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CONNECTING GOVERNANCE AND THE FRONTLINES: HOW WORK PRESSURE AND AUTONOMY MATTER FOR COPING IN DIFFERENT PERFORMANCE REGIMES

ABSTRACT

How frontline employees cope with perceived work pressure may be of direct influence on policy outcomes. This study contributes to the street-level bureaucracy literature in several ways. First, we study both passive client-oriented and active system-oriented coping. Second, we analyse how these coping behaviours relate to work pressure and work autonomy. Finally, this article analyses whether these relationships are conditioned by the performance regime. Using a unique set-up of hospital employees (n=979) working in external and internal performance regimes, we find a higher level of system-oriented active coping than client-oriented passive coping. Moreover, we find that autonomy matters for system-oriented coping and work pressure for client-oriented coping, and that these relationships are context-dependent.

INTRODUCTION

Frontline workers such as physicians, nurses, and teachers have an important role in shaping services such as healthcare and education. Through their decisions and actions, they enact the policies set by higher-level decision-makers. However, conditions at the frontline can be challenging as employees are exposed to various demands arising from conflicting interests, limited resources, and high-performance expectations (Brodkin 2011; Hupe and Buffat 2014). The literature on street-level bureaucracy (Lipsky 1980; Tummers *et al.* 2015) has shown that frontline workers try to cope with perceived work pressure from such demands in various ways. Most notably, the literature finds that frontline workers try to cope by applying what we call passive behaviours in their interaction with clients, like creaming, rationing, and routinizing (Tummers *et al.* 2015).

However, the focus on the interaction with clients excludes other ways to cope with work pressure. Relating back to Hirschman's (1970) concept of voice, some authors (Maynard-Moody and Musheno 2003; Hupe and Krogt 2013) have pointed out that frontline employees also cope by trying to *change* the underlying causes of work pressure. This challenges beliefs that frontline employees have limited power to voice their concerns and limited capacity to create new solutions in ways that remove the causes of work pressure. At the same time, Brodkin (2011) points out that the growth of performance regimes based on external goal setting and incentives has started to 'squeeze out' opportunities for such 'active' coping, as it becomes more difficult for frontline employees to affect the causes of work pressure when these circumstances are determined externally.

It is the purpose of this article to provide a more comprehensive understanding of frontline employees' use of coping behaviours in the work context. Therefore, we study both

passive client-oriented coping behaviours (aimed at the interaction with the individual user without attempting to address the underlying causes of work pressure) and *active system-oriented* coping behaviours (focused on the broader governance system and addressing the underlying causes of work pressure). We aim to provide insight into how these coping behaviours relate to the general level of work pressure and work autonomy. Moreover, we analyse whether these relationships differ between performance regimes with a different emphasis on external goal setting and incentives.

The article thereby makes two contributions to our knowledge of frontline employees' use of coping behaviours. First, it sheds light on the relationship between different types of coping behaviours and their relationship with the classical coping determinants of work autonomy and work pressure. To our knowledge, there has been no such studies before. Second, we aim to identify how these relationships relate to performance regimes, which are governance systems that rely on performance measurement practices (Moynihan *et al.* 2011). External and internal performance regimes differ in the degree to which goals and indicators are externally set and linked to incentives (Jakobsen *et al.* 2017; Pollitt *et al.* 2010). As most coping studies (see overview in Tummers *et al.* 2015) do not compare coping between performance regimes (Hupe and Hill 2007; Berkel and Knies 2016), there is a need for such comparisons. Continual austerity and demographic developments (Lodge and Hood 2012; Kiefer *et al.* 2015) will in the coming years create an efficiency pressure on public organizations that may increase the need for coping (Winter 2002; Berkel and Knies 2016; Tummers and Rocco 2015).

Using survey data, we analyse the coping behaviours of frontline employees (n=979) from 16 hospital wards in Denmark that are embedded in either an external or internal performance regime. We utilize a trial act in which nine hospital wards for a three-year period

were exempted from the Diagnosis-Related Group (DRG) system, in which each diagnosis is connected to a specific remuneration (Busse *et al.* 2011). Instead, the trial wards were encouraged to develop new performance indicators and received a global budget (Søgaard *et al.* 2015).

In the following sections, we first introduce the literature on the coping behaviours of frontline employees and the expected relationships between work pressure, work autonomy and coping. This is followed by the methods section. Subsequently, we present the analysis and results. The final discussion and conclusion addresses the contributions of this study and avenues for future research.

THEORETICAL FRAMEWORK

Behavioural Coping Behaviours in Public Services

In his seminal work on street-level bureaucracy, Lipsky (1980) introduced a bottom-up approach to public administration, arguing that the actions of those at the frontlines of public service delivery are just as (or more) important in shaping the outcomes of public policy than the decision-makers at the top. Frontline employees operate between citizens and the state (Maynard-Moody and Musheno 2003) and must execute policies under challenging conditions that can give rise to work pressure, such as conflicting expectations from multiple stakeholders and a gap between the resources available and the expected quality of services (Brodkin 2011; Hupe and Buffat 2014). When these conditions cause work pressure, frontline employees have to cope with it. Or, as it is formulated by Lipsky (1980, pp. 85–86; 142), coping is about ‘the management of work stresses’.

