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**Analysing the Effect of Green and Red Tape on
Administrative Burden of Health Care Professionals in
Mental Health Care Setting**

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Abstract

In addition to the rising demand for mental healthcare after the Covid-19 pandemic, mental healthcare professionals in the Netherlands are facing an increase in work time spent on administrative tasks as the Dutch government passed the Compulsory Mental Healthcare Act (CMHA) in 2020 (Maris et al., 2022). With these changes underway, this bachelor thesis aims to determine whether the administrative burden placed on professionals increases for red tape rather than green tape. By surveying a Dutch youth mental healthcare organisation, the effects of red and green tape on administrative burden are researched and analysed in the context of the theories in the field of public administration. The state of research extends from the conceptualisation and operationalisation of the key concepts to the application of Public Service Motivation in the healthcare sector and to the research into the effects of red and green tape by Kaufmann, George et al. and Pandey et al. The survey analysis shows an increase in administrative burden for red tape in comparison to green tape, even though the operationalisation of administrative burden with Likert scale items is not always internally consistent. This paper provides a perspective on the usage of administrative burden and red tape as distinct concepts and aims to improve the lives of healthcare professionals by contributing to research in this field.

Keywords: administrative burden, red tape, green tape, mental health care

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1 Introduction

The demand for mental health care has been steadily and steeply increasing. The recent Covid-19 pandemic has resulted in an even higher need for health care with a measurable increase in anxiety disorders and depression (APA, 2020). The effect on children appears to be even more drastic as a study by Tedja et al. (2023) suggests an increase of up to 55% of presentations regarding children with mental health problems to the emergency department. This rise in demand has left an impact on mental health care workers. A survey from the American Psychological Association from 2021 shows that more than half of all psychologists have turned to other psychologists to manage their burnout. While this question was not asked in prior years, the other results imply an increase in mental health problems among the professionals themselves as well (APA 2021). This increase stems not only from the growing demand but from governmental regulations as well. This is especially the case for the Dutch mental health care system, as the new Compulsory Mental Healthcare Act (CMHA) was introduced in 2020. A 2022 survey study by Maris et al. (2022) claims that while administrative tasks assume 40% of the working time of mental healthcare workers, this percentage has increased after the implementation of the CMHA. A previous study which combined survey results with detailed interviews supports these findings that the CMHA has increased the administrative burden. (Maris et al., 2021). From both studies, one can deduce that administrative tasks are a daily occurrence in the lives of healthcare professionals. While this thesis focuses on the Netherlands, research shows that the problem of administrative burden for healthcare professionals is not limited to one nation (Michel, 2017).

Part of the societal context and relevance is evident in the description of the problem that is associated with red and green tape as well as administrative burden in the mental health care sector. The rates of burnout among mental healthcare professionals (APA, 2021) show the relevance of this issue and its connection to the importance of a functioning mental healthcare system. Maris cited Samira Ahli's Dutch study from 2019, explaining that administrative tasks and their share in professionals' daily lives are one of the reasons healthcare workers are leaving their field (Maris, 2022; DeHart-Davis et al.,

2014). With the increase in patient needs, the loss of personnel is even more damaging to the whole healthcare system.

Therefore, this paper aims to answer the research question: “How do green and red tape influence the daily work of healthcare professionals regarding their administrative burden?”. To fulfil this aim, several minor questions need to be answered as well. Firstly, the term green and red tape need to be defined as well as examples need to be found. Secondly, the concept of administrative burden requires conceptualisation and operationalisation. This is done based on desk research into different theories and previous research. Lastly, as the concept of administrative burden is split into distinctive parts, one can pose the question of whether some of these aspects are perceived as more burdensome than others.

The relevance of this research to the scientific community can be determined by the comparison of the state of research and the knowledge gap that this research aims to fill. In this paragraph, a brief overview will be shared as the full state of research is a larger section of this thesis.

The research in the field of Public Administration with regards to red and green tape as well as administrative burden spans several decades. While red tape originated in its current form with Bozeman in his 1993 article, the concept has been analysed since the 1970s. There are several thousands of articles on the subject that range over a wide variety of research focuses and fields. The knowledge gaps that this paper intends to close, are mainly based on the lack of research on the administrative burden in the mental health care system (Keiser et al., 2019; Kyle et al., 2021; Michel, 2017) and the intermingling of the concepts of red tape and administrative burden (Cambell, 2022). Additionally, the concept of green tape has been coined by Leisha DeHart-Davis in 2008 and has not been as thoroughly researched as administrative burden and red tape (Kaufmann, 2022). Especially research comparing the concepts of green and red tape is yet to be conducted in the field of Public Administration.

To answer the research questions, the following paper will first give a brief overview of the state of research in the field of public administration with a focus on red tape and administrative burden. In the next section, the theoretical findings will be displayed alongside the definitions of the key concepts which are based on previous research in this field. Following this is a section in the methodology for the data collection as well as analysis, which will be followed by the results of the survey and its analysis as well as the interview. Subsequently, the results will be discussed within the context of the theoretical basis and the limitations of this study. Lastly, the recommendations of this paper for future research and societal implications will be mentioned.

2 Theory

In the following section, the concepts of red tape, green tape and administrative burden will be introduced and explained. Additionally, the theories and the hypotheses of this thesis which are based on these theories will be presented.

2.1 Definitions and State of Research regarding Conceptualisation

2.1.1 Red Tape

While red tape has been used as a concept at least since Herbert Kaufmann's book in 1977 and has been established as a concept of note, the "formal study of red tape by public administration scholars began in the 1990s" (Campbell et al., 2022, p 298). This is likely in part due to Bozeman who popularised the term through his 1993 article "A Theory of Government "Red Tape". Here, he defines red tape as "excessive or meaningless paperwork (Bennett and Johnson, 1979); a high degree of formalization and constraint (Hall 1968); unnecessary rules, procedures and regulations; inefficiency; unjustifiable delays; and as a result from all this, frustration and vexation" (Bozeman, 1993, p. 274).

According to Bozeman (1993), there are four types of red tape that are differentiated by their point of origin. Ordinary red tape comes from inside an organisation and which leaks outside, while external control red tape originates from outside a structure and seeps inside. Pass through red tape is

implemented from the outside again and is focused on external actors. Lastly, intra-organisational red tape stays within an organisation (Pandey et al., 2000). This paper will centre on external control red tape, as it applies to governmental rules that focus on actors within the organisational framework since the organisation that is studied in this paper is one.

The Three-Item-Red-Tape (TIRT) was introduced by Borry in 2016. In this article, she outlines her new concept and scale and compares it to the previously used General Red Tape (GRT) scale by Bozeman. The TIRT consists of three individual items that make up the concept of red tape: burdensomeness, inefficiency and un-necessity. These items are proven to represent the concept of red tape in the aforementioned article through the usage of structural equation modelling with previous survey data. During this process of proving the validity of the TIRT Borry displays that the TIRT is positively related to the GRT. However, Borry notes that further research is necessary to establish the superiority of the TIRT over the GRT. Nevertheless, Borry states that since the TIRT does not use the words “red tape” in its description, which can lead to associations for participants and influence their behaviour, it may be a better scale for measuring red tape. Additionally, the usage of three easily defined concepts is an improvement on Bozeman’s previous definition which simply assumed that participants knew about the concept of red tape (Bozeman et al., 2011; as cited in Borry, 2016). In the same article, Borry refers to the concept of formalization, meaning the written form of rules. She compares the term to green tape as she equates written rules with effective rules. In the study, she proves that this term has a negative relation to the TIRT and therefore offers tentative proof that the TIRT is different in its operationalisation of red tape to green tape and in its item of written and effective rules (Borry, 2016).

Noteworthy is the subjectiveness of the items that define red tape (Borry, 2016). While inefficiency can be an objective indicator, burdensomeness and un-necessity are almost always subjective in their perception. This subjectiveness is further exaggerated through the value clashes that can be present in different regulations. An example of this are regulations to protect private information. There, the right to privacy needs to be weighed against national interests or quick procedure for example. As public

policymaking is always a matter of weighing the value of one regulation against all other values, there is rarely an objective way of classifying the necessity of a law or regulation. While one person may primarily value privacy, another might prefer a simpler bureaucracy. A similar argument can be made for the burdensomeness of regulations. One person may find filling out multiple forms daily as burdensome while others might enjoy the organisational aspect.

This subjectiveness of red tape is especially troublesome with qualitative data collection as it represents the opinions of a few individuals. In quantitative studies, the number of replies can lead to a general picture of how regulations can be perceived by a group of people instead of individuals that may not like certain aspects of it. Borry argues that based on Moon and Bretschneider's article from 2002, the perception of red tape is more important than the objectiveness of the concept and its measure (Borry, 2016, p 580). Pandey and Kingsley give a similar argument in their article from 2000, where they state that the importance of the individual in red tape research is often underappreciated (Pandey et al., 2000).

In this research the TIRT scale by Borry, defining red tape as burdensome, unnecessary and inefficient regulations, will be used as it describes the aspects that are associated with red tape to participants that are unfamiliar with the subject matter and gives clear indications that allow participants to think of examples of red tape that might affect them personally.

