & Taylor, 2011). On the second floor, “discontent is channelled towards a target” (King & Taylor, 2011, p. 606). When an individual actually starts to consider using violence to fight the perceived injustice, they move up to the third floor. The fourth floor is reached when an individual officially joins a terrorist organization. The last floor of Moghaddam’s Staircase to terrorism is only attained by individuals who are actually willing to commit a terrorist act (King & Taylor, 2011)

2.2.5 Sageman’s four prongs

In contrast with the other models, which are all linear models, Sageman’s model (2008) is emergent and nonlinear (King & Taylor, 2011). The model by Sageman (2008) argues that radicalization is the result of the interplay between four factors. Moral outrage, “the result of perceiving events as moral violations” is mentioned as the first cognitive factor (King & Taylor, 2011, p. 608). The frame that an individual uses to perceive the world and resonance with personal experience are the last two cognitive factors that influence the process of radicalization in the model by Sageman (2008). The three factors can easily reinforce each other. Additionally, Sageman (2008) argues that the interaction with like-minded individuals is crucial for actual radicalization to occur. This last factor is labelled “mobilization through networks” (King & Taylor, 2011, p. 608).

2.2.6 Self-radicalization model by Helfstein

Helfstein (2012) has proposed the Self-Radicalization model to explain the evolvement of individuals into prospective terrorists. The model consists of four consecutive stages: awareness, interest, acceptance and implementation. The first stage, awareness, is described as a gradual and long-term process in which an individual’s knowledge of a certain (radical) ideology expands (Jiries, 2016). According to Helfstein (2012), awareness is a “precursor to any other stage of radicalization” (p. 16). Individuals will only move to a next stage of radicalization when they have acquired enough information, depending upon their personal threshold (Helfstein, 2012). Once an individual is aware of a radical ideology, he or she may move to the next stage, interest. In this sense, Helfstein (2012) explains interest runs deeper than simple intellectual curiosity. It involves the “willingness to alter one’s belief system or social norms to reflect those associated with an ideological doctrine” (Helfstein, 2012, p. 16).

Acceptance is the third stage and crucial to the actual implementation of a violent act. In this stage, individuals actually embrace and endorse the beliefs as well as social norms conveyed in the (radical) ideology (Helfstein, 2012). The final stage of the Self-Radicalization model, conducting a violent act, only occurs when individuals have sufficiently accepted the (radical) ideology (Jiries, 2016).

An important facet of the model outlined above is that self-radicalization is not a linear process (Jiries, 2016). Empirical evidence suggests that it is very likely that an individual will move back and forth between certain stages. Besides feedback loops, moving back to a prior stage, individuals may even bypass certain stages (Helfstein, 2012). The process can be interrupted or reinforced by outside factors, such as the social environment of an individual (Jiries, 2016).

2.2.7 Similarities and differences

The models described above are based upon several similar assumptions but are also different in certain key fundamentals. There appears to be a certain extent of consensus amongst scholars about specific radicalization determinants. Generally, all models observe radicalization to be the result of several psychological processes. The models describe “emotions, cognitions, and social influences that, when operating in the right order and combination, can lead someone to endorse and engage in terrorism” (King & Taylor, 2011, p. 609). As of these similarities, all models mention relative deprivation and identity crises as important factors in the process of radicalization. Relative deprivation, especially focused upon groups, is discussed in the subsequent section. This study does not elaborate any further upon identity-related issues, which is referred to as some form of personal crisis relating to discrimination and integration (King & Taylor, 2011). These issues are not the main subject in the study at hand.

Besides the commonalities, various discrepancies are observed. Specifically, the number of stages or steps an individual must undertake to realize full radicalization differs significantly per model. Essentially, the format of the models varies. Furthermore, most of the models stress the importance of “group-think” in the radicalization model, whereas the self-radicalization model by Helfstein (2012) is centred around the individual (Fernandez, Gonzalez-Pardo & Harith, 2019, p. 3). King & Taylor (2011) focus upon two fundamental discrepancies between the models: the position of established organizations in the radicalization process and the extent to which personality characteristics are a determinant of

radicalization. This study focuses upon the latter determinant, as established extremist organizations are not the topic of the current study.

Throughout their analysis, King & Taylor (2011) highlight the increasing importance of the Internet as a medium for radicalization. Online radicalization seems particularly compelling in the context of self-radicalization, as described by Helfstein (2012). For this reason, online radicalization is discussed in a later chapter as well.

2.3 Psychological factors

The paper by King & Taylor (2011) describes three psychological factors that could emerge as contributors of radicalization, two of which are applicable to the current study.

Consecutive, personality characteristics as well as relative deprivation are elaborated upon.

2.3.1 Personality characteristics

In social psychology, an ongoing debate exists about the origin of human behaviour. Some scholars believe that situational factors are the sole determinant of all human behaviour, whereas others attribute human behaviour to personality traits. The remaining academics believe human behaviour stems from a combination of the two (Funder, 1997). In the past, terrorists or radicalized individuals were portrayed as either mentally ill or as suffering from severe psychological problems. Over the past decades, this vision has changed. Nowadays, people who engage in terrorist actions are assumed to be ‘normal’ people. In this sense, the ‘ultimate terrorist’ does not exist. This switch has resulted in a bias towards studies that mostly aim to describe radicalization in the context of situational factors (King & Taylor, 2011). King & Taylor (2011) criticize this view and state that “individual characteristics are significant determinants of how people respond to situations” (King & Taylor, 2011, p. 614). This is not to say situational factors do not play a role but to highlight the importance of both personality characteristics and situational factors in the shaping of human behaviour.

Several studies have aimed to describe a typical radicalized Jihadi foreign fighter. Essentially, these individuals are often males between the age of 18 and 29 (Aly et al., 2017; King & Taylor, 2011). Besides the common demographic description, King & Taylor (2011) suggest that specific personality traits could be a determinant of radicalization as well. As such, these individuals are typically adventurous sensation seekers (King & Taylor, 2011). In the current study, research was done concerning personality characteristics to see whether the same results could be found.

Concerning demographics, firstly, age was included in the study. Hassan et al. (2018) state that “adolescence is a period where personal and social ideals are sought”, which increases vulnerability of these youngsters to engage with radical thoughts (p. 72). Moreover, Koehler (2014) found that the Internet as a facilitator of online radicalization is essential to younger individuals. The Internet, and especially social media platforms after their emergence in 2005, are mostly used by younger people. Secondly, gender was included in the study. A considerable part of the existing literature finds that radicalization effects are stronger amongst males (Aly et al., 2017). It was therefore interesting to study whether this same effect would hold in the current study. Several studies have found a positive relationship between unemployment and extremism (Deckard & Jacobson, 2015). Therefore, employment status as well as education level (these studies often included socio-economic variables) were included in the present study too (Hassan et al., 2018).

The current study also explored whether specific personality characteristics predict attitudes towards (participation in) anti-corona measures demonstrations. Many scholars agree that there are five basic dimensions of personality (Gosling, Rentfrow & Swann, 2003). These are set out in The OCEAN Personality Model: Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism. These five factors all represent a range between two extremes. Extraversion, for example, expresses a continuum between extreme extroversion and extreme introversion. Several instruments have been created to measure the five personality characteristics described in the Ocean Personality Model. However, most of these instruments are very extensive and time consuming. The ten-item personality inventory (TIPI) is a quick and adequate measurement instrument (Gosling, Rentfrow & Swann, 2003).

2.3.2 Relative deprivation

Relative deprivation has been defined as “the judgment that one is worse off compared to some standard accompanied by feelings of anger and resentment” (Smith, Pettigrew, Pippin & Bialosiewicz, 2012, p. 203). Relative deprivation can be seen as an explanation of social behaviour and shaper of emotions (Smith et al., 2012). King & Taylor (2011) argue that “people experience feelings of relative deprivation by comparing their material conditions to that of other groups, and viewing their group disadvantage as an injustice” (p. 609). An important distinction needs to be made between personal relative deprivation and group relative deprivation. The former occurs when the individual compares oneself with another individual. The latter appears when someone compares the group in which they place themselves to another group, or the outside group. Essentially, personal relative deprivation

has been associated with personal emotions, such as diminished self-esteem, delinquency and even depression. Group relative deprivation, on the other hand, has been established to be a “predictor of collective action and prejudice towards other groups” (King & Taylor, 2011, p. 609).

Even though relative deprivation is often recounted as an important predictor of radicalization, not all scholars agree. Several studies do find a link between personal relative deprivation and radicalization. These studies generally use demographic data to predict radicalization. According to these studies, radicalized individuals mostly come from the middle-class. However, most of these studies usually reflect actual deprivation instead of subjective relative deprivation. Relative deprivation captures the extent to which a person perceives to be disadvantaged, independent of one’s socio-economic status (King & Taylor, 2011). Indeed, Smith et al. (2012) find that relative deprivation is a subjective state.

In summary, King & Taylor (2011) argue that “group-based feelings of injustice reliably predict collective action” (p. 610). It is important to note that first of all, emotions regarding perceived injustice, not the actual injustice, are a predictor of behaviour. Secondly, King & Taylor (2011) state that group based relative deprivation is a predictor of collective action and not personal relative deprivation. In the current study, measures of personal as well as group relative deprivation were included to see whether these contribute to radicalization processes in the context of the corona crisis.

2.4. Online radicalization

King & Taylor (2011) identify that an important factor in describing relative group deprivation is the use of the Internet by individuals. Social comparison happens very easily online. Multiple scholars have characterized the Internet as the “virtual incubator of radicalization” (King & Taylor, 2011, p. 613). Online radicalization theory and the role of social media platforms are elaborated upon next.

2.4.1 Online radicalization theory

In 2017, 25 per cent of the world population was believed to carry a smartphone with direct Internet connection (Aly et al., 2017). Logically, the Internet is used as a platform to spread information and ideas by many individuals, companies and even states. Plenty of scholars state that, compared to older media devices such as radio and television, the Internet bears obvious advantages (Aly et al., 2017; Neumann, 2013). In this sense, the Internet is way more inclusive than traditional media. Everyone with access to the Internet can participate. It also

allows for a two-way interaction through for example forums, chatrooms and e-mail (Aly et al., 2017). The social and interactive nature of the Internet enables people to take on their own ideal role. However, there might be a discrepancy between this idealized self and the true self. Essentially, a state of discomfort is created when a person's beliefs and actions do not align. This has been termed "dissonance" by Festinger (1957) who have constructed the Cognitive Dissonance Theory (CDT) (Brehm & Cohen, 1962). In order to reduce dissonance, individuals with extremist ideas potentially get involved with aggressive offline behaviour. As an example, Neumann (2013) has presented online role-playing as an explanation for online radicalization. Likewise, Brachman and Levine (2011) explain that online gaming and especially violent games that involve multiplayer roleplaying have resulted in an increase of aggressive behaviour offline.

The Internet also serves as an echo-chamber, "a place where individuals find their ideas supported and echoed by other like-minded individuals" (Koehler, 2014, p. 124). This is also amplified by Neumann (2013) who argues that constant interaction with people who hold similar ideas normalizes potential extremist beliefs. The Internet as social environment can be a place where deviant behaviour and extreme ideas are learned and absorbed (Neumann, 2013).

Essentially, the Internet has worked as a facilitator of radicalization for over a decade (Koehler, 2014). Interviews conducted in a study by Koehler (2014) on the role of the Internet in the radicalization process of eight former German right-wing extremists found that the Internet was observed to be a "cheap and effective way to communicate, bond and network with like-minded movement members" (p. 118). Furthermore, the research indicated that the Internet provides "a perceived constraint-free space and anonymity" (Koehler, 2014, p. 118). According to Neumann (2013), this sense of anonymity allows people to hide their real identity and avoid responsibility for certain actions. This effect is referred to as "online disinhibition" by Suler (2004, p. 321). It may eventually lead to violent behaviour offline as well as a polarization of thoughts (Neumann, 2013; Jiries, 2016).

Besides the mostly communicative purpose of the Internet that has been highlighted above, the Internet also serves an instrumental purpose. It provides ways to discuss logistics, raise money or post manuals and instruction videos for potential violent actions (Neumann, 2013). A substantial part of radicalization online happens on social media platforms, which will be discussed in more detail in the next section.

