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Procedural justice in prison: The importance of staff characteristics

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Abstract

A humane and fair treatment of prisoners is of intrinsic value in itself, and is generally acclaimed to reduce prisoners' psychological distress and misconduct in prison, and their criminal behavior after release from prison. To create a more just prison climate, scholars have emphasized the importance of correctional staff. However, there is a lack of empirical research on the relationship between correctional officers' characteristics and prisoners' perceptions of a procedurally just treatment in prison. Our study fills this gap in knowledge. Data were used from (a) the Prison Project, a large-scale study in which prisoners held in all Dutch pre-trial detention centers were surveyed ($N = 1,610$) and (b) the Dutch Correctional Staff Survey 2011 ($N = 690$). Multilevel analyses show that prisoners perceived their treatment in prison as more procedurally just in units where there are more female officers, where officers held more positive attitudes towards rehabilitation, and where there is a higher officer-to-inmate ratio.

2.1 Introduction

A significant body of literature suggests that the use of procedural justice by criminal justice authorities can be an effective strategy to secure citizens' compliance with the law. According to procedural justice theory, people are more likely to comply with the law and cooperate with authorities' rules and decisions when they think that the actors in the criminal justice system exercise their authority in a fair and respectful manner (Leventhal, 1980; Lind & Tyler, 1988; Thibaut & Walker, 1975; Tyler, 1990). The presumption is that the more people feel that they are treated in a procedurally just manner during their interactions with criminal justice actors, the more they will view them as legitimate and respect them. Empirical research testing the ideas of procedural justice theory generally confirmed that when criminal justice actors (e.g. police, judges, and correctional officers) treat people with fairness, respect, and dignity, people view these actors as more legitimate and are more willing to comply and cooperate (e.g. Reisig & Mesko, 2009; Sprott & Greene, 2010; Sunshine & Tyler, 2003; Tyler, 2001).

Despite the fact that both theoretical and empirical literature on procedural justice has been well developed over the past decades and that this literature has focused on a variety of law enforcement settings, this literature has focused almost exclusively on the consequences of procedural justice (e.g. compliance, legitimacy, and confidence). The antecedents of procedural justice have remained largely neglected (with some exceptions: Casper, Tyler, & Fisher, 1988; Wright & Bronstein, 2007). Knowing that procedural justice matters for obtaining compliance, it is relevant to examine which factors contribute to a higher sense of procedural justice.

In the current study, we focus on the determinants of procedural justice in the correctional setting, a context in which interactions between authorities (correctional staff) and prisoners are frequent and prolonged. Obtaining a procedurally just prison climate is important for several reasons. First, mission statements of national Prison Services in North-American and European countries typically emphasize the importance of a decent and humane treatment of prisoners (<http://www.justice.gov.uk/about/hmps>; <http://www.kriminalforsorgen.dk>; Dutch Prison Service, 2009; Gaes et al., 2004). Second, a procedurally just prison climate is important for the manageability of prisons. In line with procedural justice theory, prisoners who evaluate their treatment in prison as more fair and respectful appear less involved in misconduct, like disobedience, possession of contraband, and violence (Reisig & Mesko, 2009; Sparks & Bottoms, 1995), and report lower levels of psychological distress (e.g. Gover et al., 2000; Liebling et al., 2005). Finally, a procedurally just treatment can also be related to prisoners' (offending) behavior after release from prison. Research in police and court settings has shown that offenders who evaluated their treatment by the police and judges as fair and non-stigmatizing were less likely to re-offend (McGrath, 2009;

Paternoster, Brame, Bachman, & Sherman, 1997). In line with these results, it can be expected that when prisoners perceive their treatment in prison as more procedurally just, this may contribute to lower levels of re-offending. In sum, a more procedurally just prison climate is one of the aims of Prison Services and may contribute to a safer correctional environment, prisoners' psychological well-being, and lower recidivism risks. Therefore, it is important to examine contextual factors within the correctional setting that may contribute to a more procedurally just prison climate.

When theorizing about what determines a fair and humane prison climate, scholars have particularly emphasized the importance of the behavior and characteristics of correctional officers (Bottoms, 1999; Crewe et al., 2011; Lieblich, 2004). Correctional officers play a central role in the correctional system and are ultimately responsible for putting criminal justice policies into practice. Therefore, they determine or shape, to a large extent, how the system is run and how prisoners are treated (Crewe et al., 2008; Kifer et al., 2003). Correctional officers play a key role in the lives of prisoners as they interact with prisoners on a daily basis, and are generally prisoners' first link to the outside world during incarceration. Moreover, the behavior of officers seems to be an important determinant of prisoners' perceptions of fairness and respect. Research among English prisoners indicated that prisoners' perceptions of fairness were substantially more dependent on perceptions of staff fairness and staff-prisoner relationships than they were on regime fairness (e.g. material provisions and facilities) (Ahmad, 1996).

Surprisingly, theoretical and empirical knowledge on the extent to which officers contribute to a procedurally just treatment in prison is rather limited. Although some studies examined the effects of correctional officers' characteristics (e.g. age, gender, tenure, and job-related attitudes), these studies focused on other outcome variables like officers' work-related attitudes (e.g. Jurik, 1985; Kifer et al., 2003; Tewksbury & Mustaine, 2008), prisoners' perceptions of other prison conditions like their perceived autonomy or safety (Crewe et al., 2011; Molleman & Leeuw, 2012), or prisoners' violent behavior (e.g. Bieri, 2012a; Camp, Gaes, Langan, & Saylor, 2003). To our knowledge, no study has examined the relationship between correctional officers' characteristics and whether or not prisoners feel they are treated in a procedurally just manner.

