

# VU Research Portal

## Procedural justice in prison

Beijersbergen, K.A.

2014

### **document version**

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

### ***citation for published version (APA)***

Beijersbergen, K. A. (2014). *Procedural justice in prison: A study on determinants and consequences of a procedurally just treatment of prisoners.*

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

### **E-mail address:**

[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)

Procedural justice and prisoners'  
mental health problems:  
A longitudinal study

## Abstract

Given the high prevalence of mental health problems among prisoners, knowledge on its determinants is important. Prior cross-sectional studies suggest that a procedurally just treatment within prison is a significant predictor; however, longitudinal research is lacking. The aims of this study were to examine (1) the longitudinal relationship between prisoners' perceptions of procedural justice – including fairness, respect, humanity, and relationships with officers – and their mental health, and (2) the moderating role of coping style in this relationship. Data were obtained from the Prison Project, a longitudinal study of adult male prisoners in the Netherlands, interviewed both three weeks and three months after their reception into pre-trial detention ( $N = 824$ ). A cross-lagged structural equation model was employed to investigate associations. The results show that prisoners who experienced a higher level of procedural justice three weeks after their arrival in custody reported fewer mental health problems after three months. No evidence was found that coping style moderated this relationship. These findings suggest a causal relationship between procedural justice and psychological well-being, and, therefore, support an extension of procedural justice theory. Fair and respectful treatment of prisoners is a predictor not only of prison order and prisoners' compliance but also of prisoners' psychological well-being.

## **5.1 Introduction**

Research has consistently shown that prisoners are more likely to suffer from psychiatric disorders than the general population (Fazel & Seewald, 2012). Moreover, prisoners display higher levels of psychological problems, such as distress and depressive feelings (Schneider et al., 2011; Zamble & Porporino, 1990). These high prevalence rates have stimulated a wide interest into possible causes. Prisoners' pre-existing characteristics, such as age, ethnicity, prior mental health problems, and coping styles, have been investigated in this context, as have aspects of prison life (e.g. Cesaroni & Peterson-Badali, 2010; Hochstetler, Murphy, & Simons, 2004; Wooldredge, 1999; Zamble & Porporino, 1988).

One aspect of prison life which potentially relates to prisoners' well-being has not received much attention; that is the extent to which prisoners feel they receive a fair and decent treatment. According to procedural justice theory, people will be more likely to comply with authorities' rules and decisions, when authorities treat people respectfully, without discrimination or bias, with transparent and fair procedures, and allow all parties a voice (Lind & Tyler, 1988; Thibaut & Walker, 1975; Tyler, 1990). When applying this theory to the correctional context, unfair and degrading treatment of prisoners is expected to result in resistance and misconduct among them (e.g. Liebling, 2004; Reisig & Mesko, 2009; Sparks & Bottoms, 1995). Extending the theory, it can be argued that fair and humane treatment in prison is related not just to prisoners' behavior but also to their psychological well-being. As Liebling (2011) pointed out, interpersonal relationships and being treated with dignity and respect are important for human beings in general, as well as for life in prison.

Prior research has indeed suggested that prisoners' perceptions of procedural justice are related to their mental health. Several studies have shown that prisoners who felt unfairly and disrespectfully treated in prison were more distressed, anxious, or depressed (e.g. Gover et al., 2000; Liebling et al., 2005; Slotboom et al., 2011). These studies, however, have some important limitations. First and foremost, they have used cross-sectional data and, therefore, were not able to draw conclusions about the direction of the relationship between procedural justice and psychological problems. Longitudinal studies are needed to make causal inferences and to test procedural justice theory accurately. Second, although prior studies included prisoners' personal characteristics (e.g. age, ethnicity and prior psychological problems), most of them did not examine interactions between procedural justice and pre-existing factors. The significance of the interaction between the prisoner and his environment has been stressed by Porporino and Zamble (1984). Prisoners' backgrounds and personal characteristics are likely to affect how they respond to environmental conditions and should, therefore, be taken into account.

