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Abstract

The rapid development of information and communication technologies (ICT) is changing the service of the public sector. Previously, the government and public sector acted as street-level bureaucrats on an individual and physical level, according to the street-level bureaucracy theory. In the meantime, many sectors have replaced physical contact with system analysts and software developers and have become influenced by system-level bureaucracies. This article examines the implementation of this transformation in the Dutch mental healthcare. More specifically, this study compares the opinions of street-level bureaucrats (i.e., psychologists) and system-level bureaucrats (i.e., data experts) concerning the levels of satisfaction of digital services (i.e., digital therapy forms). In total, eight participants (four psychologists and four data experts) were interviewed. In accordance with the hypothesis, data experts were slightly more positive toward digital therapy forms as compared to psychologists. Interesting was the fact that the data experts were aware of the disadvantages experienced by the psychologists. Larger sample sizes are needed to draw valid and more generalizable conclusions. As research on the level of satisfaction of both psychologists and data experts against online therapy forms from a street- and system-level bureaucracy perspective is scarce, more research is required to investigate which factors contribute to the difference in opinions between street- and system-level bureaucrats. By identifying such factors, our basic understanding of digital services in the public services increases, and digital innovations can be more effective to match the street-level bureaucrats' needs.

Keywords: street-level bureaucracy; system-level bureaucracy; public administration; digital innovation; satisfaction; internet-based interventions; psychologists.

Introduction

Society is changing at a rapid pace. Formerly, the government was characterized by specialization of functions, adherence to fixed rules and a hierarchy of authority (Dahlströrm & Lapuente, 2022). If one tries to visualize this term, according to Bovens and Zouridis (2002), it evokes the image of large, massive buildings in which large groups of male bureaucrats, hampered by piles of files of important reports, embellished with impressive-looking signatures. Bureaucrats were known as small-minded civil servants who could reject or approve an application for the most unjustifiable reasons (Bovens & Zouridis, 2002). Theories about the phenomenon of bureaucrats are associated with the phenomenon that government agencies often function very differently from what might be expected from the rules and objectives of those agencies, also known as the street-level bureaucrats theory.

The concept of street level bureaucrats was introduced by Lipsky (1971). With this concept, Lipsky (1971) referred to all civil servants from both the government and the public service sector, who are in daily contact with citizens and can have a significant impact on the citizens' lives. The civil servants shape the government and are the calling card of what the government means to citizens. Apart from that, civil servants are the real shapers of policy (Lipsky, 1971). Even though the government tries to write a democratic policy with strict and restrictive rules, it is the civil servants who shape the policy through their way of implementation. This ties in with Lipsky's second concept called discretionary space. One of the most important characteristics of frontline workers is that they have a considerable amount of autonomy and are thus allowed to make many decisions about the concrete performance of their tasks.

However, a transition is taking place within the street-level bureaucrat theory. The increasing use of information and communication technologies (ICT) is changing the structure and working methods of a large number of executive government agencies (Bovens & Zouridis, 2002). Previously, the emphasis was on street-level bureaucracies where street-level officials exercised their profession physically one-on-one with a patient through administrative discretion. In the meantime, the bureaucracy at the street level seems to have given way to a bureaucracy at the system level. Nowadays, system analysts and software designers seem to play the leading role in these executive government bodies and public sector services. The implementation of the law has been virtually perfected by employing ICT, and the discussion about discretionary space seems to have disappeared. However, with this influence, several new problems have arisen.

For example, in the Dutch government and the Dutch public sector, the human decision-making process has been automated and replaced by the computer (Bovens & Zouridis, 2002). The street-level bureaucrats have been replaced or largely influenced by system-level bureaucrats. This way, not street-level bureaucrats but the programmers of the computers are getting the best of public organizations with discretion (Bovens & Zouridis, 2002). The Dutch public sector is digitalizing, although digitalisation in the Dutch healthcare, and in particular mental health care, seems to be lagging. The use of information and communication technologies in the public sector, especially the Internet, is seen as a potential government tool to increase citizens' satisfaction with the government (Welch et al., 2004). Therefore, the Dutch government strongly encourages the use of digital forms of care (Ministerie van Algemene Zaken, 2016). Although ICT developments are conceived by system-level bureaucrats, the implementation still lies with the street-level bureaucrats. Street-level bureaucrats work with ICT only on a supportive basis, whereas system-level bureaucrats are used to work with ICT on a decisive basis (Bovens & Zouridis, 2002). Due to the difference in the extent to which street- and system-level bureaucrats deal with ICT and its role, they might differ in their level of satisfaction regarding ICT. To our knowledge, this discrepancy has not yet been studied in the current literature.

This difference between street- and system-level bureaucrats also appears to be evident in public services as mental health care. Earlier research shows that psychologists and data experts have a different opinion about online therapy forms (Stinckens et al., 2020). For example, there is an indication that psychologists are less satisfied, due to perceived barriers, with online forms of therapy compared to data experts. Therefore, it would be interesting to further investigate whether in this case the psychologists (i.e., street-level bureaucrats) and data experts (i.e., system-level bureaucrats) differ from each other in their view of providing health care services online. This article focuses on the street-level bureaucrats and the system-level bureaucrats theory and the opinions of these bureaucrats, to clarify what the differences in perception of digital services between street-level bureaucrats and system-level bureaucrats are. To investigate the discrepancy between the two different levels of bureaucrats, this research is focussing on the opinion of psychologists and data experts on online therapy forms: “Is there a difference in the level of satisfaction regarding online therapy forms between psychologists and data experts?”

Theoretical framework

To better understand the potential impact of the disparity between psychologists and data experts, we need to look more closely at what the street-level bureaucrats theory and the system-level bureaucrats theory are in this context and what the role of the bureaucrats is. In this section, we will go into more detail about this. First, we will look at the street-level bureaucrats theory from Lipsky (1971) and why this is relevant to the perception of digital services. Then, we will get into detail on the system-level bureaucrats theory from Bovens and Zouridis (2002). At the end of this theoretical framework, we will give more information on our research question and hypothesis and how we will test each of the hypothesis.