This study aspires to fill this gap in knowledge. The aim of the study was to examine the relationship between the composition of correctional officer characteristics and prisoners' perceptions of a procedurally just treatment in prison. More specifically, this paper addresses the following research question: To what extent are background characteristics, work-related attitudes, and workload of correctional officers related to prisoners' perceptions of fairness, respect, humanity, and relationships with officers? To answer this question, a unique multilevel dataset was used, which combined data

from a nationwide survey among prisoners in all pre-trial detention centers in the Netherlands ($N = 1,610$) with data from a national survey among correctional officers working in these pre-trial detention centers ($N = 690$).

2.2 Theory and prior research

A review of the literature suggests that three types of correctional officers' characteristics may be related to officers' behavior, and, consequently, to how prisoners experience their treatment in prison: officers' background characteristics, their work-related attitudes, and their workload. Here, we discuss these characteristics and formulate hypotheses on their relationship with prisoners' perceptions of procedural justice.

2.2.1 Background characteristics of correctional officers

Our first hypothesis states that a higher number of female officers are expected to result in a more fair, respectful, and humane treatment of prisoners, and in more positive officer-prisoner relationships. This expectation can be deduced from social role theory and evolution theory, which both suggest that males and females differ in their social behavior, attitudes, and skills. Both theories propose that women dispose of more social attitudes and behavior than men, either due to differences in gender roles (social role theory) or due to evolved dispositions and skills (evolution theory) (Eagly & Wood, 1999). Prior empirical research has confirmed this hypothesis: When compared with men, women show more empathy and consideration for others, smile and laugh more, touch other people more, and show more involvement with others (e.g. Anderson & Blanchard, 1982; Eagly & Wood, 1991). Moreover, research within the correctional context showed that, when compared with male officers, female officers are more likely to support a human service or rehabilitative orientation (e.g. Farkas, 1999; Tewksbury & Mustaine, 2008), or adopt a caring approach (Tait, 2011). It is to be noted, however, that some studies did not observe differences between male and female officers in their human service orientation (e.g. Cullen, Lutze, Link, & Travis-Wolfe, 1989; Jurik, 1985; Lambert & Hogan, 2009).

Second, correctional officers who finished a higher educational level are expected to exhibit greater tolerance and understanding of prisoners, which may result in more fair, respectful, and humane behavior towards prisoners, and more positive relationships with them. This expectation can be deduced from theoretical models suggesting that higher levels of education are related to more prosocial attitudes, like tolerance for out-groups (e.g. criminals, homosexuals, and homeless people). For instance, according to the 'developmental' perspective (Phelan et al., 1995), education fundamentally alters people, changing their characters and basic values in the direction

of tolerance of diversity. Empirical studies have confirmed that higher educated people show more tolerance for nonconformist groups in general (Bobo & Licari, 1989; Phelan et al., 1995). Within the correctional context, studies showed that higher educated correctional officers either had more positive attitudes towards prisoners and rehabilitation (e.g. Burton, Ju, Dunaway, & Wolfe, 1991; Lambert, Hogan, Barton, & Elechi, 2009; Van der Broek & Molleman, 2012), or did not significantly differ in attitudes from their lower educated counterparts (e.g. Cullen, Latessa, Burton, & Lombardo, 1993; Gordon, 2006; Moon & Maxwell, 2004; Whitehead & Lindquist, 1989).

Third, older officers can be hypothesized to have more positive attitudes towards prisoners and towards the rehabilitation goal of imprisonment, and, consequently, are expected to approach prisoners with more fairness, respect, and humanity, and have more positive relationships with them. This expectation is based on empirical research revealing that older officers hold more optimistic attitudes towards prisoners and are more supportive of rehabilitation than younger officers (e.g. Farkas, 1999; Kifer et al., 2003; Lambert et al., 2009; Paboojian & Teske, 1997). In line with these empirical results, it has been hypothesized that officers 'mellow' with age (Farkas, 1999). Aging may, therefore, increase officers' interest in a human service approach. However, not all studies have observed significant differences between older and younger officers (e.g. Antonio & Young, 2011; Burton et al., 1991; Lambert & Hogan, 2009).

Fourth, officers who are relatively new to the job can be expected to have more positive attitudes towards prisoners and, therefore, approach prisoners with more fairness, respect, and humanity, and have more positive relationships with them. The expectation can be deduced from two theoretical notions. First, it has been suggested that officers with long tenure become cynical after working in prison for years, and will develop more negative attitudes about prisoners and prisoners' possibilities to successfully reintegrate (Jurik, 1985). As a consequence, they may treat prisoners in a less procedurally just way. Second, it has been argued that due to a selection bias, the pro-prisoner and less punitively oriented officers are more likely to quit their job because they become dissatisfied with their working conditions (Jurik, 1985). Prior empirical research on correctional officers' work experience has shown mixed results. Some studies observed that new officers were most likely to have a human service orientation (e.g. Jurik, 1985; Kifer et al., 2003; Van Voorhis, Cullen, Link, & Travis Wolfe, 1991), others reported no significant association between years of service and officers' correctional orientation (e.g. Gordon, 2006; Lambert & Hogan, 2009; Tewksbury & Mustaine, 2008).

