

# Juvenile adaptation to imprisonment: Feelings of safety, autonomy and well-being, and behaviour in prison

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## Abstract

Adaptation to imprisonment involves feelings of safety, autonomy, well-being, stress or misbehaviour among detained offenders. According to importation theory, characteristics such as previous experiences of imprisonment or psychiatric problems affect the adaptation of offenders to imprisonment; deprivation theory, in contrast, focuses on factors such as social interactions with peers or staff and fairness in procedures or in daily life encounters. In this study, adaptation to imprisonment and the relationship with importation and deprivation factors were investigated among 207 juvenile offenders incarcerated in Dutch juvenile correctional institutions. A cross-sectional multi-method design was used, including a survey, screening instruments, records and qualitative interviews. Controlling for importation characteristics, strong associations of adaptation to imprisonment were found with interactions with peers and staff, justice, daily activities and the number of juveniles in a group. The study provides valuable insight into the factors related to adaptation to imprisonment, which can help to improve safety in prison and, subsequently, could be useful in increasing the motivation of juveniles to participate in treatment programmes. The implications for theory and practice are discussed.

## Keywords

Adaptation to imprisonment, importation and deprivation factors, juvenile inmates, procedural justice, situational prison control

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## Introduction

In 2010, more than 4000 criminal cases against juvenile offenders aged 12 to 18 years were settled with imprisonment in the Netherlands (Van der Laan and Blom, 2011). In 2010, 2255 juvenile offenders were locked up in a correctional institution (CI). The number of juvenile offenders entering a CI has decreased in the past five years, although their recidivism rates are still an object of concern. More than half of the juvenile offenders recidivate within two years of release (Wartna et al., 2011). Dutch CIs have been severely criticized by inspectorates because they were considered to be unsafe for juveniles (Inspectie Jeugdzorg and et al., 2007). In recent years, judicial youth policy in the Netherlands has seen important changes in the residential care provided to detained juveniles. Alongside changes in the organizational structure and the introduction of a risk need responsivity programme (Andrews and Bonta, 1994), attention is paid to the imprisonment experiences of juvenile offenders and their behaviour during that period. It is assumed that the quality of life experienced in a CI can affect both safety in the institutions (Staatssecretaris van Justitie, 2008) and the effectiveness of a sanction in reducing reoffending (Minister van Justitie, 2004). Poor adaptation could have a negative effect on the willingness of juveniles to participate in daily activities and training programmes and it could reduce the effects of these training programmes indirectly.

Adaptation to imprisonment has been studied since the 1950s (Irwin and Cressey, 1962; Sykes, 1958), mainly among Anglo-Saxon populations (Adams, 1992; Liebling, 2004; Toch and Adams, 2002; Zamble and Porporino, 1988). Adaptation is found to be multifaceted. Research has focused on psychological aspects, including feelings of safety, fear or anxiety (Bottoms, 1999; Gover, et al., 2000; Harvey, 2007; Liebling, 2004; O'Donnell and Edgar, 1999), autonomy or loss of control (Dhami et al., 2007; Goodstein et al., 1984; Sykes, 1958), and well-being or stress (Biggam and Power, 1997; Cesaroni and Peterson-Badali, 2010; Harvey, 2007; Ireland et al., 2005; Wooldredge, 1999). Another line of research has focused on misconduct such as physical assaults, threats and disobeying orders (Gendreau et al., 1997; Jiang and Fisher-Giorlando, 2002; Toch and Adams, 2002).

In the short term, poor adaptation to imprisonment can increase risky situations. Prisoners' response to fear is linked to self-harm (Harvey, 2007). Persistent feelings of anxiety or stress increase the likelihood of (attempting) suicide (Liebling, 1999) or of aggressive behaviour (O'Donnell and Edgar, 1999). Aggressive misconduct increases insecure situations for other inmates and for staff (French and Gendreau, 2006). Adaptation to imprisonment also seems to have consequences in the long term. Reduced feelings of control or well-being are associated with increased learned helplessness and can have a negative impact on participation in daily activities or training programmes meant to decrease the risk of recidivism (Bukstel and Kilmann, 1980; Goodstein et al., 1984). Moreover, misconduct in prison predicts recidivism (Gendreau et al., 1997). Based on their longitudinal study among adult prisoners, Zamble and Porporino (1988) argued that negative prison experiences will affect relapse or reoffending indirectly. Their findings suggest that poor adjustment to incarceration decreases the motivation to change and predicts recidivism. On the other hand, it has been found that experiencing opportunities for choice increases prisoners' motivation, reduces stress and improves general functioning (Goodstein et al., 1984).<sup>1</sup> More recently, studies showed that

encounters with prison authorities shape the perceived legitimacy of the authorities (Franke et al., 2010; Tyler, 2010), which in turn can affect compliance with rules in the short and the long term (Reisig and Mesko, 2009; Tyler, 2003). Altogether, there are several important reasons to study (poor) adaptation to imprisonment and its correlates among juveniles.