The correctional literature has suggested that coping style is an important factor when examining how the correctional environment affects prisoners' mental health (e.g. Gullone et al., 2000; Ireland et al., 2005). According to the stress-coping model, the behavioral and mental health impact of a stressful situation, such as unfair treatment in prison, depends on how this situation is appraised and dealt with by the individual (Lazarus & Folkman, 1984). In general, coping has two main functions: dealing with the problem or situation that is causing the distress (problem-focused coping) and regulating the emotions that accompany the stressor (emotion-focused coping) (Folkman et al., 1986). Some researchers have identified a third type of coping, avoidance-focused coping, in which individuals avoid dealing with the stressor (e.g. Endler & Parker, 1994). Coping efforts may be adaptive or maladaptive. Although the effectiveness of a coping style may depend on characteristics of the stressful situation, in general, problem-focused coping is considered as more beneficial for mental well-being than emotion-focused and avoidance-focused coping (Thoits, 1995).

Our aim in this study was twofold: (1) to examine the longitudinal relationship between prisoners' perceptions of procedural justice and their mental health problems, and (2) to examine the moderating role of coping styles in the effect of procedural justice on mental health problems. We first hypothesized that prisoners' perceptions of procedural justice three weeks after arrival in pre-trial detention (T1) influence prisoners' mental health problems three months after arrival in pre-trial detention (T2) (Hypothesis 1a). As it is well known that negative moods may result in increased recall of negative information (e.g. Mathews, 1993), the opposite hypothesis was also tested: Prisoners' self-reported mental health problems at T1 influence their perceptions of procedural justice at T2 (Hypothesis 1b). Our second main hypothesis was that a problem-focused coping strategy would reduce the negative effect of procedural injustice on mental health, whereas emotion-focused and avoidance-focused coping styles would exacerbate any negative effect (Hypothesis 2).

## **5.2 Method**

### **5.2.1 Context**

We used data from the Prison Project, a study in which prisoners were surveyed three weeks and three months after arrival in one of the Dutch pre-trial detention centers. The Netherlands currently has 58 correctional facilities, of which 32 are used at least partly as pre-trial detention centers, with separate wings for pre-trial and convicted prisoners. On an average day, around 12,000 people are incarcerated (of whom about 49% in pre-trial detention) (Linckens & De Looft, 2012). Prison conditions in the Netherlands remain rather liberal and humane compared with those of many

other countries. Dutch facilities do not, for example, face major overcrowding or understaffing, most prisoners reside in a single cell and staff-prisoner relationships are generally characterized as informal and supportive (Dervan, 2011; Kruttschnitt & Dirkzwager, 2011).

### **5.2.2 Sample**

All adult male prisoners who entered one of the Dutch pre-trial detention centers between October 2010 and April 2011 and who met the selection criteria<sup>22</sup> were approached in person by employees of the Prison Project and invited to participate in the study. We used data from T1 and T2, which took place three weeks and three months after reception into pre-trial detention, respectively. At T1, 1,764 prisoners (64%) participated in a structured interview with a Prison Project employee in a private visiting room. Each prisoner also filled out a self-administered questionnaire in his cell. When T2 started, 1,206 prisoners were still incarcerated in a pre-trial detention center or prison. Of these, 196 prisoners were not contacted, in most cases because they had been released. Of the 1,010 prisoners who were approached, 824 (82%) participated in T2 and filled out a self-administered questionnaire in their cells. Most prisoners (90%) still resided in a pre-trial detention center at T2, 10% was already convicted and housed in a prison. Participants and non-participants of T2 did not differ with respect to age, prior imprisonment, prior mental health problems, coping style, perceived procedural justice, or mental health problems at T1. The groups only differed on ethnicity: Prisoners with a non-Dutch background were somewhat overrepresented among non-respondents (47% versus 38%).