2.1.2 Green Tape

There appears to be a focus on the negative aspects of regulations, evident from the amount of research done on red tape as opposed to green tape (Pandey et al., 2002; Giauque et al., 2011; Jacobsen, 2017; Walker et al., 2005). The concept of green tape was first introduced by DeHart-Davis in 2008, nearly a decade after Bozeman popularised the term red tape. While Bozeman compares red tape to white tape, DeHart-Davis mentions that there is a difference between white and green tape. She defines green tape as effective organizational rules that are part of normal bureaucracy whereas white tape are "organizationally beneficial rules" (DeHart-Davis, 2008, p.362). In the same article 5

principles of green tape are outlined: “written requirements, with valid means-ends relationships, which employ optimal control, are consistently applied, and have purposes understood by stakeholders” (DeHart-Davis, 2008, p.362). This first principle refers to the aspect of formalization that was mentioned by Borry before. Since the TIRT measure had a negative relationship with formalization, the definition of green tape as the opposite of red tape can be assumed. The validity argument in the second principle can be referred to as the necessity principle of the TIRT scale. If the means do not serve the ends of the regulation, it cannot be considered necessary. The other three principles of green tape as proposed by DeHart-Davis can be similarly equated to the opposite of the TIRT scale. The optimal control attribute may be equated to two of the items of the TIRT scale. The necessity of the TIRT scale relates to the necessity of control that is used for enforcing the rule. The rules were described as “reasonable, not too picky, and flexible” in the study by DeHart-Davis (p. 369). Inefficiency is mentioned directly as an indicator of rules that are not green tape. The attribute of rule consistency is related to the aspect of efficiency, as the article describes a situation where not enforcing the rules the same way for everybody leads to a “waste of time” (DeHart-Davis, 2008, p.371). It also poses the question of necessity, as rules that exist but are not enforced serve a purpose in society. The last principle of an understanding of purpose by stakeholders can be traced back to the burdensomeness of rules. DeHart-Davis says that “comprehending rule purposes seemed to make compliance more acceptable and less burdensome” (DeHart-Davis, 2008, p.373).

This thesis will use the opposite of the TIRT scale to define and conceptualise green tape, as both the TIRT scale opposite and the conceptualisation by DeHart-Davis fulfil the same three defining characteristics: a necessary and effective regulation that causes little burden for those that have to comply by it.

2.1.3 Administrative Burden

The concept of administrative burden has existed for quite some time in the field of public administration. Throughout the years several attempts at conceptualisations were made but the first

general concept was developed by Pamela Herd and Donald P. Moynihan in 2019. Since then, most articles have referred to their threefold definition of administrative burden. In their own article from 2020, they define administrative burden as follows: “administrative burden are the frictions of interacting with government (...) and arise via three primary mechanisms: learning cost, compliance cost and psychological cost.” (Herd et al., 2020, p.3). Learning costs are all costs that are associated with the learning of rules while compliance costs are all the costs that originate from the learning of how to comply with regulations or the actual compliance. The psychological cost of regulations relates to the “experience the stresses, loss of autonomy, or stigma that come from such encounters” (Herd et al., 2018, p.2). While the definition by Herd and Moynihan seems to only relate to monetary cost for the first two types of cost, the usage of the definition in this thesis will extend to temporal cost, meaning the time investment in all stages of adherence to regulations. These costs may fall under the category of monetary cost within the setting of employment, where the time spent on administrative tasks is necessarily a monetary cost factor for the employer. However, the inclusion of temporal cost as a separate dimension allows for the measurement in other contexts or when the employee does not regard the time investment as a monetary cost. Additionally, this extension makes the operationalisation simpler to understand for the participants of the survey.

All previous surveys on administrative burden were conducted with questions pertaining to the individual instances of administrative burden and not general concepts. An example of this is Micheal Anne Kyle and Austin B. Frakt’s article from 2021 where they analyse the administrative burden of patients by measuring instances like appointment scheduling or authorisations. Therefore, a new operationalisation based on pre-existing definitions needed to be developed for this paper. This operationalisation will be given in the method section of this paper.

2.1.4 Red Tape and Administrative Burden – Two concepts?

An important controversy in the research of Public Administration focuses on the connection between the concepts of administrative burden and red tape. Many articles use the terms interchangeably, and

some meta-narrative reviews determine that the concepts are less distinct than connected (Campbell et al., 2022). The argument is made that “the case for the distinctiveness of the two concepts is weaker than is the case for family resemblance” (Campbell et al., 2022, p.308). Representatives of this theory argue that the further splintering of concepts that are too similar to each other can lead to tedious and pointless debates and distract from the focus of research on the topics (Campbell et al., 2022; George et al., 2021; Podsakoff et al., 2016). Defendants of the argument that administrative burden and red tape are different concepts and cannot be used interchangeably find the main difference in the legitimacy of the purpose of the regulation. While red tape cannot serve a legitimate purpose according to the TIRT-scale which lists a missing necessity as one of the characteristics (Borry, 2016), and Bozeman (2000) defines red tape “as rules that do not advance a legitimate purpose”, administrative burden can serve legitimate public values (Moynihan et al., 2014). There is no final correct answer to this controversy as with many discussions in social sciences that centre on the conceptualisation and definition of terms. Regarding the usage of the terms in this paper, the used definitions by Moynihan et al. (2014) for administrative burden and Borry (2016) for red tape allow the distinctiveness of the two concepts to be part of this thesis and the discussion of the results. As one of the first thesis to use these concepts in dependant variable relationships, this thesis will contribute to the discussion of distinctness and attempt to fill a knowledge gap in Public Administration.

2.2 State of Research and Knowledge Gaps

In this section, the state of research with regards to red tape, green tape and administrative burden will be outlined and the relevant knowledge gaps which this thesis aims to fill will be given.

While red tape has been researched since before the term was officially coined, the research in this field mainly focuses on public organisations and their employees (Campbell et al., 2022; Christensen et al., 2019; Dudau et al., 2020). To begin this section, the four types of red tape by Bozeman (1993) which were mentioned in the definition of red tape, will be contextualised. The focus of this paper on the governmental level of red tape rather than the organisation-based red tape mainly stems from the field

of research of the researcher. However, the focus of research has often been to improve the management of administrative tasks of their self-imposed regulations and tasks (Bozeman, 1993) or on the public organisations in which the red tape originates (Walker et al., 2009). While this paper and its research operate within one organisation, its focus remains on governmental regulations and therefore could fill a knowledge gap within this part of red tape research. As the effects of red tape may differ according to the type of red tape, this knowledge gap is particularly important to be filled as the well-researched effects of red tape may not always apply to all types of red tape. An example of this difference is the higher negative influence that intraorganisational red tape has on individuals in comparison to externally imposed regulations (George et al., 2021).

The negative effects that are mentioned above were determined to be lower organisational performance and employee outcomes for sectors where red tape is efficient (George et al., 2021). The definition of red tape is often equated with its effects. Defining red tape by the negative effects of rules and procedures may be practical in some instances (Pandey et al., 2002) but it does not display the variety of what red tape is (Borry, 2016). The effects of red tape are usually implied or associated with alienation. This term describes the state of separation between the work one does and oneself according to Pandey et al. (2002). As such this concept results in “effort expenditure on the job, performance on the job, absenteeism and a high turnover” (Kanungo, 1982; according to Pandey et al., 2002, p.785) The effects that are otherwise reported to be associated with red tape such as negative emotions like anger, frustration or confusion (Hattke et al., 2019). The negative emotions are not influenced by whether a regulation is perceived as meaningful. The study that researched this, determined two causes for this observation. One proposed interpretation is the difference in speed of emotions as a fast intuitive response and the slow deliberation that the valuing of a regulation regarding its meaning requires. The other offered explanation refers to Bozeman (2012) who determined that red tape can be perceived as such when the burden of complying with rules is higher than the values that the stakeholder associated with the regulation. While both rulings appear to be possible, the study supposed that the longer deliberation does not align with the intuitiveness of

emotional responses (Hattke et al., 2019). Nevertheless, this reference to Bozeman allows the questioning of red tape as an objective measurement. While the objectiveness of red tape has been questioned before (Borry, 2016), the new question that the weighing of values poses is whether all regulations can be perceived to be red tape as long as the perceived cost outweighs the perceived value. As this possibility does not influence the research design of this thesis as the TIRT scale allows for subjectiveness while giving some objective guidelines, this is likely an important question regarding the future of red tape research. Concluding, one can say that while the effects have been researched the exact definition and an overview of all effects are still missing in the literature.

With regards to green tape the state of research on its effects is even less well determined. As the term has been coined only in 2008 by DeHart-Davis, the concept has not received as much attention as its opposite red tape (Maris, 2021; Maris, 2022; Michel, 2017; Kyle, 2021). One might fault a negativity bias in research for this circumstance (Rozin et al., 2001). However, one study was conducted on the effects of green tape which concluded that green tape has positive effects on turnover rates. This study did not test for causality which is why the knowledge gap for the effects of green tape persists (Kaufmann et al., 2022).