Despite the use of many different definitions of coping in the broader organizational and psychological literature (Lazarus 1991; Skinner *et al.* 2003), a common trait is to define coping as a reaction to work pressure¹. Within this broad conceptualization, there is a key distinction between emotional and behavioural coping behaviours. Tummers *et al.* (2015: 1101-1102) have sought to make behavioural coping the key focus of public administration research by defining coping in public service as ‘behavioral efforts frontline workers employ when interacting with clients, in order to master, tolerate or reduce external and internal demands and conflicts’. In this article, we follow this focus on behavioural coping, as ‘the very legitimacy of public agencies and the state hinges substantially on how worker stress translates into actions taken towards clients’ (Tummers *et al.* 2015, pp. 1101–1102).

The review by Tummers *et al.* (2015) also shows that coping research in public administration has mainly been restricted to the interaction with clients. However, this narrows our understanding of frontline employees’ coping behaviours in two important ways. First, an exclusive focus on the client-worker interaction dilutes that frontline employees are confronted with multiple fora to which they are held accountable and from which they are exposed to expectations about their work (Hupe and Hill 2007). Therefore, in addressing this work pressure, they also have multiple choices regarding whom they will act towards and in which way. Second, behaviours such as voicing, problem solving, and organizing for change do occur among frontline employees and can have a major influence on policy outcomes (Lipsky 1980; Brodtkin 2011; Steenhuisen and van Eeten 2013; Hupe and Buffat 2014). Hence, we employ a broader definition of coping that goes beyond the interaction with the client (yet strongly inspired from

¹ Although there are many pressures that an individual can be exposed to outside of work, we focus here on the work situation and pressures arising from work.

Tummers *et al.* 2015). Coping is thus here understood as behaviours frontline employees use to tolerate work pressure or reduce its underlying causes in their work situations.

Two Types of Coping Behaviours

We focus on two types of behaviour whereby frontline employees can cope. One type of coping is passive client-oriented, which means that behaviours are aimed at tolerating work pressure in the interaction with clients. With passive we mean that the strategy is aimed at addressing the symptoms, not the underlying problem. There are many well-known forms of this type of coping like rationing, routinizing, and creaming (Maynard-Moody and Musheno 2003; Winter 2003). Rationing for example reduces the pressure felt by the fact one has too many patients, but does not solve the problem of too many patients.

We contrast passive client-oriented coping behaviours with active system-oriented behaviours. These behaviours are aimed at reducing the underlying causes of work pressure in the broader governance system including the managerial and organizational context. This can happen by speaking up about problems within the organization or by engaging in the development of new governance forms or new solutions aimed at reducing the underlying causes behind work pressure. This active system-oriented behaviour resembles the professional and political reactions that Hupe and Buffat (2014) identify. These behaviours aim to not only ‘tolerate’ work pressure but also to ‘reduce’ the underlying factors. Factors such as workload assignments and regulations can repeatedly create work pressure. Creaming and other passive coping strategies help in handling the work pressure, but they do not change the workload assignments and regulations that caused the work pressure in the first place. Hence, when the employee stops with the passive coping, the work pressure will return. Passive strategies can also

be aimed at the broader governance system, e.g., by bending the rules, and active-strategies can also be aimed at clients. In this paper, however, we focus on contrasting passive client-oriented coping and active system-oriented coping.

Lipsky (1980) and, more recently, Brodtkin (2011) are sceptical about the prevalence of such active system-oriented behaviours. They argue that the individual costs of such activism are often too high because of a lack of power. Despite such scepticism, it is important to study these behaviours to gain insight into when and how frontline employees react to work pressure as there are anecdotal examples of such behaviours by frontline employees (Brodtkin 2011; Hupe and Buffat 2014).

There may be large differences between various types of frontline workers. Evans (2011), for instance, criticizes Lipsky (1980) for generalizing across various types of employees without accounting for the degree of professionalization. Healthcare workers such as physicians and nurses are much more organized, and traditionally they have had more influence on their own governance than frontline employees in other fields (Noordegraaf 2011). Their professional background and status may also make them more likely to speak up and try to change the underlying causes of work pressure (van Loon *et al.* 2016; Noordegraaf 2011).

Active system-oriented coping and passive client-oriented coping may sound as normative judgements regarding good or bad behaviours. However, this cannot be assumed generally. Research in organizational psychology has shown that activist behaviours are more beneficial for individual well-being than client-oriented coping (Reuter and Schwarzer 2010), but little is known about broader impacts. For example, more system-oriented activism may result in more internal conflict as well as a gap between the democratically intended and the executed policy (Lipsky 1980). Still, system-oriented coping from professionals who raise their voice

about problems and advocate new solutions can also reflect processes of organizational learning (Mahler 1997). Similarly, passive client-oriented coping such as creaming or rationing implies that clients are not treated equally, which can undermine the legitimacy of policy (Lipsky 1980). On the other hand, such behaviours may also guard social norms and client interests (Maynard-Moody and Musheno 2003). Therefore, frontline coping cannot be seen as inherently good or bad but should be seen as responses to the dilemmas of public service in which they try to balance multiple contradictory values (de Graaf *et al.* 2016).

Work Pressure and Coping Behaviours

Work pressure is a cognitive state related to ‘the anticipated execution of work tasks’ and a high level of work pressure implies that frontline employees ‘are aware of the work to be done and are concerned about their ability to complete the work successfully’ (Roe and Zijlstra 2000, p. 13). The state of mind regarding the ability to complete the work successfully is both a defining element of coping – a response to work pressure – but the level of work pressure is also one of the major factors argued to determine coping (Lipsky 1980; Brodtkin 2011).