Street-level bureaucrats and the usefulness of online platforms

This theoretical framework starts with the oldest theory, the street-level bureaucrats theory from Lipsky (1971). His theory has been marked highly as a 'real-world' perspective and irrefutable analysis of professionals practice in the public service and public bureaucracies (Evans & Harris, 2004). Lipsky showed a new angle on this topic by turning the spotlight to professional practice, including dilemmas experienced by individuals in the public sector (Evans & Harris, 2004). In doing so, Lipsky criticized most of the research on policy implementation that existed at the time.

In contrast with previous research, Lipsky (1971) argues that policy implementation research should not focus on the top of the hierarchy, but rather on the grassroots executors, better known as "the street-level bureaucrats". Hereby Lipsky (1971) means that government policy executors have many direct contacts with citizens and street-level bureaucrats. If scholars want to investigate how policy is shaped, how it is implemented, and how it is perceived by citizens, they must look at it from the bottom up, at the street level, and not top down by looking at the laws (Lipsky, 1971). In a street-level bureaucracy, the operational activities – which involve directly interacting with individual citizens and making decisions – constitute the core of the organization. Street-level bureaucrats, who perform their jobs at 'street level', operate in conditions that are shaped by scarcity and discretion. The government does not deal directly with citizens, and the government does not see the direct effect of the policy on the citizen. This explains why it is difficult for the government to make policies that meet the needs of the citizens.

Many street-level bureaucrats work in the public-service sector. These employees interact directly with individual citizens and have considerable discretion in their responsibilities in agreeing or declining facilities or even in commanding sanctions (Lipsky, 1971). This manifests

itself for the street-level bureaucrats at work whereby they continuously decide whether they use their discretionary powers in a specific case. They can decide whether they abide by the imposed rules and can therefore exert both minor and major consequences on decisions (Bovens & Zouridis, 2002). Thereby, they become not only implementing agents of policy, but also policy makers:

"[T]he decisions of street-level bureaucrats, the routines they establish, and the devices they invent to cope with uncertainties and work pressures, effectively become the public policies they carry out. I argue that public policy is not best understood as made in legislatures or top-floor suites of high-ranking administrators, because in important ways it is actually made in the crowded offices and daily encounters of streetlevel workers" (Lipsky, 1980, xii).

Every year, millions of decisions are made on these questions at the street level by public sector employees, with choices that can have a huge impact on the daily lives of citizens. According to Lipsky (1971), this explains the discrepancy that occurs between the policy, as formulated by the top, and the actual implementation practice that underlies it. Lipsky (1971) also sees it as a cause of the structural inability of government agencies to meet the needs of relatively powerless population groups.

Psychologists as street-level bureaucrats

Lipsky (1980) introduced the term street-level bureaucrats to refer to how public service employees shape and enact policies. These public employees interact directly with citizens and have substantial discretion in the execution of their work. In bureaucracies like (mental) healthcare and education, these front-line service providers work directly with the citizens (Aldrich & Rudman, 2020; Zouridis et al., 2019). Psychologists are an example of street-level bureaucrats and there are mainly two reasons for this (Tummers & Bekkers, 2012). First, psychologists play an important role in the implementation of policies and how services are delivered (Peterson & Brofcak, 1997). Psychologists work directly with patients and their decisions directly influence the patients' lives (Tummers & Bekkers, 2012).

Secondly, as said earlier Lipsky (1971) addressed that frontline workers have a considerable amount of autonomy, called 'discretionary space'. Psychologists also have a certain degree of discretion within their work (Tummers & Bekkers, 2012): The government makes a certain number of treatments available per patient, for example, eight sessions for the diagnosis of 'depression'. Psychologists may determine whether a follow-up program is deemed

necessary and therefore whether more treatments than are included in the basic package are required. If a patient wants more treatments and the psychologist does not consider this necessary, the patient will not be financially reimbursed for the follow-up treatments. In other words, discretionary space makes it possible to adjust the (general) policy to the specific circumstances and needs of the patient (Tummers & Bekkers, 2012).

Moreover, psychologists have the discretionary space to choose, for example, whether they provide face-to-face therapy or through an online platform. Normally psychologists carry out their work through physical meetings with the patients as online forms could be associated with more administrative work, which would allow them to opt for physical therapy (De Witte et al., 2021). An important characteristic of street-level bureaucrats is that they have a significant degree of autonomy within their work, which enables them to make decisions about the concrete execution of their tasks (Aldrich & Rudman, 2020; Zouridis et al., 2019). In conclusion, psychologists can be considered street-level bureaucrats.

System-level bureaucracy and the usefulness of online platforms

E-government has remained relatively unexplored from a street-level bureaucracy perspective (Buffat, 2013). This is essential for our understanding of today's street-level organizations functioning in such an increasingly automated and technologized work environment. Lipsky's work has therefore been criticized by various researchers. The main criticism is that he lumps all professions that come under street-level bureaucrats (Evans & Harris, 2004). Even though Lipsky wanted to connect theory with practice, this oversimplified image did not match the nuanced reality. In addition, the theory failed to consider the fundamental changes that have taken place over the past few decades (Bovens & Zouridis, 2002).

The biggest change that has recently taken place is the advent of information and communication technology (ICT) (Bovens & Zouridis, 2002). ICT could automate human processes and make them more efficient. The entry of computers into the dynamics of government and the public sector has had consequences for both the organization of the street-level bureaucrats and the underlying legal structure (Bovens & Zouridis, 2002). In a relatively short time, Lipsky's street-level bureaucracy has been influenced with what Bovens and Zouridis (2002) call screen-level bureaucracy. Screen-level bureaucracy means that the street-level bureaucracy decision-making process is automated. Where previously public sector executives had direct contact with individuals, this process now takes place partly or entirely through a computer screen. As a result, employees are no longer able to take to the streets freely,

as they are connected to the organization via a computer. Customer details are completed online via fixed electronic forms (Bovens & Zouridis, 2002). Knowledge management systems and digital decision trees take over, choices are made based on software designs, and ICT executes and controls the whole production process.