2.4.2 Online radicalization and social media

The communicative advantages of the Internet as well as the perceived anonymity by its users becomes visible on social media platforms (Jiries, 2016, p 217). The massive and unlimited number of users on social platforms such as Facebook and Twitter make it the perfect place for ideological development of any kind. Jiries (2016) states that “utilizing social media is another very blatant approach to reaching massive amounts of people throughout the world for their support and being linked with like-minded individuals” (p. 207). Many authors have argued that social media serves an important role in creating a collective identity (Koehler, 2014).

The crucial role of the Internet has been highlighted in several of the models described before. In the earlier stages of the majority of the models, individuals actively search for information regarding specific extremist groups. Websites may lead people directly towards articles containing radical and unfiltered information about the core ideologies (Aly et al., 2017). Furthermore, in the subsequent stages, social media platforms provide these individuals with “the opportunity to meet and network with like-minded individuals” (Koehler, 2014, p. 123). Social media platforms are a great communication facilitator as they allow for two-way interaction. Moreover, Koehler (2014) argues that the radical worldview individuals at these stages hold, is enforced through the “veil of objectivity” (Koehler, 2014, p. 123). In the later stages, when individuals are closer to actually committing a violent act, the instrumental purpose of the Internet can be observed (Neumann, 2013). The Internet works as an ‘enabler’ for logistical as well as communicative means. For example, technical information about possible targets and methods can be passed on to other radicalized individuals or groups (Koehler, 2014).

Although, the Internet bears many characteristics that make it a unique place for radicalization, a note should be placed. No causal effect of Internet, and more specifically social media, usage on violent behaviour has been established up to the current moment. Nonetheless, the process of radicalization is definitely strengthened and accelerated by the Internet. According to der Valk & Wagenaar (2010), the Internet might be necessary to bring all elements of the radicalization process together. This point is also made by Jiries (2016) who states that online and offline radicalization are equally important. Additionally, she concludes that social media platforms are for sure a very powerful tool for spreading radical thoughts because it is very easy, fast and borderless (Jiries, 2016). To study the effect of the Internet upon radicalization, social media usage was included in the current research.

2.5 Trust in government officials and conspiracy beliefs

Although, this is not a topic discussed in the paper by King & Taylor (2011), a central element in the current corona crisis is the spread of conspiracy theories and misinformation. Banai, Banai and Miklousic (2020) have found that people who believe in conspiracy theories, on average, were less compliant with preventive corona measures. Furthermore, the participants in their study often had relatively low trust levels in governmental officials. The study took place in Croatia. A similar effect has been found by Allington and Dhavan (2020) who performed a comparable study in the United Kingdom.

In the study by Banai et al. (2020), a total of 1976 participants, who were recruited via social media and popular Croatian news websites, completed the measures of the study. The participants were asked to answer questions in five categories: sociodemographic, COVID-19 conspiracy beliefs, pseudoscientific information beliefs, trust in government officials and compliance with official COVID-19 guidelines. In the study by Banai et al. (2020), conspiracy theories are defined as “a belief that a group of people secretly work to attain some malevolent goal” (Bale, 2007, p. 46). In case of the corona crisis, these conspiracy theories include the idea that the coronavirus is humanmade in order to control the population. Conspiracists believe the coronavirus has been spread via global vaccination or via 5G technology. Other theories suggest that the coronavirus is similar to a typical flu, because governmental institutions and health care providers report higher mortality rates than actual rates (Banai et al., 2020). Generally, conspiracy beliefs concerning the corona crisis can be divided into theories about the origin, the spread, the threat level and the infection and mortality rates of the virus (Banai et al., 2020). Banai et al. (2020) argue that “people who endorse conspiracy beliefs are more likely to doubt government communication” (p. 7). Consequently, these people are predicted to have lower trust in government officials and their ability to take measures and contain the crisis. This may lead to less compliance with corona measures and that was also what the evidence of the study by Banai et al. (2020) showed.

More generally, Connolly et al. (2019) argue that conspiracy theories are a marker of institutional distrust. Conspiracy theories can lead people to undermine governmental authority, justify incorrect beliefs, encourage prejudice etc. Over the past years, conspiracy theories have become more prevalent and social media platforms have allowed for a quicker spread and distribution of such theories (Connolly, Uscinski, Klofstad & West, 2019).

In the current study, trust in government officials and belief in conspiracy theories were considered as well. The aim was to find whether a similar effect as established by Banai et al. (2020) could be found.

2.6 Conceptualization

The current study was mainly interested in testing determinants of radicalization of individuals. The study focused on individuals' attitudes towards anti-corona measures demonstrations, which was the dependent variable of the study. In this sense, the study used the four steps described in the Self-Radicalization Model by Helfstein (2012) as the basis for the dependent variable. The model was chosen, because the four stages are very clear and applicable to more forms of radicalization than only Jihadi radicalization. Additionally, the model, to a certain extent, combines the other models described in the theoretical framework. More specifically, hypotheses are formulated regarding the factors that have been described as possible determinants of radicalization.

2.6.1 Hypotheses

Principally, the current study aimed to apply the Self-Radicalization Model by Helfstein (2012) to the case of anti-corona measures demonstrations in the Netherlands. Recall that the model consists of four stages: awareness, interest, acceptance and implementation (Helfstein, 2012). Overall, it is hypothesized that several determinants can predict attitudes towards (participation in) anti-corona measures demonstrations in the Netherlands. In the hypotheses formulated below, the expected effects per variable are specified.

Following studies on Jihadi radicalization, the typical radicalized individual is a young male with low job opportunities (Aly et al., 2017; King & Taylor, 2011). Furthermore, King & Taylor (2011) stress the importance of personality characteristics in explaining radicalization. As such, they state that outgoing individuals who always seek sensation have a higher chance of radicalizing. In the current study, the TIPI method was used to see whether the argument by King & Taylor (2011) holds as well as to study whether more core personality characteristics could predict radicalization. Thus, a part of the research was exploratory. The hypothesis regarding socio-demographic variables and personality characteristics is formulated as follows:

H1: Young and 'outgoing' males with low opportunities have stronger and more positive attitudes towards participating in anti-corona measures demonstrations.

The next sub-question of the current study relates to relative deprivation. King & Taylor (2011) argue that individuals who feel relatively deprived, especially relating to the group they adhere to, have a bigger chance of radicalizing. Following, the second hypothesis states:

H2: Individuals who experience feelings of relative deprivation are more inclined to participate in anti-corona measures demonstrations.

It has been argued that the Internet, and more specifically social media platforms, serve as a facilitator for self-radicalization (Helfstein, 2008; Koehler, 2014). Generally, social media platforms provide a quick and easy place for information flows and a perceived sense of anonymity (Aly et al., 2017). Social media platforms provide a community setting in which information is provided. People may be more inclined to change their attitudes and behaviour in such settings and formulate extreme opinions (Singhal et al., 2003). Therefore, the third hypothesis states that:

H3: People who are more extensive users of social media have a more positive attitude towards participating in anti-corona measures demonstrations compared to people who use social media less often.

According to the study conducted by Banai et al. (2020), individuals with relatively low trust levels in government officials were less inclined to follow up on preventive corona measures imposed by the Croatian government. The current study aimed to test whether this relationship holds in the Netherlands as well regarding participation in anti-corona measures demonstrations. Therefore, the fourth hypothesis is formulated below:

H4: Individuals with low levels of trust in government officials have a more positive attitude towards participating in anti-corona measures demonstrations compared to individuals with higher levels of trust in government officials.

Furthermore, the study by Banai et al. (2020) mostly looked at conspiracy theories about the coronavirus. They found that coronavirus conspiracy theories had a negative effect upon compliance with preventive measures (Banai et al., 2020). In line with the fourth hypothesis, this study aimed to find whether this relationship also holds in the current study. The fifth hypothesis states that:

H5: Individuals with a strong belief in conspiracy theories regarding the coronavirus have a more positive attitude towards participating in anti-corona measures demonstrations.

Overall, it is expected that the combined significance of the effects set out above depends on the stage of the Self-Radicalization Model by Helfstein (2012). That is, the total of variance

in the dependent variable explained for by all included independent variables depends on the stage of the Self-Radicalization Model that is used as dependent variable. Literature states that opinions and beliefs become more extreme when an individual moves up to a higher stage of self-radicalization (Jiries, 2016). Essentially, attitudes become more extreme and therefore predictable. Following, the sixth and last hypothesis is formulated as:

H6: The amount of variance explained by the independent variables increases when the dependent variable moves one step 'up' in the Self-Radicalization Model, closer to actual radicalization.

In the next chapter, the methodological framework of the study is outlined.

3. Methodology

In this chapter the methodology of the study is set out. Firstly, the general research design is outlined. Hereafter, the key variables are operationalized and variable recoding procedures are explained. Thirdly, the procedure is presented. Ultimately, the data collection and data analysis strategy are illustrated. More specifically, the statistical methods that were used are presented. The specificities of the sample population are provided. The chapter ends with an overview of the reliability of the scales that were used.

3.1 Research design

In this positivist research, a quantitative method was used to answer the research question. The study employed a correlational design and tried to find connections between several theoretical concepts. The nature of the study was deductive, as its main aim was to test whether overarching concepts stemming from Jihadi radicalization theories could be applied to the corona crisis case. Statistical analysis of self-accumulated data, through the distribution of questionnaires, was the central element of this study.

3.2 Operationalization of variables

In this study, several dependent variables were measured. These dependent variables all captured a different stage of the four staged Self-Radicalization Model by Helfstein (2012). Every stage of this theory: awareness, interest, acceptance and implementation, were measured using two statements per category. Participants had to indicate to which extent they agreed with the statements using a 5-point Likert scale. Tittle & Hill already in the year 1967 assessed that measuring attitudes using a Likert scale is a good predictor of actual behaviour. Bertram (2007) agrees and points out that it is “likely to produce a highly reliable scale” (p. 7). The 5-point Likert scale that was used runs from ‘strongly disagree’ to ‘strongly agree’. In this sense, participants were asked to indicate the extent to which they agreed or disagreed with several statements measuring their attitude towards these topics. One example per statement regarding the Self-Radicalization Theory applied to the current study is provided.

The first stage, awareness of anti-corona measures demonstrations, aimed to measure whether people were aware of demonstrations (e.g., “*I am aware that several demonstrations have occurred against anti-corona measures*”). Secondly, interest in anti-corona measures demonstrations was measured (e.g., “*I read about anti-corona measures demonstrations and it made me curious*”). The third stage of the Self-Radicalization Model typically measures

acceptance of a certain radical ideology (Helfstein, 2012). In the current study, this was translated to actually endorsing the thoughts associated with disobeying governmental corona measures and feeling the need to act upon these beliefs (e.g., *“I feel that it is justified to participate in an anti-corona measures demonstration”*). Finally, the implementation stage aimed to measure the attitudes towards actually participating in an anti-corona measures demonstration (e.g., *“I would participate in an anti-corona measures demonstration”*). Four separate dependent variables have been created, all measuring another stage of the Self-Radicalization Model by Helfstein (2012). These variables were all 5-point scale averages of answers to two questions regarding someone’s attitude towards anti-corona demonstrations in different stages. Furthermore, all statements, each reflecting a different stage of the Self-Radicalization Model, were combined into one overall dependent variable measuring general attitudes towards anti-corona measures demonstrations. Again, this variable was a 5-point scale average. However, it captured the answers to all eight statements regarding someone’s attitude towards anti-corona demonstrations.

Consequently, a total of five sets of questions formed the independent variables of this study. These followed from the theory and hypotheses. All of the independent variables have been recoded into dummy variables to make for a clear and structured statistical analysis. Below the independent variables are described more extensively.

3.2.1 Personality characteristics

Regarding sociodemographic information, participants were asked for their age (in years), gender (male, female or other), employment status (full-time employment, part-time employment, not employed or student) and education level (highest received diploma). Gender has been coded 1 for male and 0 for female. Education level has been divided into lower and higher-level education. Age has been divided into three age variables: low, medium and high. The medium aged category included participants of the age 31 to 50. Logically, the low age and high age category included participants of the age of 30 and lower and 51 and higher respectively. Participants’ employment status has been divided into three groups: employed, unemployed and students.