Multiple studies have focused on the caseload as an indicator of work pressure and how a high caseload leads to coping (Winter 2002; Tummers and Rocco 2015; Berkel and Knies 2016). However, Lipsky (1980) has suggested that it is not the *number* of clients or cases in itself but the workload arising from for example the total work obligations – such as treatments, registration, coordination – and expectations regarding quality and efficiency as these factors all contribute to the level of work pressure. Studies have shown that work pressure can lead to client-oriented coping such as rationing and routinizing (Winter 2002; Berkel and Knies 2016). A frontline employee experiencing work pressure due to too few resources to address all

expectations is likely to try to cope by reducing client demand by rationing services (Tummers and Rocco 2015). Berkel and Knies (2016) similarly show how caseworkers try to reduce their caseload and keep performance metrics high by creaming the clients most likely to succeed. The theoretical argument supporting a positive relationship between work pressure and passive client-oriented coping is that the work pressure creates a need for coping thereby making these behaviours relevant to pursue.

There is little empirical evidence on how work pressure relates to active system-oriented coping. On the one hand, the same mechanism as with passive client-oriented coping could be at play; work pressure increases the need to cope and hence makes frontline employees pursue not only passive client-oriented but also active system-oriented behaviours. This argument is particularly likely with well-trained and resourceful professionals that have the capacity to engage successfully in active coping behaviours. On the other hand, high work pressure is likely to limit the capacity in the form of time and resources to find solutions and voice towards managers. From a theoretical perspective, it is therefore unclear whether frontline employees will engage in more system-oriented activism when they experience high work pressure.

Work Autonomy and Coping Behaviours

When studying frontline employee behaviour, another important factor is their work autonomy. Work autonomy is a perceptual state relating to front line workers 'perception of self-determination' in their work (DeCotils & Koys 1980, p. 173). There are multiple dimensions of autonomy but we focus on the most specific form namely when and how front line workers execute their tasks. Work autonomy may have various effects on the use of coping behaviours. On the one hand, a low level of work autonomy restricts the room for coping, whereas high

levels of autonomy allows for more use of coping behaviours. This may make the values and norms of professionals play a role in how public services are delivered, which can both threaten policy execution but also lead to better outcomes (DeHart-Davis 2007; Brodtkin 2011; Maynard-Moody and Musheno 2012; Steenhuisen and van Eeten 2013). Frontline employees can also dislike work autonomy on this account because it makes them responsible and thus blameable for their actions (Crozier 1964, pp. 204–208). On the other hand, autonomy may also reduce the need to cope as the frontline employees have more ways to manage and tolerate the work pressure by changing how or when they do their tasks. There is more leeway to act without having to shift the burden to clients. With respect to passive client-oriented coping, there is thus no clear theoretical expectation about the relationship with work autonomy.

With respect to active system-oriented coping we expect that work autonomy increases learning behaviour as it creates the discretion people need in order to work towards new solutions (Hammond *et al.* 2011, p. 93) and motivates them to do so (Fernandez and Pitts 2011). Therefore, we expect work autonomy to increase the capacity and inclination of frontline employees to active system-oriented coping. Hence, we expect frontline employees with more work autonomy to be more likely to engage in active system-oriented coping.

Performance Regimes and Coping Behaviours

A prominent issue in the literature is the individual-level causes of coping (Maynard-Moody and Musheno 2000; Loyens & Maesschalck 2010; Tummers and Rocco 2015). This article responds to recent calls to study the institutional context of governance in which frontline employees operate (Brodtkin 2012; Hupe and Buffat 2014). A key feature of the current governance contexts is the use of performance regimes that govern public organizations through performance goals

and performance indicators (Moynihan *et al.* 2011; Pollitt *et al.* 2010). As argued by Brodtkin (2011), such performance regimes are likely to moderate the impact of factors like work pressure and work autonomy on coping; they can shape the importance of autonomy, capacity, and need of frontline employees for different coping behaviours. This study aims to provide insight into the moderating role of performance regimes. We conceptualize performance regimes through two ideal types of performance regimes.

First, external performance regimes tie incentives to goals set externally as well as lower-level indicators of such goals. This provides strong cues to professionals about what behaviour is expected and rewarded. Such regimes are challenging in areas with complex services such as healthcare as performance is hard to define, let alone measure and reward fairly (Jakobsen *et al.* 2017; Pollitt *et al.* 2010). Outcomes of complex services do not always accurately reflect the performance of the service provider; a physician can perform excellently even though the patient did not survive. These difficulties in measuring and managing performance open up possibilities for and legitimize coping behaviours of frontline employees. As pointed out by Brodtkin (2011), such external performance regimes could ritualize ‘speed over need’ by rewarding those who are quick without rewarding quality. In healthcare, Kerpershoek *et al.* (2016) showed that staff had unintended responses to a Diagnosis-Related Group (DRG) reimbursement system because it was not perceived as fair to clients and the healthcare providers.

Hence, the external performance regime promotes a short-term focus on delivering on specific performance goals instead of a broader focus aimed at developing goals and practices in a longer-term perspective. Furthermore, it increases the cost of trying to resist the factors causing the work pressure since each moment spent on trying to change the situation decreases the likelihood of hitting the target (Brodtkin 2011). Following policy alienation research (Tummers

and Bekkers 2014), externally determined goals may lead to employees feeling alienated from what they are doing and make them less willing to implement policy directives.

Other types of performance regimes may have a different impact on how work pressure and autonomy relate to the coping behaviour of frontline employees (Berkel and Knies 2016). In an internal performance regime, external incentives are removed, and the employees themselves set lower-level goals (Jakobsen *et al.* 2017). Such a regime can enhance the effect of autonomy as frontline employees have more autonomy and capacity to manoeuvre without being at risk of punishment. For example, when the frontline employees do not have to perform a specific number of treatments to reach an externally set DRG target, they may use their autonomy actively to address problems with waiting lists or preventing re-hospitalization.