In explaining adaptation to imprisonment, two theories are dominant. Deprivation theory assumes that poor adaptation is explained best by the characteristics of the correctional environment itself. The original model stated that deprivation among prisoners results from a loss of liberty or control, loss of contact with family and friends, or loss of heterosexual relations, the so-called 'pains of imprisonment' (Sykes, 1958). Succeeding researchers added social, justice and situational deprivation factors. It has been argued that deprivation of basic human needs in social interactions and procedures in prison and the environment itself affect adaptation to imprisonment. From a procedural justice perspective (Tyler, 1990), it is argued that the experienced legitimacy of the authorities affects the adaptation of prisoners (Bottoms, 1999; Liebling, 2004). Fair treatment in rule enforcement and in daily life encounters by the authorities contributes to the experienced legitimacy. When legitimacy is high, people are more willing to comply with rules or authority, even in prison settings (Sparks and Bottoms, 1995; Tyler, 2003). Liebling (2011) argued that, where the authority of staff is accepted as legitimate, obedience is more likely to be lasting, information will flow more readily between staff and prisoners, trust will develop and well-being will increase. From a situational prison control perspective, it is argued that the prison environment itself offers opportunities for stress, violence or other unproductive behaviour (Wortley, 2002). In some situations, inmate behaviour can be regulated by providing opportunities for individuals to behave in a way that can be beneficial to them, whereas in other situations problem behaviour could increase because situational factors prompt or provoke action. According to Wortley (2002), the prison environment itself – for example, overcrowding, the living conditions or the absence of recreational activities – produces frustration, boredom or fear and can motivate prisoners to misbehave. In addition, he argued that lapses in security or inadequate surveillance or supervision create opportunities for prisoners to misbehave.

Importation theory, on the other hand, proposes that dealing with imprisonment is explained by the characteristics of prisoners themselves. Offenders tend to bring their street attitudes into prison and as a consequence the inmate culture reflects the culture of the street (Irwin and Cressey, 1962). Adaptation to imprisonment depends on the inmates' own risks and needs (Bukstel and Kilmann, 1980).

Contemporaneous studies indicate that both importation and deprivation characteristics explain adaptation to imprisonment (Dhami et al., 2007; Gover et al., 2000; Jiang and Fisher-Giorlando, 2002). For example, Gover et al. (2000) found that individual factors such as age and race and deprivation factors such as institutional activities and perceived justice in the interaction with staff affected levels of anxiety among juvenile inmates. Jiang and Fisher-Giorlando (2002) found that both deprivation and importation characteristics explained inmate misconducts.

In this study we focused on four aspects of adaptation to imprisonment – safety, autonomy, well-being and misconduct – and the deprivation factors related to these aspects, taking into account the importation characteristics of juvenile offenders. Whereas

adaptation to imprisonment and its correlates have been studied extensively, our study contributes to the existing literature in several ways. First, whereas previous research focused mainly on one aspect of adaptation to imprisonment, we differentiated between four aspects in the same group of juveniles. Second, instead of focusing on one explanatory model, we used an integrated importation and deprivation model. This offers insights into the unique factors related to adaptation to imprisonment in general. Third, most previous studies were conducted in Anglo-Saxon countries, with the exception of some German studies (Windzio, 2006). We used a Dutch sample. Finally, whereas most other studies relied on one methodological approach, we used a multi-method approach (survey, institutional files, screening instruments and qualitative interviews) to study adaptation to imprisonment among juveniles and its correlates. Our central research question was: 'Which deprivation factors relate to aspects of adaptation to imprisonment among detained Dutch juvenile offenders, regardless of importation factors?'