The subjects of this study are professionals in a health care setting, focusing on intermediaries while previous research was mainly conducted with regards to citizen-stare interactions when researching administrative burden. Generally, the role of third-party actors has previously been disregarded in research. Few studies have been conducted on other actors such as professionals. In the theories surrounding administrative burden, stakeholders can fulfil four different types of roles. They can be political stakeholders, who influence politics and lobby for certain regulations, change the costs of interaction by either lessening learning costs through programmes or other non-profit efforts or they “can alter cost in their role of service providers” (Herd et al., 2018, p.38). Lastly, third parties can be the goal of regulations when these aim to improve or limit access to the services provided (Herd et al., 2018).

In addition to the research that is explicitly associated with red and green tape and administrative burden, the research done into Public Service Motivation (PSM) is valuable to this thesis. PSM is defined as “the beliefs, values and attitudes that go beyond self-interest and organisational interest, that concern the interest of a larger political entity and that motivate individuals to act accordingly whenever appropriate” (Vandenabeele, 2007, p.547). PSM is usually focused on the motivation that employees in public organisations feel and have to do their work and is used in Behavioural Public Administration research regarding nudging and policy incentives. The effects of red tape on PSM of public servants were found to be detrimental and not moderated by most of the PSM-dimensions such as compassion, self-sacrifice or attraction to policy making. An exception was the dimension of “commitment to public interest/civil duty”, which did decrease the resignation of employees (Giauque et al., 2011). Another study applies PSM to the healthcare sector and not only determines that PSM applies to doctors but also resulted in the conclusion that control policies lead to a reduction in intrinsic motivation of doctors (Berdud et al., 2016). The results of this study directly refer back to the research of this paper as they establish a link between the motivation of employees and their reaction to red tape and determine that if the study results by Giauque can be transferred to the private sector, the commitment to civil duty might mitigate the negative effects of red tape. This possible connection ties back to Bozeman’s (2012) assumption that value clashes lead to a higher perception of red tape.

These last sections relate to the context in which research is conducted in, beginning with the focus on physiological healthcare systems in opposition to mental healthcare. While the medical community has been placing a higher emphasis on mental healthcare, the social sciences have done much less research, especially regarding administrative burden. As detailed in previous sections, most studies of the key concepts are focused on public organisations. If research is conducted in the field of healthcare, it is rarely done in the mental healthcare field. The study by Michel (2017) is only an example of such a practice but stands exemplary for a larger issue. Referring to the societal importance of mental healthcare and the growing problems of burnout and increasing demand, this knowledge gap needs to be closed. While some might argue that the mental healthcare sector is simply another part of the

healthcare system, the processes and administrative requirements are different in all sectors, which requires individualised assessment (Walker et al., 2015).

Another general knowledge gap that this thesis aims to resolve is one regarding the methodology of research with administrative burden. While survey research designs are the most common in administrative burden research, the survey questions usually perturb the individual instances of administrative burden or give specific examples of situations (Kyle et al., 2011). While this practice is not detrimental to these research designs or methodological integrity of individual papers, it does not further the field of Public Administration research. It can be seen in the operationalisation of administrative burden for this thesis that no general operationalisation exists, and this thesis poses a first step in its development.

The last paragraph on the state of research is a summary of the most important authors in this field. The authors who introduced key concepts are namely Bozeman who popularised the term red tape, DeHart-Davis who introduced the concept of green tape in 2008 and Moynihan and Herd who wrote a book on administrative burden and conceptualised the term. Other important authors include Pandey, Borry who introduced the TIRT scale, Kaufmann and Campbell.

2.3 Hypotheses

The past section provides alongside an interview the basis for the hypothesis that are tested in this research. In accordance with the research by Kaufmann et al. (2022) and Hattke (2019) regarding the effects of green and red tape and the definition of administrative burden by Herd et al. (2018) the following hypotheses can be assumed:

Null-Hypothesis: The administrative burden for green tape is the same as for red tape.

Hypothesis 1: The administrative burden is higher for red tape than for green tape.

The second hypothesis is based on the example of the European General Data Protection Regulation (GDPR) for red tape which was determined in the interview. In addition to this, the research by Hattke

(2019) regarding the missing difference of negative emotions between meaningful and meaningless regulations and the value weighing that was mentioned by Bozman (2012) allows for the hypothesis that:

Hypothesis 2: Red tape regulations that relate to data privacy will result in higher administrative burden.

The last hypothesis stems from the definition of administrative burden and the different costs (Herd et al., 2018) that are associated with the concept. Additionally, the definition of red tape gives examples of all three administrative burden costs (Borry, 2016) which allow for the following assumption:

Hypothesis 3: The individual items of administrative burden will all be higher for red tape than green tape.

These hypotheses will be tested by analysing the survey data and evaluated in the discussion section of this thesis.

3 Method

3.1 Data Collection

3.1.1 General Research Design

To answer the research question and sub-questions, a mixed methods survey was chosen as the data collection method. As the survey actively collected information from participants, the approval of the Ethics Board of the Behavioural, Management and Social Sciences faculty was obtained. The comparative nature of the research question required data points for the administrative burden of both green and red tape. For this purpose, a questionnaire was developed which was hosted on Qualtrics and distributed among an organisation which is part of the youth mental healthcare in the Netherlands. This organisation has several locations across the Netherlands and treats patients aged 0 to 18 with a variety of different diagnoses. With around 1000 employees this organisation is rather large and provides a sufficient basis for survey-based research. The exact sampling of the participants was based on an interview that was held prior to the distribution of the survey with one of the employees of the organisation. The interviewee is a member of the staff that implements governmental regulation into organisation policy and ensures the quality and security of the care offered to patients. During the interview, the results of which can be seen in more detail through a transcript in the appendix of this thesis, the interviewee distinguished the group of “Professionals” within the organisation. To this group which contains around 700 to 800 professionals, the survey was intended to be distributed. The term “Professionals” encompasses all employees that have a direct link to patient treatment. Such include psychologists, psychotherapists, psychiatrists and social workers. The survey was eventually distributed to 318 possible participants on the 17th of July 2023. The distribution was done by the coordinator of the cooperation via email with an accompanying text by the researcher herself. The survey was in the Dutch language and translated by a native speaker. The data collection concluded on the 8th of August at noon.

3.1.2 Interview Design

As previously mentioned, an interview was needed to obtain some pieces of information that were not obtainable otherwise or very specific to the research organisation. As the interview was conducted to collect data prior to the analysis, it belongs in the method section and not the result section. Since the collected information is relevant to the understanding of the thesis, the design will be presented in this paragraph and a full transcript can be found in the appendix of this thesis.

As the survey and the interview required the acquiescence and knowledge of personal contact details, the approval of the ethics board was acquired. This interview was conducted on the 22nd of June 2023 with an employee of the organisation who works in quality management and policy maker. During the interview, three main questions were answered: one about their role within the organisation, one regarding the group that would receive the survey and one regarding exemplary regulations that apply to this group. These questions aimed at determining the sample for the survey and examples of red and green tape to illustrate these concepts to the participants.

3.1.3 Interview Results as basis for Survey Design

The interview was focused on identifying the survey population as well as examples of red and green tape in the context of the organisation. The interviewee differentiated between staff and professionals in the organisation. Staff is responsible for the administrative side of the organisation while the professionals have direct patient contact within the context of treatment. Regarding an example of red tape, the interviewee mentioned the European privacy law General Data Protection Regulation (GDPR, AVG in Dutch). This law has various expressions in the daily lives of professionals as it encompasses a wide range of data protection regulations. The red tape in the survey focuses on those regulations that prohibit other patients' names to be entered into patient files. Some professionals feel that this is necessary as patients interact with one another. However, as somebody can request access to their file, this is not allowed. This example fulfils the three characteristics of red tape: burdensome, inefficient and not necessary, at least partially according to the interviewee. The determination of an example of

green tape required more research by the interviewee and continuous contact. During this conversation, the “Beroepen in de Individuele Gezondheidszorg” (BIG) registry was brought up. This Dutch regulation requires healthcare employees to be registered in a national registry to be employed. This regulation aims to provide quality care for all patients in the Netherlands. The interviewee determined that this regulation is necessary, efficient and has little burden associated with it. Therefore, this regulation was chosen as the example of green tape.

3.1.4 Survey Design

3.1.4.1 Operationalisation

Administrative Burden

To operationalise administrative burden, the different items were developed from the definition and the prior examples of operationalisation. The three distinct aspects of administrative burden learning, compliance and psychological costs were considered.

As the organisation in which the survey was distributed differentiates between staff and professionals who fulfil different tasks the mechanism of learning cost is not easily adapted into a survey item. The survey was distributed to professionals as they have direct patient contact. The staff is responsible for the adaptation of governmental rules into policies for the employees to follow. The “Professionals” still experience learning costs as they must learn how to fulfil the requirements of regulations. While learning costs are usually connected to the costs associated with learning of regulations, this thesis will focus on the learning costs that are connected to learning how to manage those regulations.

The learning costs were divided into three items. One of which stated that the participant spends a large amount of time learning to follow regulations, while the other refers to the simplicity of understanding and the last one inquires if special training or instructions were required.

The items that are associated with compliance cost amount to five different items. They refer to the amount of time spent on regulations and the appropriateness of that time, the percentage of time

spent on regulation compliance and the repetition of regulations both for the same patient as well as daily. The last item states that adherence to regulations is intuitive and simple.

Five items refer to psychological cost. Two aim to determine the happiness of the participant with the regulations while the two other items relate to the appearance of the profession, first towards younger generations and second towards patients. Lastly, the fifth item describes the participant's perception of a need for change.

