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## **Coping Mechanisms Used by Street-Level Bureaucrats to Cope With Clients That Believe or Spread Misinformation and Disinformation About COVID-19 in Europe: an Explorative-Comparative Study Among Teachers and Health Workers**

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# **Coping Mechanisms Used by Street-Level Bureaucrats to Cope With Clients That Believe or Spread Misinformation and Disinformation About COVID-19 in Europe: an Explorative-Comparative Study Among Teachers and Health Workers**



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## **Abstract**

This thesis explores the coping mechanisms street-level bureaucrats (SLBs) adopt to cope with patients who believe or share a form of mis- or disinformation. This is done by looking at two types of street-level bureaucrats: health workers and teachers. Although health workers and teachers are often exposed to encounters where a patient believes or shares a form of mis- or disinformation and it is recognized that street-level bureaucrats have considerable discretion and can act as policymakers (Lipsky, 2010), the current literature has not taken SLBs into consideration with misinformation and disinformation yet. During the current pandemic, an excessive amount of misinformation and disinformation spreads on social media, and in today's digital society it has become rather difficult to identify fake news (Vermanen, 2020) (Deprez, 2020). The spreading and belief in mis- and disinformation can have harmful consequences for democracy, public health, and societies' trust in science (Diepstraten, 2021). Through a qualitative analysis consisting of interviews and (media) documents, the results presented in this explored that SLBs adopt a wide variety of coping mechanisms. The findings of this study suggest that SLBs their coping mechanisms for clients who believe or share misinformation and disinformation are more similar than one expected beforehand and that the type of encounter is more important than the type of SLB. The results of this study can provide valuable insights into how SLBs can cope with mis- and disinformation, ultimately contributing to combatting and preventing the spread and belief in mis- and disinformation.

*Keywords: street-level bureaucrats, health workers, teachers, misinformation, disinformation, COVID-19, coping mechanisms*

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## 1. Introduction

It is assumable to say that in today's digital society the event of spreading misinformation and disinformation has increased. One can, for example, with new digital technologies such as artificial intelligence manipulate sound and vision (Rijksoverheid, 2018). Another even more recent threat is the Coronavirus. During the current pandemic, a lot of information appeared on the internet. According to the data journalist platform Pointer, there are at least 50 anonymous Twitter accounts that are spreading false information about the Coronavirus, and around 500 Twitter accounts are under suspicion of spreading wrong information (Vermanen, 2020). The excessive amount of misinformation and disinformation about COVID-19 that spreads on social media is by the WHO referred to as an infodemic (WHO, n.d.). Following this line, Deprez, a communication scientist at the University of Ghent, asserts that not only young people and people older than 60 are susceptible to fake news: no one is immune (Deprez, 2020). Diepstraten states: "the combination of disinformation, the enormous amount of internet users and social media 'bubbles' fed by algorithms is a threat for both societies health and trust in science" (Diepstraten, 2021). The described events are also a real threat to democracy since the quality of news information is of great importance when it comes to democracy. The two most crucial functions of democracy are to provide trustworthy information and to interpret and analyze current developments (van Keulen, 2018).

Consequently, during the Coronavirus it became clear that governments fail to ensure that science is understandable for its citizens and should therefore not only consider the input of experts to translate the information (Hartley et al. 2020, p. 735). Furthermore, research has emphasized that **misinformation** and **disinformation** can have harmful consequences for public health (Tasnim et. al, 2020). An example of misinformation is for example the Dutch government's slogan: 'Dansen met Janssen', which gave Dutch citizens the message that it was legitimate to go to a club or festival right after they received their vaccination with the Janssen vaccine. Nonetheless, it was not taken into consideration that after vaccination one needs to wait at least two weeks before the body has built enough immunity against the Coronavirus (Dongen, 2021). However, the Dutch government thought this was a 'safe' message based on the Corona situation during this time (Rijksoverheid, 2021). Secondly, disinformation is closely related to misinformation, however, during disinformation, the person sharing the information is sharing this information on purpose to mislead people (Shu et. al, 2020, p. 2). An example of disinformation is the message that 5G causes Corona (Roozenbeek, 2021). This information can be seen as a type of disinformation as it is presumably published to mislead people, having a big influence on some people's emotions

and behavior (Wardle et. al, 2018, p. 44) (Fallis, 2013, p. 135). Ultimately, this led to the destruction of 5G towers, as some towers were set on fire (Ollongren, 2021).

As seen in the paragraph above, during the pandemic false information performs by ‘masking healthy behaviors and promoting erroneous practices that increase the spread of the virus and ultimately result in poor physical and mental health outcomes’ (Tasnim et al. 2020, p. 171) and by limiting the dissemination of clear and trustworthy information concerning for example information about the transmission of the virus (Wong et al. 2020; p. 1244).

Additionally, since COVID-19 vaccines are on the market and available for European citizens, an abounding amount of misinformation and disinformation concerning the safety of the vaccines and the approval process of the vaccines occurred on social media platforms (European Council, 2021). A situation where misinformation or disinformation is often spread or encountered is for example the classroom. Teachers are dealing with students who believe or spread mis- and disinformation, as (false) information spreads on social media. An example of this is a teacher who encountered one of his students in middle school, the student was not going to get a vaccine since his mother said that ‘the Covid vaccine kills people’ (Silva, 2021). Additionally, health workers also often deal with patients who spread or believe in COVID-19 related mis- or disinformation. In Idaho this even led to violence towards health workers as some health workers are accused of killing patients by family members of people who died from COVID-19. These family members often think that COVID-19 does not exist (Boone, 2021). The European Union acknowledges the importance to tackle COVID-19 misinformation and disinformation and recently established guidelines to counter disinformation, which will be elaborated on later in this research. Yet, there is no existing policy that includes street-level bureaucrats while the examples above show SLBs encounter it regularly in their interactions with clients (European Council, 2021).

This research explores **coping mechanisms** used by **street-level bureaucrats** who face clients who believe or share misinformation and disinformation. Focusing on behavioral coping mechanisms in relation to mis- and disinformation can provide valuable new insights on how to deal with the increased spreading and belief of mis- and disinformation, as this is not brought into relation yet. These insights provided by street-level bureaucrats could be crucial for detecting and preventing the spreading and belief in mis- and disinformation. Street-level bureaucrats can for example be administrators, policemen, social workers, health workers, or teachers who have discretion in exercising authority on their clients. Lipsky provides several coping mechanisms used by street-level bureaucrats to cope with their work

(Lipsky, 2010). Since especially street-level bureaucrats deal with stress due to high workloads and a lack of resources, several authors including Lipsky (1980) underline that street-level bureaucrats develop coping mechanisms such as ‘stereotypes, catchwords and principled beliefs’ (Bartels, 2012, p. 471). Moreover, an additional source of stress on the already high workload can be experienced by SLBs when clients believe or spread a form of mis- or disinformation. This can also lead to friction, irritations, or even conflicts between street-level bureaucrats and clients. Following this discourse, street-level bureaucrats could provide both on a national and European level valuable information to implement policies when one analyzes their coping mechanisms used on their clients who believe or share mis- and disinformation. This assumption gives rise to the following research question: *How can street-level bureaucrats cope with clients who believe or share misinformation and disinformation about COVID-19 in Europe?*

### *1.1 Contribution of study*

Although research about street-level bureaucrats and their contacts with clients has received increasing attention by authors as (Lipsky, 2010) (Gofen et. al, 2021) (Tummers, 2015) (Bartels, 2012), the concept was not brought into relationship with misinformation and disinformation yet, and more specifically, mis- and disinformation concerning the Coronavirus. The current literature primarily focuses on coping mechanisms used by street-level bureaucrats to cope with stress (Lipsky, 2010) (Tummers, 2015). Connecting mis- and disinformation with existing explanations about behavioral coping mechanisms used by street-level bureaucrats can provide new contributions to the existing scholarship on coping mechanisms and street-level bureaucrats. It is appealing to explore this new context, considering the increased spreading of mis- and disinformation and all its calamitous consequences. Thus, one explores new light by exploring the causal mechanisms between mis- and disinformation and coping mechanisms. Additionally, analyzing street-level bureaucrats’ coping mechanisms for mis- and disinformation could have great potential to overcome the current issues on the belief and spreading of misinformation and disinformation during the Coronavirus and on the quality of policy-making on national and European level, contributing to the societal relevance of this study. Furthermore, the contribution of this study extends to solely mis- and disinformation during the Corona crisis. Hence, this research has therefore not only deep value on the existing scholarship but can also have a considerate societal impact.

## *1.2 Structure*

After providing the background on the issue of the belief and spreading of mis- and disinformation during the pandemic, the research question and the academic and societal relevance of the study, the second chapter of this study focuses on the theory. It commences with a literature review, discussing relevant literature for the research by firstly providing an empirical background on street-level bureaucrats and coping mechanisms. Secondly, the literature review provides an empirical background on misinformation and disinformation and its consequences. This is deemed necessary to have an overview of the existing literature so that one can identify gaps in the literature and conceptualize the possible interrelation of the main concepts into a theoretical framework. The theoretical framework will also propose and explain the expectations which entail that health workers will move away from clients to cope with clients who believe or share misinformation and disinformation (E1) and that health workers prefer to avoid confrontations with violent clients (E1.1), adopt internally and externally derived coping mechanisms (E1.2) and will adopt a public-health approach (E1.3) to cope with clients who believe in misinformation and disinformation. For teachers it is expected that they will move towards clients to cope with clients who believe in misinformation and disinformation (E2) and will adopt emotion-oriented coping mechanisms (E2.1). These assumptions are based on the existing scholarship concerning SLBs and coping mechanisms and can be seen as broad expectations with considerable leeway to deviate from. Subsequently, the research outlines the empirical part in chapter 3. Chapter 3.1 discusses the comparative explorative research design (Stebbins, 2019) including the justification on the case selection of teachers and health workers as street-level bureaucrats. The main concepts are also operationalized in this chapter. Moreover, the methods of data collection and analysis are discussed and one reflects on the validity and trustworthiness of this study. Thereafter, chapter 4 argues the results and analyzes the similarities and differences with the established expectations.

Lastly, this research summarizes the overall findings of the study in chapter 5 and discusses the limitations of the study, specifically regarding the generalizability issue as there are only two cases and seven samples. Furthermore, suggestions for future research are given.



## 2. Theory

### 2.1 Literature Review

This literature review will commence with discussing literature relevant to this research. It will provide a view on the existing empirical scholarship on street-level bureaucrats and coping mechanisms, in order to explain the conceptualization of *street-level bureaucrats and their coping mechanisms used on clients* in chapter 2.2.1. Hence, the literature review will also provide empirical background on misinformation and disinformation and its consequences for public organizations or government institutions. Both paragraphs are valuable so that one is aware of the existing literature on these topics.

#### 2.1.1 Empirical background on street-level bureaucrats and coping mechanisms

This paragraph will discuss relevant empirical literature about street-level bureaucrats and coping mechanisms. Lipsky (2010) tries to place street-level bureaucrats (SLBs) in the public services these provide. SLBs can for example be administrators, policemen, social workers, health workers or teachers who have discretion in exercising authority on their clients (Lipsky, 2010, p. xi).

Different coping mechanisms can be adopted by SLBs for several experiences with clients. Lipsky states that SLBs adopt coping mechanisms to cope with stress that is experienced from their work, as there is a gap between demands these SLBs need to provide and the resources available (Lipsky, 2010, p. 78). Nielsen (2006), on the other hand, does not necessarily see SLBs coping mechanisms as a way of coping with negative experiences. The author concludes from his empirical analysis that coping mechanisms can also be adopted by SLBs to maximize job satisfaction (Nielsen, 2006). Where Lipsky (2010) illustrates the importance of discretion, Durse (2007), on the other hand, notes the importance of understanding SLB's role in contemporary governance, which differs in several ways. Durse's study examined specifically the tendency to neighborhood working (bottom-up) by exploring neighborhood management in the deprived Salford. The results of the study believe that SLBs are capable of using several skills and strategies to cope with complex contemporary governance. Following this line, several scholars such as Davidovitz et. al (2021); Malandrino and Sager (2021); and Lotta et. al (2021) note that especially during crises as COVID-19 SLBs experience higher levels of discretion, as SLBs obtained in general more tasks and there was higher policy ambiguity (Gofen et. al, 2021, p. 9). Additionally, authors Hupe & Hill (2007) and Lipsky (2010) note that SLBs often act as policymakers under these circumstances (Alcadipania et. al, 2020, p. 395).