## Previous research

Deprivation factors that affect adaptation to imprisonment can be differentiated into social, justice and situational factors. Social factors concern inmate–inmate interactions and staff–inmate interactions. Interactions among, and relations with, other inmates affect adaptation to imprisonment. Inmate interactions and relations create 'inmate solidarity', which reduces the pains of imprisonment (Sykes, 1958). Supportive interactions with inmates have been found to decrease levels of stress (Biggam and Power, 1997; Cesaroni and Peterson-Badali, 2010; Harvey, 2007). On the other hand, interactions between inmates also create opportunities for interpersonal violence and increase the likelihood of victimization (Bottoms, 1999; Maitland and Sluder, 1996).

Basic aspects of human interactions are important in prison, especially where it concerns staff–inmate interactions. In prison, interactions between staff and inmates are unequal (Sykes, 1958). In order to maintain social order, staff need to exercise authority and power (Liebling, 2011; Sparks and Bottoms, 1995). From a procedural justice perspective, it is argued that, when the authority of staff is accepted as legitimate, obedience is more likely and well-being will increase (Liebling, 2011). Relations between staff and prisoners in everyday interactions are at the heart of the prison system. Control and security in prisons flow from getting that relationship right (Sparks and Bottoms, 1995).

The way in which interactions are formed influences inmates' adaptation to imprisonment. First, this concerns aspects of daily life encounters between prisoners and staff. Prisoners want to be treated humanely, since inhumane treatment leads to experiences of 'being nothing' or 'having no value' (Liebling, 2004). Humane treatment by staff relates positively to well-being (Liebling, 2004) and autonomy (Goodstein et al., 1984). Next, a certain amount of trust in staff–inmate interaction relates positively to mental well-being among inmates (Liebling, 2004). Social support by staff is also considered to be an important predictor of successful adaptation to prison, whereas staff–inmate transactions characterized by hostility relate negatively to well-being and safety (Liebling, 2004). Support enables prisoners to deal with stressful situations and can be stress-buffering (Cohen and Wills, 1985). Social support by staff members is negatively related to feelings of anxiety and helplessness among juvenile detainees (Biggam and Power, 1997).

and predicts well-being and feelings of safety among young adult prisoners (Harvey, 2007). A second aspect is justice in rule enforcement by staff. For example, consistency in rule enforcement and fair treatment by staff correlate positively with adaptation to imprisonment. Experienced unfairness by staff relates to feelings of stress (Harvey, 2007), anxiety (Liebling, 1999) and fear, regardless of importation characteristics (Gover et al., 2000). Inmates who evaluate the use of authority by staff as fair engage less often in aggressive misconduct (Reisig and Mesko, 2009).

According to a situational prison control perspective, the prison environment itself can lead to poor adaptation by inmates (Wortley, 2002). Situational factors that were found to affect the adaptation of juveniles to imprisonment include structured activities, crowding or specific areas with a lack of supervision. Structured activities such as work and recreational activities (sports or education) relate positively to feelings of autonomy (Goodstein et al., 1984) and well-being (Gover et al., 2000; Liebling, 2004) and negatively to feelings of fear (Gover et al., 2000) and rule violations (Jiang and Fisher-Giorlando, 2002). On the other hand, Steiner and Wooldredge (2008) found that programme participation increased the odds of rule violations (e.g. violence), suggesting that programme participation increased the possibility of provocative interactions, especially in crowded environments. Crowded facilities bring inmates closer together or inhibit the supervision of inmates (Gaes, 1985; Steiner and Wooldredge, 2008). A crowded environment can intensify stress (Bukstel and Kilmann, 1980; Gaes, 1985) and is a predictor of prison misconduct (Gendreau et al., 1997). In addition, although in general prisoners tend to experience prison life as safe (O'Donnell and Edgar, 1999; Harvey, 2007), specific areas where control by staff is limited, such as the shower cubicles or visiting areas, are mentioned as unsafe for inmates (Liebling, 2004).

Finally, a variety of importation factors have been related to poor adjustment to imprisonment. Importation factors that correlate with (poor) psychological adaptation to imprisonment, such as stress or feelings of fear, are age (Ireland et al., 2005), race (Adams, 1992), coping style (Biggam and Power, 1997; Ireland et al., 2005) and psychiatric history (Adams, 1992). Importation factors that correlate with misconduct in prison are race (Harer and Steffensmeier, 1996), substance abuse and criminal history (DeLisi et al., 2010).

In sum, the literature shows that psychological and behavioural adaptation to imprisonment are related to a variety of social, justice and situational deprivation factors and importation factors. While controlling for importation factors in our study, we focused on the unique association of deprivation factors with feelings of safety and autonomy, well-being and misconduct among a sample of Dutch juvenile offenders. Next, we will briefly describe relevant aspects of the Dutch juvenile justice system (for more details, see Liefwaard, 2012).