### **5.2.3 Measures**

#### *Procedural justice*

Prisoners were asked about their *perceptions of procedural justice* both at T1 and T2. Procedural justice was assessed according to four subscales, relating to fairness, respect, humanity, and relationships with officers. These subscales were based on two existing instruments on prison perceptions (Liebling, 2004; Mol & Henneken-Hordijk, 2008). Prisoners could indicate on a five-point scale to what extent they agreed with statements about treatment in prison. A low score indicated a negative judgment; a high score a positive judgment. Fairness was measured with six items, like "The regime in this correctional facility is fair". Respect was assessed with three items, such as "This correctional facility is poor at treating prisoners with respect". The

---

<sup>22</sup> Selection criteria were aged 18–65 years, born in the Netherlands, no significant psychiatric problems, and held in pre-trial detention for at least three weeks.

subscale humanity consisted of three items, “I am being looked after with humanity here”. Finally, the scale covering relationships with officers was measured with five items, like “The correctional officers help me if I have problems”. The scales were reliable ( $\alpha = 0.71\text{--}0.90$ ).

#### *Mental health*

Prisoners were asked about their mental health both at T1 and T2. *Mental health problems* were assessed with the Dutch version of the Brief Symptom Inventory (BSI) (De Beurs & Zitman, 2006; Derogatis, 1975). This consists of 53 psychological symptoms which prisoners were asked to rate on a five-point scale (0 = not experienced at all; 4 = experienced a lot). These 53 items relate to nine subscales: depression, anxiety, hostility, somatic complaints, phobic anxiety, cognitive problems, interpersonal sensitivity, paranoid ideation, and psychoticism. The Dutch BSI has been validated and showed good psychometric qualities (De Beurs & Zitman, 2006). In our study, all nine subscales proved reliable ( $\alpha = 0.71\text{--}0.91$ ).

#### *Coping style*

Prisoners' coping styles were measured at T1 with the Dutch adaptation of the Brief COPE Inventory (Carver, Scheier, & Weintraub, 1989; Kleijn, Van Heck, & Van Waning, 2000). The Dutch version has 32 items reflecting thoughts and behaviors of people dealing with stressful situations. On a four-point Likert scale, participants could indicate to what extent these responses applied to them (1 = not at all; 4 = a lot). The Dutch Brief COPE distinguishes three general coping strategies: *problem-focused coping* (eight items about active, planning, suppression of competing activities, and positive reinterpretation), *emotion-focused coping* (six items on emotional social support, instrumental social support, and venting emotions), and *avoidance-focused coping* (six items concerning denial, mental disengagement, and behavioral disengagement). The COPE has been validated and shows satisfactory psychometric qualities (Carver et al., 1989; Kleijn et al., 2000). In our sample, all three scales proved reliable ( $\alpha = 0.69\text{--}0.83$ ).

#### *Background characteristics*

Demographic and personal characteristics of prisoners may have an impact on their perceptions of procedural justice and their mental health. To control for their possible influence, four background variables of prisoners were included in the model: *age* on arrival in the correctional facility, *ethnicity* (0 = Dutch background; 1 = at least one parent is born outside the Netherlands), *prior imprisonment* according to official records of the Dutch Prison Service, and *treatment for psychological problems* in the 12 months preceding incarceration.