Following this line, the high workloads street-level bureaucrats often have to cope with can influence their encounters with clients. Street-level bureaucrats frequently are forced to not work according to the highest standards because enough time, information, or other resources are not available to interact properly with the individual client. Stress also occurs from client-workers interactions and Tummers established coping mechanisms for SLBs how to cope with these interactions (Tummers, 2015). The theoretical framework will elaborate further on these coping mechanisms. In the same line, Dearstyne (2007); Stivers (2007); McAdams and Stough (2011); Henderson (2014) Alcadipani et. al (2020); and Dunlop et. al (2020) stress that SLBs experience especially during a crisis (suddenly) a higher workload, and a lack of information and resources to meet the demands of citizens. Additionally, there are vague and conflicting voices at all managerial levels (Gofen et. al, 2021, p. 8). Thus, to cope with the high workloads, street-level bureaucrats are compelled to develop routines of practice and psychologically simplify the environment and their clients (Lipsky, 2010). Similarly, Weber (1992), Albrow (1980), and Du Gay (2000) emphasize that street-level bureaucrats can be forced to implement different acts that are not in line with their ideas because of an iron cage (Bartels, 2012, p. 470). Baviskar et. al (2017) also build further on Lipsky's notion that SLBs are valuable policymakers and use similar coping mechanisms by extending the existing coping mechanisms. This is done by carrying out an empirical study looking at street-level bureaucrats working at municipal child welfare. The study concludes that aversion and tolerance towards clients, as well as institutional capacity and 'conceptual modification of job contents', can be seen as coping mechanisms used by SLBs (Winter et. al, 2017).

Bartels (2012) sees a gap in the literature about street-level bureaucrats since the importance of the 'in-between' is not taken into consideration during interactions between street-level bureaucrats and citizens, yet this is crucial according to Bartels (Bartels, 2012, p. 475-476). Agger et. al (2017) on the other hand note that the importance of interactions between citizens and street-level bureaucrats is recognized, yet there is a lack of research that focuses on how SLBs can cope with conflicts during these interactions with actors and institutional architectures. Agger et. al conducted therefore an empirical study, the results provided coping mechanisms that SLBs use during their work, including coping mechanisms that are related to building relations and deadlock situations. Both are seen as situations that need to be practiced in order to master (Poulsen et al., 2017). Building relations and deadlock situations can therefore be seen as additional coping mechanisms besides the coping mechanisms that are provided by Winter et. al (2017); Lipsky (2010); Gofen et. al (2021).

Some literature looks specifically at health workers' and teachers' coping mechanisms. Lipsky (2010) notes that teachers' interactions with clients are often not as intense as expected or desired, due to the high work pressure teachers are unable to take 'full responsibility' (Lipsky, 2010, p. 77). This is in line with the literature on SLBs (Tummers, 2015) (Gofen et. al, 2021). Additionally, teachers their work is focused to educate students (Lipsky, 2010, p. 77). Raven et. al (2018) investigated how health workers cope with the Ebola epidemic in Sierra Leone and concluded that the health workers in Sierra Leone adopted both internally derived coping mechanisms and externally derived coping mechanisms (Raven et. al, 2018). This is in line with Boey Kam-Weng's notion that nurses often attend seminars, training courses, or read books to cope with stress (Boey Kam-weng, 2007, pp. 43-59) which can be seen as externally derived coping mechanisms. When one specifically looks at health care workers' coping mechanisms during the COVID-19 pandemic, it is explored by Rose et. al (2021) that coping mechanisms under healthcare workers can vary greatly per healthcare role, while some coping mechanisms were similar among groups. It was concluded that all researched groups effectively coped with stress by good teamwork and sharing jokes or humor with other health workers (Rose et. al, 2021). Additionally, Boey Kam-Weng et. al (2007) note from their quantitative survey among nurses that investigates their stress coping mechanisms, that nurses often deal with stress due to high work pressure or work overload (Boey Kam-weng, 2007, pp. 30-42). The study concludes that the most frequently used coping mechanism by nurses focuses on an active and direct approach to cope with stress, and focuses less on emotion (Frisch, Dembeck & Shannon, 1991) (Boey Kam-weng, pp 55-56. 2007). On the other hand, when specifically looking at coping mechanisms used by teachers, Yiu Chung et. al conclude from their quantitative and qualitative study that emotion is a major coping mechanism to deal with stress for teachers (Ko Yiu-chung et. al, 2007, pp. 122-123). Furthermore, Montgomery and Rupp (2005) note from their empirical study on teachers' stress between 1998 and 2003 that stress is often related to coping strategies that are negatively emotion-oriented (Rupp et. al, 2005). Finally, Lipsky (2010) emphasizes that both teachers and (mental) health workers are forced to make decisions on the information available rather than 'presumptions of proper determinations' as they do not possess enough discretion to decide themselves. This situation can be seen as a type of coping called routinizing (Lipsky, 2010, pp. 85).

### *2.1.2 Empirical background on misinformation and disinformation and its consequences*

The following paragraphs will focus on existing findings concerning misinformation, meaning that the individual sharing the false information is unaware the information is incorrect (Shu et. al, 2020, p. 2), and disinformation, meaning that false information is spread on purpose to mislead (Shu et. al, 2020, p. 2) and its consequences for public organizations or (government) institutions. Shu et. al (2020) note that misinformation and disinformation are closely related since disinformation can turn into misinformation and misinformation can turn into disinformation (Shu et. al, 2020, pp. 2-3). Wardle et. al (2018) emphasize that combinations of these two types are possible and sometimes are accompanied by other types (Wardle et. al, 2018). The reason for producing disinformation can differ from financial to political gains (Shu et. al, 2020, p. 1) (Wardle et. al, 2017, pp. 33-34). Additionally, social and psychological motivations also play a role (Wardle et. al, 2017, p. 35).

Misinformation and disinformation are closely related to trust in government. The belief and spreading of misinformation and disinformation can be seen as a threat to democracy since the quality of news information is vital: the two most crucial functions of democracy are actually to provide trustworthy information and to interpret and analyze current developments (van Keulen, 2018). Nonetheless, the inability to provide trustworthy information does not necessarily have to lead to a decrease in government trust. Ognyanova et. al (2020) conclude from their large-N survey that the participants who were exposed to false information led to a decline in trust towards the mainstream media, yet the researchers saw an increase in political trust (Ognyanova et. al, 2020). Contrarily, Limaye et. al note that scientific misinformation is actively used to undermine trust in government and for political gains (Limaye et. al, 2020), which is in line with the claims of Shu et. al (2020) and Wardle et. al (2017) about one's reasons to produce disinformation. Furthermore, as seen in the introduction, governments also fail sometimes to provide trustworthy information. This is more often seen in authoritarian governments like China. Wang et. al (2021) conducted a survey experiment in China investigating the consequences when a government incorrectly denies certain claims or information, and find that this has negative effects on trust in government and its credibility (Wang et. al, 2021) this is therefore in accordance with the claim that misinformation can undermine trust in government as noted by Limaye et. al (2020); Shu et. al (2020) and Wardle et. al (2017).

Besides the governments' job to provide trustworthy information, one can also identify places where misinformation and disinformation presumably are often evaluated and shared. Online

media is also seen as a major target for a lot of disinformation including fake news, as online media is easily accessible. Shu et. al (2020) see fake news as a major example of disinformation (Shu et. al, 2020, pp. 3-6). A public institution where mis- and disinformation presumably is often evaluated and shared are schools or colleges. Following this line, Leeder (2019) conducted a quantitative survey among college students and found out that students with higher grades/performance have on average stronger abilities to identify fake and real news and that students are often not able to accurately identify their capability of identifying fake and real news (Leeder, 2019).

Thus, as it is acknowledged that social media is a major target for the spreading of mis- and disinformation, Shu et. al (2020) note that this spreading can have unfavorable effects on people and society as a whole. Firstly, fake news can impact citizens' trust in the news ecosystem or the actual non-fake news. Secondly, fake news can lead to (intentionally) persuading readers to believe biased or false information for political or financial gain. Thirdly, fake news influences the manner how individuals interpret and react to non-fake news as fake news influences individuals' abilities to make a distinction between true and false (Shu et. al, pp. 1-2). Similarly, Wardle et. al (2018) stress that the spreading of information disorder has effects on the information environment and can hinder for example the democratic process or reduce vaccination rates (Wardle et. al, 2018, p. 44). Wardle et. al (2017) stress that there are four characteristics of information disorder that contribute to the (widely) spreading of the information. First of all, it has to provoke an emotional response. Secondly, there has to be a strong imagery component. Thirdly, the narrative needs to be strong. And lastly, the information needs to be repeated (Wardle et. al, 2017, pp. 38-39). Fallis (2013) stresses that being aware of the several manners one can be misled could potentially be beneficial for preventing that someone believes disinformation, classification schemes for disinformation (which will be elaborated on in the theoretical framework) can provide awareness of how disinformation can manifest itself (Fallis, 2013, p. 159).

## 2.2 Theoretical Framework

The theoretical framework focuses on two strands: the role of street-level bureaucrats and their coping mechanisms used on clients. Coping mechanisms will be discussed in relation to street-level bureaucrats. The following paragraphs will start with conceptualizing the main concepts for this study, including; *street-level bureaucrats*, *coping*, *misinformation*, and *disinformation*. Consequently, chapter 2.2.5 theorizes about possible coping mechanisms

street-level bureaucrats use on clients who believe in dis- and misinformation. Deduced on the relationship between the main concepts about SLBs and coping mechanisms, expectations are given.

### *2.2.1 Conceptualizing street-level bureaucrats*

One can say that the concept of street-level bureaucrats arose in the 1980s when scholars as Lipsky (1980), Prottas (1979), and Weatherly (1979, 1980) placed the concept on the academic agenda (Hupe, 2019, p. 32). Lipsky (2010) tries to place street-level bureaucrats in the public services these provide. SLBs can for example be **administrators, policemen, social workers, health workers, or teachers** who have discretion in exercising authority on their clients (Lipsky, 2010, p. xi). Central concepts in street-level bureaucracy literature are **discretion** and **coping**, which will be elaborated further on in the next paragraphs.

SLBs all have **face-to-face interactions** with their clients, yet the working conditions under which SLBs are working may vary greatly (Nielsen, 2006, p. 882). Additionally, also Lipsky notes that one must take into consideration that general findings on street-level bureaucrats require to be adapted to the individual case (Lipsky, 2010, xii). And even though Lipsky notes that SLBs are essentially comparable, the author also stresses that some occupations are completely different or disparate, such as policemen and social workers (Lipsky, 2010, xix). Moreover, Winter (2002) notes that SLBs act as individual **policymakers** and therefore act according to their values (Hupe, 2019, p. 37). In the same line, Bartels notes that street-level bureaucrats could be helpful for decision making as street-level bureaucrats' contacts could enhance the understanding of public encounters and are therefore valuable for the quality of services, decisions, and outcomes (Bartels, 2013).