Next, personality characteristics were measured using the ten-item personality inventory (TIPI), which was originally created by Gosling et al. (2003) based upon the Ocean Personality Model or Five-Factor Theory (Costa & McCrae, 1990). Participants were asked to assess the extent to which a pair of personality characteristics matched with their own personality (e.g., *“critical, quarrelsome”*). A total of ten pairs of personality characteristics

were posed. The ten-item personality inventory (TIPI) has been recoded into five dummy variables all capturing one of the main personality characteristics as set out by the Five-Factor Theory of personality: extraversion, agreeableness, conscientiousness, emotional stability (sometimes labelled neuroticism) and openness to new experiences (sometimes labelled intellect) (Costa & McCrae, 1990). These five variables indicated the extent to which a person was considered to be, for example, extraverted (1=more extraverted, 0=more introverted). Recoding been done in accordance with the literature (Gosling et al., 2003).

3.2.2 *Relative deprivation*

Three statements relating to personal relative deprivation (e.g., “*I feel like the corona measures influence my personal life*”) and three statements relating to group relative deprivation (e.g., “*I feel like I belong to a disadvantaged group in the corona crisis*”) were formulated. Participants were asked to illustrate the extent to which they agreed or disagreed with these statements using a 5-point Likert scale. The questions were based upon emotions, because deprivation is subjective according to the literature (King & Taylor, 2011).

Subsequently, questions regarding relative deprivation have been divided into a personal relative deprivation scale dummy variable and a group relative deprivation scale dummy variable. The former was an average of answers to three 5-point scale questions relating to personal deprivation (0=relatively not deprived; score 2.5 or lower, 1=relatively deprived; score higher than 2.5). The latter variable was developed similarly but relates to group instead of personal deprivation.

3.2.3 *Social media usage*

General Internet and social media usage was measured using three statements (e.g., “*I use social media every day*”). Moreover, participants were asked to indicate the extent to which they used online news sources versus offline news sources using a slicer. Social media usage has thus been included by combining answers to three 5-point scale statements. Three dummy variables have been created (low, medium, high), indicating the extensiveness of participants’ use of social media. The extent to which one used online news sources versus offline news sources has been included as a dummy variable (0=mostly offline news, 1=mostly online news).

3.2.4 Trust in government officials

The three statements relating to trust in government officials have been taken from the paper by Banai et al. (2020) and applied to Dutch government officials instead of Croatian government officials (e.g., “*I trust the Dutch government and I think they are doing a good job*”). Again, participants were asked to specify the extent to which they agreed or disagreed with the statements using a 5-point Likert scale. Trust in government officials has been included as a dummy variable, similar to the relative deprivation dummy variables (0=relatively low trust; score 2.5 or lower, 1=relatively high trust; score higher than 2.5).

3.2.5 Conspiracy beliefs

The study by Banai et al. (2020) formed the basis for measurement of belief in conspiracy theories in the current study. Banai et al. (2020) divide the different conspiracies regarding the coronavirus in four categories. Namely conspiracies about the origin, spread, threat level and infection and mortality rates. Participants in the current study were asked to indicate the extent to which they believed these conspiracies were true using a 5-point Likert scale. One theory per category set out by Banai et al (2020) was presented (e.g., “*The coronavirus was intentionally made in a laboratory*” regarding the origin of the virus). Furthermore, three assumptions about the coronavirus that are commonly assumed to be true following the experts were placed within this category to make for a trustworthy baseline (e.g., “*The corona crisis has a major impact upon the elderly population of the Netherlands*”). Belief in conspiracy theories has been included as dummy variable as well. The scale, again, was similar to the scale created for the relative deprivation dummy variables (0=relatively low belief in conspiracy theories; score 2.5 or lower, 1=relatively high belief in conspiracy theories; score higher than 2.5). A list of all included variables in the analysis and their exact meaning can be found in Appendix 2.

3.3 Procedure

The questionnaire was created using Qualtrics. It was drawn up in Dutch, because the study focused upon the Netherlands. In this sense, no individuals were excluded through language barriers. Participants opened the questionnaire through a link. All participants remained anonymous. Firstly, participants had to respond to an informed consent. Hereafter, the questionnaire consisted of six parts. The first part of the questionnaire consisted of questions regarding sociodemographic information. Next, personality characteristics were measured in accordance with the procedure described before. Questions in the second part of the

questionnaire aimed to measure participants' attitudes towards anti-corona measures demonstrations in eight statements. The order of the questions posed in the third till sixth part of the questionnaire was random for all participants. This was done to control for the effect that the order in which the questions were posed would possibly have on the results provided. That is, the first two sets of questions, relating to demographics, personality characteristics and attitudes towards anti-corona measures demonstrations, were posed in the beginning of the questionnaire for everyone. Hereafter, the various sets of questions were randomized. This was to make sure participants would not get biased throughout the questionnaire in answering questions relating to the dependent variable. The third part of the questionnaire was focused upon relative deprivation. Participants has to respond to a total of six statements. Fourthly, general Internet and social media usage were measured in three statements. In this section, participants also had to user a slicer to indicate whether they used more online or offline news sources. The fifth part of the questionnaire consisted of three statements relating to trust in government officials. The sixth and final part of the questionnaire aimed to measure beliefs in conspiracy theories. In this sense, seven statements were provided, of which four statements were considered conspiracy theories regarding the coronavirus. The final questionnaire that was used in this study can be found in Appendix 1.

3.4 Data collection

Questionnaires were distributed online. This was done within a relatively short time span, because the corona crisis was and is still evolving at such a high pace. Precisely, data collection took place from mid-December 2020 until mid-January 2021. In this way, the participants were least affected by time and outside developments. It is important to note that numerous violent anti-corona measures demonstrations took place after the data collection of the current study was completed. More specifically, this entails the demonstrations that took place as a result of the curfew that was introduced in the Netherlands. From the 23rd of January onwards, Dutch citizens are obliged to stay inside their houses from 9 p.m. until 4.30 a.m. As these demonstrations have started after the data collection was completed, they have not affected the current study.

3.5 Data analysis strategy

The analysis was conducted using Stata. To explore the effect of *personality characteristics* and *demographics*, *relative deprivation*, *social media usage*, *trust in government officials* and *conspiracy beliefs* upon *attitudes towards anti-corona measures demonstrations*, several

Ordinary Least Squares (OLS) multiple regressions have been employed. In order to prepare the data, first, unfinished questionnaires have been taken out of the sample. Concretely, 27 respondents were deleted resulting in a final sample of 222 respondents. Following classic statistical literature, the distribution of the data can be assumed to be normal $N(0,1)$ as the sample size is considered substantial (Stock & Watson, 2015).

3.5.1 OLS regressions

The four dependent variables linked to the stages of the Self-Radicalization Model as well as the overall dependent variable capturing all these stages have been regressed upon all sociodemographic variables, personality characteristics, relative deprivation, social media usage, trust in government officials and conspiracy beliefs. In order to prevent for perfect multicollinearity, one category of the variables setting out age, employment status and social media usage have been excluded from the regression. These three variables (age low, student & social media usage low) function as baseline for the age, employment status and social media usage variables. Robust standard errors have been used to allow for heteroskedasticity of the error terms (Stock & Watson, 2015).

3.6 Participants

Sixty per cent of participants was female, and forty per cent male. The minimum age was 15 years old whereas the maximum age was 81 years old. Sixty-eight per cent of participants was between 20 and 52 years old. Most of the participants were higher-educated, a total of ninety per cent. Around sixty per cent of participants indicated to be either parttime or fulltime employed. Furthermore, around thirty per cent of participants were students and around ten per cent either voluntarily or involuntarily unemployed.

3.7 Reliability of the scales

Cronbach's Alpha has been used to assess the reliability of the scales of the current study. The dependent variable measuring all stages of the Self-Radicalization Model or general attitudes towards anti-corona measures demonstrations was assessed. The scale reliability coefficient was 0.751, which indicates that the scale was reliable (Stock & Watson, 2015). Subsequently, reliability of the scales of the other four dependent variables, all representing a specific stage of the Self-Radicalization Model, were assessed. Reliability of the scales of attitudes on awareness and attitudes on acceptance regarding anti-corona measures demonstrations were considered quite low (scale reliability coefficient 0.391 and 0.485

respectively). Whereas reliability of the scales of attitudes on interest and attitudes on implementation of anti-corona measures demonstrations were considered high (scale reliability coefficient 0.690 and 0.865 respectively).

Reliability of the scales of the independent variables have also been assessed. The TIPI scale has been tested for reliability extensively in previous studies (Gosling et al., 2003). However, in the current study the scales measuring agreeableness, conscientiousness and openness to new experiences were found to be unreliable (scale reliability coefficient 0.0793, 0.3960 and 0.4116 respectively). On the other hand, the scales measuring extraversion and emotional stability were found to be reliable (scale reliability coefficient 0.7482 and 0.7274 respectively). Both scales of the personal relative deprivation and group relative deprivation variables were found to be reliable (scale reliability coefficient 0.622 and 0.786 respectively). The scale that aimed to measure social media usage was found to be somewhat unreliable (scale reliability coefficient 0.5538). Next, the scale of the variable measuring trust in government officials was found to be highly reliable (scale reliability coefficient 0.810), whereas the scale measuring conspiracy beliefs was found to be somewhat less reliable (scale reliability coefficient 0.559). However, the latter one was still included in the overall analysis.

4. Results

This section discusses the results of the statistical analysis that has been performed. First, the five regressions that have been done are explained in terms of their overall significance. Hereafter, the two main models that are the focus of the current study are analysed and set out in more detail in light of the hypotheses of the study.

4.1 The regressions

A total of five OLS multiple regressions have been performed. The four variables measuring a different stage of the radicalization process, awareness, interest, acceptance and implementation have been used as dependent variables. Furthermore, the variable that combines all these stages and thus projects overall attitudes towards anti-corona measures demonstrations has also been used as dependent variable.

Firstly, awareness about anti-corona measures demonstrations was regressed upon all independent variables. The independent variables explained a significant proportion of the variance in general awareness regarding anti-corona measures demonstrations: $R^2 = 0.1433$, $F(18, 203) = 1.89$, $p < 0.005$. A total of 14.33 per cent of the variance in the dependent variable was explained for by the regression. The second regression performed used the variable measuring the interest stage of the Self-Radicalization Model by Helfstein (2012) as dependent variable. Again, the independent variables explained a significant proportion of the variance in interest in anti-corona measures demonstrations: $R^2 = 0.1798$, $F(18, 203) = 2.98$, $p < 0.001$. The variance in the independent variables explained for by the regression increased to 17.98 per cent. Arguably, the interest stage of the Self-Radicalization Model could be predicted more comprehensively than the awareness stage. Next, acceptance of anti-corona measures demonstrations was regressed upon the same independent variables. The independent variables explained a significant fraction of the variance in acceptance of anti-corona measures demonstrations: $R^2 = 0.2460$, $F(18, 203) = 3.73$, $p < 0.001$. Again, the variance in the independent variables explained for by the regression increased compared to the first two regressions. A total of 24.60 per cent of the variance in acceptance of anti-corona measures demonstrations was explained for by the third regression. The fourth regression performed used the variable measuring the implementation stage of the Self-Radicalization Model by Helfstein (2012) as dependent variable. The independent variables explained a significant proportion of the variance in attitudes towards participating in anti-corona measures demonstrations: $R^2 = 0.4952$, $F(18, 203) = 5.52$, $p < 0.001$. A total of 49.52 per cent

of the variance in the dependent variable was explained by the regression, which is relatively high. These results confirmed H6: the amount of variance explained by the independent variables increased when the dependent variable moved one step 'up' in the Self-Radicalization Model. Essentially, later stages of the Self-Radicalization Model, closer to actual radicalization, were predicted more precisely by the independent variables.

Furthermore, it should be noted that the constant term in all four regressions described above was decreasing. In the fourth regression, the constant term was at its lowest level. This indicates that participants, in general, had a more negative attitude towards implementation of anti-corona measures demonstrations compared to their attitude in the interest, awareness and acceptance stage. Implementation, in this sense, means participation in demonstrations.

In the fifth regression, the overall attitude of participants towards anti-corona measures demonstrations was used as dependent variable and regressed upon all the independent variables. The independent variables explained a significant proportion of the variance in attitudes towards anti-corona measures demonstrations: $R^2=0.3421$, $F(18, 203) = 4.87$, $p<0.001$. An R^2 of 0.3421 means that 34.21 per cent of the variance in the dependent variable was explained for by the regression. The regression tables of the five regressions that have been performed in Stata can be found in Appendices 4 to 8.