## **5.2.4 Analytical strategy**

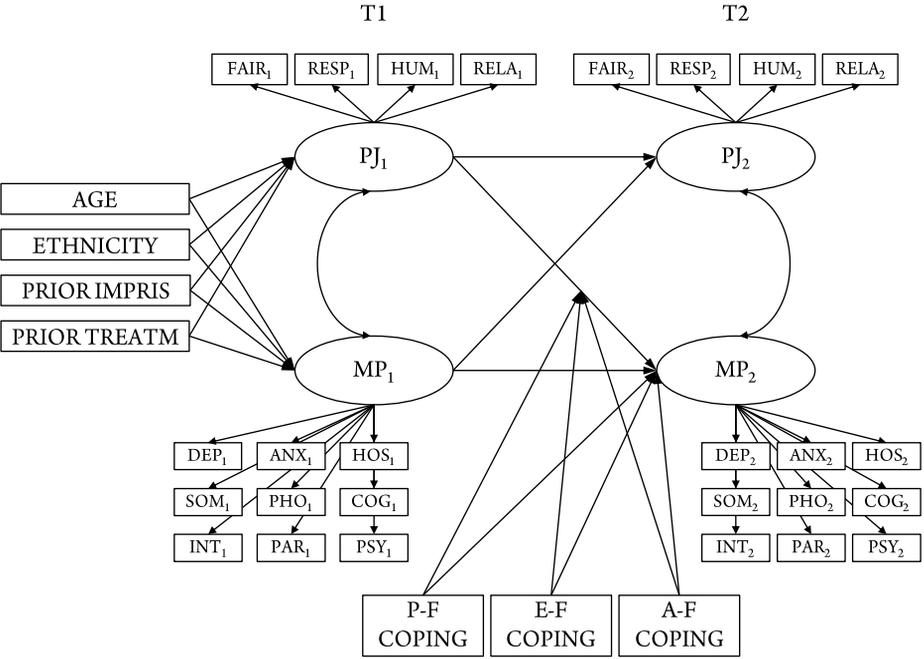
A cross-lagged structural equation model was used to analyze the panel data. Figure 5.1 shows the hypothesized model. The scales fairness, respect, humanity, and relationships with officers were used as indicators of a latent variable representing prisoners' perceived procedural justice. The nine subscales of the BSI were used as indicators of a latent variable representing prisoners' mental health. The model also included prisoners' coping style, age, ethnicity, prior imprisonment, and prior mental health treatment. In order to fit a cross-lagged structural equation model, the first step is to fit the measurement model to check whether the hypothesized latent constructs are represented by the observed indicators. This condition is met when the measurement model shows adequate fit to the data and the factor loadings are above 0.50 (Hair et al., 1998). In the second step, the structural model is constructed in which the variables are related to one another (Kline, 2011).

To test the two variants of our first hypothesis, we compared four competing models: stability model  $M_1$  without any cross-lagged paths (rejecting both Hypotheses 1a and 1b), model  $M_2$  with a cross-lagged path from procedural justice at T1 to mental health problems at T2 (supporting Hypothesis 1a), model  $M_3$  with a cross-lagged path from mental health problems at T1 to procedural justice at T2 (supporting Hypothesis 1b) and model  $M_4$  with both cross-lagged paths (supporting both Hypotheses 1a and 1b).<sup>23</sup> Using the chi-square difference test, we tested which model fitted the data best. To test the second hypothesis, the best fitting model was compared with model  $M_5$ , in which the three coping styles were added as moderators. The analyses were conducted with MPLUS 7.0 (Muthén & Muthén, 2012), using the Maximum Likelihood estimation method. Missing data were deleted list wise, resulting in a sample size of 702.

---

<sup>23</sup> All models were controlled for prisoners' coping style and background characteristics.

**Figure 5.1** Hypothesized cross-lagged structural equation model for prisoners’ perceived procedural justice and mental health problems



Note: PJ = procedural justice; FAIR = fairness; RESP = respect; HUM = humanity; RELA = relationships with officers; MP = mental health problems; DEP = depression; ANX = anxiety; HOS = hostility; SOM = somatic complaints; PHO = phobic anxiety; COG = cognitive problems; INT = interpersonal sensitivity; PAR = paranoid ideation; PSY = psychoticism; P-F COPING = problem-focused coping; E-F COPING = emotion-focused coping; A-F COPING = avoidance-focused coping.