In sum, in this study, we hypothesize that in units where there are more female officers, more officers with a higher educational level, more older officers, and more officers with a short tenure, prisoners will perceive their treatment in prison as more fair, respectful, and humane, and experience more positive relationships with officers.

2.2.2 Work-related attitudes of correctional officers

Hypotheses regarding the effects of correctional officers' work-related attitudes can be deduced from theories on the link between attitudes and behavior (e.g. Ajzen & Fishbein, 1977; Allport, 1935; Bohner & Dickel, 2011). In general, it is assumed that attitudes have a powerful influence on behavior. Allport (1935) asserted that attitudes determine what people see, hear, think, and do. The attitude-behavior relationship is based on a general notion of consistency: People act towards a certain object in accordance with their attitude towards that object. Ajzen and Fishbein (1977) argued that the strength of this relationship increases when the attitude and behavior are directed at the same target and action (i.e. correspondence between the measures). For example, a person's behavior to donate to church will be more strongly related to their 'attitude towards donating money to church' than their more general 'attitude towards churches'. In a similar vein, prison scholars have argued that correctional officers' work-related attitudes and beliefs affect the way they interact with prisoners (e.g. Farkas, 1999; Whitehead & Lindquist, 1989). Based on these ideas, it is hypothesized that officers with a more positive attitude towards prisoners and towards rehabilitation will approach prisoners in a more fair, respectful, and humane manner, and develop more positive relationships with prisoners.

In general, empirical studies supported the attitude-behavior link. Meta-analyses have demonstrated that, although attitudes and behavior are not always perfectly aligned, overall, attitudes significantly and substantially predict future behavior (Greenwald, Poehlman, Uhlmann, & Banaji, 2009; Kraus, 1995). Within the correctional context, research on the relationship between officers' attitudes and prisoners' perceptions of their treatment is lacking. There are two studies that examined how officers' attitudes and orientations are related to the way prisoners perceive their stay in prison (Crewe et al., 2011; Molleman & Leeuw, 2012). However, instead of examining the effects of officers' attitudes on prisoners' perceptions of a fair and just treatment, these studies focused on prisoners' perceptions of other aspects of prison life (e.g. autonomy, program delivery, and overall quality of life in prison).

2.2.3 Workload of correctional officers

Finally, we hypothesize that in units where there is a higher officer-to-inmate ratio and where there are more officers experiencing a lower workload, prisoners will judge their interactions with officers as more fair, respectful, and humane, and view their relationships with them as more positive. This expectation is based on the theoretical notion that besides quality time, 'quantity time' is important in relationships (Emmers-Sommer, 2004). The presumption is that a higher frequency of contact and a longer

duration of interactions will result in positive relational outcomes such as satisfaction. Likewise, in the correctional setting, it has been suggested that more officer-prisoner contact will result in more positive relationships (Fairweather, 2000). When applied to correctional officers, a higher workload most likely reduces the available time officers have for interacting with prisoners. Therefore, it can be expected that both a higher officer-to-inmate ratio and a lower perceived workload among officers is associated with a more fair, respectful, and humane treatment, and more positive officer-prisoner relationships.

Empirical research on the association between ‘quantity time’ and relationship quality confirmed that more frequent face-to-face interactions and spending more time together were associated with higher relational satisfaction, both in friendship, romance, and manager-employee relationships (e.g. Callan, 1993; Emmers-Sommer, 2004; Kingston & Nock, 1987). Within the court setting, Casper et al. (1988) showed that the amount of time spent with the lawyer was positively related to defendants’ perceptions of procedural justice. However, to our knowledge, research on this association in the correctional context is lacking.

2.3 Method

2.3.1 Data

To examine the relationship between correctional officers’ characteristics and prisoners’ perceptions of procedural justice in prison, this study used two datasets: (a) prisoner data from the Prison Project and (b) correctional officer data from the Correctional Staff Survey 2011 held by the Dutch Prison Service.

Prisoner data from the Prison Project

The Prison Project is a large-scale longitudinal study on the effects of imprisonment in the Netherlands. In the project, a representative sample of 1,909 prisoners is followed for several years, both during and after their incarceration. The sample of the Prison Project consists of male prisoners aged 18-65 years, who were born in the Netherlands, who had no significant psychiatric problems, who entered one of the Dutch pre-trial detention centers between October 2010 and April 2011, and who were held in pre-trial detention for approximately three weeks. In the first few weeks of their pre-trial detention, employees of the Prison Project approached and informed all eligible prisoners. Participation was voluntary, and all participants signed an informed consent declaration.

The present study used data of the first wave of the Prison Project that was performed when the prisoners were held in pre-trial detention for about three weeks.

This first wave consisted of a structured interview and a self-administered questionnaire. Between October 2010 and April 2011, 2,945 prisoners meeting the selection criteria entered the pre-trial detention centers in the Netherlands. Of this group, 170 prisoners could not be approached (mainly because they were already released or were not allowed to have contact with others during the police investigation). Of the 2,775 prisoners who were approached, 1,909 prisoners (69%) participated in the interview and 1,764 prisoners (64%) also completed the questionnaire.^{3,4}

Correctional officer data from the Correctional Staff Survey

The Dutch Prison Service regularly conducts a survey among their correctional staff and for the present study data were used from the survey administered in April 2011 (Van der Broek & Molleman, 2012). All 3,740 correctional officers working in Dutch correctional facilities (i.e. both pre-trial detention centers and prisons) were asked to participate in the study. Participation in the survey was voluntary and officers were allowed to fill out the questionnaires during working hours. To guarantee anonymity, officers could send their completed questionnaire to an independent research institute. In total, 2,277 correctional officers (61%) participated in the survey.⁵

Combining the two datasets

For the present study, the prisoner and officer data from all Dutch pre-trial detention centers were combined on unit level. Every unit in the correctional facilities had a unique code and for each prisoner and officer, it was known in which unit he or she was living or working. Officer data were aggregated on unit level (e.g. the average age of the correctional officers per unit), and these aggregated officer measures were attached to the data of the individual prisoners.