The difference between the two regimes lies in the autonomy for the employees in determining the goals and the consequences of not meeting goals. Compared to the external performance regime, the internal performance regime makes the relative impact of the work pressure that the employee must cope with larger for active system-oriented behaviours vis-à-vis the passive client-oriented type. In the internal regime, where goals are set internally and there is more organizational autonomy, there is more autonomy and capacity to be successful with the active system-oriented coping than is the case in the external regime. In the external regime, the demands for realizing certain externally set goals are likely to strengthen the effect of work pressure on client-oriented coping as employees may feel less capable of changing the underlying causes of work pressure, which increases the likelihood of them coping passively towards the client when faced with high work pressure. Therefore, we expect external performance regimes to strengthen the relationship between work pressures and passive client-

oriented coping and internal performance management regimes to strengthen the relationship between work autonomy and active system-oriented coping.

CASE

This study is part of a larger project analysing the implementation and impact of a change in performance regime. In 2014, the Central Denmark Region decided to run a three-year trial in which nine hospital wards are exempt from the external performance regime. In the external regime, hospital wards are given a goal regarding their DRG production on which part of their budget relies. The goals are set externally, and through registration of the diagnoses, hospitals receive fixed remunerations. The nine trial hospital wards were given a global budget and were exempt from the DRG system. Moreover, they were encouraged to choose their own goals and performance indicators, which would be registered by the Region and provided to them for internal development (Søgaard *et al.* 2015). The trial was run in response to dissatisfaction with the system, which was perceived to create perverse incentives. For this research project, seven control wards with similar characteristics but operating under the old external regime were selected (two of the trial wards were so specialized that there was no comparable ward in the Region). The nine wards were selected on a combination of political concerns as well as wishes to have different hospitals and specialties involved. Inclusion in the trial act is thus exogenous to coping, but not a random selection.

METHODS

Data

In this study, we focus on data collected 2 years after the official beginning of the trial act. After the official beginning, new goals had to be set by the wards, and the new performance regime needed time to trickle down. Thus, in this survey it should be possible to see the first patterns in the differences between the trial and control wards. A survey was sent by email to the employees of all wards (n=3976) in the beginning of 2016. Of these employees, 2194 worked in a ward included in the trial act and 1782 in a control ward. 1561 hospital employees partly or fully filled in the survey, resembling approximately 30 percent of the population. Looking at the questions of relevance in this study, the analyses can be carried out using 863 to 979 responses. Of these respondents, 42 percent worked in a control ward. In the sample, 14.3 percent of the respondents were male. Most were nurses (761), followed by medical secretaries (226), junior physicians (147), and physicians (117). 17.2 percent of the employees worked in a ward that was highly specialized. 12.5 percent of the respondents had personnel or professional management responsibilities.

Measurement

The measurement of the constructs was tested by confirmatory factor analysis and/or reliability analyses. When performing a confirmatory factor analysis, it is recommended to use multiple fit indices. Here, we report CFI, TLI, RMSEA, and SRMR. The first two indicate good fit above .95 and the latter two below .08 (Hu and Bentler 1999).

Work pressure was measured with two items referring to having too much to do (González-Romá *et al.* 2006) and experiencing work pressure that makes it difficult for the worker to carry out the job properly. The two items had a high reliability as Cronbach's alpha was .9242. *Autonomy* was measured using three items partly based on the measure used by

Bakker and Bal (2010), which refers to being able to decide on the order of your work and how to do it and being able to participate in decision-making regarding your work. Cronbach's alpha for these three items was .7310. The items can be found in the appendix.

Coping behaviours were measured using items inspired by previous studies on coping in public services (van Loon *et al.* 2016; Winter 2003) and insights from psychological research on proactive coping (Schwarzer and Taubert 2002; Reuter and Schwarzer 2010). The overall question was: “*Indicate how often you apply the strategies below when you are in stressful work-situations, or when you experience high pressure (for instance from patients, hospital management and regulations) at work*”.² The pressures and demands referred to here all relate to how you react to not being confident about your “ability to complete the work successfully” (Roe and Zijlstra 2000, 13). We mention stressful work-situations in order to evoke a frame of work pressure among the respondents, as stressful situations is everyday language for feeling pressured.

We focus on two types of coping behaviours: passive client-oriented and active system-oriented coping. For each coping type, the respondents could indicate how often (from always (1) to never (7)) they applied such behaviour. Client-oriented coping are the behaviours aimed at changing the relationship with the client to reduce the pressure. Examples are rationing (time) and routinizing. System-oriented coping refers to behaviours by which the employee actively aims to change the situation, for example, by using voice or activating the profession/colleagues.

Table 1 around here

² The original Danish text was: 'Angiv hvor ofte du bruger nedenstående strategier, når du er i stressede arbejdssituationer, eller når du oplever et stort pres (for eksempel fra patienter, hospitalsledelse og reguleringer) på arbejdet'.

The items with their descriptives can be found in table 1. In this table, we can see that employees scored highest on ‘using your professional background to argue for better solutions’ and lowest on only ‘doing what is expected’.