### 5.3 Results

#### 5.3.1 Descriptive statistics

On average, the prisoners were 30.5 years old ( $SD = 10.8$ ), 302 (38%) had a non-Dutch parent, 439 (54%) had been imprisoned before, and 308 (37%) had had psychological treatment in the 12 months preceding incarceration. Perceptions of fairness, respect, humanity, and relationships with officers at T1 (i.e. procedural justice) ranged, on average, from neutral to slightly positive ( $M_{T1} = 2.95-3.23$ ). Over time, prisoners’ perceptions of procedural justice decreased significantly ( $M_{T2} = 2.85-3.15$ ). Mental health ratings on the BSI subscales were, on average, between 0.44 and 1.10 at T1. On all nine subscales, prisoners scored significantly higher than the general Dutch male population (De Beurs, 2004). At T2, prisoners’ BSI ratings had decreased significantly, except for depression scores, which were unchanged. On the coping style measures,

prisoners had an average score of 2.93 for problem-focused style ( $SD = 0.56$ ; range 1–4), 2.29 for emotion-focused style ( $SD = 0.65$ ; range 1–4), and 2.10 for avoidance-focused style ( $SD = 0.61$ ; range 1–4).

### 5.3.2 Measurement model

A confirmatory factor analysis (CFA) with the four latent constructs and their indicators was performed to assess the quality of the measurement model. The CFA ( $\chi^2(289) = 1.405.25$ ;  $p < 0.05$ ) achieved good fit as assessed by a comparative fit index (CFI) value of 0.94, a root mean square error of approximation (RMSEA) value of 0.07 and a standardized root mean square residual (SRMR) value of 0.04. All indicators loaded significantly onto their latent constructs, with standardized factor loadings exceeding 0.50 (procedural justice 0.80–0.93; mental health problems 0.57–0.92). Table 5.1 shows the composite reliabilities and correlations of the latent variables. The latent variables proved reliable, with composite reliabilities above 0.70. The correlations show, as expected, associations between procedural justice and mental health problems. We can conclude that the latent constructs are well represented by its observed indicators. Therefore, we can proceed with the structural model.

**Table 5.1** Composite reliability and correlations of latent variables ( $N = 745$ )

	Composite reliability	Procedural justice T1	Procedural justice T2	Mental health problems T1
Procedural justice T1	0.90			
Procedural justice T2	0.92	0.65 ***		
Mental health problems T1	0.80	-0.08 *	-0.01	
Mental health problems T2	0.73	-0.23 ***	-0.18 ***	0.52 ***

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.00$

### 5.3.3 Longitudinal association between prisoners' perceived procedural justice and mental health problems

We tested for the best fitting model among four nested alternatives in order to examine the hypotheses relating to longitudinal associations between procedural justice and mental health (Hypotheses 1a and 1b). Table 5.2 shows the four models and their comparisons. The first chi-square difference test showed that the difference between the stability model without any cross-lagged paths ( $M_1$ ) and the model with a cross-lagged effect of procedural justice at T1 on mental health problems at T2 ( $M_2$ ) was significant ( $\Delta\chi^2(1) = 23.32$ ;  $p < 0.05$ ). This means that model  $M_2$  fitted the data better

**Table 5.2** Results of nested structural model comparisons ( $N = 702$ )

Model	$\chi^2$ (df)	Comparison	$\Delta\chi^2$ (df)
M <sub>1</sub> : No cross-lagged	1,911.65 (462)		
M <sub>2</sub> : Cross PJ <sub>1</sub> – MP <sub>2</sub>	1,888.33 (461)	M <sub>1</sub> – M <sub>2</sub>	23.32 (1) ***
M <sub>3</sub> : Cross MP <sub>1</sub> – PJ <sub>2</sub>	1,908.31 (461)	M <sub>1</sub> – M <sub>3</sub>	3.34 (1)
M <sub>4</sub> : Both cross	1,884.85 (460)	M <sub>1</sub> – M <sub>4</sub>	26.80 (2) ***
		M <sub>2</sub> – M <sub>4</sub>	3.48 (1)

Note: PJ = procedural justice; MP = mental health problems.