## **Dutch juvenile correctional institutions**

In the Netherlands, juvenile penal law applies to children aged 12 to 18 years. Serious juvenile offenders who are brought before the juvenile criminal court can be locked up in a juvenile CI if they are on remand, if they have been sentenced to detention or if they have received a mandatory treatment order (MTO: a 'PIJ-maatregel').

Dutch juvenile CIs can be divided into two types. Juveniles on remand and juveniles who have been sentenced to detention are placed in custodial centres (CC) that offer daily care, education and a minimum of training and intervention programmes. Juveniles who receive an MTO are placed in treatment centres, which offer intensive (psychiatric) care and treatment.

Juveniles who are placed in a CI are accommodated in specialized facilities, which can be closed or semi-open. Most of the CIs are secure institutions, surrounded by a fence and with locked doors inside. The juveniles' freedom to move is restricted to their functional unit ('living groups') and places where they have to be for their daily programme. Juveniles spend most of their time in functional units, which they share with 8–12 peers (girls and boys are separated). The number of units varies between the CIs: some have 4 units, others 10. The units are supervised by two staff members ('group leaders' not being security staff or therapist). During the evening and night juveniles stay in their own 'rooms' in solitary confinement. In a CI, juveniles receive education, (job) training or specific interventions. Recreational activities are also available. Since 2010, all juveniles in a CI participate in a compulsory daily programme called YOUTURN, which includes care, training and treatment. Furthermore, juveniles in Dutch CIs have strong legal rights. They have the right to have contact with the outside world (family). Limitations of rights and freedom in the CI are strictly regulated. Juveniles have the right to file a complaint if they experience unlawful or arbitrary treatment.

The Dutch juvenile justice system aims to have a pedagogical orientation focused on care and rehabilitation. The system is oriented towards the Anglo-Saxon system, including its focus on strict criminal justice; however, care remains central. Compared with correctional facilities for juveniles in the Anglo-Saxon countries such as the US or the UK, in the Netherlands the pedagogical aspect plays a more prominent role in the CIs (including education and recreational activities), and the inmate to group leader ratio in the functional units is lower.

## Method

We used a multi-method approach by gathering information from multiple sources (survey, interviews, file data and official record data) and by analysing our data in a quantitative and qualitative way.

In 2010, 2255 juvenile offenders entered one of the 11 CIs in the Netherlands. The majority of these offenders (85 percent) were on remand, 14 percent had a juvenile detention sanction and almost 2 percent had received an MTO. The mean time spent in a CI on remand is 45 days and 84 days for juveniles who have been sentenced to detention.

Our study is restricted to juveniles in CCs. We included juveniles who were in prison for at least seven days but not longer than four months. The main reason for doing this was that we did not want our results to be biased by the first few days in prison, which are found to be very stressful.

The survey was conducted between January and July 2010 in six CCs. During that period, 799 youngsters were locked up in one of these centres. Of those, 401 were not eligible for our study: 182 did not meet the inclusion criteria and 219 could not



participate for other reasons (they did not speak Dutch, had left the institution or were in isolation). Of the remaining 398 juveniles, 207 offenders participated (a response rate of 52 percent). We compared the response group with the non-response group on gender, age, ethnicity and features of their criminal career. The response group contained relatively fewer boys ( $p < .05$ ).

In our sample, 87 percent were male, 82 percent were aged 16 years or older, and 35 percent were native Dutch. The largest minority group was of Moroccan origin (20 percent of the total sample), followed by 'other' ethnic origin (17 percent), Surinamese (11 percent), Turkish (9 percent) and Dutch Antilles (8 percent). Two-thirds of the juveniles (68 percent) had only finished primary education, 26 percent had a higher degree, and 6 percent had not completed any education at all. The majority were on remand (85 percent) and more than half (56 percent) had not been in prison before. Of the recidivists, 57 percent had been in prison two or more times before. More than half of the group had committed a serious violent offence – assault, robbery, (attempted) murder.

In addition to the survey, consent was obtained from 173 juveniles to collect individual data from the official records of correctional institutions (TULP/JJI), to examine their institutional files and to use screening information. TULP/JJI includes information on the execution of custodial sentences, the date of arrival in an institution and the misconducts of juveniles during their stay. The institutional files provided additional information on the (mis)conducts of the juvenile offenders. Upon their arrival in the CC, juveniles were screened for psychosocial and mental health problems. For the purpose of this study we used the Massachusetts Youth Screening Instrument (MAYSI-2; Grisso et al., 2001).