In contrast to Lipsky's (1971) theory, Bovens and Zouridis (2002) argue that traditional street-level bureaucracy has been replaced by system-level bureaucracy. They state:

"Meanwhile, the large-scale executive public agencies of the welfare state appear to be quietly undergoing a fundamental change of character internally. Information and communication technology (ICT) is one of the driving forces behind this transformation. Window clerks are being replaced by Web sites, and advanced information and data expert systems are taking over the role of case managers and adjudicating officers.... Today, a more true-to-life vision of the term 'bureaucracy' would be a room filled with softly humming servers, dotted here and there with a system manager behind a screen." (Bovens & Zouridis, 2002, p. 175)

As Bovens and Zouridis (2002) state these ICT influences are rooting further and deeper within the public sector leading to a Dutch bureaucracy that soon arises based on system-level instead of street-level. System-level bureaucracy means that the discretionary space is now limited to only the designers of the systems better known as the 'system-level experts' (Reddick et al., 2011). In these bureaucracies, the discretionary space of the street-level bureaucrats is disciplined by digital systems and the locus of administrative discretion has fallen into the hands of system-level bureaucrats (Zouridis et al., 2019). They are responsible for programming the decision-making process and translating legislation into software. Where previously an employee handled a case through human contact, this has now made way for automated systems. As a result, employees' discretionary space and administrative freedom have been reduced or have disappeared (Bovens & Zouridis, 2002). This leaves the system-level employees with no more limited administrative freedom, as the computer delivers the entire process from the first visit to a website to automatically delivering approving or rejecting e-mail (Bovens & Zouridis, 2002).

Differences between street-level bureaucrats and system-level bureaucrats

In the meantime, several circumstances can be identified that could lead to a transformation from street level to a bureaucracy at system level (Bovens & Zouridis, 2002).

Whereas for the street-level bureaucrats the role of ICT is more supportive, for the system-level bureaucrats the role of ICT is decisive. In addition, where human interference with individual cases was full for the street-level bureaucrats, there is none human interference for the system-level bureaucrats.

The government bases policy on scientific research and research reports (Head, 2008). That means contacts with citizens no longer take place in the streets, in meeting rooms with case managers, but through Web sites and online communication platforms (Bovens & Zouridis, 2002). Street-level bureaucrats may have a different viewpoint as they speak with individual cases on a daily basis (Lipsky, 1971). System designers will become the organizational backbone and case managers will disappear. As street-level bureaucrats and system-level bureaucrats have different roles and different jobs to fulfil within society, this may also influence their opinion about the role of ICT in the government. Whereas street-level bureaucrats had discretionary space this is now shifting to system-level bureaucrats. As system-level bureaucrats programme the decision-making process and translate the legislation into software (Zouridis et al., 2019). Earlier research found that more discretion positively affects the willingness to implement a new policy (Tummers & Bekkers, 2012). Automation mostly leads to less perceived discretion (de Boer & Raaphorst, 2021). Therefore, it is likely that street-level bureaucrats and system-level bureaucrats have a different vision regarding online communication platforms in healthcare. As the street-level bureaucrats loose discretionary space, while the system-level bureaucrats perhaps have more discretionary space. The difference in their vision on digitalisation of the healthcare sector is what this study will focus on. More specifically, this study will examine the difference between data experts and psychologists regarding levels of satisfaction with the use of online platforms in therapy. Therefore, it is important to know if the digitization of therapy leads to less discretionary space and how this affects the street- and system-level bureaucrats.

Satisfaction and bureaucrats

Previous literature indicates that the level of satisfaction among street-level bureaucrats can be affected when digitization projects are implemented (Tummers & Bekkers, 2014; Maynard-Moody & Portillo, 2010). For example, Maynard-Moody and Portillo (2010, p. 259) state that: 'Street-level workers rely on their discretion to manage the physical and emotional demands of their jobs. They also rely on their discretion to claim some small successes and redeem some satisfaction.' The explanation behind this movement would lie in the principle that employees have the right to participate in decisions that affect the lives of employees and

patients (Tummers & Bekkers, 2014). Employees derive satisfaction from making decisions that help them create. When employees experience discretionary space within their work, this can positively influence various job indicators because the work fulfils intrinsic employee needs (Tummers & Bekkers, 2014). Research shows that bureaucrats who work with IT support systems, experience less discretion than street-level bureaucrats who do not work with IT support systems (de Boer & Raaphorst, 2021). Since digital forms of care for psychologists can be associated with less discretionary space, because they are limited to only providing online therapy and more administrative tasks, it is interesting to see if this result in less satisfaction for psychologists.

Goal of the study

There is evidence that shows that psychologists' levels of satisfaction toward online therapy are different from that of data experts (Stinckens et al., 2020). Earlier research shows that psychologists see more downsides and less benefits of online therapy forms than the data experts (Stinckens et al., 2020). Data experts may be too optimistic and therefore too satisfied. Although earlier studies that suggest Internet-based psychological interventions can be used to effectively treat various mental disorders (Ebert et al., 2015; Erbe et al., 2017; Richards & Richardson, 2012; Sztein et al., 2018), digital experts see this from a more technological point of view as compared to the psychologists (Stinckens et al., 2020). For example, virtually all surveyed psychologists thought that the therapeutic relationship for the patient would change when therapy takes place via online communication platforms, whereas none of the data experts saw this as a burden. The studies (Ebert et al., 2015; Erbe et al., 2017; Richards & Richardson, 2012; Sztein et al., 2018) presented mainly focus on efficacy and effectiveness, but do not take other factors into account (e.g. the opinion of psychologists) (Mora et al., 2008; Stinckens et al., 2020). Research on this topic is relevant, as the results of this study could be used in future digital innovation projects from the government in the Dutch mental healthcare system, so they better meet the needs of patients and psychologists. Despite the importance of possible differences in the vision of psychologists and data experts on digital therapy, little research is done on this topic (Stinckens et al., 2020). If the Dutch mental healthcare wants to implement digital therapy forms, the system should know where to focus on. The theory of Lipsky (1971) and the theory of Bovens and Zouridis (2002) show how street-level bureaucracy, where the official 'on the street' decides on your application and then processes it, and system-level bureaucracy, where the system decides and executes by itself, distinct from each other and can lead to differences in the opinions of executive parties. That is why this study will examine the