The last two regressions have been used in the extensive analysis of the independent variables. The current study was predominantly focused upon predicting actual radicalization as comprehensively as possible. For this reason, the fourth regression model, predicting actual participation in anti-corona measures demonstrations has been analysed. Furthermore, the fifth regression model, predicting general attitudes towards anti-corona measures demonstrations, has been analysed. This has been done to have a thorough analysis of general attitudes towards demonstrations. The fourth and fifth regression models both had a significantly higher R^2 compared to the first, second and third regression models. This means that the last two models had more predictive power and results were more meaningful.

Next, the meaning of the fourth as well as the fifth regression model is explained. The significance of the findings is also discussed. The fifth regression model, measuring general attitudes towards anti-corona measures demonstrations, is elaborated upon first. Hereafter, the fourth regression model, measuring attitudes towards participation in anti-corona measures demonstrations, is presented. The order reflects the proximity to actual radicalization. It should be noted that results cannot be causally interpreted, as the study does not have an experimental setting.

4.2 Regression model 5: general attitude towards demonstrations

In the fifth regression of the current study, all independent variables have been regressed upon the dependent variable measuring overall attitudes towards anti-corona measures demonstrations. The regression formula of the fifth regression model and the regression output in Stata look like the following:

$$\begin{aligned}
 \text{Attitude_demonstrations} = & 2.923 - 0.0004\text{Gender} + 0.223\text{Education} - \\
 & 0.193\text{Age}_{\text{medium}} - 0.279\text{Age}_{\text{high}} - 0.023\text{Employed} - 0.070\text{Unemployed} + \\
 & 0.008\text{Extraversion} - 0.079\text{Agreeableness} - 0.017\text{Conscientiousness} + \\
 & 0.070\text{Emotional}_{\text{stability}} - 0.043\text{Openness}_{\text{experience}} + 0.024\text{Personal}_{\text{deprivation}} + \\
 & 0.193\text{Group}_{\text{deprivation}} + 0.071\text{News}_{\text{source}} - 0.072\text{Socialmedia}_{\text{medium}} - \\
 & 0.192\text{Socialmedia}_{\text{high}} - 0.450\text{Trust}_{\text{government}} + 0.960\text{Conspiracy}_{\text{beliefs}}
 \end{aligned}$$

Linear regression

Attitude demonstrations	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Gender	0	.082	-0.01	.996	-.162	.161	
Education	.223	.131	1.70	.091	-.036	.481	*
Age medium	-.193	.122	-1.58	.116	-.434	.048	
Age high	-.279	.118	-2.35	.019	-.512	-.045	**
Employed	-.023	.085	-0.27	.784	-.191	.144	
Unemployed	-.07	.148	-0.48	.635	-.362	.221	
Extraversion	.008	.075	0.11	.912	-.14	.157	
Agreeableness	-.079	.091	-0.87	.385	-.259	.1	
Conscientiousness	-.017	.194	-0.09	.93	-.4	.365	
Emotional stability	.07	.116	0.61	.545	-.159	.3	
Openness to experience	-.043	.118	-0.37	.715	-.275	.189	
Personal deprivation	.024	.093	0.25	.8	-.16	.207	
Group deprivation	.193	.079	2.45	.015	.038	.348	**
News source	.071	.071	1.00	.317	-.069	.211	
Social media medium	-.072	.083	-0.88	.382	-.236	.091	
Social media high	-.192	.215	-0.90	.372	-.616	.231	
Trust in government	-.45	.227	-1.98	.048	-.898	-.003	**
Conspiracy beliefs	.959	.253	3.80	0	.461	1.458	***
Constant	2.923	.387	7.56	0	2.161	3.686	***
Mean dependent var		2.689	SD dependent var			0.637	
R-squared		0.342	Number of observations			222.000	
F-test		4.865	Prob > F			0.000	
Akaike crit. (AIC)		373.812	Bayesian crit. (BIC)			438.463	

*** $p < .01$, ** $p < .05$, * $p < .1$

Figure 1: Stata regression output regression model 5

Ultimately, the model is analysed in terms of the main variables of interest: personality characteristics, relative deprivation, social media usage, trust in government officials and conspiracy beliefs.

4.2.1 Personality characteristics

In the fifth regression model, the regression coefficient for gender was positive, meaning that males, on average, had a more positive attitude towards anti-corona demonstrations compared to females. However, this effect was not significant, and was therefore not very meaningful for further interpretation and prediction. In the fifth regression model, people in the higher age category, on average, scored 0.279 points lower on a 5-point scale compared to people in the lowest age category: $t(203) = -2.35, p < 0.05$. Thus, people aged 50 years of more, on average, had a more negative attitude towards anti-corona measures demonstrations compared to people aged 30 and lower. No significant effect was found in the variables regarding employment status. A distinction was made between voluntary and involuntary unemployment in an additional regression analysis. However, this addition did not significantly change the results in the overall model set out above. Furthermore, the TIPI variables, expressing someone's core personality characteristics, did not show up significant in the model. Overall, the results did not support H1: young and 'outgoing' males with low opportunities did not have a stronger and more positive attitudes towards anti-corona measures demonstrations.

4.2.2 Relative deprivation

No significant effect was found for relative personal deprivation in the fifth regression model. However, a highly significant effect was found for relative group deprivation. Following the model, people that felt relatively deprived compared to other groups, on average scored 0.193 points higher on a 5-point scale: $t(203) = 2.45, p < 0.05$. Thus, these people, on average, had a more positive attitude towards anti-corona measures demonstrations. These results partly confirmed H2: individuals who experience feelings of relative deprivation were more inclined to participate in anti-corona measures demonstrations. Although, the effect for relative personal deprivation was small and non-significant, the effect for relative group deprivation was significant.

4.2.3 *Social media usage*

No effect was found for the extensiveness of social media usage of participants upon their attitudes towards anti-corona measures demonstrations. The regression coefficients for the variables measuring social media usage were negative in the fifth regression model, meaning that more social media usage led to a more negative attitude towards anti-corona measures demonstrations. Since these effects were not significant, they were not very meaningful. Another variable captured people's main news source, which could be either online or offline. The model showed a positive result for the regression coefficient of this variable, meaning that people that used more online news sources had a more positive attitude towards anti-corona measures demonstrations. However, the effect in the model was not significant: $t(203) = 1.00, p > 0.05$. In general, no evidence has been found for H3: people who were more extensive users of social media did not have a more positive attitude towards anti-corona measures demonstrations compared to people who used social media less often.

4.2.4 *Trust in government officials*

In the fifth regression model, a significant effect was found for the variable measuring trust in Dutch government officials. Participants with relatively high trust in government officials, on average, scored 0.450 points lower on a 5-point scale: $t(203) = -1.98, p < 0.05$. This means that people with high trust in government officials had a more negative attitude towards anti-corona measures demonstrations. This result supported H4: individuals with low levels of trust in government officials were found to have a more positive attitude towards anti-corona measures demonstrations compared to individuals with higher levels of trust in government officials.

4.2.5 *Conspiracy beliefs*

A highly significant and substantial effect was found for the extent to which people believe in conspiracy theories upon their attitudes towards anti-corona measures demonstrations. Participants who did believe in conspiracy theories regarding the coronavirus in the model, on average, scored 0.959 points higher on a 5-point scale: $t(203) = 3.80, p < 0.01$. Thus, these participants, on average, had a more positive attitude regarding anti-corona measures demonstrations. These results confirmed H5: individuals with a strong belief in conspiracy

theories regarding the coronavirus had a more positive attitude towards anti-corona measures demonstrations.

4.3 Regression model 4: attitude towards participation in demonstrations

In the fourth regression model of the current study all independent variables have been regressed upon the dependent variable measuring the fourth stage of the self-radicalization model by Helfstein (2012), implementation. The regression formula and the regression output in Stata of the fourth regression model look like the following:

$$\begin{aligned}
 \text{Attitude_implimentation} = & 1.741 + 0.013\text{Gender} - 0.123\text{Education} + 0.020\text{Age}_{\text{medium}} - \\
 & 0.127\text{Age}_{\text{high}} + 0.025\text{Employed} - 0.034\text{Unemployed} - 0.017\text{Extraversion} - \\
 & 0.175\text{Agreeableness} + 0.047\text{Conscientiousness} + 0.214\text{Emotional}_{\text{stability}} - \\
 & 0.060\text{Openness}_{\text{experience}} + 0.006\text{Personal}_{\text{deprivation}} + 0.271\text{Group}_{\text{deprivation}} + \\
 & 0.179\text{News}_{\text{source}} + 0.084\text{Socialmedia}_{\text{medium}} + 0.096\text{Socialmedia}_{\text{high}} - \\
 & 0.751\text{Trust}_{\text{government}} + 1.406\text{Conspiracy}_{\text{beliefs}}
 \end{aligned}$$

Linear regression

Attitude implementation	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Gender	.013	.084	0.16	.874	-.153	.18	
Education	-.123	.131	-0.94	.349	-.38	.135	
Age medium	.02	.126	0.16	.877	-.23	.269	
Age high	-.127	.117	-1.09	.275	-.357	.102	
Employed	.025	.098	0.26	.796	-.167	.218	
Unemployed	-.034	.162	-0.21	.836	-.353	.286	
Extraversion	-.017	.101	-0.17	.863	-.216	.182	
Agreeableness	-.175	.102	-1.71	.088	-.377	.026	*
Conscientiousness	.047	.232	0.20	.839	-.41	.504	
Emotional stability	.214	.127	1.68	.094	-.036	.464	*
Openness to experience	-.06	.133	-0.45	.656	-.323	.203	
Personal deprivation	.006	.094	0.06	.951	-.18	.192	
Group deprivation	.271	.089	3.04	.003	.096	.447	***
News source	.179	.078	2.29	.023	.025	.334	**
Social media medium	.084	.084	1.00	.318	-.082	.25	
Social media high	.096	.241	0.40	.692	-.38	.572	
Trust in government	-.751	.166	-4.53	0	-1.078	-.424	***
Conspiracy beliefs	1.406	.191	7.37	0	1.03	1.782	***
Constant	1.741	.379	4.59	0	.993	2.489	***
Mean dependent var		1.311	SD dependent var			0.742	
R-squared		0.495	Number of observations			222.000	
F-test		11.065	Prob > F			0.000	
Akaike crit. (AIC)		382.522	Bayesian crit. (BIC)			447.173	

*** $p < .01$, ** $p < .05$, * $p < .1$

Figure 2: Stata regression output regression model 4

Just like the fifth regression model, the fourth regression model is discussed in terms of the main variables.

4.3.1 Personality characteristics

In the fourth regression model, the same non-significant effect was found for gender compared to the fifth regression model. Thus, man had a more positive attitude towards participating in anti-corona measures demonstration. However, the effect had no predictive power due to its insignificance. The effect that was found for age in the fifth regression model was not found in the fourth regression model. Moreover, no effect was found for employment status, even when differencing between voluntary and involuntary unemployment. The variables measuring personality characteristics, again, did not show up to be significant. Overall, these results did not confirm H1: young and ‘outgoing’ males with low opportunities did not have a more positive attitude towards participating in anti-corona measures demonstrations. Although most of the regression coefficients matched the hypothesis in terms of direction (positive or negative), they were not significant.

4.3.2 Relative deprivation

Repeatedly, no significant effect for feelings of personal deprivation upon attitudes towards participating in anti-corona measures demonstrations was found in the fourth regression model. However, similar to the fifth regression model, this effect was found for group deprivation. People who felt relatively deprived compared to other groups, on average scored 0.271 points higher on a 5-point scale: $t(203) = 3,80$, $p < 0.01$. Hence, these people, on average, had a more positive attitude towards actually participating in anti-corona measures demonstrations. Again, these results partly confirmed H2: individuals who experienced feelings of relative deprivation were more inclined to participate in anti-corona measures demonstrations. Given the small and non-significant effect found for relative personal deprivation and the large and significant effect found for relative group deprivation, H2 was only confirmed partly. Nonetheless, this is in line with the theoretical assumptions by King & Taylor (2011), who found that especially relative group deprivation has an effect upon radicalization.