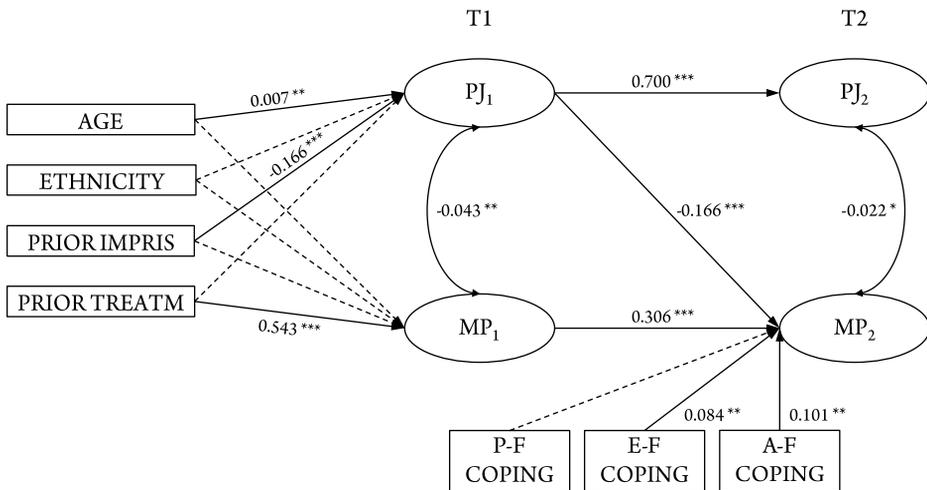
\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.00$

than model M<sub>1</sub>, supporting Hypothesis 1a (prisoners’ procedural justice perceptions at T1 influence their mental health problems at T2). The second chi-square difference test, which compared the stability model (M<sub>1</sub>) with the model with a cross-lagged path from mental health problems at T1 to procedural justice at T2 (M<sub>3</sub>), showed no significant difference ( $\Delta\chi^2(1) = 3.34$ ;  $p > 0.05$ ). Thus, model M<sub>1</sub> accounted better for the data than model M<sub>3</sub>, and Hypothesis 1b was not supported (prisoners’ mental health at T1 did not influence their perceptions of procedural justice at T2). The comparison between the stability model (M<sub>1</sub>) and the model with both cross-lagged paths (M<sub>4</sub>) yielded a significant chi-square difference test ( $\Delta\chi^2(2) = 26.80$ ;  $p < 0.05$ ), indicating an improvement in the model fit.

Subsequently, both model M<sub>2</sub> and M<sub>4</sub> accounted better for the data than the stability model (M<sub>1</sub>). When comparing the one cross-lagged model (M<sub>2</sub>) with the full cross-lagged model (M<sub>4</sub>), the chi-square difference test showed no significant improvement ( $\Delta\chi^2(1) = 3.48$ ;  $p > 0.05$ ), favoring the more parsimonious model with only one cross-lagged effect (M<sub>2</sub>). Therefore, it was concluded that model M<sub>2</sub> with a cross-lagged effect of procedural justice at T1 on mental health problems at T2 was the best fitting model and described the data best. Reviewing the fit indices, model M<sub>2</sub> showed a satisfactory fit (CFI = 0.91; RMSEA = 0.07; SRMR = 0.06).

The results of the parameter estimates of model M<sub>2</sub> are shown in Figure 5.2. In line with Hypothesis 1a, findings showed that prisoners who experienced a higher level of procedural justice at T1 reported fewer mental health problems at T2 ( $b = -0.166$ ). This occurred even after controlling for prior mental health problems. Furthermore, prisoners high on emotion-focused and avoidance-focused coping reported more mental health problems at T2 ( $b = 0.084$  and  $0.101$ ). No effect was found for problem-focused coping. Finally, older prisoners and prisoners who had not been incarcerated before experienced a higher level of procedural justice at T1 ( $b = 0.007$  and  $-0.166$ ) and prisoners with psychological problems prior to incarceration showed more mental health problems at T1 ( $b = 0.543$ ).

**Figure 5.2** Results of final cross-lagged structural equation model for prisoners' perceived procedural justice and mental health problems ( $N = 702$ )



Note: In this simplified version of the model, indicators of the latent variables have been omitted for clarity. Dashed lines represent paths that were included in the model, but were non-significant. Unstandardized coefficients ( $b$ ) are shown. PJ = procedural justice; MP = mental health problems; P-F COPING = problem-focused coping; E-F COPING = emotion-focused coping; A-F COPING = avoidance-focused coping.