difference between the level of satisfaction of system level bureaucrats, i.e., digital innovation data experts, and the street level, i.e., psychologists. Hereby, psychologists are expected to be less satisfied with online therapy forms than data experts.

Method

Design

This research is a descriptive qualitative research design, which explored the vision of psychologists and data experts compared to online forms of therapy. In-depth semi-structured interviews were conducted with the psychologists and data experts. Qualitative design is appropriate for analysing narrative data.

Participants

This study aimed to take one questionnaire (see Table 1 and Table 2) with around 5 psychologists and 5 data experts. Participants were recruited through the network of the researcher, via written and online advertisements, and on Facebook. Inclusion criteria for the psychologists to participate in this study were as followed: Participants have to provide physical treatment or have direct conversations with patients and need to possess the ability to read and understand the Dutch language. Inclusion criteria for the data experts were: participants must be an expert in digital innovations and must possess a good command of the Dutch language. For both groups, no exclusion criteria were specified, except for a bad command of the Dutch language.

The data experts were chosen because they have a significant amount of knowledge about digital platforms, i.e., the data experts build the platforms. Data experts were chosen if they had much knowledge of how the services for the psychologists were delivered. For example, they were asked in advance whether they had experience developing online therapy platforms (e.g. make it possible to record, allow interactive features, and various design decisions). The data experts had to be able to influence the development of the programs through their work. Although, the chosen data experts did not have the knowledge of the specific platform the psychologists were using, they had developed a similar platform, which gave them the necessary knowledge to talk about similar platforms. All four data experts work at the same company and recently completed an assignment for a psychologist's practice, which included the development of a platform for psychologists and patients. Functionalities of the platform included: video calling and chatting, receiving appointment reminders, and scheduling and uploading homework assignments. Despite the fact that the data experts have not developed the specific platform, they do have all the necessary substantive knowledge. As a result, they

are still system-level bureaucrats who know how the platform works. The psychologists were chosen because they make use, or have made use of online platforms. As a result, they know how these platforms work and they have been able to develop an opinion about them.

To ensure the validity and reliability of the research, an attempt was made to find data experts and psychologists from the same company to ensure that they are talking about the same topic. In the Netherlands, as far as we know, there are no psychologists who work at the same company as data experts. That is why there is chosen for four data experts who have done an assignment for psychologists and for four psychologists who have experience with the kind of platforms that the data experts create. The four psychologists all work at the same mental healthcare company. The four data experts all work for the same digital development agency.

Measures and interview

The authors' role was to study the levels of satisfaction in psychologists and data experts, learn more about how online therapy forms are developed in practice, and draw lessons from these practices. Satisfaction of psychologists and data experts is an operationalisation of the system- (data expert) and street- (psychologist) bureaucracy theory, therefore measuring satisfaction is an appropriate manner of measuring the level of system- and street-level bureaucracy. Since the government's aim for some digital innovations is to increase the satisfaction of citizens regarding e-Government (Welch et al., 2004), this research must include the degree of satisfaction of psychologists and data experts. As the level of satisfaction among street-level bureaucrats can be affected when digitization projects are implemented (Tummers & Bekkers, 2014). There are several existing literatures on the definition of satisfaction and how to measure it. For example, McMurtry and Hudson (2000) investigated the Client Satisfaction Inventory (CSI), a 25-itemscale for measuring general satisfaction with services among patients of human service agencies. This scale has a good validity and reliability, however, the questions in the CSI are based purely on patient-side of satisfaction instead of the server-side of satisfaction. Therefore, this questionnaire is not suitable as measurement instrument for this study.

Another study, from Vigoda-Gadot (2006), also measured satisfaction. In this study, satisfaction encompassed detailed information regarding satisfaction with various public services. Respondents were asked to report the degree to which they agreed with a list of public institutions and organizations that deliver various services. The disadvantage of this study is that it includes many variables in combination with satisfaction, which are not necessary for

our study as our study looks more at the server-side of satisfaction. Therefore, only the following question would apply: “How satisfied are you with … .”

The study that provided most of the input for the measurement instrument used in this study, was a study on e-government satisfaction. In our study, the Satisfaction variable needed to contain detailed information about the satisfaction of psychologists and data experts with the online platforms. In this study respondents were asked to report how satisfied they were with the digital therapy forms. The response scale ranged from one (strongly disagree/very dissatisfied) to five (strongly agree/very satisfied). An existing questionnaire on E-Government satisfaction was used to measure satisfaction levels regarding online forms of therapy (Welch et al., 2004). This questionnaire is based on several separate components that contribute to e-government satisfaction:

> E-Government Satisfaction = f (Government Web Site Use, Trust in Government, Transaction Satisfaction, Transparency Satisfaction, Interactivity Satisfaction).

The questionnaire has been adapted from e-government to specific online communication platforms during therapy:

> E-communication therapy platforms Satisfaction = f (Platform Use, Trust in Platform, Transaction Satisfaction, Transparency Satisfaction, Interactivity Satisfaction).