4.3.3 *Social media usage*

Also in the fourth regression model, no effect was found for the extensiveness of the social media usage of participants upon their attitudes towards participating in anti-corona measures demonstrations. The regression coefficients for the variables measuring social media usage were positive, meaning that more social media usage led to a more positive attitude towards anti-corona measures demonstrations. However, again these effects were not significant, and therefore not relevant. Regression output for the variable measuring the main news source, either online or offline, was interesting though. In the fourth regression model, participants that used more online than offline news sources, on average, scored 0.179 points higher on a 5-point scale: $t(203) = 2.55$, $p < 0.05$. Hence, these participants, on average, had a more positive attitude towards participating in anti-corona measures demonstrations. Overall, the results did not confirm H3: individuals who were more extensive users of social media did not have a more positive attitude towards participating in anti-corona measures demonstrations compared to people who used social media less often. Nonetheless, a significant effect was found for the variable comparing people that use more online than offline news sources. This indicates that participants that used more online news sources compared to offline news sources had a more positive attitude towards participating in anti-corona measures demonstrations. It would be interesting to further study and test this effect.

4.3.4 *Trust in government officials*

The effect for trust in government officials that was found in the fifth regression model was even more extreme in the fourth regression model. People with relatively high trust in government officials, on average, scored 0.751 points lower on a 5-point scale: $t(203) = -2.32$, $p < 0.05$. Thus, these people, on average, had a more negative attitude towards participating in anti-corona measures demonstrations. Reversely, people with low trust in government officials, following the model, had a more positive attitude towards participating in anti-corona measures demonstrations. It could be argued that these people were more likely to actually participate in an anti-corona measures demonstration. These results confirmed H4: individuals with low levels of trust in government officials had a more positive attitude towards participating in anti-corona measures demonstrations compared to individuals with higher levels of trust in government officials.

4.3.5 *Conspiracy beliefs*

The same significant effect for believe in conspiracy theories upon attitudes regarding anti-corona measures demonstrations as found in the fifth regression model was found for actual participation in anti-corona measures demonstrations, as shown by the fourth regression model. Participants who did believe in conspiracy theories regarding the coronavirus, on average, scored 1.406 points higher on a 5-point scale: $t(203) = 4.02, p < 0.01$. This means that participants who did believe in conspiracy theories, on average, had a considerably more positive attitude towards participating in anti-corona measures demonstrations. Again, these results supported H5: individuals with a strong belief in conspiracy theories regarding the coronavirus had a more positive attitude towards participating in anti-corona measures demonstrations.

5. Discussion

This study has aimed to place radicalization theory in a broader perspective. More specifically, the study has sought to find determinants of individuals' attitudes towards anti-corona measures demonstrations as well as attitudes towards participating in these demonstrations. Because of the violent nature of demonstrations against the imposed preventive corona measures by the Dutch government, it is important to study what motivates the protestors. Several determinants of radicalization that are found throughout various radicalization models have been applied to the current study (King & Taylor, 2011). The Self-Radicalization Model by Helfstein (2012) has been used as a basis for the dependent variable of the study. As such, online questionnaires have been distributed and a total of 222 results have been analysed. Five OLS regressions have been performed, of which two models were selected and discussed more extensively. The fifth regression model discussed, regressed general attitudes towards anti-corona measures demonstrations upon the independent variables whereas the fourth regression model regressed attitudes towards participating in anti-corona measures demonstrations upon the independent variables.

Through statistical analysis, the study has aimed to find factors that predict people's self-radicalization processes and their attitudes towards (participating in) anti-corona measures demonstrations in the Netherlands. Overall, this study found that later stages of the Self-Radicalization Model by Helfstein (2012) were predicted more comprehensively compared to the earlier stages of the model. This indicates that the determinants of radicalization that were included in the study better predicted attitudes closer to actual radicalization. In other words, the current study should be preferred when predicting the most extreme attitudes. Essentially, this means actual participation in anti-corona measures demonstrations.

Several important significant determinants of attitudes towards (participation in) anti-corona measures demonstrations were found. First of all, group relative deprivation significantly affects attitudes towards (participation in) anti-corona measures demonstrations. Individuals who perceive they belong to a disadvantaged and neglected group in the corona crisis compared to other groups in society have more positive attitudes towards (participating in) anti-corona measures demonstrations. This result can be explained by social psychology. Social projection, "the attitude and imagining involved in the reference of self-reactions to others", is a strong human tendency (Mullen et al., 1992, p. 423; Buunk & Mussweiler, 2001). Group relative deprivation is observed when individuals perform "intergroup

comparison” resulting in “intergroup categorization” (Mullen, Dovidio, Johnson & Copper, 1992, p. 424). Essentially, this leads to an exaggeration of in-group-out-group differences. Social comparison theory, which has originally been developed by Festinger (1954), captures these processes. People are inclined to perceive themselves as worse off compared to others, especially in case of intergroup comparison (Buunk & Mussweiler, 2001). Following the results and theoretical explanation, it is important to study what drives social comparison processes. An example could be the increased usage of the Internet and social media platforms, which have made it a lot easier to get involved with social comparison processes. Nowadays it has also become harder to escape these social comparison processes. The relation between social comparison processes and social media usage in light of radicalization would be an interesting topic for future research.

Social media usage has also been included in the current study. Although, the amount of social media usage did not significantly affect the dependent variable of the study, another interesting effect was found. Individuals who indicated to use more online news sources compared to offline news sources have a significantly more positive attitude towards participating in anti-corona measures demonstrations. Essentially, this finding confirms that the Internet works as a facilitator of radicalization (Koehler, 2014). Alfano, Carter & Cheong (2018) elaborate upon the concept of online self-radicalization. They argue that the Internet allows for radicalization through top-down as well as bottom-up technological seduction. The former occurs when technological designers try to guide Internet users towards certain prescribed choices and attitudes by structuring technological architecture in particular ways. Nudging strategies are used to guide individuals towards specific ideas. Essentially, the same strategy is imposed on all users. Bottom-up technological seduction, on the other hand, uses technology to impose a unique ‘seduction’ strategy upon all Internet users. In this sense, data is used to personalize technological seduction and eventually radicalization for each individual user (Alfano et al., 2018). Essentially, a theoretical model is created by Alfano et al. (2018) which aims to explain online radicalization through technological seduction. It would be interesting to further study the technical aspect of the Internet upon self-radicalization in the context of the corona crisis. Moreover, more research should be done regarding social media usage. A limitation of the current study is that social media usage might not have been measured accurately. The scale variable was constructed based upon three questions. In future research, a more extensive and elaborate scale measure should be used to estimate social media usage.

Consequent, the level of trust in Dutch government officials significantly affects attitudes towards (participation in) anti-corona measures demonstrations. Individuals with a relatively low level of trust in government officials were found to have more positive attitudes towards (participation in) anti-corona measures demonstrations. These findings are in accordance with the results of the study by Banai et al. (2020), who found that low levels of trust in Croatian government officials decreased compliance with preventive corona measures. However, following these results, it would be interesting and important to study which factors determine trust in government officials formerly. Previous studies suggest that political and economic performance of governance actors are determinants of overall trust in government officials (Nunkoo & Smith, 2012). Zhao & Hu (2017) argue transparency of government to be an important indicator of trust as well. These are only a few examples of determinants that could be investigated in light of general trust in government officials.

Additionally, the present study found that belief in conspiracy theories regarding the coronavirus significantly affects attitudes towards (participation in) anti-corona measures demonstrations. Participants that believe in conspiracy theories have a more positive attitude towards (participating in) such demonstrations. These findings are in accordance with results of a study conducted by Pummerer et al. (2020), who studied conspiracy theories concerning the COVID-19 pandemic and their societal effects. Belief in conspiracy theories was found to decrease “institutional trust, support of governmental regulations, adoption of physical distancing, and social engagement” (Pummerer et al., 2020, p. 2). Although, a connection between conspiracy theories and their spread through the Internet and social media platforms is often already made, it would be interesting to further study this topic (Duplaga, 2020).

Lastly, personality characteristics, measured using the TIPI method, were not found to significantly affect attitudes towards (participation in) anti-corona measures demonstrations. The same holds for sociodemographic variables. Only a small significant effect was found regarding age and attitudes towards anti-corona measures demonstrations. People aged 50 or higher were found to have a more negative attitude towards these demonstrations. Thus, older people have a more negative attitude towards demonstrations against preventive corona measures. However, this effect was not found for attitudes regarding actual participation in anti-corona measures demonstrations. In another study, Duplaga (2020) found that younger people, rather than older people, were more likely to believe in conspiracy theories regarding the corona crisis. He also found that individuals with a lower, rather than a higher level of education, and students, rather than employees, were more likely to believe such theories (Duplaga, 2020). In this sense, it would be very interesting to study the interaction effects

between these sociodemographic variables and believe in conspiracy theories regarding the corona crisis in the context of this study. Additionally, it would be interesting to link sociodemographic variables to other determinants of radicalization to study whether these might affect attitudes towards (participating in) anti-corona measures demonstrations. An example would be the interaction effect of social media usage and age upon attitudes towards anti-corona measures demonstrations.

5.1 Limitations

First of all, the present study has found several predictors for attitudes towards anti-corona measures demonstrations. However, it can be debated to what extent these attitudes also predict actual behaviour. According to Azjen & Cote (2008) “empirical research has provided very little support for the idea that performance of specific behaviours can be predicted from global attitudes” (p. 292). Azjen & Cote (2008) argue that only very strong attitudes are good predictors of actual behaviour. Essentially, it seems best to measure actual behaviour instead of attitudes. However, studying actual behaviour is very time consuming and comes with various ethical dilemmas. Especially, given the current topic, measuring actual radicalization is very sensitive to ethical difficulties. Given the time constraint, the present study has solely focused upon predicting attitudes instead of actual behaviour.

Secondly, various measurement issues were already mentioned in the section above. These all contribute to the limitations of the study, but could possibly be solved in future studies by improving the scales. For example, social media usage could be measured more extensively by using an existing scale such as the Social Media Use Integration Scale developed by Jenkins-Guarnieri, Wright & Johnson (2013).

Furthermore, the current study suffers from some limitations with respect to reliability and validity. These are discussed below.

5.1.1 Reliability

The current study focused on a very specific moment in time. The corona crisis is evolving very quickly and is in this sense unpredictable. Therefore, the chance that the current study can be reproduced and find the same results over time is not very high. It is important to note, however, that this was not the intention of the study. The study aimed to measure the current effect. In general, radicalization processes move step by step and change rapidly.

5.1.2 *Validity*

The present study aimed to find correlations between the independent variables and several dependent variables in various regressions. Because the study did not employ an experimental design, causal inferences could not be made. Nonetheless, test statistics and measures of fit, such as the R^2 , could indicate the extent to which the study could make good predictions. However, it remains difficult to establish whether the current study suffered from omitted variable bias. In other words, the variance in the dependent variables of the study that was not explained for by the independent variables is probably explained by other variables that were not included in the current study. Besides internal validity, the current study faced some issues regarding external validity. It is rather plausible that the sample was not representative of the whole population of the Netherlands. Therefore, the results need to be treated with caution. Generalizations can only be made with respect to people with similar characteristics as people within the sample population. In this sense, the sample selection might have been biased as questionnaires have only been filled out by people who have opened the questionnaire online. This fact should be taken into consideration when interpreting the results.

5.2 *Future research*

Following the limitations, future research should aim to predict actual behaviour instead of general attitudes. Essentially, an experimental setting would be necessary to allow for this prediction. Considering the violent escalation of numerous demonstrations lately, it is very important to establish what drives actual (violent) behaviour. The current study has made a good effort in providing several factors that predict attitudes towards (participation in) anti-corona measures demonstrations. Future studies should try to find whether these determinants also predict actual behaviour.

Furthermore, several indications for further research were mentioned briefly before. An important topic would be to study the role of the Internet in radicalization studies in connection to other fields. As such, it would be interesting to study Internet usage in light of social comparison theory in the case of radicalization into extreme thoughts concerning the corona crisis. Age has been found as a mediator of social comparison through the Internet (Duplaga, 2020). In this sense, it would be interesting to study the interaction effects between Internet usage and sociodemographic variables, such as age, in the context of radicalization. Moreover, self-radicalization through technological seduction, as discussed by Alfano et al.

(2018) would be an interesting subject for future research. This topic is also easily linked to belief in conspiracy theories regarding the coronavirus. By itself, the Internet plays a critical role in the distribution of such theories and therefore Internet usage connects to this topic. As trust in government officials was found to significantly affect attitudes towards (participation in) anti-corona measures demonstrations, it would be interesting and important to further study the determinants of trust in government officials.