We performed a confirmatory factor analysis on the two-factor solution. The model fitted well (CFI=.969, TLI=.954, RMSEA=.064 (.049-.079), SRMR=.029), and all factor loadings were significant. Testing the reliability of the factors, the system-oriented coping factor showed a high reliability (alpha=.8515). The reliability of client-oriented coping, however, was below the recommended threshold (alpha=.5443), which is probably due to the variety of coping behaviours included. Re-examining the items, they tap into rationing, routinizing, and creaming behaviours. These behaviours are different in their nature, and therefore, we analyse them separately. A full measurement model including work pressure, autonomy, client-oriented coping, and system-oriented coping was tested through CFA. It showed a good fit to the data (CFI=.959, TLI=.943, RMSEA=.063, SRMR=.042).

Performance regime was measured using the trial act, which grouped employees as either working in an external performance regime or an internal performance regime. All employees working in a ward included in the trial act were coded one, and all employees in the control wards were coded zero.

Other variables that may influence our dependent and independent variables were included as controls. First, the degree of professionalism was measured using the professional vocation of the employees. The employees were classified as little professionalized (medical secretaries), moderately professionalized (nurses and paramedical staff, and highly professionalized (junior physicians and physicians). Second, the type of ward was added by

including dummies for each type of ward: neurological, eye, ear, acute, dental, orthopaedic, and neuro-surgical, with the medical wards as reference category. These variables catch variance concerning the differences in tasks between the wards. Third, the type of contract of the employee (temporary, part-time, or fulltime) was included as this may have an effect on work pressure as well as on coping behaviour. Finally, we control for employee characteristics by including age, gender, and tenure.

Analyses

To analyse the relationships between work pressure, autonomy, and frontline behaviour, we conducted robust regression with clustered standard errors to control for the fact that employees were clustered in 16 wards. To analyse the role of the performance regime, we included interaction terms. The variables were standardized before we computed the interaction (Dawson 2013). Since including multiple interactions in an equation complicates interpretation of these effects, two different interaction models were tested: one with an interaction between the performance regime and work pressure and one with work autonomy.

RESULTS

In this section, we first discuss the correlations. Next, we show the results of the regression analysis on client-oriented coping and system-oriented coping.

Descriptives and correlations

From the descriptives, we learn that the respondents report client-oriented passive coping behaviour (mean =2.95) much less often than active system-oriented coping (mean=5.23). This

finding contrasts with qualitative studies finding that such active system-oriented coping is rare. This may be because of the high professionalization of the employees studied here, which we will come back to in the discussion. The correlations (table 2) show that work pressure is significantly related to passive client-oriented coping but not to system-oriented coping. Work pressure and performance regime are negatively related, indicating that those included in the trial have a higher work pressure. Work autonomy is negatively related to work pressure and to the trial act, indicating that these employees experience lower autonomy on average. Autonomy is negatively related to client-oriented coping but positively related to system-oriented coping. Client-oriented coping and system-oriented coping are negatively related, though not very strongly. This means that employees showing client-oriented coping behaviour can sometimes show system-oriented coping behaviour as well.

Table 2 around here

Active system-oriented coping

Table 3 shows the results of the regression analyses for active system-oriented coping. Model 1 shows that tenure in the ward, a supervisory position, and working at a dental ward are positively related to system-oriented coping. Supervisors are more likely to speak out and show coping in response to pressure than those without supervisory tasks. In the neurological/surgical and orthopaedic wards, employees are less likely to speak out than in the medical ward. Finally, junior physicians are significantly less likely to respond by using coping than the reference category, medical secretaries.

In model 2, work pressure is added. The results show that work pressure is not related to system-oriented coping. Whether nurses, physicians, and other healthcare personnel voice and

aim to actively address the causes of work pressure does not depend on how much work pressure they experience. Model 3 shows that employees with more work autonomy are more likely to show system-oriented coping. Model 4 shows that this relationship holds when work pressure is also included. Models 5 to 7 show that the trial act is not related to the level of system-oriented coping, nor is it in interaction with work pressure or work autonomy. The models explain up to 5.8 percent of the variance in system-oriented coping between healthcare frontline workers.

Table 3 around here

Client-oriented coping

This section looks at passive client-oriented coping behaviour in which the employee changes the relationship with the client, for example, through rationing time and routinizing. The different models are set up exactly as the models for system-oriented coping. Since the reliability of the overall passive, client-oriented measure was too low, we ran the regression for each item separately. To reduce the number of regression tables, we have condensed the results of the analyses – the models are similar to the models for system-oriented coping – to show the main results regarding work pressure, work autonomy, and the performance regime per passive client-oriented coping behaviour (see table 4).³

The results of the model including work pressure, work autonomy, and the performance regime show that these variables are differently related to the various client-oriented behaviours. Employees who experience a high level of work pressure report more rationing by spending less time with patients, more routinizing, and more creaming. Only rationing, where the employee only does what is expected, is not related to work pressure. Work autonomy appears to be

³ The full regression tables are available in an online appendix.

positively related to creaming, i.e., those with more to say in how they do their work are also more likely to cream. The performance regime is related to rationing by ‘doing only what is expected and nothing more’. However, frontline employees in the internal performance regime are less likely to show such behaviour.

Table 4 around here

The interaction analyses (models 6 and 7) show a significant interaction between work autonomy and the performance regime for rationing, and between work pressure and the regime for creaming. The interaction for creaming shows that employees in the external performance regime respond more strongly to work pressure with creaming behaviours than employees in an internal learning regime. The interaction for rationing shows that employees with more work autonomy are less likely to cope by rationing their time in an internal performance regime and more likely in an external performance regime. The significant interactions are plotted in figure 1. Here, we see predicted values of (a) creaming and (b) rationing at different levels of work pressure/work autonomy in the internal performance regime and the external performance regime.