The interview was based on ten questions. The two questionnaires, for the psychologists and psychologists, had been converted into a questionnaire specific to this situation (as shown in Table 1 and Table 2). Data experts were expected to have a more positive opinion than psychologists, as we expected to find data experts to give higher scores and tell more positive things about digital therapy forms, compared to psychologists.

Procedure

After screening for inclusion and telling the respondents information about privacy and data processing, respondents were invited to talk about their experiences with online mental healthcare. The guidelines for the interview questions for the psychologists are presented in Table 1. The interview questions for the data experts are presented in Table 2. In total, eight interviews were conducted, four psychologists and four data experts. All interviews were conducted by telephone (i.e., WhatsApp calling) and lasted 40 minutes on average. Following the first interview, the data was organized and condensed into a story format with highlighting meaningful direct quotes or paraphrased statements (i.e., statements were changed if the statement is too directly linked to the company, to protect the confidentiality). Names and

companies were changed to protect confidentiality and are not mentioned in the results. After the interviews were taken, all respondents were fully debriefed about the study and were allowed to ask questions.

Table 1

Interview questions for psychologists

1. Platvorm Gebruik Hoe vaak zou u zeggen dat u het therapieplatform gebruikt - zeer regelmatig (4), redelijk regelmatig, af en toe of zelden (1)? 2. Vertrouwen in platform Hoeveel vertrouwen heeft u in het therapieplatform - veel (4), redelijk veel, een beetje, heel weinig (1)? 3. Transactie tevredenheid Investering in e-services: hoe hoog zou volgens u de prioriteit van de overheid moeten zijn bij het beschikbaar stellen van informatie en diensten via internet: zeer hoge prioriteit (1), hoge prioriteit, gemiddelde prioriteit, lage prioriteit, zeer lage prioriteit (5)? 4. Transparantie tevredenheid Betrouwbaarheid van informatie: hoe betrouwbaar is volgens u de meeste informatie die door therapieplatforms wordt verstrekt: zeer betrouwbaar (5), enigszins betrouwbaar, neutraal, niet erg betrouwbaar, helemaal niet betrouwbaar (1)? 5. Interactiviteit tevredenheid Welke mogelijke weerstandobstakels ziet u ten opzichte van therapieplatformen? i. Onvoldoende veranderingsbereidheid, beperkte uitkomstenverwachting, negatieve sociale invloed, praktische belemmeringen, angst, geringe zelfeffectiviteit autonomie, aantasting professionele relatie, weestand tegen protocollering, zorgen rond databeveiliging, aantasting therapeutische relatie 6. Algemene tevredenheid Op een schaal van 1 (erg ontevreden) – 5 (erg tevreden) hoe tevreden bent u over de digitale communicatievormen die gebruikt worden tijdens therapie?

Table 2

Interview questions for data experts

1. Platvorm Gebruik

Hoe vaak zou u zeggen dat psychologen het therapieplatform gebruiken - zeer regelmatig (4), redelijk regelmatig, af en toe of zelden (1)?

2. Vertrouwen in platform

Hoeveel vertrouwen heeft u in het therapieplatform - veel (4), redelijk veel, een beetje, heel weinig (1)?

3. Transactie tevredenheid

Investering in e-services: hoe hoog zou volgens u de prioriteit van de overheid moeten zijn bij het beschikbaar stellen van informatie en diensten via internet: zeer hoge prioriteit (1), hoge prioriteit, gemiddelde prioriteit, lage prioriteit, zeer lage prioriteit (5)?

4. Transparantie tevredenheid

Betrouwbaarheid van informatie: hoe betrouwbaar is volgens u de meeste informatie die door therapieplatforms wordt verstrekt: zeer betrouwbaar (5), enigszins betrouwbaar, neutraal, niet erg betrouwbaar, helemaal niet betrouwbaar (1)?

5. Interactiviteit tevredenheid

Welke mogelijke weerstandobstakels ziet u ten opzichte van therapieplatformen?

i. Onvoldoende veranderingsbereidheid, beperkte uitkomstenverwachting, negatieve sociale invloed, praktische belemmeringen, angst, geringe zelfeffectiviteit autonomie, aantasting professionele relatie, weestand tegen protocollering, zorgen rond databeveiliging, aantasting therapeutische relatie

6. Algemene tevredenheid

Op een schaal van 1 (erg ontevreden) – 5 (erg tevreden) hoe tevreden bent u over de digitale communicatievormen die gebruikt worden tijdens therapie?

Results

In this section, we first focus on the sample descriptive which includes demographic characteristics. Second, we discuss the street level bureaucrats (i.e., psychologists) and their levels of satisfaction regarding online therapy, their opinion on the advantages of online therapy, followed by the disadvantages of online therapy. Then we discuss the system level bureaucrats' (i.e., data experts) levels of satisfaction regarding online therapy and their opinion on the advantages of online therapy forms. After that, we go further into details on the disadvantages of online therapy forms as seen by the data experts. In addition, we describe the similarities and differences in levels of satisfaction of psychologists and data experts. Furthermore, we briefly discuss improvement issues raised by the psychologists and data experts. Finally, we elaborate on future recommendations for the Dutch government in

stimulating online communication platforms in Dutch mental healthcare. Yet, as shown in Table 4 the psychologists are neutral and positive towards online therapy forms. One of the psychologists indicated that it is better to give online therapy than nothing.

Sample description

In the current study, both psychologists and data experts participated. In total, eight interviews were conducted, four psychologists and four data experts. Participant characteristics can be found in Table 3.

Table 3

Outcomes of demographic characteristics

	Psychologists	Data experts
Number of participants	4	4
Gender, *n* female (%)	100%	0%
Age, in years	22 - 28	22 - 29
Lives in province	Zuid-Holland (N=4)	Zuid-Holland (N=4)
Educational attainment	Masters degree (N=4)	Masters degree (N=2), HBO master (N=2)

Note. Total $N = 8$

All psychologists were female and aged between 23 and 28 years. The four psychologists work at the same firm, a specialist mental health care company. This is a company that offers specialist treatment. Patients come here via the general practitioner or a medical specialist. Mental health care institutions in the Netherlands offer this second line of care, better known as specialized mental health care.