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

### 5.3.4 Coping style as moderator

To examine whether coping style affected the relationship between procedural justice and psychological well-being (Hypothesis 2), model  $M_5$  was tested: The three coping styles were added as moderators to model  $M_2$ . Contrary to our hypothesis, no significant effect was found for the moderating role of coping. Likewise, comparing model  $M_5$  with model  $M_2$ , the chi-square difference test showed no significant improvement in the model fit ( $\Delta\chi^2(3) = 7.37; p > 0.05$ ), favoring the more parsimonious model  $M_2$ .

## 5.4 Discussion

Our findings suggest a causal relationship between procedural justice and psychological well-being. While controlling for prior mental health problems, prisoners who experienced a higher level of procedural justice three weeks after arrival in pre-trial detention reported fewer mental health problems after three months. This conclusion is in line with prior cross sectional studies that indicated an association between an unfair and inhumane treatment of prisoners and higher levels of mental health problems

(e.g. Eichelsheim & Van der Laan, 2012; Liebling et al., 2005). Our longitudinal study shows that the relationship is one of cause and effect: A procedurally just treatment of prisoners predicts prisoners' mental health. Our results support an extension of procedural justice theory, as a fair and respectful treatment is a predictor of not only prisoners' compliance but also of their psychological well-being.

Contrary to our hypothesis, we did not find support for a moderating role of coping style. A possible explanation for this may lie in the way we assessed coping. Coping style was measured only once, and the prisoners were asked how they generally cope with stressful situations. This approach assumes that coping strategies are relatively stable. At present, there are divergent ideas about the extent to which this is true, and some literature suggests that coping style may be at least partly situation specific (e.g. Folkman et al., 1986). Particularly in the correctional environment, where coping responses are restricted because of constraints of the environment, prisoners might change their coping strategies (Brown & Ireland, 2006). Therefore, investigation of relationships between specific prison-related stressful situations, coping and psychological problems may be an interesting avenue for further research.

Some methodological concerns should be addressed. First, second-generation immigrants were slightly underrepresented in the sample, because of attrition at T2. This may have introduced some bias. This underrepresentation was, however, quite small, so we doubt if it significantly affects the generalizability of our results. Second, data were acquired from prisoners' self-report only and might, thus, suffer from single-source bias (Podsakoff et al., 2003). Additional information on mental health, such as prison medical records, could be a useful supplement in future studies. Third, prisoners in our sample, on average, expressed neutral feelings about their perceptions of their treatment within Dutch correctional facilities. As noted earlier, the Netherlands is still known for having relatively liberal and humane prison conditions (Dervan, 2011; Kruttschnitt & Dirkzwager, 2011). Consequently, our findings may not be generalizable to countries with harsher conditions. Nevertheless, the fact that the findings are in line with those of earlier cross-sectional studies in other Western countries is encouraging. Fourth, measuring procedural justice is a complex issue. There is no established standard for it, and researchers have used different subscales and items (e.g. Murphy & Tyler, 2008; Reisig & Mesko, 2009; Sunshine & Tyler, 2003; Tyler, 1990). Procedural justice is often conceptualized as having multiple dimensions, such as standing, neutrality and trust, but studies on measuring procedural justice suggest that it may be a one-dimensional construct (Henderson et al., 2010; Reisig et al., 2007). In line with this, we measured procedural justice as one (latent) construct.

Despite these concerns, our study is, to our knowledge, the first attempt to examine the relationship between procedural justice and prisoners' mental health longitudinally. Our results are relevant for prison policy and practice. Given the

high prevalence of mental health problems in prison populations, knowledge of its determinants is important. As it is difficult to change prisoners' pre-existing characteristics, a more beneficial approach may be to focus on predictors within the correctional environment, such as the treatment of prisoners. Our study suggests that prison management can try to reduce prisoners' mental health problems by creating a fair and humane prison climate.