Each of these costs is an index in the analysis and is part of the concept of administrative burden.

The operationalisation of administrative burden and red and green tape is presented in a table in the appendix.

Red Tape

The TIRT scale was used for this survey. The three principles of burdensomeness, inefficient and missing necessity were explained to the participant and contextualised by giving an example. Therefore, red tape is measured objectively as well as subjectively. The effect of the subjectiveness of some aspects was attempted to be negated by requiring only two out of the three aspects.

Green Tape

While the five principles of green tape that were mentioned in the definition give more detail with regard to its operationalisation, this paper will orientate itself towards the antithesis of red tape. This is done to allow the participants of the survey to understand all necessary concepts as easily as possible due to their unfamiliarity with the terminology and context. A similar point can be made on the attribute of written requirements. As the red tape regulations that are analysed in this context are external control red tape passed and enforced by the government towards organisations, the analysed red tape is a written regulation as well. Therefore, this differentiation cannot be made in this paper.

3.1.4.2 Questionnaire Design

From this operationalisation of administrative burden, the same 13 statements needed to be rated based on the accuracy of the statement for each participant for both green and red tape. To prevent habitual behaviour in the answering, some items were phrased the opposite way. These biases can be categorised in different ways. The most common ones are extreme response bias, social desirability bias or other response set biases like central tendency bias or acquiescence bias. The biases were mitigated with various methods. Through the survey as research design, the social desirability bias is lessened.

The ordering of whether the participant saw the answer option of red or green tape first was randomised, which was a mitigation strategy. This ranking took place on a 7-point Likert scale with the options ranging from “Strongly Agree” to “Strongly Disagree”. One of the statements regarding the emotions of the participants was worded differently and required another set of answer options which ranged from “Great”, “Happy”, “Satisfied”, “Neutral”, “Dissatisfied”, “Unhappy” to “Annoyed”.

The participants were asked to rank these items individually and they were given the definition and an example of red tape and green tape. Two open questions are included regarding which other green or red tape the participant encounters in their daily lives. These questions pertain to the individual experience and serve as an additional data point for the analysis.

Lastly, the survey included questions towards the participants’ demographic markers as control variables. These variables were age, gender, work experience in general and in the organisation as well as the specific profession of the participant.

3.2 Data Analysis

The analysis of the data collected in the survey is split between the statistical analysis of the quantitative data and the qualitative analysis of the open questions.

Before the survey was conducted, a power analysis was calculated to determine the effect size of the survey. This was done using the G*power tool by the Heinrich Heine Universität in Düsseldorf with the effect size of 0.06 and 0.14, taken from previous studies in the field of public administration. The Hattke et al. article from 2019, uses the effect size of 0.06 for small, anticipated effects and the value of 0.14 for medium effects (Hattke et al., 2019).

The answers to the open questions were translated back to English by a native speaker. The reoccurring topics were coded by theme and category and the frequency of these mentions was counted. Any replies that did not answer the question were disregarded for this study. The results were put in a table for easier visualisation.

The statistical analysis of the survey was conducted with the statistical software R to determine any statistically significant correlations. The responses were recoded with a traditional coding system. Items 6 and 8 were phrased oppositely to the other items and were adjusted accordingly.

Replies that were filled out only partially were excluded as this might lead to a misbalance in the administrative burden comparison between red and green tape. A declining sample size makes a fair comparison impossible. There was one reply where the control variables were not filled out while answers regarding the dependent variable were complete. This response was included in the t-test as it contained all relevant information.

To begin, the descriptive statistical measures were calculated. The comparison between red and green tape and the administrative burden associated with both was made by using a matched pair t-test. To compare the score of administrative burden of red and green tape, all measurements of the individual items were added to a total number for each independent variable. In addition to this, the individual items and indices of administrative burden were compared as well. The distribution of the control variables was calculated to determine if the sample is representative.

The analysis continued with the calculation of Cronbach's Alpha to determine the internal consistency of the items that make up administrative burden and administrative burden as a concept. This

calculation determines whether the index is reliable about what is being measured. This value was calculated for all costs and administrative burden as a whole for both red and green tape.

Afterwards, a series of t-tests was conducted to determine if the difference between the scores of the administrative burden for green and red tape are significant. These t-tests were conducted for both the overall administrative burden as well as the individual costs.

4 Analysis

4.1 Results

This section describes the results of the analysis conducted to answer the research question: “How do green and red tape influence the daily work of healthcare professionals regarding their administrative burden?”.

4.1.1 Power analysis

Firstly, a G*power analysis was conducted using the literature-based effect sizes of 0.06 for small effects and 0.14 for medium effects. The analysis determined that a sample size of 1826 for small effects and 337 for medium effects is necessary. The reply rate was 45 with 16 complete answers, some of which did not fill in the open questions or part of the control questions and one partial answer without control variables.

4.1.2 Qualitative analysis

The qualitative analysis includes 14 replies for the open question regarding examples of red tape and 12 for the open question regarding examples of green tape. The answers were coded by theme and the number of mentions for the individual examples were counted. This resulted in a table which can be referenced in the appendix. The common themes for green tape are the different registries for professionals and work processes with a distinction for agenda setting. The themes for red tape range from privacy-related regulations like the GDPR (Dutch: AVG) to contact with the municipalities to work processes with one additional mention of time registration requirements. One answer to the open

question on red tape focused more on the nature of the survey and did not answer the question. Therefore, it was not considered during the analysis.

The themes that were mentioned the most often with 10 responses for red tape and 8 for green tape were similar or identical to the examples of green and green tape given for the Likert scale statements. The responses for red tape and the AVG gave more details on which parts were perceived to be red tape. A lot of the responses focused on the privacy of data and the additional task associated with adhering to these regulations. These were grouped under the AVG/ privacy theme (Table 1).

In the answers to the green tape open question, the focus lies on the registration processes. One response mentions that the "BIG registration is a good example" (Table 2).

Something of note is the doubling of the theme of work processes regarding both red and green tape. While there are answers to both questions that mention this theme, the focus lies on different parts of the work processes.

4.1.3 Quantitative analysis

With a sample size of 17, the administrative burden score for red tape is 68,471 and 51,588 for green tape. These results show in combination with the scores for the different costs of administrative burden that a difference in administrative burden for red and green tape is observable. In all observed indices is the mean of red tape higher than the one for green tape. The difference for administrative burden is the highest with 16,882. The mean differences between compliance and psychological cost are almost identical with 7 and 6,941 respectively. Learning cost has the lowest mean difference with 2,941. The statistical significance was measured with matched pair t-tests, the results of which will be outlined below. The score for all neutral answers to the items would have been 52 for administrative burden, 20 for compliance and psychological cost and 12 for learning cost. The distribution of answer categories shows a difference in percentages for both regulations even though both indicate some level of administrative burden.