The four data experts were all male and aged between 23 and 29 years old. The four data experts do not work at this specialist mental health care company but do work all four at the same company. This company is specialized in building online communication platforms, and they did a project for a specialist mental health care company. The data experts work for a different company than the psychologists. However, the data experts executed a project for a mental health organization. Although the data experts and psychologists do not work directly

on the same technology, when we talk to them, we are talking about the same concept as both psychologists and data experts know the platforms. The data experts all have experience with building personalized websites for both individuals and SMEs; providing front-end development and design; and providing an all-in-one development team in the trend of web apps, mobile apps, and other software solutions.

Advantages - Psychologists

The psychologists mentioned some advantages of online therapy forms. All four psychologists said that it saved traveling time for both patients and psychologists and almost all psychologists said that it saved travel costs for the patients. In addition, one psychologist works especially a lot with screen sharing. Normally she had to print everything, but now she can share her screen to show the patients their homework. The patient was also allowed to share his or her screen with the completed work. The psychologist found this to work well for several reasons: the psychologist no longer needs to print everything, patients can not lose the paper, and patients can access the assignment more easily (e.g. if they want to work on it during the day). The last advantage worth mentioning is the fact that psychologists are able to see the patient in their environment.

> "Iemands omgeving zegt zo veel over diegene. Het is hun eigen veilige omgeving. Je ziet hoe mensen echt zijn."

Table 4

Outcomes of the satisfaction questionnaire

	Psychologists	Data experts
1. Platform gebruik, *M(SD)*	3,25 (0,96)	3 (0,82)
2. Vertrouwen platform, *M(SD)*	2,25 (0,5)	3,5 (0,5)
3. Transactie tevredenheid, *M(SD)*	2,75 (0,96)	2,5 (0,58)
4. Transparantie tevredenheid, *M(SD)*	3,25 (0,5)	4 (0)
5. Interactiviteit tevredenheid*	1 – 10	1, 2, 4, 5, 8, 9, 10
6. Algemene tevredenheid, *M(SD)*	3,25 (0,5)	3,5 (0,58)

Note. Total *N* = 8, *M* = Mean, *SD* = Standard Deviation.

* Psychologists and data experts recognised the following numbers: 1 = Onvoldoende

veranderingsbereidheid, 2 = beperkte uitkomstenverwachting, 3 = negatieve sociale invloed, 4 = praktische belemmeringen, 5 = angst, 6 = geringe zelfeffectiviteit autonomie, 7 = aantasting professionele relatie, 8 = weestand tegen protocollering, 9 = zorgen rond databeveiliging, 10 = aantasting therapeutische relatie

Disadvantages - Psychologists

Although the psychologists had some positive comments on online therapy, they were generally more negative. All four psychologists indicated that they preferred physical meetings over online meetings. Despite the fact that the psychologists did have experience with online therapy, most of the psychologist used it ‘redelijk regelmatig’ as shown in Table 4, they did not prefer online therapy forms. The main disadvantage, according to them, is not being able to see the patient’s body language. The psychologists found the patient's body language and attitude very important. Psychologists see this as of major importance during therapy, but reading body language is hardly to not possible online. In addition, a psychologist indicated online therapy forms lead to awkward situations with the patients. One of the psychologists indicated that online therapy is often less effective than physical therapy because of the delay in the line during online video calling. She indicated that as a result, there are more frequent delays during the sessions because sentences must be repeated and errors have to be corrected.

> “Ik ben opzich tevreden over online beeldbellen. Kijk fijn was het niet om online te bellen, want soms werkt het gewoon slecht. Je hebt vertraging in de lijn, je praat de hele tijd door elkaar heen en dat is gewoon heel erg vervelend. Dat stoort het contact […], zeker als slechte kwaliteit van geluid of beeld hebt. Dat ligt niet eens zo zeer aan het platform, eerder aan het internet van de patiënt of dat van mij.”

One psychologist was already quite optimistic about online therapy forms and is still satisfied. The second psychologist started working at the company during the corona crisis. Therefore, she has no experience working without online therapy forms. The other two psychologists indicated that the corona crisis influenced their level of satisfaction with online therapy forms. One psychologist experienced frustration during the corona crisis as she found it hard to be able to give only online therapy. She, therefore, does not prefer this form of therapy. She was open to blended therapy forms, in which the therapy is partly physical and partly online. The other psychologist indicated that she had become a little more positive

about online therapy forms. As the main reason for this, she noticed she has become more agile with the platform. As shown in Table 4 almost all four psychologists were neutral in their opinion regarding online therapy forms. One psychologist mentioned the benefits of online therapy forms did not compensate for the downsides.

Advantages – Data experts

The data were positive about the type of online platforms that were used during therapy. As shown in Table 4 the mean of the data experts regarding their general level of satisfaction is only a little bit higher than the mean of the psychologists. As expected this study found that data experts had more faith in the platform than the psychologists. Accordingly, the explanations and additions of the data experts were more positive. All four indicated that the platforms do what they have to do, although one platform works better than the other. Advantages of digital forms of therapy that were mentioned are: Psychologists and patients can see and connect (distance), prevent long travel times and relocation times, and make some aspects of the work easier to share/collaborate (e.g., share screen). In addition, a data expert mentioned that online forms of therapy offer a solution for certain groups (e.g., groups that cannot receive/dare to receive physical therapy due to circumstances).