In the process of combining the two datasets, we could not include prisoners of whom it was unclear in which unit they were held ($N = 49$ prisoners), and prisoners who were housed in a unit for which insufficient officer data were available ($N = 105$

³ Response rates in prisoner studies vary considerable (e.g. 34% (Reisig & Mesko, 2009) to 89% (<http://www.icpst.umich.edu/icpsrweb/NACJD/studies/4572>)). The response rate of the Prison Project is fairly good compared to other Dutch prisoner studies (e.g. 51-54%; Mol & Henneken-Hordijk, 2008; Nelissen, 2000).

⁴ Using registered data of the Dutch Prison Service, background characteristics of the sample (1,764) were compared with prisoners who were not approached (170) and prisoners who refused to participate in the research (866). The groups were similar with regard to age and their marital status at the time of their arrest, and differed slightly on offense type (participants were more often suspected of a violent offense and less often of a property crime).

⁵ The participating officers and the entire officer population were compared with regard to gender, age and years of service. The groups differed slightly on age and work experience, but the effect sizes were far below the threshold of 0.1 (Cohen, 1988).

prisoners).⁶ This resulted in a final sample of 1,610 prisoners, who were housed in 105 different units. The data on the officer characteristics of these units were obtained from 690 officers, who worked in these 105 different units.

2.3.2 Measures

Dependent variables: Prisoners' perceptions of procedural justice (inmate level)

In the Prison Project, four measures were used to determine *prisoners' perceptions of a procedurally just treatment*: (a) *fairness*, (b) *respect*, (c) *humanity*, and (d) *relationships with officers*. Although traditionally, 'relationships with authorities' (in this study 'relationships with correctional officers') was not included in measures of procedural justice, prior research in the correctional setting has suggested that prisoners' perceptions of justice and fairness depend to a large extent on their perceptions of staff-prisoner relationships (Ahmad, 1996; Liebling, 2004). The four scales and items were based on two existing instruments measuring prisoners' perceptions of their conditions of confinement: the Measurement of Quality of Prison Life (Liebling, 2004) and the Dutch Inmate Survey (Mol & Henneken-Hordijk, 2008). Examples of items used for the measures on prisoners' perceptions of a procedurally just treatment were "Overall, I am treated fairly by staff in this correctional facility" (fairness, six items), "This correctional facility is poor at treating prisoners with respect" (respect, three items), "Some of the treatment I receive in this correctional facility is degrading" (humanity, three items), and "The correctional officers are nice to me" (positive relationships with officers, five items).

The statements about the perceived treatment in the pre-trial detention center were presented to the prisoners on a five-point scale and prisoners could indicate to what extent they agreed or disagreed with these statements (1 = strongly disagree; 5 = strongly agree). All items were coded (or reverse coded) so that a lower score reflected a more negative judgment about the treatment in prison, and a higher score reflected a more positive judgment. The four scales proved reliable with Cronbach's alpha ranging between 0.70 (humanity) and 0.87 (relationships with officers).

Independent variables: Characteristics of the correctional officers in the units (unit level)

In the Correctional Staff Survey, several background characteristics of the correctional officers were included, which led to the following aggregated measures: the *proportion of female officers* in a unit, the *average educational level* of the officers in a unit, the *average age* of the officers in a unit, and the *average number of years of work experience*

⁶ Officer data were considered insufficient when there were less than three participating correctional officers in a unit.

of the officers in a unit. Since there was not much variation in the educational level of correctional officers, this variable was dichotomized into a lower level (score 0; representing intermediate secondary education) and a higher level (score 1; representing higher secondary education or intermediate vocational training).

In the Correctional Staff Survey, two scales were included to measure correctional officers' attitudes towards prisoners and towards rehabilitation in each unit. First, correctional officers were asked to give their opinion on four items measuring *attitudes towards prisoners*. The scale (and items) were based on the Prison Staff Quality Life survey (Crewe et al., 2011; Liebling, personal communication in 2010). An example of an item of this scale included "It is important to have compassion for prisoners". Second, correctional officers were asked to give their opinion on five items measuring *attitudes towards rehabilitation*. This scale was originally developed by the Dutch Prison Service (Van der Broek & Molleman, 2012). An item of this scale was for instance "You try to encourage prisoners to change". Items of both scales were rated on a five-point scale (1 = completely disagree; 5 = completely agree). All items were coded in such a way that a lower score indicated a more negative attitude, and a higher score indicated a more positive attitude. The reliability for both scales was good ($\alpha = 0.83$ for prisoners; $\alpha = 0.87$ for rehabilitation).