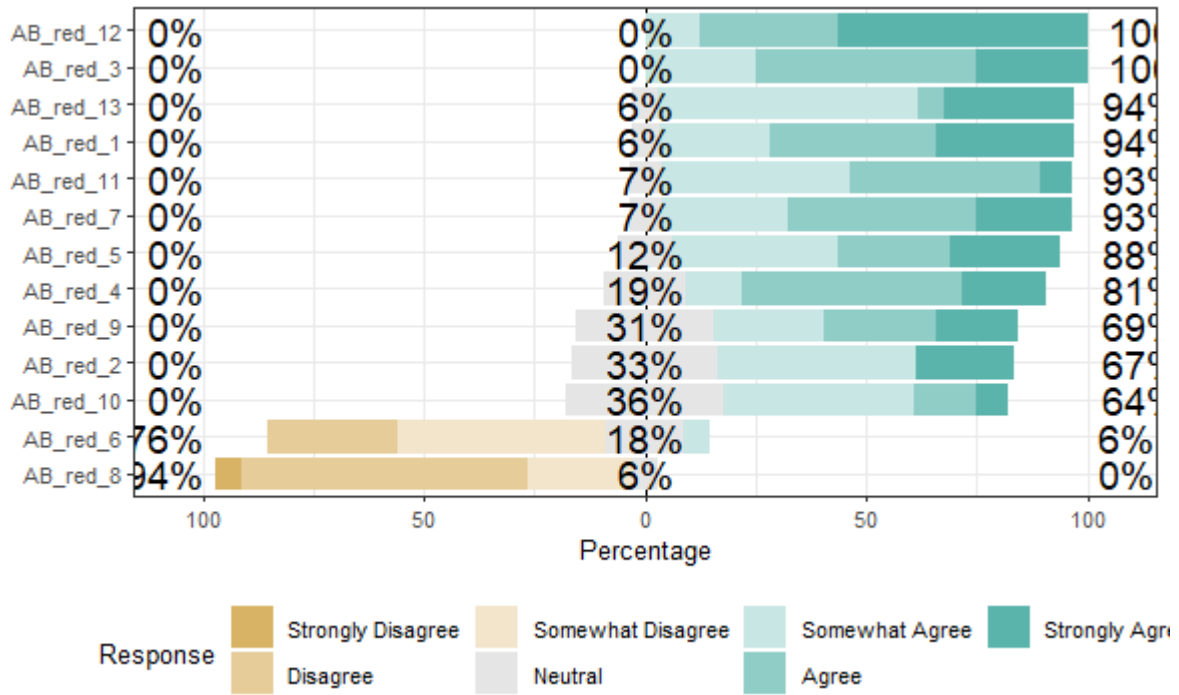


Figure 1 Distribution of AB for RT

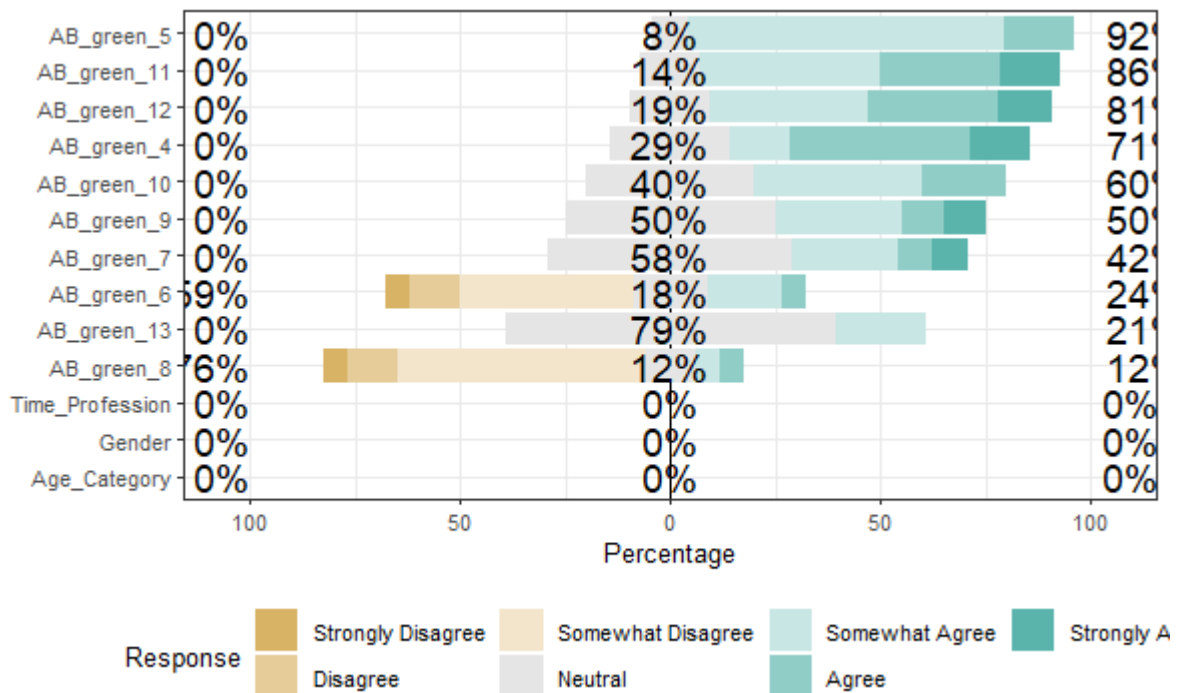


Figure 2 Distribution of AB for GT

The descriptive statistics calculate the standard deviation for all items which lies between 0,69 for item 8 of red tape and 2 for item 4 of green tape. The mean standard deviation lies at 1,34.

The mean age category was observed to be the category of 36 to 45. The smallest age category makes up 6,25% of the answers and the biggest age category of 56 to 65 makes up 18,75% of the results. Most respondents fall in the age category of 36 to 45 with 31,25%. The control variable of age is very unevenly distributed with 93,75% of all respondents reporting a female gender and 1 male participant. The mean time that participants have been in their profession is 15,13 years with a minimum of 1 year and a maximum of 35 years. The mean time that participants have been part of the organisation is 9,5 years. For this variable, the minimum value is 1 year and the maximum is 21 years. The last control variable regarding the specific profession of the participant resulted in a mixed representation of professions. 6 participants are psychiatrists, 3 psychologists and 1 person is a psychotherapist. Six participants reported another profession than the ones that were offered as answer options. These results ranged from two doctors of psychology, one family therapist, two psychomotor therapists and one general doctor.

Table 3: Age- control variable: distribution in percentages

	18-25	26-35	36-45	46-55	56-65	older
responses	6,25%	25%	31,25%	18,75%	18,50%	0%

Note: n= 16

Table 4: gender- control variable: distribution in percentages

	male	female
responses	6,25%	93,50%

Note: n= 16

Table 5: profession-control variable: distribution in real values

	Psychotherapist	Psychologist
responses	1	3

Note: n= 16

Cronbach's Alpha was calculated for all indices afterwards. In the table below, the alpha values of those calculations are outlined which have been rounded to the third decimal. However, as the raw alpha values are partially below 0,6, the results are partially statistically insignificant.

The most extreme example of this is the indices for learning cost. With an alpha value of 0,023 for red tape and 0,174 for green tape, the items of these indices do not seem to measure the same concepts. With alpha values of 0,597 (red tape) and 0,53 (green tape), the indices of psychological costs are showing poor internal consistency of the items. The indices for compliance cost are higher at 0,604 for red tape and 0,703 for green tape. With these values the items can be considered to measure the same concept, however, further improving the operationalisation is advisable. While Cronbach's Alpha calculations for the subindices of administrative burden show non-existent to improvable internal consistency, the values for administrative burden prove the reliability of the operationalisation with values of 0,771 for red tape and 0,802 for green tape.

The statistical program recommended recoding some variables which was done for the index of learning cost and psychological cost for green tape. The recoding of item 6, which says that understanding and following these regulations is easy, for learning cost resulted in an alpha value of 0,5. While this value is still not statistically significant, it is an improvement on the previous value of 0,174. A similar improvement can be seen for the alpha value of psychological cost. The original value of 0,53 is increased to 0,64 when item 13, which measures the participant's feelings about the regulations, is recoded.

Table 6: Descriptive Statistics and t-test of items

		descriptive statistics				t-test		
		mean red tape	mean green tape	sd red tape	sd green tape	mean difference	p-value	confidence interval
compliance	item 1	5,71	4,53	1,31	1,7	1,18	0,03	0,19:Inf
cost	item 2	3,76	2,82	1,75	1,33	0,94	0,01	0,32:Inf
	item 3	5,76	3,88	1,2	1,8	1,88	<0,01	0,9:Inf
	item 4	5,47	3,35	1,33	2	2,12	<0,01	1,2:Inf
	item 8	5,71	4,82	0,69	1,13	0,88	0,01	0,29:Inf
learning cost	item 5	5,47	4,29	1,18	1,36	1,18	<0,01	0,44:Inf
	item 6	5	4,53	0,87	1,28	0,47	0,1	-0,15:Inf
	item 7	5,18	3,88	1,59	1,5	1,29	<0,01	0,56:Inf
psychological cost	item 9	5,18	3,82	1,24	1,47	1,35	<0,01	0,74:Inf
	item 10	4,53	3	1,23	1,37	1,53	<0,01	0,1:Inf
	item 11	5	3,59	1,32	1,73	1,41	<0,01	0,55:Inf
	item 12	6,12	5,12	1,5	1,41	1	0,03	0,09:Inf
	item 13	5,59	3,94	1	0,75	1,65	<0,01	1,15:Inf

Note: n= 17

The matched pair t-tests were conducted using the previously mentioned indices, the different costs and the administrative burden index, which includes all items. For this test to be administered some requirements needed to be fulfilled. The data needs to be normally distributed. A Shapiro-Wilk-test was conducted with a result of 0.09 which is over the significance level of 0.05. Therefore, the survey data is normally distributed. The other requirements of t-tests such as a ratio or interval scale, a random sampling of participants and homogeneity of variance are given through the form of data (Kim et al. 2019).

The t-test results show significance for all indices. The p-value of the calculation for administrative burden is 1.214835e-05. This p-value is significantly below the 0,05 which is the significance level for most research in social science. A similarly low value can be observed for psychological cost with 8.824266e-06. The indices of compliance cost and learning cost have p-values below 0.05 as well with

0,00033 and 0,000123 respectively. The mean difference between the administrative burden for red tape and the administrative burden for green tape is 16,882 which matches with the mean difference that can be seen calculation of the scores in the descriptive statistic. The mean difference for learning cost is 2,941, 7 for compliance cost and 6,941 for psychological cost. An important observation for all indices is the fact that the 95% confidence interval is determined to be between a number above 0 and infinity. This confidence interval states that for example, the true difference between the administrative burden of red tape and the administrative burden of green tape could lie between 11,85 and infinity.

Table 7: Descriptive Statistics, Cronbach's Alpha and t-tests of indices

	descriptive statistics		Cronbach's Alpha (recoded)		t-test		
	score red tape	score green tape	alpha value RT	alpha value GT	mean difference	p-value	confidence interval
Administrative Burden	68,47	51,59	0,771	0,802	16,88	<0,01	11,9:Inf
Learning cost	15,65	12,71	0,023	0,174 (0,5)	2,94	<0,01	1,85:Inf
Compliance cost	26,41	19,41	0,604	0,703	7	<0,01	4,09:Inf
Psychological cost	26,41	19,47	0,597	0,53 (0,64)	6,94	<0,01	4,93:Inf

Note: n= 17

4.2 Discussion

In the following section, the results will be discussed within the context of previous research and interpreted accordingly. Additionally, any limitations to the research will be presented and recommendations for future research will be given based on the results and the limitations.