Figure 1 about here

DISCUSSION

Several findings merit discussion. First, we find that frontline employees are more likely to show system-oriented coping than client-oriented coping. Whereas others have argued that frontline employees rarely cope actively because of little opportunities to do so (Lipsky 1980; Brodtkin

2012), we find they were more likely to report coping actively. There are various possible explanations for this. Employees that belong to highly organized and professionalized vocations – like our sample – see voicing and discussion as part of the profession. Critiquing Lipsky's overall image of frontline employees, Evans (2011) argues that we should be sensitive to the frontline workers' different professions as these may have a great effect on their behaviour. Another reason for some of the difference between the types of coping could also be social desirability bias, which makes people more inclined to indicate they do active system-oriented coping. Still, the marked difference deserves more attention as the street-level bureaucracy literature has focused mainly on client-oriented coping. Future research on street-level bureaucrats could look into whether it is indeed the dominant way to cope actively. This could also be done with qualitative interviews that would provide us with an actor-based understanding of these different coping behaviours. Do front line workers also perceive differences in their use?

Second, work pressure and work autonomy relate differently to frontline coping behaviours. Work pressure relates positively to the level of passive client-oriented coping but is unrelated to active system-oriented coping. This follows insights from both qualitative and quantitative studies, which show that frontline employees who experience that they have too much work are more likely to cope by changing the relationship with the client (Winter 2002; Tummers and Rocco 2015). As Berkel and Knies (2016) argue, paying attention to the work pressure of frontline employees remains important, because the resource-demand balance has an important role in determining the outcome of public policy. The results of this study support this line of thinking.

The lack of a relationship between work pressure and active system-oriented coping indicates that behaviours aimed at changing the underlying cause of work pressure are not related

to the amount of work frontline employees have to do. The results show is that the level of work pressure as measured here does not matter for how often employees employ active system-oriented coping. This could be due to the limitations of our measure which may not capture all work related pressures employees experience as it focuses on the amount of work (not the difficulty or the emotional impact). One could also wonder whether active system-oriented coping is, in fact, coping at all. We argue that it is, as it is a response to work pressure, but it is a very different form of coping compared to the traditional passive client-oriented coping. More research is needed to be able to confidently conclude how active system-oriented coping is influenced by work pressure.

Conversely, we found that work autonomy was related to active system-oriented coping. The employees in our sample were thus more likely to speak up or try to change the situation when they felt they were able to have a say in the planning of their work. Lipsky (1980) and Brodtkin (2011) argue that space for internal learning and decision-making is necessary for frontline employees to be able to improve public services. The findings of this study underline these statements.

More work autonomy, however, is interestingly also related to more creaming. Although various authors have argued that giving back autonomy to frontline employees would reduce passive coping or gaming behaviours (Brodtkin 2012; Noordegraaf and Steijn 2013), we do not find support for that here. Instead, it may even increase certain client-oriented coping behaviours such as creaming. Work autonomy does not seem to reduce their rationing or routinizing behaviour, nor does it alleviate the impact of work pressure⁴ on client-oriented coping.

Third, performance regimes appear to matter for the way in which frontline employees respond to work pressure and work autonomy. If the performance regime emphasizes external

⁴ We have run additional tests showing that there is no interaction between autonomy and work pressure.

goals coupled with financial incentives, this increases creaming behaviour due to high work pressure. Moreover, employees in an internal learning regime are less likely to ration when provided with work autonomy. At the same time, our study does not show any moderation of the performance regime on system-oriented coping. A possible explanation could be that this study has been carried out too soon after the initiation of the trial act to be able to detect such changes. Another explanation could be that other factors are more important for system-oriented coping. Finally, it could be that the sample taken here, i.e., with highly professionalized frontline workers, means that frontline workers are more likely to speak up and discuss and address issues and problems, regardless of the performance regime (Noordegraaf 2011). The difference in coping may be more substantial when studying a different group of frontline employees (van Loon *et al.* 2016).

The results of this study also raise new questions. For instance, can we assume that similar factors influence different coping behaviours? Here, we find that work autonomy and work pressure did not similarly influence passive client-oriented coping and active system-oriented coping. Moreover, as one of the first studies comparing coping behaviours between different performance regimes, we find that differences between regimes may matter. Sometimes, frontline personnel have been called citizen agents rather than state agents (Maynard-Moody and Musheno 2000), indicating that their judgements of clients as deserving and their personal values matter more for how they treat clients than state policy and regulation. Based on this study, we may say that such a view is incomplete. Frontline employee behaviour is likely to be the result of a complex interaction between work, client, and institutional governance factors, among which the governance regime is just one (Loyens and Maesschalck 2010).

There are limitations to this study and the conclusions we can draw from this. First, this study is based on cross-sectional data, which means that we cannot tell whether the relationships found here are causal. We also rely on self-reported data that may be subject to bias (Favero and Bullock 2015), but the intervention in performance regimes was an exogenous factor that could not be influenced. Moreover, the questions regarding work pressure and work autonomy were asked in a different way and on a different scale than those regarding the coping items. The moderate model effect sizes show that other factors not included may also play a role in the coping behaviours – even though the effect sizes are comparable to other studies focusing on individual behaviours (Bright 2007). In addition, it could be that the change in regime itself may have triggered differences in coping behaviour. In order to study this, we would need to have longitudinal data. Moreover, it could be that variation in autonomy at a collective level (Rutz *et al.* 2017) influences individual coping responses. Cross-profession and cross-organizational studies may provide more insight into the impact of collective factors. Finally, although the findings regarding work pressure match findings in different contexts, we should be careful to generalize to very different contexts. For instance, performance regimes with high external accountability may work better in less complex service providers in which the behaviour of frontline employees is more easily monitored (Jakobsen *et al.* 2017). Nonetheless, this study provides new findings on how work and institutional governance factors influence the way frontline employees cope with challenges in their work.