Two measures were created to determine officers' workload in each unit. First, the *officer-to-inmate ratio* per unit was calculated. For each unit, the total number of officers assigned to the unit was divided by the maximum number of prisoners in the unit. Employees of the Prison Project visited all pre-trial detention centers to collect this information. Second, in the Correctional Staff Survey, officers were asked on their *perceived workload*. This scale (six items) was developed by the Dutch Prison Service (Van der Broek & Molleman, 2012). An example of an item of this scale was "I often work under time pressure". Officers were asked to indicate on a five-point scale (1 = completely disagree; 5 = completely agree) to what extent they agreed or disagreed with the six statements. The internal consistency of the perceived workload scale proved to be good ($\alpha = 0.89$).

The descriptive statistics of the correctional officers' characteristics on unit level are shown in Table 2.1. The proportion of female officers in a unit was 0.22, meaning that on average one out of five correctional officers working in a unit was a female. However, there were also units where all officers were males. On slightly less than half of the units (46%), officers had a lower educational level, and on average the correctional officers in a unit were 44 years old. Units had on average officers who had almost 16 years of work experience in prison. Even in the least experienced units, officers had on average seven years of tenure. On average, the units were somewhat positive with regard to 'attitudes toward prisoners' ($M = 3.66$) and 'attitudes towards rehabilitation' ($M = 3.62$). The average officer-to-inmate ratio was 0.26, meaning that overall there

was one officer for every four prisoners. In some units, there was one officer for every eight prisoners, while other units showed a ratio of 1:2. On average, the 105 units had a neutral score of 2.98 for officers' perceived workload.

Table 2.1 Descriptive statistics of aggregated officers' characteristics per unit ($N = 105$)

Officers' characteristics per unit	N	%	M	SD	Min	Max
Background characteristics						
Proportion female officers	102		0.22	0.11	0.00	0.44
Educational level						
Lower	48	45.7				
Higher	57	54.2				
Age	105		44.08	4.14	32.00	53.00
Number of years of service	105		15.72	4.54	7.00	25.50
Work-related attitudes						
Attitude towards prisoners	105		3.66	0.26	3.13	4.58
Attitude towards rehabilitation	105		3.62	0.31	2.98	4.70
Workload						
Officer-to-inmate ratio	105		0.26	0.09	0.12	0.50
Perceived workload	105		2.98	0.44	1.75	3.86

Control variables: Prisoners' background and prison situation characteristics (inmate level)

Using prisoner data from the Prison Project, this study controlled for several background characteristics of prisoners. First, demographic characteristics of the prisoners were included, like *age* upon arrival in the pre-trial detention center, *ethnicity* (0 = Dutch background; 1 = one or both parents are born outside the Netherlands), having an *intimate relationship* at the time of their arrest that lasted at least three months (0 = no; 1 = yes), and *educational level*. The educational level of the prisoners was divided into three categories: low (primary school or intermediate secondary education), middle (higher secondary education or intermediate vocational education), and high (higher vocational education or university education). Second, we controlled for the personality of prisoners, which was measured with the Dutch Big Five Inventory (Denissen, Geenen, Van Aken, Gosling, & Potter, 2008). In this questionnaire, several traits were presented and participants indicated to what extent these traits applied to them. The inventory distinguishes five scales: *neuroticism* (eight items), *extraversion* (eight items), *openness to new experiences* (ten items), *agreeableness* (nine items), and *conscientiousness* (nine items). The Dutch Big Five Inventory has been validated and has shown good psychometric qualities (Denissen et al., 2008). In the present study, the five personality factors had acceptable internal consistency, with Cronbach's alpha ranging from 0.63 (agreeableness) to 0.79 (neuroticism). Third, two variables

concerning criminal behavior were taken into account: Whether or not the prisoner reported a *prior imprisonment* (0 = no; 1 = yes), and the *type of offense* the prisoner was suspected of according to official records of the Dutch Prison Service (property, violent, sexual, drugs, property damage and public order, and other).

This study also controlled for two characteristics of the detention situation of the prisoners. First, in the Prison Project prisoners were asked whether or not they were *sharing a cell* with another prisoner (0 = no; 1 = yes), since research has suggested that double bunking may negatively affect the relationships between officers and prisoners (Inspectie voor de Sanctietoepassing, 2011). Second, the *type of unit* where the prisoner was housed was taken into account. This information was collected in all pre-trial detention centers by Prison Project employees. Besides standard units, there were 'entry' units for prisoners who just entered the facility and 'care' units for vulnerable prisoners or prisoners with psychological problems.

The descriptive statistics on prisoners' background and prison situation characteristics are presented in Table 2.2. On average, the prisoners were 30 years old and almost 40% of the prisoners had at least one parent who was not born in the Netherlands. Nearly 55% of the sample had an intimate relationship at the time of their arrest and two-thirds of the prisoners had finished a low educational level. Almost two-thirds of the prisoners reported that they had been incarcerated before and most of the prisoners were suspected of a violent offense (42%) or a property offense (24%). Around 22% of the sample shared a cell with another prisoner at the time of the interview. The majority of the prisoners (57%) were housed in a standard unit, whereas one-third resided in an entry unit and 10% in a care unit.

2.3.3 Analytical strategy

This study examined to what extent characteristics of correctional officers are related to prisoners' perceptions of fairness, respect, humanity, and relationships with officers. To address this question, multilevel linear regression analyses were conducted, linking the correctional officers' characteristics in each unit to prisoners' perceptions of the treatment in these units. Multilevel linear regression analyses – instead of ordinary least square regression – were performed to account for the hierarchical structure of the data: 1,610 prisoners were nested within 105 units.⁷ Ignoring the hierarchical structure and the dependence across observations from the same unit would lead to an underestimation of standard errors, and would possibly result in incorrect conclusions about nonexistent relations (Hox, 2010; Snijders & Bosker, 1999). The estimation

⁷ Of course, the 105 units were nested within 32 facilities. However, since the relative variance of the facility level in the empty models turned out to be very small and no variables were measured on facility level, the present study was confined to two levels: the inmate and unit level.