4.2.1 Answer to Hypotheses

The results of this paper serve to answer the research question and verify or falsify the hypotheses that were developed based on the theories and state of research. The quantitative survey results were used

to verify the first hypothesis and by extension falsify the Null-hypothesis. The matched pair t-test determined a statistically significant difference between administrative burden for red tape and green tape. The difference was significant for a higher value of the administrative burden of red tape than green tape. The results of this t-test will be outlined in detail in the section on the quantitative results.

The second hypothesis can be verified as well as the qualitative data allows the assumption that regulations regarding privacy are associated with a higher administrative burden than other regulations. This verification will be explained in detail as part of the qualitative data discussion.

The last hypothesis surrounding the individual items of administrative burden can be verified by using the results of the t-test as well as the descriptive data. As all t-tests show a significant difference in favour of administrative burden, except item 6, this hypothesis is technically falsified even though the hypothesis that all items will show a higher burden for red tape than green tape is true for almost all items.

The Null-Hypothesis: "The administrative burden for green tape is the same as for red tape." is falsified. Hypothesis 1 regarding the higher administrative burden for red tape than for green tape is verified. The second hypothesis can be verified as well. The third hypothesis regarding the higher administrative burden for all items is falsified as one item does not fulfil this condition.

4.2.2 Qualitative Analysis

The open questions that were part of the survey resulted in qualitative data which was analysed by coding the answers according to the themes that appeared in them. In the same way as the quantitative data analysis, this data set is underpowered, and any conclusions or interpretations cannot be applied to the scientific field or practical world without further research.

What can easily be perceived is the frequent mention of the topics that were represented in the examples given to the participants during the Likert Scale questions. This correlation can be perceived in different ways. One interpretation would be that different biases such as the social desirability bias

or confirmation bias have impacted the participant's response. The other interpretation is based on the accuracy of the example and assumes that the examples were well chosen due to the agreement among the participants. These possible explanations are the reasoning behind the practical verification of the second hypothesis. While a correlation between the topic of data protection and red tape can be observed from the data, the statistical significance of this observation has not been analysed nor can any claims about causality be made.

The observation that privacy is a common red tape, ties back to the second hypothesis formulated at the beginning of this thesis regarding the higher administrative burden for regulations that are associated with data privacy. While this sample is not large enough to make general statements, a possible relationship can be assumed. The possible result might be grounded in the different values that individuals have. In the theory section of this thesis, the objectiveness of red tape as a variable in the field of Public Administration is a topic of discussion. As Borry (2016) mentioned, smaller sample sizes increase the impact that personal values and impressions about red tape have on the objectivity of the measurement. The definition of red tape that was given to participants during the survey describes red tape as being burdensome, unnecessary and inefficient. While some individuals may perceive the protection of data as a necessary regulation, others might not agree. The survey attempted to negate this subjective assessment by requiring only two aspects to be present for a regulation to be red tape. This operationalisation of red tape may have weakened the soundness of the concept; however, it was necessary to attempt to receive a relatively objective variable with the red tape. Nevertheless, the possible effect of the subjectiveness of red tape cannot be disproven.

To disprove or prove the effect that different values have on the perception of red tape, a study with a higher sample size or a cross-country design would be necessary. The first study would analyse the difference between individuals whereas the second study would focus on the difference in values between countries and if these values can be seen in the perception of red tape as well (Ilhan et al. 2020)..

A last observation that can be made concerning the qualitative data, is the relatively high representation of work processes and internal red tape. With 9 out of 14 participants mentioning “Work processes” or “Declarations” as examples of red tape, the assumption can be made that red tape is perceived to be more burdensome when the regulations originated within the organisation. This impression is supported by the study by George et al. (2021). They proved that intra-organisational red tape has a higher negative impact than external regulations. This differentiation between the types of red tape ties back to Bozeman’s four types of red tape (1993). This observation allows the recommendation for more studies that focus on the origin of red tape and the impact it has on the effects of red tape. Any future research results might improve the internal organisation of the organisation and their handling of red tape that originates internally and of such that is imposed from the outside and their implementation of those. This possible effect can be assumed as some answers regarding examples of green tape described work processes such as agenda setting, time registration and certain practises in the treatment of patients (7.2 Table 2, coding table green tape).

4.2.3 Quantitative Analysis

With regards to the discussion and analysis of the results of the quantitative analysis, these aspects need to be broken down into the different statistical tests that were conducted.

4.2.3.1 *Descriptive Statistics*

During this portion, the control variables will be discussed. The mean age category of respondents was 36 to 45. This age bracket is likely representative of the mean age of mental healthcare employees, as the mean age of this profession is 44 in the United States of America (zippia n.d.). As both the US and the Netherlands are countries with similar demographics and economic status, a similar mean age can be assumed for the Netherlands. While the organisation that was researched for this paper has no data on the age of its employees, the assumption can be made that it is similar to the national average in the Netherlands. Additionally, the gender control variables show a similar unusual distribution. The percentage of 93,75% females in a survey is not representative of the population as a whole. While

women do make up the majority of healthcare employees with 65,1% in the US (zipia n.d.), this survey has an overrepresentation as a percentage of 6,25% for men is too small for this study to be representative. The average of 9,5 years within the organisation cannot be compared to the national or intra-organisational average nor can the average time within the profession which is 15,13 years. While six people indicated other professions than the ones mentioned by the interviewee beforehand, the other groups were not equally distributed either.

As the values for learning cost and psychological cost were below the significance level for both green and red tape, the operationalisation of these concepts needs to be reworked. However, as the alpha values for psychological cost were in the middling range, the items that were used in this thesis may be used as a jumping-off point for future research. The learning cost items need to be reworked in their entirety as the alpha values were near zero. This is especially evident when the recoding of the variables is taken into consideration. Two variables were recoded to determine a second alpha value for the learning cost and psychological cost of green tape. The item "These regulations are easy to follow and understand" (survey questionnaire) was recoded for the learning cost index. The mean of this variable does not differ much from the other variables that are associated with the administrative burden of green tape. With regards to the items that form learning cost, its mean is the highest but not by a large margin. The same can be said about item 13 which was recoded for psychological cost. It does not have one of the most extreme means of administrative burden or psychological cost. The explanation of this difference cannot be based on the general operationalisation of administrative burden, as this concept has a significant internal consistency. To determine the cause of these differences, further studies with larger data sets are needed to determine if the significance of these indices is based on their operationalisation.

Another descriptive statistical value that needs to be discussed is the standard deviation. The ratio of 2:1 for the highest and lowest standard deviation is proposed and statistically validated as a theory by Teh et al. (2016). This data set has a slightly larger ratio than 2:1 for the highest and lowest standard

deviation of items with 2 to 0,69. However, the observation of all standard deviations of the items shows that only three items fall below 0. These items are items 6 and 8 for red tape and 13 for green tape. In combination with these results of Cronbach's Alpha, the recommendation can be made to reformulate these items and to improve upon the operationalisation of administrative burden.

4.2.3.2 *T-test and indices*

The indices and items all exhibit p-values of $<0,05$ except item 6, where the p-value is 0,1. From these results, the conclusion can be drawn that there is a statistically significant difference between most items and indices for green and red tape. However, the 95% confidence interval which spans a positive number and infinity for all items and indices except item 6, determines that the level of significance cannot be determined precisely. This is likely due to the low sample size. An explanation for the low t-test value of item 6 can be found in the small mean difference for this item with 0,47. Additionally the mean difference for learning cost as an index is the lowest as well with 2,94. From these observations as well as the table of proportions for item 6 it can be determined that training or instructions are required most of the time when a new regulation is implemented. This possible explanation has an impact on the definition of green tape. The requirement of little burden may only apply during compliance with and not the learning of green tape. This poses the question how burdensomeness can then be a defining factor of red tape (Borry, 2016).

Another observation that can be made based on the indices is that the administrative burden score for green tape does not exceed the score of only neutral answers. While this difference is only small with 51,59 instead of 52, it is meaningful as it questions whether green tape leads to administrative burden at all. Since the mean value of all items of administrative burden is below 4 for green tape, the mean answer to the items is in disagreement with the statements that describe administrative burden. While this result does not negate the claim that administrative burden and red tape are two different concepts, it does show that administrative burden is not perceived to be a result of green tape in all of its aspects. The score of learning cost for green tape shows that this index is an effect of green tape

since its mean is higher than the mean for neutral answers. This allows the conclusion that while administrative burden does not result from green tape, the learning costs that are associated with it do. This partially disproves the claim that administrative burden and red tape are interchangeable concepts (Campbell et al. 2019) since learning cost is part of the administrative burden. While the t-tests conclude that the differences are statistically significant, the standard deviation can not give such an assurance for the means of the items and indices. Further research into the connection between administrative burden and green tape is necessary to prove statistical significance.