In relation to work practices, this means that accounting for the effects on frontline employees' behaviour is important when performance regimes. To reduce client-oriented coping, organizations can look at differences in work pressure between individuals and departments. Work pressure can be the result of a heavy caseload (Berkel and Knies 2016), but it can also

arise from a lack of resources, high targets set by managers, or burdensome procedures from regulatory agencies. If organizations wish to increase system-oriented coping among frontline employees, it may prove beneficial to provide them with more work autonomy. Increasing system-oriented active coping may be beneficial in situations where the employees are key players and possess valuable information. However, it is important to keep in mind that frontline behaviour is embedded within a specific governance context which may, such as the performance regime, be of importance when determining frontline behaviours.

CONCLUSION

This study has contributed to a more comprehensive understanding of frontline employees' use of coping behaviours. In relation to types of coping behaviours, the study shows that when perceiving work pressure, front line workers respond with both passive coping strategies such as creaming but also with active system-oriented strategies aimed at reducing the underlying causes. Among professionalised front line workers examined in this study, active system-oriented behaviours is even a more typical response to work pressure than passive client-oriented behaviours. Furthermore, there are positive empirical relationships between work pressure and passive client-oriented coping and work-autonomy and active system-oriented coping and these relationships vary between external and internal performance regimes. This study shows that institutional settings can influence how frontline employees respond to work characteristics. With this, we connect street-level research to institutional governance factors. Performance regimes can be seen as enabling and constraining frontline employees, and the interactions between these system-level factors and the street-level provide new insights into why frontline employees ration, cream, routinize, or speak up. Although the study does not allow finite causal conclusions, it still demonstrates prospects of much further research into the diverse

determinants of different forms of coping behaviour as well as their interaction with the broader governance system.

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Appendix

TABLE A1 *Work pressure and autonomy items*

Variable
<i>Work pressure</i> ('the next questions are about how pressured you feel in your work. To what degree do you agree or disagree with the following statements?')
I have too many tasks to be able to do everything well enough.
The pressure at my work is so intense that I find it difficult to carry out my tasks properly.
<i>Work Autonomy</i> ('the next questions are about how much self-determination you have in your work' To what degree do you agree or disagree with the following statements?)
When I am at work, I plan myself how I carry out my tasks
When I am at work, I plan myself when I carry out my tasks
I am able to participate in decision-making regarding my work
Response options: Completely agree; agree; neither agree or disagree; disagree; completely disagree.

Tables

TABLE 1 *Behavioural items and descriptives*

	N	Mean	Std.	Scale	
<i>Client-oriented coping</i>					
I spend less time with patients than optimal according to professional norms.	1,020	3.857843	1.539276	1	7
I treat patients similarly even though I know some need more attention than others.	1,064	3,139098	1.584085	1	7
I spend more time on patients who can move quickly through the system.	953	2,795383	1.474966	1	7
I only do what is expected of me when working with patients, nothing more.	1,073	2.049394	1.271231	1	7
<i>System-oriented coping</i>					
I speak up in my ward when pressure is an obstacle for providing good healthcare.	1,173	5,421142	1.380000	1	7
I take an active role in discussing how to improve our work situation.	1,171	5,345004	1.401043	1	7
I try to change pressure that hurt our work performance by organizing my colleagues to take action.	1006	4.49006	1.516542	1	7
I activate my professional associations (union, vocational group) to change the situation.	1,104	2,839674	1.726709	1	7
When I experience a clash between the patient's interest and pressure from the system, I take the initiative to find a workable solution.	943	5.287381	1.337488	1	7

TABLE 2 *Correlations*

	1	2	3	4	5	6	7	8	9	10	11
1. Work pressure	1										
2. Autonomy	-0.1680***	1									
3. Passive client-or. Coping	0.2965***	-0.0677*	1								
4. System-or. Coping	0.0279	0.1581***	-0.0865**	1							
5. Gender	-0.0411	-0.0226	0.0253	-0.0321	1						
6. Age	-0.0821**	0.0519	-0.1715***	0.1293***	0.0160	1					
7. Tenure ward	-0.0419	0.0956***	-0.1280***	0.1248***	-0.0419	0.5661***	1				
8. Professionalism	0.0813**	-0.0338	0.0551	-0.0301	0.5433***	-0.0360	-0.0723**	1			
9. Supervisory (=1)	0.0712**	0.1278***	-0.0302	0.1369***	0.2795***	0.2314***	0.1153***	0.3190***	1		
10. Intervention (=1)	-0.0621*	-0.0864**	-0.0503	0.0146	0.0779**	0.0029	-0.0406	0.0336	0.0116	1	
11. Fulltime vs temporary	-0.0012	0.0698*	0.0093	0.0838**	0.2279***	-0.0444	-0.0561*	0.1918***	0.2359***	0.0354	1
12. Part-time vs temporary	0.0278	-0.0624*	-0.0372	-0.0438	-0.2459***	0.1534***	0.1536***	-0.1952***	-0.2089***	-0.0559*	-0.8849*