The **scope** of street-level bureaucracy research has widened over the years; whereas teachers, policemen, and social workers can be seen as the 'traditional' street-level bureaucrats, nowadays other categories as '**court clerks** (Yngvesson, 1988), **tax auditors** (Kinsey and Stalans 1999), **emergency call operators, attorneys and correctional officers** (Guy, Newman and Mastracci 2008) and **local housing officials** (Alden, 2015)'' are added to the list (Hupe, 2019, p. 33). Furthermore, the **organizational setting** in which SLBs operate is by Lipsky stressed as the main determinant when one aims to understand what happens at the level of the street of government bureaucracy. Some of these approaches focus on **psychological traits** (Hupe, 2019, p. 36). This research will specifically analyze the behavioral coping mechanisms of two types of SLBs: teachers in high schools and health workers.

In the literature on street-level bureaucracy, the concept of **discretion** plays a major role and is seen as ‘controlled freedom’ (Hupe, 2019, p. 32). The concept of discretion is interrelated to coping, as the concept is deemed important for the often complex work of street-level bureaucrats, making it extremely difficult to reduce their level of discretion. Discretion often brings extra work pressure for SLBs. SLBs' work is too complex to fit into certain **formats**. In education, SLBs often find themselves in situations where discretion is crucial since modern views on education state that it would not work to provide specific instructions to teachers on each unique situation (Lipsky, 2010, pp. 14-16).

Another modern view on SLBs implies that **contemporary SLBs** still have discretion but are nowadays more than just street-level bureaucrats as they have to act as ‘creative actors’ adopting several skills (Durose, 2007). Additionally, discretion originates from the notion that these SLBs are **professionals** in their field of work and are therefore expected to exercise considerable discretion, without a lot of supervision from superiors or clients (Lipsky, 2010, p. 14). Lipsky notes that SLBs have discretion in exercising authority on their clients and that the concept of discretion is often major for street-level bureaucrats that have interactions on a regular basis with citizens (Lipsky, 2010, pp. xi, 3). Nonetheless, street-level bureaucrats’ possession of discretion makes steering complex (Gassner and Gofen, 2018) (Keulemans et. al, 2020, p. 307). However, it is also for this reason that SLBs can operate as policymakers, by exercising a high level of discretion in decisions with the citizens they have interactions with (Lipsky, 2010, p. 13).

Although it is emphasized that the complex work of SLBs often needs discretion, on the other hand, there are some successful attempts to limit the level of discretion and work pressure by establishing programmed formats for example for teachers and health workers (Lipsky, 2010, pp. 14-16). This can also be seen as routinizing, a form of moving away from clients, which will be elaborated further on in the next paragraph (Tummers, 2015).

### *2.2.2 Conceptualizing coping*

Several authors have written about coping mechanisms in an attempt to understand how street-level bureaucrats such as teachers, social workers or police officers deal with stress due to high workloads, which is especially often faced by this group. Michalak et. al (2017) note that there is little understanding of the processes that influence employees’ response to stressful situations and how this can possibly influence the well-being of the employee and the performance outcome of the job (Michalak et. al, 2017, p. 365). Lipsky (1980) underlines that street-level bureaucrats develop coping mechanisms such as ‘stereotypes, catchwords and

principled beliefs'. As a consequence, clients are treated unequally as clients are categorized (Bartels, 2012, p. 471). The concept of **coping** is by Folkman and Lazarus defined as behavioral efforts taken by frontline workers to manage their interactions with clients (Tummers, 2015, pp. 1101-1102). Lazarus (1996) raises two criticisms when it comes to research on stress and coping. Lazarus notes that researchers have failed to 1) engage the individual in appraisal and coping and, 2) engage the context in which the event occurs (Michalak et. al, 2017, p. 366).

A distinction is made in the stages of appraisal; in **the primary stage of appraisal** Lazarus and Folkman (1984) affirm that during this stage an individual's interpretation of an occurrence influences their emotional and behavioral response. This primary stage of appraisal occurs first in time. Michalak et. al (2017) provide a dual theory consisting of **the Affective Events Theory (AET)** and the Transactional Theory of Psychological Stress (TTPS). The former can be placed in the primary stage of appraisal since the AET theory explores the causes and outcomes of affective workplace experiences (Michalak et. al, 2017) as employees respond to "affective events" related to work that lead to affective responses which eventually lead to certain outcomes on attitude and behavior (Ashkanasy et. al, 2011). AET can be seen as a macrostructure for Michalak et al's (2017) model. The **secondary stage of appraisal** appears when one intervenes between risk assessment, which arises during the primary appraisal, and the process of coping (Lazarus, 1996) and is appraised as important enough to manage or resolve (Michalak et. al, p. 353) This secondary stage can be further categorized into two components: the availability of **a) problem-oriented coping options**, and **b) emotion-oriented coping options** (Michalak et. al, 2017, pp. 353-354). Additionally, the **Transactional Theory of Psychological Stress** (Lazarus, 1996;1981; Lazarus and Folkman, 1984) is placed in the microstructure and puts emphasis on the process where appraisal and coping are served as mediators during interactions between persons and the environment. TTPS can also be classified under emotion-oriented coping options (Michalak et. al, 2017). The discussed coping mechanisms below all passed the primary stage of appraisal, meaning that the SLB perceives the appraisal as a risk. Thus, the coping mechanisms below are coping mechanisms that SLBs can adopt to cope with these situations or appraisals.

Before one turns to the more specific coping mechanisms, one will discuss two approaches to cope with certain appraisals. One can elaborate further on Raven et. al (2018)'s **internally and externally derived coping mechanisms**. Internally derived coping mechanisms include



*religion, the drive to serve their community or country, and support from family or friends.*

Emotions (as mentioned above) by Ko You-Chung et. al can also be seen as internally derived coping mechanisms for teachers (Ko Yiu-chung et. al, 2007, pp. 122-123). Externally derived coping mechanisms include *trainings, workshops, risk allowance, and social media platforms* (Raven et. al, 2018) *seminars and reading books* are specifically seen by health workers (Boey Kam-weng, 2007, pp. 43-59).

The literature review discussed several coping mechanisms for different strands, including stress and contemporary governance. The above-described concepts can be seen as broader orientations for coping. One specific strand is stress that occurs from client-workers interactions as characterized by Tummers and will be elaborated on further in this paragraph. Where Lazarus and Folkman's (1984) theory makes a distinction in time, Tummers looks at the context of public service delivery. In order to conceptualize coping, one focuses on Tummers' (2015) characterization of coping mechanisms, but one uses also other theories that are related to Tummers' coping mechanisms and can be useful to answer the research question. Tummers (2015) provides three coping mechanisms for these interactions: **a) moving towards clients.** This occurs when SLBs aim to help their clients. The most often used coping mechanism for moving towards clients is *rule-bending*, which refers to the notion that SLBs adapt the rules in such a way that this is in line with the clients' demands. Another coping mechanism within this strand is *rule-breaking*, this is closely related to rule-bending but goes one step further: SLBs override the rules to meet the clients' demands. Thirdly, *instrumental action* coping focuses on durable, long-lasting solutions. A fourth way of coping is to *give priority to certain clients*. Lastly, *personal resources* can be used, this occurs when street-level bureaucrats invest energy to such an extent that this is beyond the scope of their work (Tummers, 2015, pp. 1108-1110). The second coping type that was categorized is **b) moving away from clients.** This is further categorized into *routinizing*. Routinizing as a coping mechanism occurs when street-level bureaucrats are dealing with a high workload and, as a consequence, need to hand in on the quality of the service. This can be linked to the theory on SLBs where it was discussed that SLBs experience higher levels of discretion during a crisis (Davidovitz et. al, 2021) (Malandrino et. al, 2021); (Lotta et. al, 2021) more tasks and a higher workload (Gofen et. al, 2021); (Dearstyne, 2007); (Stivers, 2007); (McAdams and Stough, 2011); (Henderson, 2014); (Alcadipani et. al, 2020); and (Dunlop et. al, 2020). These implications that occur during the pandemic or another crisis are **as perceived** (Gofen et. al, 2021). Following this discourse, to cope with the high workloads,

SLBs are compelled to **develop routines of practice** and psychologically **simplify** the environment and their clients (Lipsky, 2010, p. xii). Additionally, Lipsky (2010) notes that due to SLBs' high level of discretion one should watch SLBs closely to avoid routines and simplifications (Lipsky, 2010, p. 85). Another coping mechanism to move away from clients is *rationing*, when street-level bureaucrats make it more difficult for clients to get access to the service (Tummers, 2015, p. 1110). The last coping type that is provided by Tummers is **c) moving against clients**. Moving against clients can be coped in two ways. First of all, *rigid rule-following*, meaning that street-level bureaucrats use the rules to control difficult clients. The last coping mechanism provided by Tummers is *aggression*. As already mentioned in the introduction, street-level bureaucrats sometimes have to deal with aggressive clients. Sometimes this results in aggression from the street-level bureaucrat as well (Tummers, 2015, pp. 1110-1111).

In order to conceptualize the concept of coping it is valuable to not only consider internal or individual coping mechanisms as provided by (Raven et. al, 2018). Therefore, an additional coping mechanism that differs itself from the well-documented coping mechanisms of SLBs where SLBs refer to the particular client (Tummers, 2015), is Meza et. al's (2021) coping mechanism that helps SLBs to cope with a lack of resources, as the focus shifts from client-based to **public-health approach**. This shift in approach emphasizes the importance of professionalism in SLB's scope to deal with imposed challenges when a certain situation of crisis blunts one 'professional knowledge, skills and judgment' (Gofen et. al, 2021, pp. 9-10). During this approach, general public health is more important and one aims therefore to treat the highest attainable patients (Meza et. al, 2021).

### 2.2.3 Conceptualizing misinformation and disinformation

Several authors have written about the concept of **information disorder**, a concept that consists of disinformation, misinformation, and malinformation. In order to conceptualize information disorder (or more specifically, misinformation and disinformation), several classifications by different authors are provided. Shu et. al (2020), Wardle et. al (2017), and Wardle et. al (2018) provide the following main types of information disorder: **1) disinformation**, referring to false or inaccurate news that is spread on purpose to mislead people (Shu et. al, 2020, p. 2) it is intentional, deliberate untruthful information (Wardle et. al, 2018, p. 44) (Fallis, 2013, p. 135) (van Huijstee et. al, 2021, p. 33). Fallis (2013) looks specifically at disinformation. **2) misinformation** is shared wrong information by an individual who is not aware that the information is false (Shu et. al, 2020, p. 2) (Wardle et. al,

2018, p. 44) (van Huijstee et. al, 2021, p. 33). **3) malinformation** refers to news that is spread to intentionally cause harm (Shu et. al, 2020, p. 2) based on reality and used as a tool to impose harm (Wardle et. al, 2018, p. 44) (van Huijstee et. al, 2021, p. 33). Malinformation goes one step further than disinformation and can include messages that incite to violence. Malinformation can lead to prosecution (Ratheneau Instituut, 2020, p. 2). It is for this reason that there was chosen to only analyze the first two types of information, as it is expected that street-level bureaucrats will most often find themselves in situations that include these types of false information.

Wardle and Derakshan classify disinformation and misinformation further into seven types; *satire of parody, misleading content, imposter content, fabricated content, false connection, false context* and *manipulated context* (Wardle et al., 2018). Fallis (2013) characterizes disinformation further into *misleading, grice on showing and telling, grice on norm violations*, and *manipulating the flow of information* (Fallis, 2013, pp. 142-159). Shu et. al (2020) note that misinformation and disinformation are closely related since disinformation can turn into misinformation and misinformation can turn into disinformation (Shu et. al, 2020, pp. 2-3), as one can see in the figure below.



Figure 1 Relation between disinformation, misinformation and malinformation. Source: Shu et. al (2020).

Wardle et. al (2018) emphasize that combinations of these three types are possible and sometimes are accompanied by other types (Wardle et. al, 2018).