Table 2.2 Descriptive statistics of prisoners' characteristics ($N = 1,610$)

Prisoners' characteristics	N	%	M	SD	Min	Max
Age	1,610		30.41	10.79	18.00	65.00
Ethnicity						
Dutch background	926	57.5				
Other background	623	38.7				
Missing	61	3.8				
Partner						
No	605	37.6				
Yes	884	54.9				
Missing	121	7.5				
Educational level						
Low	1,075	66.8				
Middle	384	23.8				
High	76	4.7				
Missing	75	4.7				
Personality: neuroticism	1,610		2.88	0.61	1.00	5.00
Personality: extraversion	1,610		3.50	0.56	1.00	5.00
Personality: openness	1,610		3.33	0.54	1.00	5.00
Personality: agreeableness	1,610		3.37	0.47	1.56	5.00
Personality: conscientiousness	1,610		3.51	0.46	1.78	5.00
Prior imprisonment						
No	514	31.9				
Yes	1,004	62.4				
Missing	92	5.7				
Type of offense						
Property	391	24.3				
Violence	682	42.3				
Sexual	54	3.4				
Drugs	195	12.1				
Property damage and public order	85	5.3				
Other	203	12.6				
Double bunking						
No	1,250	77.6				
Yes	360	22.4				
Kind of unit						
Standard unit	919	57.1				
Entry unit	522	32.4				
Care unit	169	10.5				

method used was Maximum Likelihood, and all continuous predictors were (grand mean) centered. Although some predictors correlated with each other, the analyses indicated no multicollinearity (VIF well below 5).

2.4 Results

2.4.1 Prisoners' perceptions of a procedurally just treatment in prison

Table 2.3 shows how prisoners on average experienced their treatment in prison. One-fifth of the prisoners reported that correctional officers treated them fair, whereas another 20% did not think that they were treated fairly. The mean score regarding fairness was 3.05 ($SD = 0.65$), indicating a neutral opinion regarding the fairness of officers' behavior. Respect and relationships with officers displayed a similar distribution. About one-third of the prisoners (38%) felt that they were treated with respect in prison and about one-third (36%) were positive about their relationships with officers. About 15% of the prisoners judged negatively about respect and relationships with officers. The mean scores of respect ($M = 3.21$, $SD = 0.78$) and relationships with officers ($M = 3.19$, $SD = 0.67$) were slightly positive. Finally, a quarter of the prisoners perceived the treatment of officers as humane, whereas another quarter judged negatively about this. The mean score of humanity was neutral ($M = 2.96$, $SD = 0.81$).

Table 2.3 Prisoners' perceptions of a procedurally just treatment in prison

Prisoners' perceptions of a procedurally just treatment	% Negative judgment (score 1.0 – 2.5)	% Neutral judgment (score 2.5 – 3.5)	% Positive judgment (score 3.5 – 5.0)
Fairness (N = 1,558)	20.9	58.7	20.4
Respect (N = 1,548)	15.1	47.0	37.9
Humanity (N = 1,533)	26.0	47.5	26.5
Relations with officers (N = 1,550)	15.6	48.8	35.6

2.4.2 Effect of officers' characteristics on prisoners' perceptions of a procedurally just treatment in prison

To answer our main research question, Table 2.4 presents the results of the multilevel regression analyses testing the associations between correctional officers' characteristics and prisoners' perceptions of a procedurally just treatment. First, we hypothesized that in units where there are more female officers, more officers with a higher educational level, more older officers, and more officers with a short tenure, prisoners will perceive their treatment in prison as more fair, respectful, and humane,

Table 2.4 Multilevel linear regression analyses for officer characteristics on prisoners' perceptions of a procedurally just treatment in prison ($N_{Level1} = 1,523-1,548$; $N_{Level2} = 102$)

	Fairness		Respect		Humanity		Relations	
	b		b		b		b	
Intercept	3.248	***	3.488	***	3.241	***	3.504	***
Level 2: Officers' characteristics per unit								
<i>Background characteristics</i>								
Proportion female officers	0.433	*	0.328		0.617	**	0.591	**
Higher educational level	-0.003		-0.025		-0.004		0.010	
Age	-0.005		-0.004		-0.004		-0.005	
Number of years of service	0.003		0.001		0.002		0.001	
<i>Work-related attitudes</i>								
Attitude towards prisoners	-0.084		-0.107		-0.107		-0.195	
Attitude towards rehabilitation	0.131		0.149		0.124		0.208	*
<i>Workload</i>								
Officer-to-inmate ratio	0.642	*	1.032	**	0.967	*	1.040	**
Perceived workload	-0.020		0.023		0.020		0.067	
Level 1: Prisoners' characteristics								
Age	0.005	**	0.007	**	0.008	**	0.011	***
No Dutch background	-0.155	***	-0.134	**	-0.136	**	-0.217	***
Having a partner	-0.051		-0.149	***	-0.121	**	-0.089	*
Educational level (ref = Low)								
Middle	0.010		0.035		0.001		0.017	
High	-0.096		-0.193	*	-0.172		-0.230	**
Personality: neuroticism	-0.052		-0.034		-0.106	**	-0.012	
Personality: extraversion	-0.011		0.009		0.059		0.084	*
Personality: openness	-0.150	***	-0.081	*	-0.193	***	-0.079	*
Personality: agreeableness	0.114	**	0.119	**	0.097	*	0.137	**
Personality: conscientiousness	0.083	*	-0.006		0.013		0.041	
Prior imprisonment	-0.176	***	-0.192	***	-0.193	***	-0.173	***
Type of offense (ref = Property)								
Violence	0.045		0.080		0.068		0.001	
Sexual	-0.131		-0.203		-0.162		-0.388	***
Drugs	-0.025		-0.036		-0.145	*	-0.056	
Property damage & public order	0.096		0.012		0.054		0.034	
Other	0.039		0.023		0.066		0.030	
Double bunking	0.031		0.013		0.007		-0.023	
Kind of unit (ref = Standard unit)								
Entry unit	0.018		0.003		-0.037		-0.037	
Care unit	0.018		0.006		-0.057		0.047	
ICC empty model	3.3%		2.3%		2.8%		6.5%	