A last result that needs to be discussed is the high mean psychological cost of red tape. Both the t-test as well as the means of all items show that psychological costs are an effect of red tape to some extent. This ties back to the theory of PSM and its application to the healthcare system. In conjunction with the study that lists control policies as an undermining factor to doctors' internal motivation (Berdud et al. 2016), the assumption can be made that red tape leads to less motivation to work in the healthcare sector. The connection between this study and the PSM study by Giauque (2011) which determines that only commitment can mitigate the effects of red tape, determines another knowledge gap in the field of Public Administration. The motivation of professionals with regard to red tape needs to be investigated further, especially with regard to the intermediary position that professionals hold between the state and patients (Herd et al. 2018).

In reflection of all these results, the argument may be made that administrative burden is not affected by green tape and red tape but rather a concept that describes the effects of regulations. As green tape does not have a score higher than the required amount to positively correlate with administrative burden, the conclusion can be drawn that administrative burden describes all effects that are associated with red tape. The score of administrative burden for red tape is relatively high with 68,47. A complete agreement between administrative burden and red tape is not needed as administrative burden is a subjective concept and a survey cannot conclusively display a correlation between the two concepts. During the description of the state of research, it was found that a summarizing and meta-

analytical study on the effects of red tape is still missing for research. This thesis could provide a first step in the development of such a study. While the theory that administrative burden is an index of the effects of red tape appears valid based on the results of this paper, further research is needed to determine if this correlation between the two concepts has a causal relationship.

4.2.4 Limitations

The limitations of this thesis and its research have been mentioned throughout the discussion of the results and will be summarised in this section.

As seen in the result section the a priori power analysis resulted in required sample sizes from 337 to 1826. Even with a medium effect between the variables, the actual sample size of 16(17) is much too low to allow any relevant statistical results. Therefore, one can say that this study was underpowered. In addition to this, the literature basis states that the subjectiveness of the variables administrative burden and red tape are more detrimental to the success of studies if the sample sizes are smaller (Borry 2016). The limited sample size can be partially attributed to the organisational limitation of conducting this research within the confines of one organisation. This limitation originates from the organisational structure of this bachelor thesis as part of a bachelor thesis circle. The prechosen organisation is Dutch, which presents a limitation in the form of a language barrier as well. As this research was conducted as part of a bachelor thesis the research design options were limited as well. In larger studies, a pre-trial of the survey could have improved the operationalisation and structuring of the items and a larger sample size which would have resulted in more statistically significant results. The limitation that the operationalisation posed was shortly mentioned in the discussion of the quantitative survey results. As the concept of administrative burden did not have clear items attached to their definition (Herd et al. 2018), the items were not ideally formulated. Pandey et al. (2002) mentioned that the definitions of concepts are not always isomorphic to their usage in surveys and research in general. While this does not completely apply to this survey, the improvement of the operationalisation of administrative burden is not completed with this thesis.

On the systematic side of limitations that are attached to the survey, biases need to be mentioned as well. While some mitigation strategies such as randomisation of the order of questions and the opposite formulation of some items, were used, the effect of biases like the social desirability bias, acquiescence bias or central tendency and extreme response bias cannot be disproven with this study.

The last bias that was mentioned in the method section, is the negativity bias. This bias can be observed in the interview that was conducted in advance of the survey. The interviewee was able to recall examples of red tape more easily than of green tape. This could be traced back to the interviewee's profession of implementing policies and assessing the quality of care. However, the negativity bias that is observable in the research with a higher number of studies on the effects of red tape than on green tape (Kaufmann 2022, Hattke et al. 2019, Pandey et al. 2000), might be an additional sign that more research is needed to prove or disprove that negativity bias is present in research regarding red and green tape and administrative burden.

5 Conclusion

5.1 Answer to Research Question

This thesis aimed to improve the daily lives of mental healthcare professionals by measuring the effect that green and red tape have on their administrative burden. For this aim to be fulfilled several subquestions needed to be answered. Examples of regulations that qualify as red tape were given by the interviewee and concerned the GDPR which was supported by the results of the qualitative data analysis of the survey. Regulations that require employees to register themselves and certain work processes such as agenda setting were perceived to be green tape. The concept of administrative burden was itemised according to the costs that are associated with it, them being learning, compliance and psychological cost. The research question: "How do green and red tape influence the daily work of healthcare professionals regarding their administrative burden?" was answered through this study. The administrative burden is influenced by red tape stronger than by green tape. Through the observations

of the survey, the theory was developed that administrative burden describes the effects of red tape which needs to be proven in future research.

5.2 Knowledge Gap and Future Research

While the results of this thesis attempt to resolve the knowledge gaps that are present in research today, it poses and exposes new questions that need to be answered.

To certify the results of this research and to determine the practical implications, there is a need to repeat this study with a larger sample size which matches the required number of replies of 1826 for small effects and 337 for medium effects more closely. Even if all recipients of this survey had replied, the effect size would have still been too small. The certification of results is especially important for the development of red tape and administrative burden as concepts that are linked through causality. The operationalisation of these concepts and green tape is an important aspect of the knowledge gap that this thesis attempted to resolve.

The recommendation for future cross-country research of how values influence the perception of red tape is based in the quantitative result of this thesis.

Another study would be necessary to determine if the explanation of the similarity of item 6 for green and red tape is sound. For this, the study would analyse if the item needed to be split into training and instructions to see if there is a difference in both kinds of learning cost. Another way to improve this item would be to have the respondents give an estimate of how much time they needed to spend on learning a new regulation. This might then show a difference in the time spent on learning red tape and green tape.

The significance of this research lies in the exploration of a new focus of research into red tape, as previous research focused on the direct effect of red tape on patients, clients or consumers whereas this paper explores the intermediate position that professionals hold in the citizen-state interaction. The new insights of this thesis allow the question of whether the same regulations that cause

administrative burden with professionals also cause such burden for patients. Further research needs to conduct for this branch of administrative burden research.

5.3 Societal Implications

The implications that this study has on the scientific community were outlined through the recommendations for further research into the results of this thesis. From a societal point of view, the implications of this study are not as clear as the results require more research.

However, based on the current results of this thesis, some recommendations can be made. The qualitative analysis showed that the internal work processes were perceived negatively to some extent. This impression is supported by research that determines that internal red tape has worse effects on organizational performance and employee outcomes (George et al. 2021). Additionally, studies show that the management of red tape has an impact on the effects that red tape has on employees. A strategy that is especially recommended is proactivity (Walker et al. 2005). Such proactive activities can include lobbying policymakers, building cooperations with other similar organisations to increase influence, collecting support from the public and directly petitioning policymakers.

6 References

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- Zippia (n.d.) MENTAL HEALTH WORKER DEMOGRAPHICS AND STATISTICS IN THE US

7 Data Appendix

7.1 Figures

Figure 1 Distribution of AB for RT	24
Figure 2 Distribution of AB for GT	24

7.2 Tables

Table 1: Coding table for open question regarding Red Tape

Open Red Tape Dutch	Open Red Tape English	AVG/ Privacy regulations	Municipality contact	Time registration	Work processes	Other
Tijdschrijven / verantwoord worden wat ik doe AVG Administratieve handelingen rondom verlengen beschikkingen / proberen contacten te krijgen met gemeentemedewerkers Feestdagen per feestdag vrij vragen via formulier	Time registration / having to justify what I'm doing / AVG administrative actions to do with extending dispositions / trying to get into contact with municipal workers / having to ask for each bank holiday off with a form	X	X	X	X	
- gebruik van usernummers (in plaats van namen) waardoor ik eerst op moet zoeken over wie het gaat; - het niet meer mogen gebruiken van een overzichtelijke wachtlijst met namen.	use of user numbers (instead of names) this leads to me having to look up who its regarding before starting.	X				
veel moeite moeten doen voor financiering van zorg, verlies van autonomie op dit vlak	no longer being allowed to use a clear waiting list with names	X				
Het invoeren van rapportages op meerdere plekken bij verschillende cliënten, doordat we niet één groepsrapportage kunnen maken maar per cliënt moeten schrijven. Daarnaast moeten we de rapportages zowel invoeren in ons eigen systeem, als in een ander systeem waar de cliënt dan bij kan.	Having to declare reports in multiple different places for different clients, because there is not 1 group report to be made but rather we have to report on each client individually. Additionally, we have to add these reports not only to our own system but also another system that the client can access.	X			X	
Ik had gehoopt dat in deze vragenlijst te lezen, want nu wist ik niet goed aan welke voorschriften ik moest denken. Sommige vind ik belastend en onnodig, maar blijkt het wel nodig te zijn (voor wet en regelgeving of anders).	I had hoped to read these in this questionnaire, because now I'm not sure what regulations I am supposed to think of. Some of them I find taxing and unnecessary, but they prove necessary (for law and regulations or other)					X
AVG aspecten	Aspects of AVG	X				