Disadvantages – Data experts

All four data experts indicated that the platforms are made too complicated. All four data experts believe that patients and practitioners should have more experience with the platforms. As shown in Table 4 the data experts think that the psychologists use the platform less often than the psychologists think themselves. The data experts are aware of the drawbacks. The main drawback that was mentioned by all data experts was the Wi-Fi, both that of the patient and the psychologist. It was striking that the data experts were aware of the disadvantages experienced by the psychologists. One data expert was able to name almost all the disadvantages mentioned by psychologists. Unfortunately, the data expert indicated that it is difficult to, for example, improve the patient's Wi-Fi connection, while these kinds of things are beyond his control.

Another disadvantage was the loss of personality of the people that are involved in the videocall. During online forms of therapy, it is not possible to see someone’s body language. That makes it harder to see someone’s mood and temper during online communication. All four data experts mention this disadvantage and know that there is currently no solution for this

problem. According to them, current technology is far, but not yet far enough to be able to see someone entirely, including their body language.

The last disadvantage is the fact that the therapy platforms are unnecessarily complex. Therefore, the effectiveness of online therapy forms gets lost. One of the data experts said the platforms have to be a lot easier.

> "In de ideale vorm kun je deze platvormen zo ontwerpen dat niet uitgelegd hoeft te worden hoe het werkt, dat spreekt dan al vanzelf. Afgestemd op de behoefte van de gebruiker.

Unfortunately, this is not yet the case and can only be strived for.

> "Veel functionaliteiten zijn vaak niet eens nodig of worden nauwelijks gebruikt. Toch moeten wij deze ontwerpen […], omdat de opdrachtgever dit wil."'

Similarities and differences between the psychologists and data experts

It was expected that data experts would think more positively about digital therapy forms than psychologists. As shown in Table 4 data experts reported their levels of satisfaction a bit higher than psychologists. However, these were negligible points. As Table 4 shows, on questions 1, 3, and 6, the data experts scored only 0.25 points higher than the psychologists. During the interview it became clear that both data experts and psychologists appear to be more negative than positive about digital therapies. Therefore, in contrast to our hypothesis, both the psychologists and the data experts think that it is a disadvantage that someone's body language and attitude can not be seen on online communication platforms. Not only the psychologists thought it is important, but also the data experts thought that body language plays an important role in therapy. In addition, both psychologists and data experts talked about the bad Wi-Fi connection between psychologists and patients during therapy sessions. The psychologists mostly have a good Wi-Fi connection, but the psychologists can not influence the fact that patients do not have decent Wi-Fi connections.

Second, it was interesting that the data experts have more confidence in the platform than the psychologists. When asked why the data experts had so much confidence in the platform, the data experts mainly described the functions of the platform. The platform is developed with a certain goal once that goal has been achieved, otherwise, the platform will not function. It was striking that the psychologists mainly see what goes wrong with the platform, which the data experts previously attributed to external factors, such as Wi-Fi connection and the digital skills of the patient.

It was remarkable that the psychologists are quite divided on the subject, where the data experts share more of the same opinion. Where one psychologist was more satisfied with online

therapy forms after the corona crisis, another psychologist was less satisfied. The data experts indicate that they are all quite satisfied with the platforms. They see problems that arise during working with the platforms more in the platforms itself and the ICT behind them, whereas the psychologists seem to experience this less.

Finally, it was striking that data experts were very well aware of the frustration and disadvantages experienced by psychologists. Data experts were able to identify what problems psychologists encounter and what kind of solutions would help.

Discussion

The current study investigated the differences in levels of satisfaction regarding online therapy between street-level bureaucrats and system-level bureaucrats. In addition, differences in opinion between the street-level bureaucrats and system-level bureaucrats regarding digital services in the Dutch mental healthcare were studied. For this purpose, structured interviews of four psychologists and four data experts were taken. As we expected, there was a difference between the view of street-level bureaucrats (i.e., psychologists) and system-level bureaucrats (i.e., data experts). Consistent with previous research on the vision of psychologists and data experts on online therapy forms, it seems that psychologists understand the value of online forms of therapy (Stinckens et al., 2020). In contrast to our hypothesis, data experts' attitude against online therapy forms was not as positive as expected. Although differences in levels of satisfaction between the data experts and psychologists were negligible, data experts were more positive about the faith they have in online therapy forms. A possible explanation for this could be the fact that data experts have more knowledge about the background of the systems than psychologists.

First, based on the previous literature, it was argued that system-level bureaucrats would be more satisfied than street-level bureaucrats regarding digital therapy. However, the current study shows that the system- and street-level bureaucrats hardly differ in levels of satisfaction. This is different from previous literature that stated that data experts were 'uitgesproken positief' compared to the psychologists who were more 'afwachtend' and 'kritisch' (Stinckens et al., 2020). One reason for this difference could be the fact that the system-level bureaucrats who participated in this study had experience with working for a psychologist's practice. The data experts were found to be aware of the disadvantages experienced by the psychologists. For example, one data expert was able to name almost all the disadvantages mentioned by psychologists. As a result, the system-level bureaucrats had a lot of knowledge about what

contributes to satisfied street-level bureaucrats, and they could perhaps better relate to the street-level bureaucrats than the average system-level bureaucrat.

Second, there was a clear difference in the degree of trust that street- and system-level bureaucrats have in online therapy. The data experts had more confidence in online therapy forms. The psychologists mainly indicated how often they saw online therapy forms go wrong and how the corona crisis showed that online therapy did not work well. The data experts know the background behind the platform's system and how the system works. One of the data experts mentioned that the lack of trust is not necessary, because the faults are not due to the platform, but due to external factors (i.e., Wi-Fi connection). As a result, they could have a more positive attitude towards the platforms. This difference in satisfaction levels between street-level bureaucrats and system-level bureaucrats could explain why current digital innovations in mental healthcare often quickly disappear (De Witte et al., 2021).