5.3 Conclusion

In conclusion, this study has found several predictors for attitudes regarding (participation in) anti-corona measures demonstrations. The predictors that were studied were taken from previous literature describing Jihadi radicalization. The most important findings are listed below. First of all, relative group deprivation is found as a predictor of attitudes towards (participation in) anti-corona measures demonstrations. As such, people that feel as if they belong to a disadvantaged group in the corona crisis have more positive attitudes towards (participation in) anti-corona measures demonstrations. Secondly, trust in government officials is found to predict attitudes towards (participation in) anti-corona measures demonstrations. People who have a relatively high level of trust in government officials have a more negative attitude towards (participation in) anti-corona measures demonstrations. Hence, determinants of trust in the government moderate the effect. Thirdly, belief in conspiracy theories is found to predict attitudes towards (participation in) anti-corona measures demonstrations. As such, people who do believe in conspiracy theories regarding the coronavirus have a more positive attitude towards (participation in) anti-corona measures demonstrations. Lastly, people who use more online news sources compared to offline news sources, have a more positive attitude towards participation in anti-corona measures demonstrations. No significant effect was found for the included sociodemographic variables, personality characteristics, social media usage and relative personal deprivation. This means that these variables could not predict attitudes towards (participation in) anti-corona measures demonstrations. Overall, the fourth regression model, predicting attitudes towards actual participation in demonstrations, was the best model in terms of explained variance. Hence, the last stage (implementation) of the Self-Radicalization Model by Helfstein (2012) was predicted most accurately by the determinants. Essentially, the fourth regression model of the current study is the best predictor of actual radicalization.

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Appendices

Appendix 1: The questionnaire from Qualtrics (in Dutch)

Master Thesis CSM Merel Croon

Start of Block: Introductie

Q1 In dit onderzoek ben ik benieuwd naar de ervaringen van mensen gedurende de corona crisis.

Dit zal ik gaan onderzoeken aan de hand van deze vragenlijst.

De vragenlijst bevat vragen over uw persoonlijke ervaring in de corona crisis, uw mening over demonstraties tegen de corona maatregelen en uw mening over algemene opvattingen rondom het coronavirus. Verder wordt er gevraagd naar een aantal persoonlijke eigenschappen en uw mening over de Nederlandse regering.

Alle antwoorden worden compleet geanonimiseerd. U mag op ieder moment stoppen met de vragenlijst. Het invullen van de vragenlijst duurt ongeveer 5 minuten.

Q2

Ik verklaar hierbij op voor mij duidelijke wijze te zijn ingelicht over de aard en methode van het onderzoek, zoals hierboven uiteengezet.

Ik stem geheel vrijwillig in met deelname aan dit onderzoek. Ik behoud daarbij het recht deze instemming weer in te trekken zonder dat ik daarvoor een reden behoeft op te geven door dat ik op ieder moment mag stoppen met de vragenlijst. Indien mijn onderzoeksresultaten gebruikt zullen worden in wetenschappelijke publicaties, dan wel op een andere manier openbaar worden gemaakt, zal dit volledig geanonimiseerd gebeuren. Mijn persoonsgegevens zullen niet door derden worden ingezien zonder mijn uitdrukkelijke toestemming.

Als ik nog verdere informatie over het onderzoek zou willen krijgen, nu of in de toekomst, kan ik me wenden tot Merel Croon (m.d.croon@umail.leidenuniv.nl).

Door op ja te klikken, gaat u akkoord met bovenstaande uitspraken.

Ja (1)

Nee (2)

Skip To: End of Survey If Ik verklaar hierbij op voor mij duidelijke wijze te zijn ingelicht over de aard en methode van he... = Nee

End of Block: Introductie

Start of Block: Demographics

Q3 Wat is uw gender?

- Man (1)
 - Vrouw (2)
 - Anders (3)
 - Wil ik liever niet zeggen (4)
-

*

Q4 Wat is uw leeftijd? Vul onderstaand in:

Q5 Wat is uw hoogst behaalde opleidings niveau?

- Basisonderwijs (1)
 - VMBO BB (2)
 - VMBO KB (3)
 - VMBO GL (4)
 - VMBO TL/MAVO (5)
 - HAVO (6)
 - VWO (7)
 - MBO 1 (8)
 - MBO 2 (9)
 - MBO 3 (10)
 - MBO 4 (11)
 - HBO (12)
 - HBO (master) (13)
 - Universiteit (bachelor) (14)
 - Universiteit (master) (15)
 - PHD (16)
 - Anders, namelijk (17) _____
-

Q6 Wat is uw huidige beroepsstatus?

- Werkend (parttime) (1)
- Werkend (fulltime) (2)
- Niet werkend (vrijwillig) (3)
- Niet werkend (werkzoekend) (4)
- Student (5)
- Anders, namelijk (6) _____

End of Block: Demographics

Start of Block: DV measurement

Q7

Vanaf het begin van de corona crisis in Nederland in maart 2020, zijn er veel maatregelen ingevoerd door de Nederlandse regering om de crisis te bestrijden.

Rondom deze maatregelen is er discussie ontstaan, aangezien niet iedereen het eens is met de maatregelen.

Dit heeft er toe geleid dat er meermaals tegen de maatregelen is gedemonstreerd in de afgelopen maanden.

Hieronder staan acht beweringen genoemd over demonstraties tegen de corona maatregelen.

Noteer onder elke bewering in hoeverre u het met de bewering eens bent.

	Sterk oneens (1)	Enigszins oneens (2)	Niet oneens, niet eens (3)	Enigszins eens (4)	Sterk eens (5)
Ik ben mij ervan bewust dat er demonstraties hebben plaatsgevonden tegen de corona maatregelen. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb gelezen over de demonstraties tegen de corona maatregelen en het heeft mij nieuwsgierig gemaakt. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb het gevoel dat het gerechtvaardigd is om deel te nemen aan een demonstratie tegen de corona maatregelen. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik zou zelf meedoen in een demonstratie tegen de corona	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

maatregelen. (4)					
Ik realiseer mij dat er onenigheid is over de corona maatregelen en dat dit leidt tot demonstraties. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik ben geïnteresseerd in de beweegredenen van demonstranten tegen de corona maatregelen. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb het gevoel dat mijn vrijheid wordt aangetast door de corona maatregelen en zou hier tegen in actie willen komen. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik wil actie voeren tegen de huidige corona maatregelen. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: DV measurement

Start of Block: Personality characteristics (TIPI)

Q8 Hieronder staat een aantal eigenschappen die al dan niet op u van toepassing kunnen zijn. Noteer onder elke bewering in hoeverre u het met de bewering eens bent. Beoordeel steeds in hoeverre beide eigenschappen op u van toepassing zijn, zelfs wanneer één van de eigenschappen meer van toepassing is dan de andere eigenschap.

	Sterk oneens (1)	Enigszins oneens (2)	Niet oneens, niet eens (3)	Enigszins eens (4)	Sterk eens (5)
Extravert, enthousiast (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kritisch, strijdlustig (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Betrouwbaar, gedisciplineerd (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angstig, snel overstuur (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Open voor nieuwe ervaringen, complex (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gereserveerd, stil (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sympathiek, warm (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Slordig, achteloos (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kalm, emotioneel stabiel (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Behoudend, niet creatief (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Personality characteristics (TIPI)

Start of Block: Relative deprivation

Q9 Hieronder staan zes beweringen genoemd over persoonlijke gevoelens ten tijde van de corona crisis. Noteer onder elke bewering in hoeverre u het met de bewering eens bent.

	Sterk oneens (1)	Enigszins oneens (2)	Niet oneens, niet eens (3)	Enigszins eens (4)	Sterk eens (5)
Ik heb het gevoel dat de corona crisis mijn persoonlijke leven sterk beïnvloed. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik het gevoel dat de corona crisis mijn carrière beïnvloed. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik het het gevoel dat de corona crisis mij harder heeft getroffen dan vergelijkbare mensen om mij heen. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb het gevoel dat ik tot een benadeelde groep behoor in de corona crisis. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb het gevoel dat mensen in mijn leeftijdscategorie worden benadeeld in de corona crisis. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik heb het gevoel dat de groep waartoe ik behoor in de samenleving harder is getroffen door de corona crisis dan andere groepen in de samenleving. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

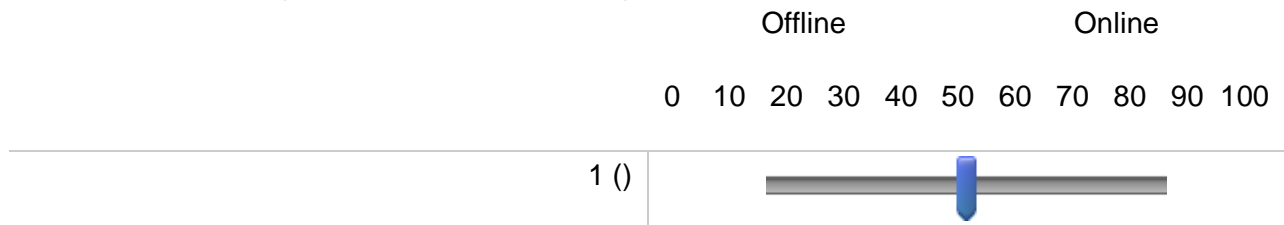
End of Block: Relative deprivation

Start of Block: Social media usage

Q10 Ik ben benieuwd naar uw gebruik van online nieuwsbronnen en sociale media in verhouding tot 'traditionele' nieuwsbronnen.
 Dit laatste doelt op offline nieuwsbronnen zoals kranten en nieuwszenders op televisie.

Onderstaand is er een 'slider' weergegeven.
 Links staat voor geheel offline nieuwsbronnen, rechts voor geheel online nieuwsbronnen.
 Geef door middel van het verschuiven van de slider aan in welke mate u offline versus online nieuws vergaard.

Voorbeeld: 30 = 30 procent offline nieuws, 70 procent online nieuws.



Q11

Hieronder staan drie beweringen genoemd over uw persoonlijke gebruik van sociale media. Onder sociale media verstaan wij websites en andere platformen via het internet waar gebruikers zelf verantwoordelijk zijn voor de inhoud en waar mogelijkheden worden geboden voor gebruikers om onderlinge contacten te onderhouden. Voorbeelden van sociale media zijn Facebook, LinkedIn en Whatsapp.

Noteer onder elke bewering in hoeverre u het met de bewering eens bent.

	Sterk oneens (1)	Enigszins oneens (2)	Niet oneens, niet eens (3)	Enigszins eens (4)	Sterk eens (5)
Mijn voornaaste bron voor informatie zijn sociale media platforms. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik maak vaak gebruik van sociale media. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ik doe vaak mee aan online discussies op sociale media platforms. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Social media usage

Start of Block: Trust in government officials

Q12 Hieronder staan drie beweringen genoemd over algemeen vertrouwen in de Nederlandse regering.

Noteer onder elke bewering in hoeverre u het met de bewering eens bent.

	Sterk oneens (1)	Enigszins oneens (2)	Niet oneens, niet eens (3)	Enigszins eens (4)	Sterk eens (5)
Ik vertrouw de Nederlandse regering en ik heb het gevoel dat het beleid dat wordt gevoerd goed is. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leden van de Nederlandse regering zijn experts in hun eigen werkveld. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De Nederlandse regering werkt in het beste belang van het Nederlandse volk. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Trust in government officials

Start of Block: Conspiracy beliefs

Q13 Hieronder staan zeven beweringen genoemd over het ontstaan en het verloop van de huidige corona crisis.

Noteer onder elke bewering in hoeverre u het met de bewering eens bent.