Shu et. al (2020) provide several directions to limit the spreading of fake news and disinformation. First of all, **explanatory methods** mean that one explains why a certain piece of information is false. Secondly, **early detection of disinformation** is crucial to prevent false information from widely spreading (Shu et. al, 2020, pp. 15, 16). These directions could

be part of the earlier discussed coping mechanisms (chapter 2.2.1) for street-level bureaucrats. Fallis (2013) stresses that being aware of the several manners one can be misled could potentially be beneficial for preventing the belief in disinformation, the discussed classification schemes for disinformation above can provide awareness of how disinformation can manifest itself (Fallis, 2013, p. 159).

#### *2.2.4 Role of street-level bureaucrats and their coping mechanisms used on clients*

Thus, while coping mechanisms and SLBs have been brought into relation with different literature, coping mechanisms for SLBs in relation to misinformation and disinformation have not been taken into consideration yet. Based on the literature, one can provide the following explanations for coping mechanisms used by health workers. Health workers sometimes have to cope with violent clients (Boone, 2021) and are dealing with a high workload (Boey Kam-weng, 2007, pp. 30-42). Consequently, a possible expectation based on health workers could therefore be that health workers prefer to avoid confrontations with violent clients to cope with clients who believe in misinformation and disinformation. As discussed in the previous paragraph, this can sometimes result in aggression from the SLBs, (in this case health workers) as well, yet the assumption is that this is less likely to occur. Aggression towards clients is seen as a type of moving against clients (Tummers, 2015, pp. 110-1111). Furthermore, the literature on health workers showed that health workers adopt both internally and externally derived coping mechanisms such as attending seminars, training courses, or reading books to cope with stress. This is often done by nurses (Raven et. al, 2018). Additionally, it was seen that good teamwork and humor among health workers worked effectively, this can be characterized as internally derived coping mechanisms (Raven et. al, 2018). These internally and externally derived coping mechanisms are therefore deemed likely to occur. Moreover, Meza et. al's (2021) public-health approach is also plausible, as health workers are, especially during the COVID-19 crisis, dealing with a huge challenge (Gofen et. al, 2021) and it is plausible to say that their focus will be less client-based and more focused on the number of patients that they can treat (Meza et. al, 2021). To cope with this crisis and the high work pressure it is plausible to expect that health workers will move away from their clients. More specifically it is expected that health workers are compelled to develop routines of practice and psychologically simplify their environment (Lipsky, 2010). All by all, one can form the following expectations based on the literature for health workers:

*(E1) Health workers will **move away from clients** to cope with clients who believe or share misinformation and disinformation.*

Besides this main expectation that focuses on a specific coping mechanism, one expects the following orientations that can be placed within (E1):

*(E1.1) Health workers prefer to avoid confrontations with violent clients to cope with clients who believe in misinformation and disinformation.*

*(E1.2) Health workers will adopt both internally and externally derived coping mechanisms to cope with clients who believe in misinformation and disinformation.*

*(E1.3) Health workers will adopt a public-health approach to cope with clients who believe in misinformation and disinformation.*

An example of how moving away from clients could possibly manifest itself under health workers' clients due to the high workload is that health workers are obliged to use some form of routinizing to cope with a client who believes in mis- or disinformation. This can for example be that health workers refer to some (government) information sites where the client can find reliable information. One could say that solely referring to these sites or brochures is not the desired way to handle their clients since this does not include personal advice, but health workers are compelled to develop routines of practice (Lipsky, 2010). Nonetheless, moving towards is also not seen as unlikely as one could also expect that health workers aim to help their patients, since this is the basis of their work. However, based on the literature about health workers it is deemed more likely that health workers will move away from clients.

Additionally, one can also provide an expectation for teachers. The literature on teachers stated that this group often uses emotion-oriented coping options (Michalak et. al, 2017), one expects therefore to see these types of coping options among teachers. One can assume that the work pressure of teachers during the Corona crisis was less high compared to health workers since teachers are not dealing with an increasing number of patients and can therefore have more time to take 'full responsibility' or, may be more likely to take more responsibility, as intense interactions are often desired by teachers (Lipsky, 2010). Additionally, one can say that the work context differs greatly compared to health workers: where health workers' work is focused on patients' health, teachers their work is focused to educate students (Lipsky,

2010, p. 77). Teachers are thus ‘educators’ and knowledge dissemination is part and parcel of their work.

Therefore, the following expectations for teachers can be formed:

*(E2) Teachers will **move towards clients** to cope with clients who believe in misinformation and disinformation*

Furthermore, the following orientation is expected:

*(E2.1) Teachers adopt emotion-oriented coping mechanisms to cope with clients who believe in misinformation and disinformation.*

An example of how moving towards clients could manifest itself under teachers’ clients is for example that a teacher chooses to *give priority to certain clients* to cope with a student who believes in mis- or disinformation (Tummers, 2015). This can for example be done by having a one-on-one dialogue with the student. In the same line, one can thus expect that teachers prefer explanatory methods to their students (Shu et. al, 2020). Yet, it is also deemed likely that teachers will move away from clients, due to the higher work pressure, as discussed above.

One will not make expectations based on the primary and secondary stage of appraisal (Lazarus and Folkman, 1984) as it is expected that this theory is less relevant to build expectations on since coping actions are only enacted during the secondary stage of appraisal (Lazarus and Folkman 1988) (Michalak et. al, 2017, p. 353). Nonetheless, this theory is interesting to bring into relation with coping mechanisms in the analysis, since the primary stage of appraisal leads to certain outcomes on attitude and behavior (Ashkanasy et. al, 2011).

Al by al, one must take into consideration that these are broad expectations from which can be deviated from. As these expectations are leads from the literature, there is also a possibility to see combinations, extensions, or additions on existing models. One adopts therefore an exploratory approach.

### **3. Empirical research**

After conceptualizing the concepts of coping, mis- and disinformation and discussing the relationship between these concepts, the expectations were deduced from relations between existing literature. The expectations provide a broad direction. Hence, this chapter will commence with explaining the research design, including the case selection and methodology as well as a more comprehensive case description. Subsequently, the empirical findings and analysis are given in chapter 4.

#### *3.1 Research Design*

This positive research studies the relationship between the theoretical concepts of misinformation, disinformation, and coping mechanisms and explores the relationship between these concepts via empirical facts, interviews, and documents (Toshkov, 2016, pp. 24-27). The expectations derived from the literature will be explored via a comparative explorative research design as it attempts to understand the behavioral coping mechanisms that can be used by street-level bureaucrats to cope with mis- and disinformation by comparing teachers and health workers, where the different contexts these SLBs operate in are acknowledged. Behavioral coping mechanisms can be placed in social/psychological sciences (Stebbins, 2019, pp. 2, 3). Using a small-N comparison with health workers and teachers can generate a theoretically informed selection in contexts where encounters with clients who believe or share misinformation and disinformation are deemed likely to occur. In other words, the comparative design can thus provide an in-depth analysis of the research question (Johns, 2013) by drawing on existing theories, empirical studies, and one's empirical findings (Toshkov, 2016, p. 264). Paragraph 3.1.1 of the research design will justify the case selection of teachers and health workers as types of street-level bureaucrats. The next paragraph will provide a description of the data collection method. The method of data collection relies mainly on interviews with health workers and teachers. The data collection also includes (government and media) documents on coping strategies or advice concerning misinformation and disinformation for street-level bureaucrats. Moreover, in chapter 3.1.3 the method of analysis is discussed, which is based on interviews and documents. Subsequently, the next paragraph reflects on the validity and trustworthiness of this research and the last paragraph will outline the operationalization of the main variables and concepts.

### *3.1.1 Case Selection and Justification*

This study aims to analyze the coping mechanisms used by street-level bureaucrats to cope with clients who believe in mis- and disinformation. As discussed above, to attain this goal, there was chosen to execute a small-N comparative study, via an explorative research design (Stebbins, 2019). Following this line, the literature on street-level bureaucrats<sup>1</sup> shows that SLB's develop several coping mechanisms in order to deal with stressful situations with clients (Lipsky, 2010). This empirical study brings for the first time coping mechanisms used by SLBs in relation to mis- and disinformation to explore how street-level bureaucrats can cope with clients who believe or share mis- and disinformation. Since street-level bureaucrats (closely) interact with clients who believe or share mis- and disinformation, SLBs can play a valuable role in aiding governments with ensuring that science is understandable for citizens (Hartley et. al, 2020, p. 735).

There was chosen to look at two types of street-level bureaucrats: teachers and health workers. One can say there is considerable variation between these two types of SLBs as both work in different contexts. Where teachers mostly have interactions with young groups educating them, health workers' main objective is to ensure patients' health and often have to cope with one-on-one dialogues with patients, or with a few other people such as family members. Additionally, health workers mostly have to interact with adults. It is therefore expected that these types of SLBs will adopt different coping mechanisms. Health workers and teachers were chosen as it is expected that especially these types of SLBs will find themselves in interactions with clients who believe or contribute to the spreading of dis- and misinformation. The sampling strategy can best be defined as convenience sampling within a theoretical specified group. The interviewees were found via purposive sampling, meaning that the interviewees were purposefully selected within my own network, which can also be seen as convenience sampling (Toshkov, 2016, p. 185). Additionally, one participant was found via another participant, also known as snowball sampling (Toshkov, 2016, pp. 111-112). Lastly, several emails were sent to high schools and healthcare institutions with the question of whether someone was available to conduct an interview, this can be categorized as voluntary response sampling (Abbott et. al, 2013). The population one wants to draw conclusions from in this study are street-level bureaucrats, the sample where the data was collected included health workers and high school, teachers.

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<sup>1</sup> Street-level bureaucrats can for example be administrators, policemen, social workers, health workers or teachers who have discretion in exercising authority on their clients (Lipsky, 2010).



As one can see from table 1, three health workers were interviewed. One of the interviewed health workers works in Argentina. Even though this case is not in Europe, the (possible) coping mechanisms used by this undergraduate doctor can provide valuable insights for coping mechanisms that can be applied in Europe. Additionally, health workers were also selected with variation when it comes to their function: one interviewee was a nurse on the Coronary Care Unit (CCU), one interviewee was an undergraduate doctor and one interviewee was a nurse in the surgical department. All by all, one can say all these respondents are similar as they are health workers who interact with clients.

Secondly, there was chosen to interview four teachers in high school. The choice for teachers can be explained by the fact that teachers interact with a large group of students and the belief and spreading of mis- and disinformation is therefore deemed likely. Additionally, there was chosen for teachers specifically teaching in high school as it is expected that this group is old enough to be exposed to mis- and disinformation (which is less likely for example for students in primary school), and there might also be a large group of students in high school who have difficulties in identifying whether certain information is false or true. It is presumed that high school students will have more difficulties with recognizing whether information is true or false compared to students in higher education. The different teachers that were interviewed can be seen as most similar as they are all working at a high school and have interactions with students from around the same age (12-18 years old). Similarly, for the selection of teachers, there was chosen for a variety of teachers: one teacher was an intern at a high school in Belgium specialized in English and mathematics and could therefore contribute to different or additional views outside of The Netherlands. Other interviewees included a history teacher, who worked at several high schools and a Dutch high school teacher providing special education. Lastly, a location leader at a practical high school for students with learning disabilities, who also provide lessons sometimes.

Furthermore, altogether there are seven respondents to compare and analyze and both of them are considered a type of SLB and have interaction with clients. Nonetheless, there is variation in their contexts. Yet this is not seen as problematic, as it is not the objective to generalize all types of SLBs and answer the research question in such a manner that it is focused on solely one coping mechanism for both health workers and teachers.