Note: Missing values on prisoners' ethnicity, partner, educational level, and prior imprisonment were included in the model as separate categories, but are not shown in the table as they had no significant effect.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

and experience more positive relationships with officers. The results show that the proportion of female officers had a significant effect. In units where there are more female officers, prisoners perceived their treatment as more fair and humane, and evaluated their relationships with officers as more positive. The relationship between officers' gender and prisoners' perceptions of respectful treatment was also positive, but not statistically significant. The other officers' background characteristics had no significant effect.

Second, we hypothesized that officers with a more positive attitude towards prisoners and officers with a more positive attitude towards rehabilitation would approach prisoners in a more fair, respectful, and humane manner, and would develop more positive relationships with prisoners. The results provided limited support for this hypothesis. Only officers' attitude towards rehabilitation was significantly related to officer-prisoner relationships: In units where officers had more positive attitudes towards rehabilitation, prisoners were more positive about their relationships with correctional officers. Officers' attitude towards prisoners was not significantly related to prisoners' perceptions of a procedurally just treatment.

Third, we hypothesized that in units where there is a higher officer-to-inmate ratio and where there are more officers experiencing a lower workload, prisoners will judge their treatment in prison as more fair, respectful, and humane, and view their relationships with officers as more positive. The results show that officer-to-inmate ratio was significantly associated with prisoners' procedural justice perceptions. In units where there is a higher officer-to-inmate ratio, prisoners perceived their treatment in prison as more fair, respectful, and humane, and perceived their relationships with officers as more positive. Officers' perceived workload in a unit had no significant effect.

Finally, analyses showed that several background characteristics of prisoners were associated with their perceptions of a procedurally just treatment in prison. In general, older prisoners, prisoners with a Dutch background, prisoners with no partner prior to their arrest, and prisoners with a lower educational level evaluated their treatment and relationships with officers as more fair, respectful, humane, and positive. In addition, personality traits mattered: Prisoners with a lower score on neuroticism and openness to new experiences, and prisoners with a higher score on extraversion, conscientiousness, and agreeableness were more positive about (some aspects of) their treatment in prison. Furthermore, prisoners imprisoned for the first time perceived their treatment as more fair, respectful, and humane, and judged their relationships with officers as more positive. Clearly, it is important to include such prisoners' characteristics into the analyses, because ignoring the effects of these characteristics on prisoners' perceptions of a just treatment would bias the estimates of the effects of the correctional officers' characteristics.

2.5 Discussion

Knowledge about the determinants of a procedurally just prison climate is important, because a fair and respectful treatment of prisoners is one of the aims of Prison Services in many Western countries and is beneficial for prison safety and prisoners' well-being. Although it is well-known that correctional officers play a central role in obtaining a just prison climate (Bottoms, 1999; Liebling, 2004), empirical research examining this relationship is lacking. To our knowledge, this is the first study that examined the extent to which background characteristics, work-related attitudes, and workload of correctional officers are related to prisoners' perceptions of a procedurally just treatment in prison.

The results of this study suggested that – even after controlling for many prisoner characteristics – certain officers' characteristics are related to the way prisoners perceive their treatment in prison. First, in units where there are more female officers, prisoners experienced more fairness, humanity, and more positive relationships with officers. Second, in units where officers held more positive attitudes towards rehabilitation, prisoners experienced more positive relationships with officers. Third, in units where there is a higher officer-to-inmate ratio, prisoners perceived more fairness, respect, and humanity, and evaluated their relationships with officers as more positive.

Our finding that female officers have a positive impact on prisoners' perceptions of a procedurally just treatment aligns with theoretical notions that social behavior is linked to gender (Eagly & Wood, 1999). It is generally accepted that females possess more social attitudes and display more social behavior than males, due to different gender roles and/or evolved dispositions. Prior studies have indeed shown that, when compared with men, women show more empathy, are more willing to listen, and have greater concern for good interpersonal relationships (e.g. Anderson & Blanchard, 1982; Eagly & Wood, 1991). In a similar vein, it has been suggested that female social control agents, like female prison officers, have “more skills in terms of talking, bonding, and building rapport with people they are attempting to control” than their male colleagues (Bierie, 2012b, p. 213). Our findings seem to support this notion. However, an alternative explanation could also be that just the mere presence of female officers changes the manner in which male prisoners approach and evaluate officers.