	Sterk oneens (1)	Enigszins oneens (2)	Niet oneens, niet eens (3)	Enigszins eens (4)	Sterk eens (5)
Het coronavirus is opzettelijk gemaakt in een laboratorium. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De corona crisis heeft een groot effect op de oudere bevolking van Nederland. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
De verspreiding van het coronavirus is gerelateerd aan de ontwikkeling van 5G technologie. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het coronavirus is afkomstig van vleermuizen en ontstaan in China. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het coronavirus is even gevaarlijk als een normale griep. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het coronavirus heeft geleid tot meer dan een miljoen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

sterftegevallen
wereldwijd. (6)

Officiële
infectie- en
sterftcijfers
gepubliceerd
door de WHO
zijn niet waar.
(7)



End of Block: Conspiracy beliefs

Start of Block: Afsluiting

Appendix 2: All relevant variables and their meaning

Attitude_demonstrations	5-point scale average of answers to 8 questions regarding attitude towards anti-corona demonstrations
Attitude_awareness	5-point scale average of answers to 2 questions regarding attitude towards awareness about anti-corona demonstrations
Attitude_interest	5-point scale average of answers to 2 questions regarding attitude towards interest in anti-corona demonstrations
Attitude_acceptance	5-point scale average of answers to 2 questions regarding attitude towards acceptance of anti-corona demonstrations
Attitude_implimentation	5-point scale average of answers to 2 questions regarding attitude towards participating in anti-corona demonstrations
Gender	0. Female 1. Male
Education	0. Lower level education (primary school, VMBO, MBO) 1. Higher level education (HAVO, VWO, HBO(+), BSc, MSc, PHD)
Age_low	0. Age 30+ 1. Age 30 or lower
Age_medium	0. Age 30 or lower & 50+ 1. Age 31-50
Age_high	0. Age 50 or lower 1. Age 50+
Employed	0. Unemployed, students, pensioners 1. Employed (parttime and fulltime)
Unemployed	0. Employed, students 1. Unemployed (voluntary and involuntary) & pensioners
Student	0. Employed, unemployed, pensioners 1. Students
Extraversion	0. More introverted (average score on 5-point scale of items 1 and 6 (reverse coded) is 2.5 or lower) 1. More extraverted (average score on 5-point scale of items 1 and 6 (reverse coded) is higher than 2.5)
Agreeableness	0. Less agreeable (average score on 5-point scale of items 2 (reverse coded) and 7 is 2.5 or lower) 1. More agreeable (average score on 5-point scale of items 2 (reverse coded) and 7 is higher than 2.5)
Conscientiousness	0. Less conscientious (average score on 5-point scale of items 3 and 8 (reverse coded) is 2.5 or lower) 1. More conscientious (average score on 5-point scale of items 3 and 8 (reverse coded) is higher than 2.5)
Emotional_stability	0. Emotionally less stable (average score on 5-point scale of items 4 (reverse coded) and 9 is 2.5 or lower) 1. Emotionally more stable (average score on 5-point scale of items 4 (reverse coded) and 9 is higher than 2.5)
Openness_experience	0. Less open to new experiences (average score on 5-point scale of items 5 and 10 (reverse coded) is 2.5 or lower)

	1. More open to new experiences (average score on 5-point scale of items 5 and 10 (reverse coded) is higher than 2.5)
Personal_deprivation	0. Relatively not personally deprived (average of answers to three 5-point scale questions 2.5 or lower) 1. Relatively personally deprived (average of answers to three 5-point scale questions higher than 2.5)
Group_deprivation	0. Relatively no group deprivation (average of answers to three 5-point scale questions 2.5 or lower) 1. Relatively group deprivation (average of answers to three 5-point scale questions higher than 2.5)
News_source	0. Mostly offline news (50% and lower) 1. Mostly online news (51% and higher)
Socialmedia_low	0. Group of people with medium or high social media usage 1. Group of people with low social media usage (average of answers to three 5-point scale questions is 2 or lower)
Socialmedia_medium	0. Group of people with low or high social media usage 1. Group of people with medium social media usage (average of answers to three 5-point scale questions is between 2 and 4)
Socialmedia_high	0. Group of people with low or medium social media usage 1. Group of people with high social media usage (average of answers to three 5-point scale questions is 4 or higher)
Trust_government	0. Low trust in government officials (average of answers to three 5-point scale questions 2.5 or lower) 1. High trust in government officials (average of answers to three 5-point scale questions higher than 2.5)
Conspiracy_beliefs	0. Low belief in conspiracy theories (average of answers to four 5-point scale questions 2.5 or lower) 1. High belief in conspiracy theories (average of answers to four 5-point scale questions higher than 2.5)

Appendix 3: Summary of the variables in Stata

Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Gender	222	.401	.491	0	1
Age	222	36.122	16.569	15	81
Education	222	.901	.299	0	1
Employment status	222	2.851	1.583	1	5
Q7 1	222	4.568	.919	1	5
Q7 2	222	2.968	1.178	1	5
Q7 3	222	2.689	1.355	1	5
Q7 4	222	1.225	.695	1	5
Q7 5	222	3.91	.998	1	5
Q7 6	222	3.014	1.238	1	5
Q7 7	222	1.743	1.03	1	5
Q7 8	222	1.396	.875	1	5
Q8 1	222	3.77	1.023	1	5
Q8 2	222	2.198	.833	1	5
Q8 3	222	4.468	.621	2	5
Q8 4	222	4.014	1.087	1	5
Q8 5	222	3.977	.721	2	5
Q8 6	222	3.59	1.121	1	5
Q8 7	222	4.131	.677	2	5
Q8 8	222	3.991	.984	1	5
Q8 9	222	3.856	.973	1	5
Q8 10	222	3.428	1.094	1	5
Q9 1	222	4.18	.934	1	5
Q9 2	222	3.14	1.343	1	5
Q9 3	222	1.833	1.04	1	5
Q9 4	222	2.284	1.299	1	5
Q9 5	222	2.752	1.324	1	5
Q9 6	222	2.27	1.218	1	5
News source	222	.608	.489	0	1
Q11 1	222	2.23	1.313	1	5
Q11 2	222	3.559	1.263	1	5
Q11 3	222	1.225	.574	1	4
Q12 1	222	3.856	.935	1	5
Q12 2	221	3.489	1.012	1	5
Q12 3	222	4.059	.938	1	5
Q13 1	222	1.459	.885	1	5
Q13 2	222	4.419	.749	1	5
Q13 3	222	1.099	.403	1	3
Q13 4	222	3.874	.928	1	5
Q13 5	222	1.865	.961	1	5
Q13 6	222	4.329	.895	1	5
Q13 7	222	1.838	1.097	1	5
Attitude demonstrations	222	2.689	.637	1.125	5
Attitude awareness	222	4.239	.756	1	5
Attitude interest	222	2.991	1.056	1	5
Attitude acceptance	222	2.216	.977	1	5
Attitude implementation	222	1.311	.742	1	5
Q9 personal	222	3.051	.845	1	5
Q9 group	222	2.435	1.072	1	5
Q11 average	222	2.338	.802	1	4.667
Q12 average	222	3.803	.821	1	5

Q13 average	222	1.565	.575	1	3.75
Age low	222	.59	.493	0	1
Age medium	222	.135	.343	0	1
Age high	222	.275	.447	0	1
Employed	222	.595	.492	0	1
Unemployed	222	.09	.287	0	1
Student	222	1	0	1	1
Extraversion	222	.82	.385	0	1
Agreeableness	222	.806	.396	0	1
Conscientiousness	222	.968	.175	0	1
Emotional stability	222	.892	.311	0	1
Openness to experience	222	.905	.293	0	1
Personal deprivation	222	.703	.458	0	1
Group deprivation	222	.468	.5	0	1
Social media low	222	.423	.495	0	1
Social media medium	222	.545	.499	0	1
Social media high	222	.032	.175	0	1
Trust in government	222	.928	.259	0	1
Conspiracy beliefs	222	.054	.227	0	1

Appendix 4: Regression 1

Linear regression

Attitude awareness	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Gender	-.145	.115	-1.26	.209	-.373	.082	
Education	.462	.221	2.09	.038	.026	.898	**
Age medium	-.234	.139	-1.68	.094	-.508	.04	*
Age high	-.472	.179	-2.63	.009	-.825	-.119	***
Employed	.062	.096	0.64	.521	-.128	.251	
Unemployed	-.057	.235	-0.24	.807	-.52	.406	
Extraversion	-.036	.125	-0.29	.774	-.283	.211	
Agreeableness	-.028	.14	-0.20	.844	-.304	.248	
Conscientiousness	-.008	.282	-0.03	.976	-.565	.548	
Emotional stability	.333	.186	1.79	.075	-.034	.701	*
Openness to experience	-.171	.237	-0.72	.471	-.637	.295	
Personal deprivation	.057	.13	0.43	.665	-.2	.313	
Group deprivation	.01	.11	0.09	.93	-.207	.226	
News source	-.031	.106	-0.29	.771	-.239	.178	
Social media medium	-.098	.125	-0.78	.434	-.344	.149	
Social media high	-.215	.264	-0.81	.416	-.736	.306	
Trust in government	-.214	.211	-1.01	.313	-.63	.203	
Conspiracy beliefs	.179	.211	0.85	.396	-.236	.595	
Constant	4.151	.479	8.66	0	3.206	5.097	***
Mean dependent var		4.239	SD dependent var			0.756	
R-squared		0.143	Number of observations			222.000	
F-test		1.724	Prob > F			0.037	
Akaike crit. (AIC)		508.540	Bayesian crit. (BIC)			573.190	

*** $p < .01$, ** $p < .05$, * $p < .1$

Appendix 5: Regression 2

Linear regression

Attitude interest	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Gender	.039	.159	0.24	.808	-.275	.352	
Education	.356	.251	1.42	.158	-.139	.851	
Age medium	-.71	.241	-2.94	.004	-1.186	-.234	***
Age high	-.418	.232	-1.81	.072	-.875	.039	*
Employed	-.177	.164	-1.08	.284	-.501	.147	
Unemployed	-.146	.285	-0.51	.609	-.708	.416	
Extraversion	.181	.169	1.07	.285	-.152	.514	
Agreeableness	-.205	.191	-1.07	.284	-.581	.171	
Conscientiousness	-.033	.338	-0.10	.921	-.7	.633	
Emotional stability	-.239	.218	-1.10	.274	-.669	.191	
Openness to experience	.09	.227	0.40	.691	-.357	.537	
Personal deprivation	-.062	.186	-0.33	.738	-.43	.305	
Group deprivation	.057	.171	0.33	.74	-.281	.395	
News source	-.039	.142	-0.27	.784	-.318	.24	
Social media medium	-.173	.153	-1.13	.261	-.476	.13	
Social media high	-.245	.284	-0.86	.391	-.805	.316	
Trust in government	-.287	.353	-0.81	.417	-.983	.409	
Conspiracy beliefs	.93	.378	2.46	.015	.185	1.675	**
Constant	3.523	.618	5.71	0	2.306	4.741	***
Mean dependent var		2.991	SD dependent var			1.056	
R-squared		0.180	Number of observations			222.000	
F-test		2.979	Prob > F			0.000	
Akaike crit. (AIC)		647.232	Bayesian crit. (BIC)			711.883	

*** $p < .01$, ** $p < .05$, * $p < .1$

Appendix 6: Regression 3

Linear regression

Attitude acceptance	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Gender	.092	.141	0.65	.516	-.186	.369	
Education	.195	.183	1.06	.288	-.166	.557	
Age medium	.153	.189	0.81	.42	-.22	.525	
Age high	-.099	.182	-0.54	.589	-.457	.26	
Employed	-.004	.146	-0.03	.979	-.292	.285	
Unemployed	-.044	.234	-0.19	.85	-.506	.417	
Extraversion	-.094	.145	-0.65	.516	-.38	.192	
Agreeableness	.09	.165	0.54	.588	-.236	.415	
Conscientiousness	-.074	.37	-0.20	.842	-.804	.656	
Emotional stability	-.027	.166	-0.16	.873	-.354	.301	
Openness experience	-.031	.176	-0.18	.859	-.379	.317	
Personal deprivation	.094	.15	0.63	.531	-.202	.391	
Group deprivation	.433	.133	3.26	.001	.171	.695	***
News source	.175	.119	1.46	.145	-.061	.41	
Social media medium	-.103	.131	-0.79	.431	-.36	.154	
Social media high	-.406	.384	-1.06	.292	-1.162	.351	
Trust in government	-.55	.324	-1.70	.091	-1.188	.088	*
Conspiracy beliefs	1.322	.36	3.67	0	.613	2.032	***
Constant	2.277	.65	3.50	.001	.996	3.559	***
Mean dependent var		2.216	SD dependent var			0.977	
R-squared		0.246	Number of observations			222.000	
F-test		3.733	Prob > F			0.000	
Akaike crit. (AIC)		594.179	Bayesian crit. (BIC)			658.830	