Table 1 Overview of interviews with SLBs

Type of SLB	Country	Function	Respondent number
Health worker	The Netherlands	Coronary Care Unit nurse	1
Health worker	The Netherlands	Nurse surgical department	2
Health worker	Argentina	Undergraduate doctor	3
Teacher	The Netherlands	History teacher at high school	4
Teacher	Belgium	Teacher intern at high school (mathematics and English)	5
Teacher and location leader	The Netherlands	Location leader and teacher at practical high school	6
Teacher	The Netherlands	Dutch teacher for high school that provides special education	7

Besides the interviews there was chosen to do a content analysis, looking at media and government documents. One major media document included an interview that was broadcasted on Dutch television with a virologist, doctor microbiologist, several nurses, and a member of the expert panel of Netherlands Veterinary Medicines Institute (SDa) (Op1, 2021). During the interview, the experts provided their view on the current pandemic and the intense work pressure these persons are dealing with. The tension with unvaccinated patients and family members, who sometimes believe in mis- and disinformation, was also discussed. Consequently, health workers their approaches to handling these kinds of situations were also discussed (Op1, 2021). This interview with several health workers that was broadcasted on television can provide additional views on the thematic analysis, this is deemed important as there were only 7 respondents for the thematic analysis. Thus, the perspectives of these health workers on how to cope with patients were valuable for answering the research question of

this study. Additionally, a document search was conducted for documents that provide guidelines, strategies, or policies on mis- and disinformation. An important guideline was recently released by the Dutch government for people working in public organizations (such as health care and education) to recognize disinformation and to go into conversation with clients (VWS, 2021). Similarly, the European Commission established recently the Digital Education Action Plan (2021-2027), where one of these plans includes a guideline for teachers to improve digital literacy and combat disinformation (European Commission, 2021). These documents are important to illustrate how the Dutch government, the European Commission but also other organizations see the issue of misinformation and disinformation and how SLBs can cope with this issue according to them. One can see below in the table an overview of the content that is used for the content analysis.

*Table 2 Overview of content*

<b>Source</b>	<b>Document type</b>
Dutch Ministry of Health Wellbeing and Sports (VWS) <sup>2</sup>	Provides guidelines for people working in public organizations on how to recognize disinformation and how to go into conversation.
Electronic Commerce Platform (ECP) <sup>3</sup>	Report on ECP festival that provides participants (health workers) with tools to cope with patients who believe or share a form of disinformation.
Wikiwijs Desinformatie <sup>4</sup>	Material for teachers and student teachers providing educational material and information about disinformation that can be used in class and material for teachers themselves.
European Commission (EC) <sup>5</sup>	Actionplan Digital Education 2021-2027 consists of a guideline for teachers to

<sup>2</sup> Rijksoverheid: <https://www.rijksoverheid.nl/documenten/brochures/2021/12/02/handreiking-desinformatie-voor-zorgprofessionals-in-coronatijd>

<sup>3</sup> ECP: <https://events.ecp.nl/event/3597c33a-b5cb-4a2e-bc4f-fd81581eff4e/summary>

<sup>4</sup> Wikiwijs: <https://www.wikiwijs.nl/startpagina/desinformatiepovo/>

<sup>5</sup> European Commission: [https://ec.europa.eu/education/education-in-the-eu/digital-education-action-plan\\_en](https://ec.europa.eu/education/education-in-the-eu/digital-education-action-plan_en)

	improve digital literacy and tackle disinformation.
Op1 <sup>6</sup>	Episode where several health workers tell how they cope with patients and information provision.
Zembla <sup>7</sup>	Documentary about the obstacles this practical high school in The Hague is coping with during the pandemic.

### 3.1.2 Method of Data Collection

The data collection process for this qualitative research consists of media sources and guidelines/documents on the one hand, and in-depth interviews with two types of street-level bureaucrats on the other hand. The in-depth interviews with street-level bureaucrats proved to be the most important source for this study as the interviews provided valuable answers from different perspectives and different types of SLBs on the research question of this study. The interviews were semi-structured open questions, leaving therefore enough room for the participants to answer freely. The questions of the interviews can be found in the appendix. All interviews lasted for approximately 30 minutes and were conducted online, as The Netherlands was in the middle of the fourth wave of COVID-19 at the time the interviews were conducted. The process of finding interviewees was complex and difficult, as it happened several times that there was no response. Additionally, as these interviews were conducted in the middle of the fourth Corona wave, several hospitals and health workers simply did not have time to conduct an interview as the work pressure was intense at this time. COVID-19 related obstacles were also occurrent for selecting teachers: one teacher had for example to cancel the interview as this teacher needed to substitute for another teacher because of a COVID-19 case. Following this discourse, it also happened a few times that an interviewee agreed to do the interview but did not respond after this or did not have time because of the high work pressure. It also occurred one time that an SLB find him/herself not experienced enough to do the interview as this SLB did not have (enough) experience with mis- and disinformation related to clients. One interviewee could not participate because of a

<sup>6</sup> Op1: [https://www.npostart.nl/op1-15-november-2021/15-11-2021/POW\\_05148067](https://www.npostart.nl/op1-15-november-2021/15-11-2021/POW_05148067)

<sup>7</sup> Zembla: <https://www.bnnvara.nl/zembla/artikelen/school-in-crisistijd>

burn-out. During the interviews, it was important to play an active role as an interviewer and ask extra, unprepared questions, ask for further explanations and so further.

The selected data did not need to fulfill certain criteria when it comes to date range, however, it was deemed more important to investigate whether any documents give guidelines or reflect on how street-level bureaucrats could handle mis- or disinformation.

### *3.1.3 Method of Analysis*

Since scholarly research on coping mechanisms used by SLBs was never brought into relation with mis- and disinformation before, empirical research depicts the best method to analyze this research question. The method of analysis for this research relied completely on qualitative methods. First of all, one used a thematic analysis to collect data from interviews with SLBs for the analysis (Neuman, 2014, p. 17). The unit of observation is people's behavior, more particularly, street-level bureaucrats' coping mechanisms. It is for this reason that the thematic analysis is seen as a suitable approach for this study. The transcripts from the deducted interviews were used for the thematic analysis. The results of the interviews were closely observed to generate certain ideas and patterns which can be identified as coping mechanisms SLBs use to cope with clients who believe in mis- and disinformation. Since two main expectations and four sub-expectations were deduced from the theoretical framework, the deductive approach was applied for this research (Toshkov, 2016). This combination of an inductive and deductive approach that arose from the theoretical framework is based on codes. Coding can simplify the conceptualization of the data from the interviews and consists of analyzing, examining, and interpreting the received information (Abbott & Mckinney, p. 319). The data is ascribed to different numbers including: (0),(1), (2). Information that can be ascribed to moving away from clients is codified under the number (0), moving towards clients is codified under the number (1), and moving against clients is codified under the number (2) (Tummers, 2015). The concept of misinformation is codified under the number (3) and disinformation is codified as (4). Additionally, several orientations of coping are further codified into problem-oriented coping mechanisms (B1) (Michalak et. al, 2017), emotion-oriented coping mechanisms (B2) (Lazarus, 1996;1981; Lazarus and Folkman, 1984) (Michalak et. al, 2017) and knowledge-oriented coping mechanisms (B3).

Table 2 operationalizes the concepts that arose from the theoretical framework making them less abstract so that one can detect, classify and measure these concepts by providing indicators (Toshkov, 2016, pp. 100-102). The table outlines the operationalization of variables that contribute or lead to types of coping mechanisms used by SLBs. The codebook can be

found in the appendix for further explanation. Since one is analyzing SLBs behavior for the thematic analysis, one can say that that the level of analysis is in this regard placed at the micro-level (Neuman, 2014).

*Table 3 Operationalization*

Concept	Indicator
Misinformation	When wrong information is shared by an individual who is not aware that the information is false (Shu et. al, 2020, p. 2) (Wardle et. al, 2018, p. 44) (van Huijstee et. al, 2021, p. 33).
Disinformation	When false or inaccurate news is spread on purpose to mislead people (Shu et. al, 2020, p. 2). Intentional, deliberate untruthful information (Wardle et. al, 2018, p. 44) (Fallis, 2013, p. 135) (van Huijstee et. al, 2021, p. 33).
Moving away from clients	When SLBs avoid purposeful encounters with clients (Tummers, 2015, p. 1110).
Moving against clients	When SLBs have a confrontation with clients (Tummers, 2015, 1110-1111).
Moving towards clients	When SLBs aim to help their clients (Tummers, 2015, pp. 1108-1110).
Problem-oriented coping mechanisms	The coping strategy is focused on managing the issue or problem (Michalak et. al, 2017, pp. 353-354).
Emotion-oriented coping mechanisms	The coping strategy is focused to regulate emotions (Michalak et. al, 2017, pp. 353-354).
Knowledge-oriented coping mechanisms	The coping strategy is focused to provide knowledge among clients or SLBs themselves.

A secondary, smaller, source for the analysis is the content analysis, which is also suitable for qualitative research. Whereas the unit of observation for the interviews concerned people's behavior, the unit of observation is in this regard 'cultural artifacts', referring to the content that is created (Abbott & McKinney, 2013, p. 316), the content analysis consists of an interview and documentary from the media concerning misinformation and disinformation, and can therefore be seen as a qualitative content analysis. Furthermore, one will also look at advisory documents. This analysis aims to investigate whether there are documents on a national and European level that give guidelines or reflect on how street-level bureaucrats could cope with mis- or disinformation and if so, what these guidelines are. The analysis of documents of the Dutch government and European Commission can best be placed at the macro-level (Neuman, 2014).

#### *3.1.4 Reflection on Trustworthiness*

The research design and methodology discussed above were carefully chosen to ensure the quality of the study. Yet for every research design, one has to take into consideration limitations when it comes to reliability.

First of all, as there was chosen for a comparative small-N design I, there are no large number of units as with large-N designs. The interviewees were selected based on non-random criteria with variation in the countries the SLBs were working, the type of hospital and school, and the position the interviewees were holding. Moreover, there was chosen for semi-structured interviews, leaving the interviewees some freedom in their responses (Morse, 2015, p. 1). Semi-structured interviews are for this reason seen as more reliable than structured interviews. The careful selection of cases is especially important for small-N design since one does not have a large number of units to rely on. Furthermore, external validity is threatened due to the small sample size of this study. Nonetheless, there was chosen to combine the thematic analysis with content analysis to increase the validity (Toshkov, 2016, p. 314).

The thematic analysis that consists of interviews provides freedom for the researcher how to interpret the data. Yet, this brings also the risk that one misses nuances in the interview data. Additionally, interviews also bring the risk of respondents providing misleading clues (Toshkov, 2016, p. 302). The thematic analysis asks therefore to be extra careful with one's choices and interpretations for the analysis (Toshkov, 2016, p. 46). The content analysis was used to interpret the messages from the content by comparing several interviews and articles from the media as well as government documents about mis- and disinformation. However,

one also needs to be careful of the subjective interpretation that arises from content analysis (Hsieh et. al, 2006).

To ensure the trustworthiness of this qualitative research, one can use Guba's (1981) model. Guaranteeing the credibility (Lincoln and Guba, 1985) of qualitative research can be seen as the most important criteria for qualitative research. To ensure credibility, it is crucial that the researcher ensures applicability and provide precise and accurate descriptions of the answers that were given during the interviews (Krefting, 1991, pp. 215-216). The importance of neutrality can be ensured by confirmability, meaning that the findings of this study are truly derived from the data, rather than one's own interpretations. There are certain strategies applied to ensure the neutrality of this study: firstly, triangulation of multiple methods (content analysis and method analysis). Secondly, reflexive analysis is done, meaning that one recognizes one's role in the research process (Krefting, 1991, pp. 216-222).

Lastly, it was also crucial that all interviewees gave informed consent for the interviews and for how their information is processed in this research. Therefore, an informed consent form was established (which can be found in the appendix). The form states that all information was anonymously processed, meaning that no names are provided in this study. If an interviewee chose to no longer participate anymore, the option was given to delete all the information the interviewee provided for this research. Additionally, as the interviews were recorded, before the start of every interview it was asked if the interviewee had any objection if the interview was recorded. Nonetheless, all interviewees gave informed consent and no interviewees had an objection to the interview being recorded.