The results provided limited support for the relationship between officers' attitudes and prisoners' procedural justice perceptions. Only a positive attitude towards rehabilitation among officers was related to more positive officer-prisoner relationships. This finding is in line with the attitude-behavior literature (e.g. Ajzen & Fishbein, 1977; Allport, 1935; Bohner & Dickel, 2011). Although attitudes and actual behavior are not always perfectly related and other factors play a role in the prediction

of behavior as well, it is clear that attitudes predict behavior (Greenwald et al., 2009; Kraus, 1995). Officers with a positive attitude towards rehabilitation may be more likely to support prisoners in changing their lives and will probably approach prisoners in a more positive and encouraging way.

In line with our hypothesis, a higher officer-to-inmate ratio was positively related to all four aspects of a procedurally just treatment in prison. When more officers are available in a unit, officers will have increased opportunities to interact with prisoners, which may result in closer officer-prisoner relationships. It should be mentioned, however, that in this study the prisoners had been incarcerated for only three weeks, which is a relatively short period for officers and prisoners to interact. Nevertheless, our finding seems in line with prior research in social psychology showing that both the frequency and the length of interactions have an effect on relationship quality (e.g. Emmers-Sommer, 2004; Kingston & Nock, 1987). In addition, our finding corroborates research among defendants and their lawyers, showing that spending more time with the lawyer increases defendants' perceptions of procedural justice (Casper et al., 1988). Moreover, our results are consistent with outcomes of a recently held meeting organized by the Dutch Prison Service, discussing the workload within the Dutch prison system. During this meeting, officers indicated that understaffing and continuous changes within the prison system contributed to an increased workload, which negatively affected their relationships with prisoners (Dienst Justitiële Inrichtingen, 2012b).

Although the data used in this study are very rich, detailed, and adequate to address the research question, some methodological concerns need to be acknowledged. The first concern relates to the time of measurement of both surveys. Prisoners of the Prison Project were approached between October 2010 and April 2011, whereas the Correctional Staff Survey was conducted in April 2011. However, unlike correctional facilities in some other countries, officers in the Netherlands do not rotate across different units within the facility; instead they work consistently in one unit. Therefore, we are fairly confident that the prisoners in our study encountered the correctional officers in our study. Nonetheless, the results of this study are based on cross-sectional data. Thus, no conclusions can be made about the causality of the findings.

Second, this study was conducted in penitentiary institutions in the Netherlands. Although some changes occurred in recent years, the Netherlands is still known for having a relatively mild prison policy (Kruttschnitt & Dirkzwager, 2011). When compared with many other countries, prison conditions in the Netherlands are rather liberal and decent. For instance, Dutch prisons do not face major overcrowding or understaffing, most prisoners reside in a single cell, prisoners do not have to wear a prison uniform, and staff-prisoner relationships are generally characterized as informal and peaceful (Dervan, 2011; Kruttschnitt & Dirkzwager, 2011). In addition, this study

was based on prisoners who were detained in pre-trial detention centers and who were still awaiting their trial. Prisons (with convicted prisoners) were not included in the study. Besides the fact that convicted prisoners in prisons might perceive their treatment by correctional staff differently than prisoners in pre-trial detention centers, staff-prisoner relationships may objectively differ between prisons and pre-trial detention centers. In the Netherlands, for instance, prisoners in prisons are allowed to spend more time outside their cells than prisoners in pre-trial detention centers. In this way, prisoners in prisons have more opportunities to interact with staff. In sum, we cannot be certain that the findings of this study are generalizable to other countries or to convicted prisoners; replications of our findings in other countries and correctional settings are needed.

A third concern relates to the contextual variance of procedural justice perceptions. As is often the case in multilevel studies, the contextual variance in this study was limited (see Table 2.4). Individual characteristics of prisoners contributed to a larger extent to the explanation of differences in perceived treatment than characteristics of the correctional officer composition did. Nevertheless, after controlling for a variety of such prisoner characteristics like their personality traits, several officers' characteristics were still significantly related to the extent to which prisoners felt they were treated in a procedurally just manner. Moreover, aspects of the correctional environment, like the officer composition, are adjustable, whereas individual prisoner characteristics (e.g. age and personality) are rather fixed. Therefore, it seems a more beneficial approach to focus on contextual factors that may influence prisoners' perceived procedural justice. Examining the effects of other characteristics of the officer composition (e.g. ethnicity) or other aspects of the correctional environment (e.g. prison architecture) would be an interesting avenue for future research.

Notwithstanding these limitations, we feel confident that the present study generated important new knowledge regarding the effects certain correctional officers' characteristics have on the way prisoners feel treated within prison. This knowledge is relevant from a policy perspective, since such characteristics are manageable. Prison Services and prison management can – when desirable – make adjustments in their staff policy, staff selection, and staff training. In this way, they may stimulate a procedurally just prison climate. Although hiring more officers might be difficult due to limited financial resources, it seems worthy to think about the right balance between male and female officers. Especially in units where there are only male officers, it could be beneficial to add a female officer to the team. Moreover, prisoners perceived their relationships with officers as more positive, when officers held more positive attitudes towards rehabilitation. In staff education and training, Prison Service and prison management could try to encourage officers to adopt a more rehabilitative orientation. Recently, the Dutch Prison Service decided that all correctional officers should be

educated on the importance of rehabilitation and trained in motivational interviewing techniques to encourage prisoners to change their lives. In the context of our results, this seems a good development.