TABLE 3 *Regression system-oriented activism, unstd. coefficients, SE in brackets, + $p<0.10$, * $p<0.05$,**** $p<0.01$, *** $p<0.001$*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Gender	-0.145 [0.111]	-0.145 [0.113]	-0.164 [0.115]	-0.158 [0.118]	-0.159 [0.116]	-0.160 [0.116]	-0.159 [0.116]
Age	0.00448 [0.00342]	0.00461 [0.00345]	0.00462 [0.00354]	0.00500 [0.00358]	0.00507 [0.00354]	0.00506 [0.00355]	0.00508 [0.00354]
Tenure ward	0.0112+ [0.00527]	0.0116* [0.00534]	0.0103+ [0.00525]	0.0106+ [0.00524]	0.0108+ [0.00529]	0.0108+ [0.00527]	0.0109+ [0.00527]
Fulltime	0.445* [0.167]	0.443* [0.170]	0.444* [0.165]	0.439* [0.171]	0.441* [0.173]	0.445* [0.173]	0.440* [0.173]
Part-time	0.214 [0.196]	0.209 [0.193]	0.237 [0.190]	0.233 [0.195]	0.238 [0.197]	0.242 [0.196]	0.238 [0.196]
Supervisory	0.410*** [0.0934]	0.407*** [0.0935]	0.349** [0.0956]	0.334** [0.0951]	0.329** [0.0961]	0.328** [0.0960]	0.329** [0.0970]
Acute	0.0853 [0.0528]	0.0875 [0.0534]	0.132* [0.0569]	0.121+ [0.0603]	0.104+ [0.0510]	0.103* [0.0461]	0.105+ [0.0511]
Eye	-0.103 [0.182]	-0.0950 [0.183]	-0.0423 [0.172]	-0.0269 [0.170]	-0.0394 [0.188]	-0.0338 [0.187]	-0.0380 [0.188]
Ear	-0.125 [0.156]	-0.119 [0.155]	-0.0794 [0.152]	-0.0739 [0.149]	-0.0783 [0.133]	-0.0810 [0.136]	-0.0785 [0.133]
Neuro-surgical	-0.186*** [0.0403]	-0.182*** [0.0388]	-0.199*** [0.0391]	-0.207*** [0.0384]	-0.203*** [0.0388]	-0.202*** [0.0392]	-0.203*** [0.0399]
Ortho	-0.124 [0.106]	-0.118 [0.104]	-0.133 [0.0795]	-0.134+ [0.0721]	-0.143 [0.0893]	-0.137 [0.0906]	-0.141 [0.0910]
Dental	0.162** [0.0470]	0.169** [0.0446]	0.204*** [0.0493]	0.227*** [0.0471]	0.202** [0.0619]	0.218** [0.0623]	0.203** [0.0629]
Neurologic	-0.00381 [0.0375]	0.0267 [0.0360]	-0.00593 [0.0350]	0.0172 [0.0334]	-0.0104 [0.0450]	-0.0117 [0.0427]	-0.0106 [0.0446]
Paramedical	0.113 [0.139]	0.113 [0.139]	0.0897 [0.141]	0.0892 [0.139]	0.0973 [0.138]	0.0969 [0.139]	0.0974 [0.138]
Nurse	0.0651 [0.108]	0.0611 [0.107]	0.0601 [0.108]	0.0517 [0.106]	0.0582 [0.107]	0.0579 [0.107]	0.0579 [0.107]
Physician	-0.110 [0.153]	-0.114 [0.156]	-0.0618 [0.157]	-0.0705 [0.161]	-0.0661 [0.161]	-0.0666 [0.162]	-0.0663 [0.161]
Jr. Physician	-0.422** [0.129]	-0.423** [0.127]	-0.315* [0.144]	-0.315* [0.143]	-0.311* [0.143]	-0.313* [0.144]	-0.310* [0.144]
Work pressure		0.00783		0.0376+	0.0397+	0.0151	0.0398+

		[0.0227]		[0.0210]	[0.0214]	[0.0386]	[0.0216]
Autonomy			0.147***	0.154***	0.155***	0.156***	0.149**
			[0.0209]	[0.0187]	[0.0184]	[0.0185]	[0.0376]
Regime					0.0512	0.0488	0.0506
					[0.0479]	[0.0471]	[0.0480]
WPxregime						0.0424	
						[0.0442]	
AUTxregime							0.0108
							[0.0452]
_cons	4.608***	4.598***	4.588***	4.576***	4.541***	4.542***	4.542***
	[0.207]	[0.203]	[0.210]	[0.207]	[0.217]	[0.217]	[0.216]
<i>N</i>	1083	1076	1082	1076	1075	1075	1075
<i>R</i> ²	0.059	0.060	0.073	0.075	0.075	0.075	0.075
adj. <i>R</i> ²	0.044	0.044	0.058	0.058	0.057	0.057	0.056

TABLE 4 *Regression with clustered standard errors, + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, Adjusted R^2 of final model*

	Model 5			Model 6		Model 7	Adj. R^2
	Work pressure	Work autonomy	Regime	WP x regime		AUT x regime	
Rationing 1 <i>(spend less time)</i>	.707***	-.040	-.117	-.140		-.145*	.263
Routinizing <i>(treat similarly)</i>	.175**	-.001	-.067	-.085		.067	.015
Creaming <i>(quickly through system)</i>	.243**	.117*	.0283	-.310*		-.030	.040
Rationing 2 <i>(only what is expected)</i>	.044	-.058	-.219**	-.044		-.153	.025

Figures

FIGURE 1 *Predicted Values of Two Forms of Client-Oriented Coping in different performance regimes*

P less than 0,05
control variables are kept at their observed values