#### 4. Findings and Analysis

The following chapter will discuss the thematic findings of the interviews with street-level bureaucrats. Additionally to these findings, one will also discuss content concerning advisory and media documents that provide guidelines, experiences, or reflect on how street-level bureaucrats could cope with mis- or disinformation and if so, what these guidelines are. The findings will discuss is examples of misinformation and disinformation and coping mechanisms the interviewed street-level bureaucrats adopt to cope with clients who believe or spread misinformation and disinformation. The table below outlines the paragraphs and the connected themes for further clarification. Finally, paragraph 4.3 will discuss the earlier established expectations and analyze the themes in order to answer the research question of this study. The findings are also linked to the earlier discussed theories and one will possibly extend or elaborate on these theories and the expectations.

*Table 4 Overview of themes*

<b>Paragraph</b>	<b>Theme</b>
4.1 Examples of Misinformation and Disinformation	Theme 1: Misunderstanding Theme 2: Parents Theme 3: Internet
4.2 Coping Mechanisms	Theme 1: A Wide Variety of Coping Mechanisms Among Health Workers Theme 2: A Wide Variety of Coping Mechanisms Among Teachers

##### *4.1 Examples of Misinformation and Disinformation*

###### **Theme 1: Misunderstanding**

Since misinformation is the result of a person sharing false information who is not aware that the information is not correct, (Shu et. al, 2020, p. 2) (Wardle et. al, 2018, p. 44) (van Huijstee et. al, 2021, p. 33) one could say that all forms of misinformation are based on a misunderstanding. Yet the following theme will focus on the main reason why the information is believed or spread.

### Thematic Findings

Misinformation among patients from health workers mostly occurs because **the patient does not understand his or her diagnosis**. From the interviews with health workers, all health workers affirmed that this is the case, yet the reason why the patient does not understand or is not aware of his/her diagnosis varies. Sometimes this is the result of high work pressure. To illustrate, respondent 1 states:

“I have noticed that patients do not always get a clear explanation about what they exactly have. So, to illustrate: a patient has had a heart infarct. But the patient has not been told yet. Consequently, the patient tells me he has something different, which is not the case.”

Consequently, the wrong information is further spread by the patient among his or her family. Moreover, a patient that does not understand his or her diagnosis is sometimes the result of a **language barrier**. Sometimes patients cannot speak Dutch or English. In these cases a family member of the patient needs to translate the information. This does not always go smoothly, resulting in misinformation, and occasionally in aggression towards health workers.

Respondent 3 argues that misinformation is often related to a student's **education level**. She states that students from a higher education level are usually more curious to investigate whether certain information is right or false. Following this line, respondent 6 emphasizes that misinformation is almost seen on a daily basis in special education. The following example is given:

“A student from the second class had seen a video where a person gets the vaccination for COVID-19 and transforms into a monkey. The student sincerely believed this was true.”

This video was not produced with the intention to mislead people, yet this student interpreted the video wrongly. Furthermore, respondent 7 notices that when it comes to false information that is shared between students this is essentially related to misinformation.

### Content Findings

The ECP festival provided some exercises for health workers on how to cope with patients who share a form of misinformation. It is discussed that often recurring errors are related to **mixing up correlation and causality**. During the workshop, it was emphasized that it is

important that health workers should go in conversation with patients and try to discover what the person is basing his or herself on (Sluis, 2021).

## **Theme 2: Parents**

The following theme will illustrate that both misinformation and disinformation are sometimes shared by students' parents. Consequently, the information is further spread by students themselves in schools.

### Thematic Findings

Whereas misinformation among patients was essentially seen as a consequence of a lack of communication between doctor and patient or because of wrong information that they read themselves on the internet, misinformation and disinformation among students occurs sometimes as false information is shared by their **parents**. Respondent 4 declares that some students learned from their parents that the holocaust did not take place.

## **Theme 3: Internet**

A major theme for the belief and spreading of misinformation and disinformation is the internet. Several examples of misinformation and disinformation from the internet among both students and patients derived from the findings.

### Thematic Findings

Respondent 2 declares that patients sometimes come with numbers from the **news** and interpret these numbers wrongly. This can therefore also be seen as a misunderstanding. This is for example the case with percentages about a miscarriage after vaccination. The news states a certain percentage about miscarriage after vaccination. Nonetheless, it is not taken into consideration that there was already a considerable percentage of women with miscarriage before vaccination. Similarly, the interviews illustrated that patients sometimes believe in types of disinformation that they have read on the **internet**. Consequently, this is sometimes shared with health workers or noticed by health workers. Respondent 1 states for example that patients sometimes tell her they do not want to get the vaccine because they have read that their arm will be magnetic. Another often emphasized point by teachers is that especially students spend a lot of time on **social media**. One teacher assumes therefore that students are in general more exposed to forms of mis- and disinformation. One teacher affirms that the **lockdown** could have strengthened the belief and spreading of false information.

Additionally, both health workers and teachers were asserting they can see a clear increase in the belief of misinformation and disinformation during the **pandemic**. This was stated by respondents 1, 4, and 5.

### Content Findings

The guidelines are primarily focused on disinformation. To demonstrate, the guideline provided by VWS (2021) is established to provide health workers with guidelines on how to cope with disinformation during Corona. The guideline is based on scientific insights on how to cope with disinformation concerning Corona vaccines, yet, it is stated that the guidelines can be applied to different subjects (VWS, 2021). Similarly, the ECP festival also mainly focused on disinformation by providing a seminar and conversation techniques, yet misinformation was also discussed. The festival was mainly focusing on promoting **digital literacy** and how health workers can cope with patients who share disinformation (Sluis, 2021). Following this line, both Wikiwijs (2021) and the EC (2021) also focus on digital literacy.

### *4.2 Coping Mechanisms*

#### **Theme 1: A Wide Variety of Coping Mechanisms Among Health Workers**

### Thematic Findings

The answers among health workers show that there is wide variation in approaches to cope with patients who believe in mis- or disinformation. Nonetheless, it was seen that health workers who encounter a patient that believes in mis- or disinformation, health workers mostly prefer to ascertain that the patient receives **correct information**. This statement can be applied to all interviewed health workers. However, during some encounters health workers prefer to **avoid the conversation**. Both respondents 1 and 2 claim that they will avoid the conversation when they notice that a client is convinced that his/her information is true and is not open to other information or more explanation. Respondent 1 states:

‘‘I know some who believe in conspiracy theories. They believe for example that there is a magnet in your arm and believe in these stories about 5G. It is very difficult to hold a conversation with these people. This results in a discussion and can eventually lead to a fight, so I know I just do not need to try when someone is not open for conversation.’’

Respondents 2 and 3 assert that aggression is not a reason for them to not go in conversation with a particular patient. From the answers among respondents 1 and 2, it became clear that these health workers are especially with disinformation related to Corona more likely to avoid the conversation. Respondent 3 on the other hand, is determined to solve the issue of mis- and disinformation during every encounter, so without exceptions. Additionally, respondent 1 finds it important to have a bond of trust with the patient. Respondent 1 also assesses whether the patient is 100% convinced of the false information or if the patient could still be open for a conversation.

All health workers sometimes ask for **support** to cope with clients who believe in mis- or disinformation. This is done by asking a doctor to provide a patient with (extra) information. The reason for this can be related to **high work pressure** or **aggressive** patients. Respondent 3 calls his superior when he forgot to provide an explanation to one of his patients. When a doctor forgot to give an explanation because of high work pressure, respondents 1 and 2 ask if the doctor can go to the patient to explain. Respondents 2 and 3 assert they look for other health workers or security when there is an encounter with an aggressive patient. Respondent 2 asserts that she finds it difficult to not become aggressive herself during these types of encounters.

Furthermore, all health workers frequently **explain the right information** when they have an encounter with a patient who believes or shares mis- or disinformation. One health worker (respondent 3) argues it is part of his job to explain the right information. Additionally, all health workers argue they sometimes provide **folders** for patients. Respondent 1 also emphasizes that when there are certain concerns about a patient who believes in mis- or disinformation there is also the possibility to embed certain **disciplines** that go in conversation with patients. This is also related to looking for support. Lastly, respondent 2 asserts that the site of the hospital provides information for health workers themselves but also for patients. This can for example be an explanation of how a certain procedure works. Similarly, respondent 3 sometimes addresses **reliable sources** patients can use during an encounter.

However, respondent 2 declares that she does not always have the time to provide exhaustive explanations:

“When there is a patient who is constantly on his or her phone when I am trying to explain something, I just give him/her a folder, and then I am finished. I am not going to put the time in a patient who is not listening.”

## Content Findings

The guidelines provided by VWS (2021), ECP (2021), and Wikiwijs (2021) mainly focus on the **issue of disinformation** by providing **guidelines** and **promoting digital literacy**. During the ECP festival, health care workers could follow **trainings** on how to cope with patients who believe or share misinformation. During the festival, the health workers were trained on how to **recognize** mis- and disinformation (ECP, 2021). Nonetheless, it is also affirmed that health workers should go in **conversation** with patients to detect where the patient's information is based on (ECP, 2021).

Additionally, there is an **online platform** named 'Dokter Media' where health workers can go for extra **explanations** and information on medical news messages (Sluis, 2021). When one looks at the interview with health workers that was broadcasted at Op1 one can say it is not health workers **priority** to go in conversation with patients who believe or share a type of mis- or disinformation (Op1, 2021):

“Going in discussion with patients leads to extra work pressure, at this moment the **work pressure** is too high for extra tasks.”

Furthermore, the interview illustrated that health workers are dealing with **stress** and **high work pressure** during the Corona crisis (Op1, 2021). It was emphasized that many health workers are thinking of stopping and some are even coping with **PTSS**. Additionally, there are a lot of health workers **sick** because of mental and physical exhaustion. Moreover, one health worker states that health workers are still '**laughing** with each other' (Op1, 2021).

## **Theme 2: A Wide Variety of Coping Mechanisms Among Teachers**

### Thematic Findings

The answers among teachers also demonstrate a wide variety of coping mechanisms. Similarly, as among health workers, teachers sometimes **avoid** certain topics. Respondent 5 argues that when it comes to a form of mis- or disinformation related to Corona, she is more careful with going in conversation with the student. This could sometimes result in her choosing to not hold a conversation with a student. Remarkably, respondent 4 claims that there was chosen to remove all information about the holocaust from the curriculum to avoid

confrontations (in particular confrontations with parents). Following this line, respondent 6 states that the school management had an encounter with a mother of a student who did not want her child had to wear a facemask at school and the school chose to **adapt** in favor of the parent:

“So then you are in a situation, are you going against the mother in this situation and are we going to say: we do not accept this. But then you have the chance that Willem Engel<sup>8</sup> will be here with cameras in the school. Thus, we have to show our understanding for the situation: the student does not have to wear a face mask.”

Nonetheless, it is not always feasible to avoid conflicts, respondent 6 asserts that teachers sometimes become **angry** themselves. On the other hand, it was seen that teachers recognize the importance to provide students with the **right information**, yet all teachers also emphasize that students need to be able to form their **own opinion**. Respondent 4 claims:

“It all depends on that you provide students the chance to form their own opinion. So you have to present in a good way counterarguments and give the student something to think about.”

Respondents 4, 6, and 7 emphasize that it is important to **go into discussion with the whole class**. Similarly, respondent 5 asserts that when she notices a student believes or shares a form of dis- or misinformation, she will hold a **one-on-one conversation** or a group discussion with the whole class. Another difficulty that teachers face is **high work pressure**. Respondent 7 states that she aims to focus on the problem (the belief in and/or spreading of disinformation and misinformation among students) yet, she also asserts that it depends on the **situation** how she copes with these situations. When there is higher **work pressure**, the respondent states that she is forced to give short(er) explanations and spend less time on the issue. Similarly, respondent 4 affirms that she needs to work according to a **schedule**, and declares that there is not a lot of time to spend time on the issue of mis- and disinformation:

“There is no time to spend entire lessons on fact-checking. There is a program you need to complete.”