*** $p < .01$, ** $p < .05$, * $p < .1$

Appendix 7: Regression 4

Linear regression

Attitude implementation	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Gender	.013	.084	0.16	.874	-.153	.18	
Education	-.123	.131	-0.94	.349	-.38	.135	
Age medium	.02	.126	0.16	.877	-.23	.269	
Age high	-.127	.117	-1.09	.275	-.357	.102	
Employed	.025	.098	0.26	.796	-.167	.218	
Unemployed	-.034	.162	-0.21	.836	-.353	.286	
Extraversion	-.017	.101	-0.17	.863	-.216	.182	
Agreeableness	-.175	.102	-1.71	.088	-.377	.026	*
Conscientiousness	.047	.232	0.20	.839	-.41	.504	
Emotional stability	.214	.127	1.68	.094	-.036	.464	*
Openness to experience	-.06	.133	-0.45	.656	-.323	.203	
Personal deprivation	.006	.094	0.06	.951	-.18	.192	
Group deprivation	.271	.089	3.04	.003	.096	.447	***
News source	.179	.078	2.29	.023	.025	.334	**
Social media medium	.084	.084	1.00	.318	-.082	.25	
Social media high	.096	.241	0.40	.692	-.38	.572	
Trust in government	-.751	.166	-4.53	0	-1.078	-.424	***
Conspiracy beliefs	1.406	.191	7.37	0	1.03	1.782	***
Constant	1.741	.379	4.59	0	.993	2.489	***
Mean dependent var		1.311	SD dependent var			0.742	
R-squared		0.495	Number of observations			222.000	
F-test		11.065	Prob > F			0.000	
Akaike crit. (AIC)		382.522	Bayesian crit. (BIC)			447.173	

*** $p < .01$, ** $p < .05$, * $p < .1$

Appendix 8: Regression 5

Linear regression

Attitude demonstrations	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Gender	0	.082	-0.01	.996	-.162	.161	
Education	.223	.131	1.70	.091	-.036	.481	*
Age medium	-.193	.122	-1.58	.116	-.434	.048	
Age high	-.279	.118	-2.35	.019	-.512	-.045	**
Employed	-.023	.085	-0.27	.784	-.191	.144	
Unemployed	-.07	.148	-0.48	.635	-.362	.221	
Extraversion	.008	.075	0.11	.912	-.14	.157	
Agreeableness	-.079	.091	-0.87	.385	-.259	.1	
Conscientiousness	-.017	.194	-0.09	.93	-.4	.365	
Emotional stability	.07	.116	0.61	.545	-.159	.3	
Openness to experience	-.043	.118	-0.37	.715	-.275	.189	
Personal deprivation	.024	.093	0.25	.8	-.16	.207	
Group deprivation	.193	.079	2.45	.015	.038	.348	**
News source	.071	.071	1.00	.317	-.069	.211	
Social media medium	-.072	.083	-0.88	.382	-.236	.091	
Social media high	-.192	.215	-0.90	.372	-.616	.231	
Trust in government	-.45	.227	-1.98	.048	-.898	-.003	**
Conspiracy beliefs	.959	.253	3.80	0	.461	1.458	***
Constant	2.923	.387	7.56	0	2.161	3.686	***
Mean dependent var		2.689	SD dependent var			0.637	
R-squared		0.342	Number of observations			222.000	
F-test		4.865	Prob > F			0.000	
Akaike crit. (AIC)		373.812	Bayesian crit. (BIC)			438.463	

*** $p < .01$, ** $p < .05$, * $p < .1$

Appendix 9: Do-File Stata

```
//Master thesis CSM do-file
```

```
//Renaming all variables
```

```
rename A Gender
rename B Age
rename C Education
rename D Employment_status
rename E Q7_1
rename F Q7_2
rename G Q7_3
rename H Q7_4
rename I Q7_5
rename J Q7_6
rename K Q7_7
rename L Q7_8
rename M Q8_1
rename N Q8_2
rename O Q8_3
rename P Q8_4
rename Q Q8_5
rename R Q8_6
rename S Q8_7
rename T Q8_8
rename U Q8_9
rename V Q8_10
rename W Q9_1
rename X Q9_2
rename Y Q9_3
rename Z Q9_4
rename AA Q9_5
rename AB Q9_6
rename AC News_source
rename AD Q11_1
rename AE Q11_2
rename AF Q11_3
rename AG Q12_1
rename AH Q12_2
rename AI Q12_3
rename AJ Q13_1
rename AK Q13_2
rename AL Q13_3
rename AM Q13_4
rename AN Q13_5
rename AO Q13_6
rename AP Q13_7
rename AQ Attitude_demonstrations
rename AR Attitude_awareness
```

```
rename AS Attitude_interest
rename AT Attitude_acceptance
rename AU Attitude_implementation
rename AV Q9_personal
rename AW Q9_group
rename AX Q11_average
rename AY Q12_average
rename AZ Q13_average
```

```
summarize browse list
```

```
//Recoding variables
```

```
recode Gender 1=1 2=0
```

```
recode Education 1=0 2=0 3=0 4=0 5=0 6=1 7=1 8=0 9=0 10=0 11=0 12=1 13=1 14=1 15=1
16=1
```

```
recode Employment_status 1=1 2=2 3=3 4=4 5=5 7=3 8=3
```

```
//Reverse coding personality traits question 8
```

```
recode Q8_2 5=1 4=2 3=3 2=4 1=5
```

```
recode Q8_4 5=1 4=2 3=3 2=4 1=5
```

```
recode Q8_6 5=1 4=2 3=3 2=4 1=5
```

```
recode Q8_8 5=1 4=2 3=3 2=4 1=5
```

```
recode Q8_10 5=1 4=2 3=3 2=4 1=5
```

```
//Generating new variables
```

```
//Age variables
```

```
generate Age_low = 0
```

```
replace Age_low = 1 if Age<=30
```

```
generate Age_medium = 0
```

```
replace Age_medium = 1 if Age>30 & Age<51
```

```
generate Age_high = 0
```

```
replace Age_high = 1 if Age>=51
```

```
//Employment status, iets fout met unemployed
```

```
generate Employed = 0
```

```
replace Employed = 1 if Employment_status<3
```

```
generate Unemployed = 0
```

```
replace Unemployed = 1 if Employment_status>=3 & Employment_status<5
```

```
generate Student = 0
```

```
replace Student = 1 if Employment_status<=5
```

//TIPI variables

generate Extraversion = (Q8_1 + Q8_6)/2
replace Extraversion = 0 if Extraversion < 2.6
replace Extraversion = 1 if Extraversion > 2.6

generate Agreeableness = (Q8_2 + Q8_7)/2
replace Agreeableness = 0 if Agreeableness < 2.6
replace Agreeableness = 1 if Agreeableness > 2.6

generate Conscientiousness = (Q8_3 + Q8_8)/2
replace Conscientiousness = 0 if Conscientiousness < 2.6
replace Conscientiousness = 1 if Conscientiousness > 2.6

generate Emotional_stability = (Q8_4 + Q8_9)/2
replace Emotional_stability = 0 if Emotional_stability < 2.6
replace Emotional_stability = 1 if Emotional_stability > 2.6

generate Openness_experience = (Q8_5 + Q8_10)/2
replace Openness_experience = 0 if Openness_experience < 2.6
replace Openness_experience = 1 if Openness_experience > 2.6

//Relative deprivation

generate Personal_deprivation = 0
replace Personal_deprivation = 1 if Q9_personal > 2.6

generate Group_deprivation = 0
replace Group_deprivation = 1 if Q9_group > 2.6

//Online and social media usage, problem with medium

replace News_source = 0 if News_source < 51
replace News_source = 1 if News_source >= 51

generate Socialmedia_low = 0
replace Socialmedia_low = 1 if Q11_average < 2.1

generate Socialmedia_medium = 0
replace Socialmedia_medium = 1 if Q11_average >= 2.1 & Q11_average < 4

generate Socialmedia_high = 0
replace Socialmedia_high = 1 if Q11_average >= 4

//Trust in government officials

generate Trust_government = 0
replace Trust_government = 1 if Q12_average > 2.6

//Conspiracy theory beliefs

generate Conspiracy_beliefs = 0
replace Conspiracy_beliefs = 1 if Q13_average>2.6

//Reliability scales

//Dependent variable, attitude towards anti-corona measures demonstrations

alpha Q7_1 Q7_2 Q7_3 Q7_4 Q7_5 Q7_6 Q7_7 Q7_8

alpha Q7_1 Q7_5
alpha Q7_2 Q7_6
alpha Q7_3 Q7_7
alpha Q7_4 Q7_8

//TIPI scale

alpha Q8_1 Q8_2 Q8_3 Q8_4 Q8_5 Q8_6 Q8_7 Q8_8 Q8_9 Q8_10

alpha Q8_1 Q8_6
alpha Q8_2 Q8_7
alpha Q8_3 Q8_8
alpha Q8_4 Q8_9
alpha Q8_5 Q8_10

//Relative deprivation (personal and group)

alpha Q9_1 Q9_2 Q9_3
alpha Q9_4 Q9_5 Q9_6

//Online social media usage

alpha Q11_1 Q11_2 Q11_3

//Trust in government officials

alpha Q12_1 Q12_2 Q12_3

//Belief in conspiracy theories

alpha Q13_1 Q13_3 Q13_5 Q13_7
alpha Q13_2 Q13_4 Q13_6

//Regressions

//Regress all variables upon dependent variable Attitude demonstrations

regress Attitude_demonstrations Gender Education Age_medium Age_high Employed
Unemployed Extraversion Agreeableness Conscientiousness Emotional_stability
Openness_experience Personal_deprivation Group_deprivation News_source
Socialmedia_medium Socialmedia_high Trust_government Conspiracy_beliefs, robust

//Regress all variables upon dependent variable Attitude demonstrations first stage, awareness

```
regress Attitude_awareness Gender Education Age_medium Age_high Employed
Unemployed Extraversion Agreeableness Conscientiousness Emotional_stability
Openness_experience Personal_deprivation Group_deprivation News_source
Socialmedia_medium Socialmedia_high Trust_government Conspiracy_beliefs, robust
```

```
//Regress all variables upon dependent variable Attitude demonstrations second stage, interest
```

```
regress Attitude_interest Gender Education Age_medium Age_high Employed Unemployed
Extraversion Agreeableness Conscientiousness Emotional_stability Openness_experience
Personal_deprivation Group_deprivation News_source Socialmedia_medium
Socialmedia_high Trust_government Conspiracy_beliefs, robust
```

```
//Regress all variables upon dependent variable Attitude demonstrations third stage,
acceptance
```

```
regress Attitude_acceptance Gender Education Age_medium Age_high Employed
Unemployed Extraversion Agreeableness Conscientiousness Emotional_stability
Openness_experience Personal_deprivation Group_deprivation News_source
Socialmedia_medium Socialmedia_high Trust_government Conspiracy_beliefs, robust
```

```
//Regress all variables upon dependent variable Attitude demonstrations first stage,
implementation
```

```
regress Attitude_implementation Gender Education Age_medium Age_high Employed
Unemployed Extraversion Agreeableness Conscientiousness Emotional_stability
Openness_experience Personal_deprivation Group_deprivation News_source
Socialmedia_medium Socialmedia_high Trust_government Conspiracy_beliefs, robust
```

```
//Regressions with different employment variables. clear all and everything again, but
different employment variables
```

```
generate Unemployed_voluntary = 0
replace Unemployed_voluntary = 1 if Employment_status>=3 & Employment_status<4
```

```
generate Unemployed_involuntary = 0
replace Unemployed_involuntary = 1 if Employment_status>=4 & Employment_status<5
```

```
regress Attitude_demonstrations Gender Education Age_medium Age_high Employed
Unemployed_voluntary Unemployed_involuntary Extraversion Agreeableness
Conscientiousness Emotional_stability Openness_experience Personal_deprivation
Group_deprivation News_source Socialmedia_medium Socialmedia_high Trust_government
Conspiracy_beliefs, robust
```

```
regress Attitude_implementation Gender Education Age_medium Age_high Employed
Unemployed_voluntary Unemployed_involuntary Extraversion Agreeableness
Conscientiousness Emotional_stability Openness_experience Personal_deprivation
Group_deprivation News_source Socialmedia_medium Socialmedia_high Trust_government
Conspiracy_beliefs, robust
```