Open Red Tape Dutch	Open Red Tape English	AVG/ Privacy regulations	Municipality contact	Time registration	Work processes	Other
- AVG - Mailprogramma's met codes - Registraties in EPD voor individuen en groepen die steeds herschreven moeten worden - Al het gedoe rondom financiering met gemeentes - Alle extra regels en formulieren die we moeten invullen zoals een gezinsplan, de constante verantwoording richting de gemeente waarom iets kost wat het kost en wat we doen - en de constante verantwoording richting onze managers over onze productie.	AVG - Mailing programmes with codes - registrations in EPD for individuals and groups that have to continuously be rewritten - all the trouble around financing in the municipalities - all of the extra rules and forms we have to fill in like a family plan, the constant accountability to the municipalities about the costs and what we do - the constant accountability to our managers about our production	X	X		X	
Registratie van afspraken, herindicatie regelen bij gemeente, overmatig veel verslaglegging	Registration of arrangements, arranging re-indications with the municipality, excessive amounts of reporting		X		X	
privacy registratie tbv financier. zoals directe vs indirectie patiëntgebonden tijd.	Privacy registration on behalf of the financier. Like direct vs. indirect patient time	X			X	
verschillende eisen gemeente verklaringen bijv taxivervoer, vergoeding voor client etc	Differing demands municipal declarations, i.e. taxi, compensation for client, etc.		X			
vaste afspraken over AVG, vaste afspraken over het regelmatig opnieuw maken van behandelplannen ook als dit niet zinvol is. Dingen die je alleen mag doen als regie behandelaar en niet mag overdragen naar een andere competente collega. Veranderingen in het voorschrijven van medicatie, waarbij je veel tijd kwijt bent, ongeveer 5-10x zoveel als voorheen met papieren recepten. registreren van alles in een patiëntendossier. alles moet er in staan maar niets mag te achterhalen zijn. Dan moet het ook nog op 3 plaatsen in dat dossier anders is het niet veilig.	Fixed agreements on AVG, fixed agreements on the regular remaking of treatment plans even if it is not meaningful. Thing you can only do as "regie behandelaar" and are not allowed to pass onto a competent colleague. Changes in the prescription of medication, very time consuming, about 5 to 10 times as much time as with paper prescriptions. Registrating of everything in a patients file. Everything has to be in there but none of it can be traceable. Then it also has to be in 3 different places in the file otherwise it's not safe.	X			X	
vaak inloggen, bijzondere wachtwoord combinaties moeten bedenken voor elk systeem anders, geen koppeling dossier en JO of telefoon/mail dus alles dubbelop rapporteren, registreren is een aparte handeling	Having to log in a lot, having to think of convoluted password combinations for every system something else, no connection to file and JO (??) or phone/mail so everything is reported double, registration is a separate action	X			X	

Open Red Tape Dutch	Open Red Tape English	AVG/ Privacy regulations	Municipality contact	Time registration	Work processes	Other
AVG: afspraken komen niet goed door in de telefoonagenda, waardoor je je pc opnieuw moet opstarten, ook als je onderweg bent. Je mag geen papieren in je tas bij je hebben (lastig als je verslagen in een gezin bespreekt). Via de mail altijd versleutelen en cliënten vinden dit heel vervelend.	AVG: appointments aren't put through to the phone agenda correctly, so you have to restart your pc, even if you're on the road. You are not allowed tk have papers in your bag with you (very difficult when you're discussing reports from a family). Always having to encrypt through mail and clients find this very annoying.	X				
Het invullen van de regio (GLD) en de locatie (Apeldoorn) bij het aanmaken van de modules.	Filling in region (GLD) and the location (Apeldoorn) while creating modules.				X	
		10	4	1	8	1

Table 2: Coding table for open question regarding Green Tape

Open Green Tape Dutch	Open Green Tape English	BIG/ SKJ/NVO registers	Work processes	Agenda setting
BIG / NVO / SKJ registraties Tijdschrijven / verantwoorden wat ik doe. Dit tevens bijhouden en in mijn eigen agenda bekijken of ik voldoende uren maak.	BIG / NVO / SKJ registrations. Time reporting / having to justify what I'm doing. Additionally having to keep track of this and seeing in my own agenda whether I'm working sufficient hours.	X	X	X
BIG-registratie	BIG registration	X		
Registreren in agenda. Elke dag opnieuw van minuut tot minuut in de agenda vastleggen welke cliënt ik heb gezien, hoelang, wat er belangrijk was. Erg belastend maar het zal nodig zijn. Ik denk wel dat het efficiënter kan maar hoe geen idee.	Registration in the agenda. Everyday again from minute to minute having to report which client I saw and for how long, what was important. Very taxing, but I suppose its necessary. I do think it could be more effective but no idea how.			X
verlenging van beschikkingen	Extension of dispositions		X	
BIG Registraties beroepsverenigingen Rekening houden met de leeftijd van de jongere wbt beroepsgeheim	BIG registrations. Registrations of professional associations. Having to account for age of the young wbt professional secrecy	X		
Diagnose-indicatie koppeling	Diagnosis-indication coupling		X	
BIG herregistratie.	BIG re-registration	X		
beroepsgeheim borgen	Keeping up professional secrecy	X		
Ik merk niet dat ik er mee in aanmerking kom doordat het soepel verloopt. De BIG registratie is een mooi voorbeeld. je regelt het en het is klaar.	I don't notice contact because it runs smoothly. BIG registration is a good example, you arrange it and its done.	X	X	
BIG herregistratie, registratie beroepsverenigingen, uitzoeken welke cursus wel of niet past binnen registratie	BIG re-registration, registration professional associations, finding out which course does or does not fit within the registration.	X	X	
SKJ registratie Veel administratie qua rapportage en verslaglegging Digitaal dossier niet efficiënt	SKJ-Registrierung High administrative burden with regards to reporting and information flow Digital file not efficient	X		
Het schrijven van voortgangsrapportages.	Writing progress reports.		X	
		8	6	2

Table 3: Age- control variable: distribution in percentages

	18-25	26-35	36-45	46-55	56-65	older
responses	6,25%	25%	31,25%	18,75%	18,50%	0%

Note: n= 16

Table 4: gender- control variable: distribution in percentages

	male	female
responses	6,25%	93,50%

Note: n= 16

Table 5: profession-control variable: distribution in real values

	Psychotherapist	Psychologist
responses	1	3

Note: n= 16

Table 6: Descriptive Statistics and t-test of items

		descriptive statistics				t-test		
		mean red tape	mean green tape	sd red tape	sd green tape	mean difference	p-value	confidence interval
compliance cost	item 1	5,71	4,53	1,31	1,7	1,18	0,03	0,19:Inf
	item 2	3,76	2,82	1,75	1,33	0,94	0,01	0,32:Inf
	item 3	5,76	3,88	1,2	1,8	1,88	<0,01	0,9:Inf
	item 4	5,47	3,35	1,33	2	2,12	<0,01	1,2:Inf
	item 8	5,71	4,82	0,69	1,13	0,88	0,01	0,29:Inf
learning cost	item 5	5,47	4,29	1,18	1,36	1,18	<0,01	0,44:Inf
	item 6	5	4,53	0,87	1,28	0,47	0,1	-0,15:Inf
	item 7	5,18	3,88	1,59	1,5	1,29	<0,01	0,56:Inf
psychological cost	item 9	5,18	3,82	1,24	1,47	1,35	<0,01	0,74:Inf
	item 10	4,53	3	1,23	1,37	1,53	<0,01	0,1:Inf
	item 11	5	3,59	1,32	1,73	1,41	<0,01	0,55:Inf
	item 12	6,12	5,12	1,5	1,41	1	0,03	0,09:Inf
	item 13	5,59	3,94	1	0,75	1,65	<0,01	1,15:Inf

Note: n= 17

Table 7: Descriptive Statistics, Cronbach's Alpha and t-tests of indices

	descriptive statistics		Cronbach's Alpha (recoded)		t-test		
	score red tape	score green tape	alpha value RT	alpha value GT	mean difference	p-value	confidence interval
Administrative Burden	68,47	51,59	0,771	0,802	16,88	<0,01	11,9:Inf
Learning cost	15,65	12,71	0,023	0,174 (0,5)	2,94	<0,01	1,85:Inf
Compliance cost	26,41	19,41	0,604	0,703	7	<0,01	4,09:Inf
Psychological cost	26,41	19,47	0,597	0,53 (0,64)	6,94	<0,01	4,93:Inf

Note: n= 17

Table 8: Operationalisation table of quantitative data

	Administrative Burden		
	Learning cost	Compliance cost	Psychological Cost
1 I spent more time with regulations like these than I think is appropriate.	X	X	
2 I spent more time with regulations like these than treating patients.		X	
3 I repeatedly fill out forms to adhere to these regulations for the same patient.		X	
4 I need to adhere to the same regulations several times a day		X	
5 I spent a lot of time trying to understand regulations like these and learning how to follow them.	X		
6 These regulations are easy to follow and understand	X		
7 I needed special training or instruction in order to understand these regulations	X		
8 Adherence to these regulations is intuitive and simple.		X	
9 The reasons why I am unhappy about my profession are related to regulations like this.			X
10 Because of regulations like this my profession is unattractive for a younger generation			X
11 Because of regulations like this my profession appears nonfunctional to possible patients.			X
12 I think that there is room for improvement.			X
13 I feel ... about regulations like this. (Great-Happy-Satisfied-Neutral-Unsatisfied-Unhappy-Annoyed)			X

7.3 Data Collection and Files

7.3.1 Survey questionnaire Dutch

In separate data appendix due to format of this file.

7.3.2 Survey questionnaire English

In separate data appendix due to format of this file.

7.3.3 R syntax file

In separate data appendix due to format of this file.

7.3.4 Transcript of interview

In sperate data appendix due to data privacy of interviewee and organisation.