Nonetheless, this is not always the case: respondent 6, teacher and location leader at a practical high school asserts that there is no strict schedule for these students and they will

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<sup>8</sup> Activist in The Netherlands who criticizes the Corona measures that are taken by the Dutch government (Engel, 2021)

always have time to discuss issues related to mis- and disinformation. When looking at teachers, using folders was not common. Nevertheless, teachers adopted other tools. To illustrate, respondent 4 **explains** sometimes to her students that the news website NOS is the official news site of The Netherlands and can therefore be seen as reliable. Respondent 5 thinks it is important that students get classes or **seminars** during their school career on how to use social media. Following this discourse, respondent 6, that works on a practical high school, states that an often-used approach is to **let the students watch the news** and while they are watching, providing some extra explanation. Additionally, this respondent also argues that the school will use a **foundation** called 1622<sup>9</sup>, this foundation will also provide lessons for the students related to fake news. Respondent 4 emphasizes that difficult encounters will always be handled in consultation with the **school management** or **other teachers**. Respondent 7 asserts that teachers should be capable to cope with students that believe or share a type of mis- or disinformation. Nonetheless, she notes that if she would find herself in a difficult encounter with a student, she would ask for support from a colleague or the school management. Additionally, one teacher states that the **relationship** with its student is also important for the encounter. Respondent 5 asserts that she will be more hesitant to hold a conversation with a student who believes or share a form of mis- or disinformation related to COVID-19, as this could result in a **conflict**.

### Content Findings

The European Commission (2021) and the VWS (2021) mainly focus on the **issue of disinformation** by providing **guidelines** for teachers and **promoting digital literacy**. The site 'Wikiwijs Desinformatie' provides **educational material** for teachers and student teachers concerning disinformation that can be used in primary education and high schools. Moreover, there is material for teachers and student teachers themselves, including **scientific research** and **workshops** (Wikwijs, 2021). Furthermore, the documentary illustrated that teachers have **extra tasks** and are extra **concerned** about their students (Zembla, 2020).

### *4.3 Analysis*

It appears that recently the role of SLBs is starting to be recognized when it comes to the belief and spreading of misinformation and disinformation: several organizations and both the Dutch government and the European Commission provided guidelines for health workers and/or teachers on the issue of disinformation. Nonetheless, the scientific literature on SLBs

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<sup>9</sup> Foundation 1622 provides projects, workshops, trainings and class material concerning social themes (centrum1622, 2021).



and misinformation and disinformation still lack to bring these concepts into relation. Several expectations were derived from the theoretical framework in an attempt to understand what coping mechanisms SLBs can adopt to cope with clients who believe or share misinformation and disinformation. This chapter will reflect, analyze and extend the theories and discuss how far the expectations are in line with the results.

### **Misinformation and Disinformation**

The findings of paragraphs 4.1 and paragraph 4.2 demonstrate that misinformation among patients was often seen because a patient does not understand his or her diagnosis or because of a language barrier. These kinds of situations can be classified as **misinformation** since the patients (or family) share false information unintentionally (Shu et. al, 2020, p. 2) (Wardle et. al, 2018, p. 44) (van Huijstee et. al, 2021, p. 33). These persons simply miss important information. A reason resulting in misinformation appeared to be a high workload among health workers, resulting in that patients do not get a (clear) explanation about their diagnosis. This is therefore in line with the theory of Boey Kam-Weng (2007) and the expectation that health workers are dealing with a high workload (Boey Kam-weng, 2007, pp. 30-42).

**Disinformation** and misinformation among patients were primarily seen because of information patients have read on the internet. The example that was given that some patients believe their arm will be magnetic after vaccination can be characterized as a form of disinformation since this information was presumably produced to mislead people (Shu et. al, 2020).

Misinformation and disinformation among students were seen differently; it was sometimes shared by students' parents. The example of the holocaust denial, which is sometimes shared by parents, is a form of **disinformation**, as it is intentional false information (Wardle et. al, 2018, p. 44) (Fallis, 2013, p. 135) (van Huijstee et. al, 2021, p. 33). Other factors for the belief in false information included a students' education level. The example that was given by respondent 6, where a student from a practical high school believed that you can turn into a monkey after being vaccinated is a form of **misinformation** since the video was not produced with the intention to mislead people, and the student sharing the information was not aware that the information he was telling was false (Shu et. al, 2020, p. 2) (Wardle et. al, 2018, p. 44) (van Huijstee et. al, 2021, p. 33). This shows that students from special education are presumably more susceptible to forms of mis- and disinformation. However, one needs to be careful with bringing a student's education level into relation with the belief in forms of mis- and disinformation. It was also emphasized by teachers that students are more exposed to mis-

and disinformation as they spend in general a lot of time on social media. Another factor that could contribute to an increase in social media usage is the pandemic. This is presumably related to the lockdown, as a consequence, people are more exposed to online information.

The content on mis- and disinformation showed that the guidelines provided by VWS (2021), ECP (2021), Wikiwijs (2021), and the EC (2021) primarily focus on disinformation. Only the ECP festival provided also some exercises for health workers on how to cope with patients who share misinformation (ECP, 2021).

### **Coping Mechanisms**

The findings of paragraph 4.2 illustrate that both health workers and teachers adopt a wide variety of coping orientations and mechanisms. It was seen that health workers often aim to help their clients by ensuring the patient receives correct information. Linking this to the theoretical framework, one can say this is related to a **problem-oriented coping mechanism**: this coping strategy is focused to manage the issue of the belief among patients in mis- and disinformation (Michalak et. al, 2017, pp. 353-354). This can also be classified as a type of **moving towards clients** since health workers prefer to help their clients (Tummers, 2015, pp. 1108-1110). The main strategy to help clients was by adopting **explanatory methods** (Shu et. al, 2020, pp. 15, 16) since all health workers affirmed they frequently explain the right information. On the other hand, it was also seen that health workers sometimes avoid confrontations, especially with difficult patients who strongly believe in disinformation related to Corona. One health worker affirmed that she avoids confrontation with patients as she does not want to be involved in a fight. Both encounters can be seen as a form of **moving away from clients**. More specifically, these can be classified as *rationing*, since these health workers make it more difficult for clients to get access to the service since these health workers chose to not go into conversation with patients (Tummers, 2015, p. 1110). Nonetheless, the other two health workers declared that an aggressive client is not a reason to avoid confrontation. This, therefore, suggests that an individual's personality is conducive to which coping mechanisms health workers adopt. One health worker affirmed she finds it sometimes difficult to not use *aggression* herself during this type of encounter: this is classified as a form of **moving against clients** (Tummers, 2015, pp. 1110-1111). Additionally, from the answers among health workers, it appeared that they all sometimes adopt **emotion-oriented** (Michalak et. al, 2017, pp. 353-354) or **internally derived coping mechanisms** (Ko Yiu-Chung et. al, 2007, pp. 122-123) by asking for **support from co-workers**. One can see this therefore as an extension of Ko Yiu-Chung et. al's theory that

primarily focuses on support from family or friends. Lastly, one identified **knowledge-oriented coping mechanisms**, since it appeared that health workers adopt several strategies to increase patients their knowledge such as **explanatory methods** (Shu et. al, 2020, pp. 15, 16), providing folders, referring to reliable sites, or inserting certain disciplines. These are all examples of **externally derived coping mechanisms** (Raven et. al, 2018). It was also seen that providing folders is sometimes adopted as a form of **moving away from clients**, specifically to *routinize*, since one health worker affirmed she **simplifies** her environment (Lipsky, 2010, p. 85) by giving folders to patients who are not listening (Tummers, 2015, p. 1110).

Also teachers strive to help their students when there is an encounter with a student who believes or shares mis- and disinformation. This can be therefore be seen as **moving towards clients** (Tummers, 2015, pp. 1108-1110). This can be explained by the fact that one could see **knowledge-oriented coping mechanisms** among teachers by providing students with reliable news sources, seminars, discussions (either one-on-one or with the whole class), and **explanatory methods** (Shu et. al, 2020, pp. 15, 16). These can also be seen as **externally derived coping mechanisms** (Raven et. al, 2018). Another way in which moving towards clients was seen among teachers was *rule-bending* during the holocaust example, as the rules were adjusted according to one of the parents' needs. The encounter concerning the face mask, where a mother of a student did not want that her child needed to wear a facemask is a similar encounter as the holocaust example, yet this encounter goes one step further as the following situation can be classified as *rule-breaking* (Tummers, 2015, pp. 1108-1110). Similarly, teachers also ask for **support from co-workers** during difficult encounters (Ko Yiu-Chung et. al, 2007, pp. 122-123). These encounters can also be classified as **emotion-oriented** (Michalak et. al, 2017, pp. 353-354) or **internally derived coping mechanisms** (Ko Yiu-Chung et. al, 2007, pp. 122-123). These coping strategies can also be classified as a **problem-oriented coping mechanism** as it focuses on managing the issue of having difficult encounters with parents (Michalak et. al, 2017, pp. 353-354). **Moving away from clients** was sometimes seen due to work pressure. One teacher asserted she needed to hand in on the quality of her explanation, and another teacher argued that there was no time for 'fact-checking'. These examples are both forms of *routinizing* (Tummers, 2015, p. 1110) since health workers are obliged to **simplify** their environment during these encounters (Lipsky, 2010, p. 85). Another similarity between health workers can be seen by the fact that one teacher stated she is more hesitant to hold COVID-19 related conversations with students.

This is thus also a form of moving away from clients (Tummers, 2015, p. 1110). **Moving against clients** was also seen in rare cases among teachers since one teacher asserted teachers sometimes become angry themselves. These types of encounters can therefore be classified as *aggression* (Tummers, 2015, pp. 1110-1111) and emotion-oriented coping mechanisms (Michalak et. al, 2007, pp. 353-354). Similar to health workers, the latter two encounters also suggest that the type of coping mechanisms teachers adopt can be related to one's personality: some teachers are more hesitant than other teachers during certain encounters and some teachers might experience emotions of anger during certain encounters.

The content demonstrates that the guidelines of the VWS (2021), Wikiwijs (2021), and the European Commission (2021) their main strategy is a **problem-oriented coping mechanism** that strives to manage the spreading of disinformation (Michalak et. al, 2017, pp. 353-354). The guideline of the VWS puts a strong emphasis on **explanatory methods** such as the 'hamburger method' (VWS, 2021) (Shu et. al, 2020, pp. 15, 16). This can be characterized as **moving towards clients** since the guideline focuses on helping the clients (Tummers, 2015, pp. 1108-1110). Both the ECP festival and Wikiwijs provide **externally derived coping mechanisms** such as trainings (ECP, 2021) and educational material (Wikiwijs, 2021) (Raven et. al, 2018). The guidelines are also all strongly focused to provide knowledge (mainly among SLBs themselves), these can therefore be characterized as **knowledge-oriented coping mechanisms** that focus on the prevention of disinformation. Additionally, there was also the focus of **early detection of disinformation** (Shu et. al, 2020, pp. 15, 16) since the ECP festival provided tips to detect disinformation (ECP, 2021) and the EC aims to provide a guideline to tackle disinformation in the class (EC, 2021). Prevention of disinformation and the early detection of disinformation can both be identified as *instrumental action*, since both can be seen as long-lasting solutions for the believe and spreading in disinformation. Instrumental action is a form of moving towards clients (Tummers, 2015, pp. 1108-1110). Furthermore, the interview with health workers at Op1 displays that, due to the high work pressure, health workers are forced to adopt a **public-health approach** as their goal is to treat as many patients as possible, it is not feasible to go into conversation with patients (Gofen et. al, 2021, pp. 9-10) (Op2, 2021). This therefore also related to **moving away from clients** and more specifically *routinizing* (Tummers, 2015, p. 1110). Lastly, **emotion-oriented coping mechanisms** such as stress were seen among both health workers and teachers during the Corona crisis (Op1, 2021) (Zembla, 2020). Additionally, PTSS and mental and physical exhaustion were seen among health workers (Op1, 2021). These can all be linked to the

**Transactional Theory of Psychological Stress** (Lazarus, 1996;1981; Lazarus and Folkman, 1984). Another emotion-oriented coping mechanism that was seen among health workers was laughing (Op1, 2021).