Third, the four psychologists seem to place great value on the body language and attitude of patients. The main reason the psychologists gave was the importance of body language for the therapist-patient relationship. It might be expected that system-level bureaucrats would not consider the physical effects of therapy, as they work on the decisive role of ICT rather than the informant role of ICT. Therefore, it is striking that the system-level bureaucrats are aware of the effects of ICT. This could be because these bureaucrats developed a platform for the psychologists and have done a target group survey for them, in which they acquired a lot of knowledge about the experiences of psychologists.

Another striking result was the fact that one therapist indicated that because of frequent delays during the online therapy sessions, her online therapy sessions seem to be less effective than physical sessions. This means that the system-level bureaucrats would be wrong about the effect of digital therapy forms on efficacy, because of the delays in video calling. This is in contrast with earlier research suggesting online therapy forms are more effective than physical therapy sessions (Ebert et al., 2015; Erbe et al., 2017; Richards & Richardson, 2012). A possible explanation for this difference can be found in the fact that the researchers were not street-level bureaucrats. Earlier studies on system-level bureaucrats have found that system-level bureaucrats are often focused on efficiency (Bovens & Zouridis, 2002). This would mean that the data experts do not take into account the different factors that are of importance for therapists to provide therapy accurately. However, the data experts in our study indicated that they find the therapeutic factors important and emphasized that these factors can have a major influence on the effectiveness of therapy. Perhaps follow-up research should control for the

background knowledge of the data experts on the topic, to see how much knowledge they have a priori, and whether this knowledge influences the opinion of the data experts.

Strengths, limitations, and remarks

The current study had several strengths and limitations. First, this study gathered the level of satisfaction of several psychologists and data experts on online forms of therapy to test if there were differences between street-level bureaucrats and system-level bureaucrats. Research on differences between street-level bureaucrats and system-level bureaucrats in the Dutch public sector is scarce. Therefore, the present study contributes to the existing literature concerning the levels of satisfaction with online therapy forms in Dutch mental healthcare. Another strength is the fact that this study was able to go into depth with the participants, as the study made use of interviews (i.e., qualitative research). Structured interviews are a good way to down into a topic (Roulston, 2010). Earlier research shows that it is important to do exploratory research to discover ideas and insights about unknown fields (Cepiku et al., 2017). The final strength of this study was the fact that the study took place online, with video calling. Therefore, the study could take place anywhere. Participants who live further away and had only a limited amount of time available for this study were able to join the study.

However, even though qualitative research has its advantages, qualitative research also has some downsides. The first limitation of qualitative research is that the personal opinions of only eight interviewees are not representative of the whole population. This study interviewed eight participants due to a shortage of time. Therefore, the validity of this study is low. This could be one of the reasons why this study found results that are in contrast with previous literature. In our study, we found that online forms of therapy would reduce accessibility, which is not in line with earlier research. For example, studies in Belgium on online mental healthcare indicate that online therapy increases accessibility (Stinckens et al., 2020). Future researchers could gather the opinions of more psychologists and data experts to provide more generalizable results.

The second limitation concerns the target group treated by the psychologists. Even though all four psychologists work for the same company, they treat different patients. Two psychologists work mostly with people aged under thirty, whereas the other two psychologists work mostly with people aged older than thirty. It is possible that younger patients are more digitally skilled than older patients. Earlier research showed that especially young people are digitally skilled as compared to older people (Huxhold et al., 2020). Therefore, a possible explanation for the difference in opinion could be the fact that the psychologists that were less

satisfied with online therapy forms, have more older patients, and are therefore biased. Since there were only minor differences present between the street-level bureaucrats and the system-level bureaucrats, it is questionable whether these differences actually exist. Future research could include control for the age of the patients of psychologists to reduce bias.

Third, the data experts have not developed the platform that the psychologists use. This could affect their knowledge of the platforms. An attempt has been made to prevent this as much as possible by including data experts who have a lot of knowledge and expertise about these platforms. For example, the included data experts have developed a similar platform and have specific knowledge about the platforms that others do not have. However, it cannot be stated with 100% certainty that the data experts and psychologists are talking about the same thing. In addition, it was, to our knowledge, barely possible to find data experts who have developed the therapy platforms of specific psychologists. Due to privacy concerns, companies could not share information on the healthcare organizations for which they had carried out assignments. In addition, it is also almost impossible to find data experts who work in the public sector. All data experts in this study work for private companies (e.g., consultancy offices and tech companies), but are commissioned for public companies.

The final limitation is that qualitative research is more likely to be influenced by the interviewer than quantitative research (Roulston, 2010). In quantitative research, the participant answers questions in his own time and environment, without being watched or interviewed by researchers. An in-depth interview, on the other hand, can feel more like a conversation (Roulston, 2010). If the interviewer reacts very enthusiastically or with an aversion to a certain answer, this can influence the answer of the participant. Further research could use quantitative measurement methods to rule out these limitations.

Conclusion

In conclusion, the current study is one of the first studies – to our knowledge – that investigated the levels of satisfaction regarding online therapy forms between street-level bureaucrats and system-level bureaucrats in the Dutch mental healthcare. Therefore, this research contributes to the existing literature on street- and system-level bureaucrats in the Dutch public sector. However, the results are not generalizable to a broader population. Furthermore, although the eight psychologists and data experts had experience with online communication platforms, their preference lies with non-virtual platforms. As research on the differences between psychologists and data experts on their satisfaction levels with online forms of therapy is scarce, more research on this particular topic is needed to examine which

factors lead to a smaller gap between the street-level bureaucrats (i.e., psychologists) and the system-level bureaucrats (i.e., data experts) in Dutch public services. Larger sample sizes are necessary to draw valid and more generalizable conclusions on the level of satisfaction of psychologists and data experts. Future research should further investigate the level of satisfaction in more target populations, such as the patients from the psychologists, and take for example moderators into account, such as trust and age (Huxhold et al., 2020). By closing the gap between the system-level and street-level bureaucrats, future digital innovations in Dutch public sector, especially the mental healthcare sector with online therapy forms, can improve and be more effective.

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