### **Expectations**

One was indeed able to identify (E1) where it was expected that health workers will move away from clients to cope with clients who believe or share misinformation and disinformation (Tummers, 2015, p. 1110). Some health workers move away when a patient believes in disinformation related to Corona. It also appeared that one health worker moves away from uninterested patients by routinizing and simplifying the environment (Lipsky, 2010, p. xii) (Tummers, 2015, p. 1110). Nonetheless, the findings showed that health workers often moved towards patients by explaining the right information (Tummers, 2015, pp. 1108-1110). In rare cases, health workers can move against clients by becoming aggressive themselves when they have an encounter with an aggressive patient (Tummers, 2015, pp. 1110-1111). In short, (E1) cannot be confirmed. Analyzing (E1.1), it is plausible to say that this expectation can also not be confirmed since several health workers affirmed that an aggressive client is not a reason for them to not go into conversation with a patient who believes in mis- or disinformation. Furthermore, it was indeed seen that health workers adopt both internally and externally derived coping mechanisms (Raven et. al, 2018). Internally derived coping mechanisms were seen in such that health workers ask for support during difficult encounters with aggressive clients or when they are dealing with high work pressure, and consequently, stress (Ko Yiu-chung et. al, 2007). Externally derived coping mechanisms were widely adopted by providing folders, referring to reliable sites, or inserting certain disciplines (Raven et. al, 2018). Thus, internally and externally derived coping mechanisms were indeed adopted by health workers, yet it still depends on the encounter which coping mechanism was adopted. Lastly, it was expected that health workers would adopt a public-health approach to cope with clients who believe in misinformation and disinformation (E1.3) (Gofen et. al, 2021, pp. 9-10). The interview that was broadcasted at Op1 illustrated that health workers are due to the high work pressure during the pandemic indeed forced to adopt a public-health approach. Nevertheless, from the interviews with health workers, it did not appear that the interviewees adopted the public-health approach. For teachers it was expected that they would move towards clients to cope with clients who believe in misinformation and disinformation (E2) (Tummers, 2015, pp 1108-1110). Similarly as for health workers, the results for teachers demonstrated that moving towards, moving away, and moving against

clients could all be identified (Tummers, 2015). Moving towards clients was often the desired approach and was seen through knowledge-oriented coping mechanisms, explanatory methods (Shu et. al, 2020, pp. 15, 16) but as also rule-bending and rule-breaking (Tummers, 2015, pp. 1108-1110). However, moving away from clients was also seen for several reasons, including high work pressure, and similar to health workers, during encounters with students who believe in disinformation related to Corona. Lastly, moving against clients was also for teachers seen in rare cases where some teachers become angry themselves (Tummers et. al, 2015, pp. 1110-1111). Thus, in spite of the fact that knowledge dissemination is part of teachers' work, teachers also often adopt approaches that are not focused on moving towards clients (Lipsky, 2010, p. 7) (Tummers, 2015). One can therefore thus not confirm (E2). It was also expected that teachers would adopt emotion-oriented coping mechanisms (Michalak et. al, 2017, pp. 365-369) to cope with clients who believe in misinformation and disinformation. The findings show that emotion-oriented coping mechanisms were indeed adopted by teachers since teachers sometimes ask for support from co-workers (Ko You-chung et. al, 2007). However, other orientations were also adopted. Knowledge-oriented coping mechanisms were seen since teachers provide students with reliable news sources, seminars, discussions (either one-on-one or with the whole class), and explanatory methods (Shu et. al, 2020, pp. 15, 16). Problem-oriented coping mechanisms were widely adopted since most encounters focus on the issue of mis- and disinformation by either trying to solve or avoid this issue (Michalak et. al, 2017, pp. 365-369). (E2.1) can therefore also not be confirmed. Al by al, the expectations cannot be confirmed since both health workers and teachers adopt a wide variety of coping mechanisms. The results demonstrate that the type of coping mechanisms health workers and teachers adopt are quite similar. This is remarkable, as it was expected that the type of coping mechanisms these different types of SLBs would vary since their work contexts differ significantly. It is therefore not unplausible to say that the type of SLBs is less relevant than expected, yet the type of encounter is major for deciding which type of coping mechanisms SLBs adopt. Additionally, it seems that one's personality might contribute to the type of coping mechanism that is adopted during some encounters. This was also not expected beforehand.

## 5. Conclusion

Starting from the assumption that SLBs could have a valuable role to overcome the current issues on the belief and spreading of misinformation and disinformation during the Coronavirus and on the quality of policy-making on national and European level, the research question ‘‘How can street-level bureaucrats cope with clients who believe or share misinformation and disinformation about COVID-19 in Europe?’’ was established. The empirical literature on street-level bureaucrats and coping mechanisms primarily focused on coping mechanisms used by SLBs during stressful situations, the high work pressure teachers and health workers often cope with, and SLB's level of discretion. Secondly, the empirical background on misinformation and disinformation and its consequences showed that schools or colleges are a place where misinformation and disinformation are often evaluated and that misinformation can be used for political gains or to undermine trust in government (Limaye et. al, 2020) (Shu et. al, 2020) (Wardle et. al, 2017). One could also see that social media is often the target of disinformation as it is easily accessible (Shu et. al, 2020) and that the consequences and effects on people and society can be damaging for both the individual and society (Shu et. al, pp. 1-2). The theoretical framework focused on two strands: the role of street-level bureaucrats and their coping mechanisms used on clients. Consequently, the theoretical framework outlined two main expectations and four sub-expectations with an exploratory approach. The main expectation states that health workers will move away from clients to cope with clients who believe or share misinformation and disinformation (E1). Furthermore, it was expected that health workers prefer to avoid confrontations with violent clients to cope with clients who believe in misinformation and disinformation (E1.1) and that health workers will adopt both internally and externally derived coping mechanisms to cope with clients who believe in misinformation and disinformation (E1.2). The last expectation for health workers included that health workers will adopt a public-health approach to cope with clients who believe in misinformation and disinformation (E1.3). The second main expectation was that teachers will move towards clients to cope with clients who believe in misinformation and disinformation. The sub-expectation entailed that teachers adopt emotion-oriented coping mechanisms to cope with clients who believe in misinformation and disinformation. Analyzing the causal mechanisms of these theoretical expectations was done via thematic and content analysis. The expectations are not confirmed since the results demonstrated that both health workers and teachers adopt a wide variety of coping mechanisms.

Thus, answering the research question of this study, it is plausible to say that SLBs adopt a wide variety of coping mechanisms, whereby the encounter is major for SLBs to decide which coping mechanisms they will adopt to cope with clients who believe in mis- and disinformation. Work pressure and the SLBs personality possibly also plays a role during some encounters. Remarkable is that the type of SLBs is hereby less relevant than was expected beforehand since the findings demonstrate that the coping mechanisms health workers and teachers adopt are quite similar. Possible explanations for this are that, despite the different work contexts of health workers and teachers, schools (Limaye et. al, 2020) and hospitals are both organizations where misinformation and disinformation are often shared, and both health workers and teachers are often coping with a high work pressure. Following this line, it is often desired by health workers and teachers to move towards clients, nonetheless, during some encounters, this is not feasible or not preferred. The findings of the government content illustrate that the guidelines that are recently provided by the European Commission (2021) and the VWS (2021) primarily focus to move towards clients by promoting digital literacy and the early detection of disinformation (Shu et. al, 2020, pp. 15, 16). The findings of this study extend to solely mis- and disinformation during the Corona crisis. The main theories that were used to answer this research question included Tummors (2015) coping mechanisms, problem-oriented and emotion-oriented coping mechanisms (Michalak et. al, 2017, pp. 365-369) and internally and externally derived coping mechanisms (Raven et. al, 2018). These theories deemed to be appropriate for answering the research question, however, one extended Michalak et. al's orientations by establishing the concept of knowledge-oriented coping mechanisms, which appeared an often adopted coping strategy by both types of SLBs.

Nevertheless, several limitations can be seen in this study. First of all, this research only focused on two types of SLBs, the inclusion of more types of SLBs could have strengthened this research in terms of generalizability, yet this was not feasible due to the limited time to conduct this study. However, other types of SLBs are seen as less relevant as it is assumed that these are less exposed to patients who believe or share a form of mis- or disinformation. Secondly, only seven samples were interviewed as it appeared to be rather difficult to find respondents for interviews, especially as this research was done during the fourth Corona wave. However, there was chosen to do both a thematic and content analysis to increase the validity of this study (Toshkov, 2016, p. 314). Further research is suggested with a wider range of SLBs and more in-depth interviews to investigate the generalizability of health



workers, teachers, and other types of SLBs. The coping literature should also consider the relationship between SLBs and misinformation and disinformation. Furthermore, Lazarus (1996) already criticized the literature on coping for not taking into consideration the individual and the context. Comparing the results of this study and the guidelines emphasize these points again (Michalak et. al, 2017, p. 366). Nonetheless, this study researched for the first time the relation between misinformation and disinformation and coping and provides therefore a contribution to the literature on coping. The results can provide valuable information for both policymakers and SLBs.

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## Appendix

### *Codebook*

#### 4.1 Examples of Misinformation and Disinformation

Misinformation= 3

Disinformation= 4

#### 4.2 Coping Mechanisms

*Problem-Oriented Coping Mechanisms* =B1

*Emotion-Oriented Coping Mechanisms* = B2

*Knowledge-Oriented Coping Mechanisms* = B3

*Moving Away From Clients* = 0

*Moving Towards Clients* = 1

*Moving Against Clients* = 2

*Interview questions for SLBs (health workers and teachers) coping mechanisms*

1. Could you shortly introduce yourself?
2. How do you see the current situation of misinformation and disinformation?
3. Do you think the spreading and belief in misinformation and disinformation has increased during the current pandemic?
4. Did you ever find yourself in a situation where you experienced a client who believed in any form of misinformation or disinformation? If yes, how did you handle this situation? Did you ever experience a form of aggression?
5. If question 4 is answered with yes: did you ever find yourself in a situation where a client believed in misinformation or disinformation regarding COVID-19? If yes, how did you handle this situation? Did your approach differ from your regular approach? If yes, why?
6. Are there certain protocols for clients who believe in misinformation or disinformation? (from your hospital or school) If not, do you think this would be helpful? Why?



## *Informed consent form*



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### **Consent form**

For the research concerning coping mechanisms used by street level-bureaucrats to cope with clients that believe in misinformation and disinformation about COVID-19 in Europe, it is necessary to use your personal data. To use this data during this research we need your consent.

#### **What data are being used?**

The transcript of this interview will be used to analyze the results. Results of the interview will be anonymously discussed in the research paper. The transcript itself will not be included in the research paper, however, it is possible that the thesis supervisor or second reader asks for permission to see the transcripts. Names are not included in the transcript.

#### **What happens if I change my mind?**

If you change your mind, you can send an e-mail to [S3028356@vuw.leidenuniv.nl](mailto:S3028356@vuw.leidenuniv.nl) with a short message indicating that you want your personal data to be removed. Your information will be permanently deleted from the collected data. Any other information that can be traced back to you will also be permanently deleted.

#### **What will be done with my data after the research project?**

Your data will be stripped of your name and other information that can identify you, until two weeks after the research is concluded.

#### **Please place a cross in the box that is applicable**

- I do not consent to any use of the information collected about me
- I consent to the use of information collected about me for this research project

#### **Name, date, location and signature**

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