Finally, we interviewed 38 juveniles in more depth and dealt more extensively with our central concepts of adaptation to imprisonment. We asked the juveniles who participated in the survey if they were willing to be interviewed in more depth. Only those who volunteered could be selected. In the selection we strove for an equal distribution of the juveniles with regard to their ethnic background. These interviews were held in the period April to July.

### *Dependent variables*

We measured three psychological variables of adaptation to imprisonment (safety, autonomy, well-being) and one behavioural variable (aggressive misconduct). The psychological variables were measured in the survey and were investigated in more depth in the interviews. The survey items were coded on a five-point Likert scale. The internal consistency of all scales (Cronbach's  $\alpha$ ) was good (Table 1).

*Safety* concerned feelings of loss of property or personal security in the institution and the group. The scale contained eight items, such as 'I feel safe in the group'. Higher scores meant greater experienced safety. *Autonomy* concerned the perceived possibility to regulate one's own behaviour in the institution and to complain about (the enforcement of) the rules. It was measured with six items, such as 'I don't have any possibility to make decisions'. A higher score indicated higher levels of perceived control. *Well-being* concerned (the absence of) feelings of stress and tension among juveniles. The scale contained six items, such as 'I feel a lot of tension' (adapted from Liebling, 2004).

**Table 1.** Descriptives.

	Range	M or percent	SD	$\alpha$
<i>Adaptation variables</i>				
Feelings of safety	1–5	4.24	0.64	0.71
Autonomy	1–5	3.47	0.89	0.72
Well-being	1–5	3.23	0.93	0.76
Percent of juveniles with aggressive misconduct	0–1	0.38	–	–
<i>Importation variables</i>				
Gender: male	0–1	87.0%	–	–
Ethnicity: native / non-native	0–1	35.0%	–	–
Age				
13–14		18.0%	–	–
15–18		76.0%	–	–
18+		5.8%	–	–
Indication of a mental health problem: yes	0–1	24.0%	–	–
Seriousness of criminal case: serious offence	0–1	52.0%		–
Number of previous imprisonments	0–6	0.93	1.39	–
<i>Deprivation variables</i>				
Clarity of rules	1–5	4.02	0.85	0.74
Enforcement of rules	1–5	3.46	0.73	0.72
Fairness	1–5	3.80	0.81	0.84
Contact with staff	1–5	3.65	0.95	0.86
Support of staff	1–5	3.68	0.96	0.8
Humanity	1–5	3.97	0.9	0.81
Trust <sup>a</sup>	1–5	3.57	1.16	$r = .76$
Interactions with inmates	1–5	4.05	0.77	0.81
Daily activities	1–5	3.02	0.92	0.82
Number of juveniles in the group	2–12	7.56	2.00	–
Time spent in the institution (days)	6–192	32.36	29.88	–

a. Two items, so we calculated  $r$ .

A higher score indicated higher levels of well-being. *Aggressive misconduct* was measured as incidents in which a juvenile was involved accounting for the time spent in the institution. We used incidents recorded in TULP/JJI and the institutional files. We had valid information for only 153 juveniles (173 gave their consent and 20 were missing). We distinguished between juveniles who were registered for aggressive incidents (38 percent) and juveniles who were not.

### *Independent variables*

Importation variables (Table 1) included *gender*, *ethnicity* and *age*. *Mental health problems on arrival* at the custodial centre were measured using the MAYSI-2. Mental health needs were measured with regard to, for example, alcohol/drug use, anger/irritability, or



depression. For each scale, cut-off scores indicate 'no problems' (0), 'attention' (1) or 'warning' (2). For this study, we needed to know whether there were indications of mental health problems on arrival at the custodial centre. The scores were summed. We distinguished juveniles with multiple mental health problems (cut-off at P75) from other juveniles. Other importation variables were the *seriousness of the criminal case* and the *number of previous imprisonments*.

We used 11 deprivation variables differentiated into justice, social and situational variables (Table 1). The variables were adapted from the annual CI survey (Jorna, 2010) and were derived from Liebling (2004). These variables were measured with several items using a five-point Likert answering scale. The internal consistency (Cronbachs'  $\alpha$ ) of all scales was good.

Three variables related to the experienced justice of the rules and fairness of treatment in the institution. *Clarity of rules* referred to the knowledge juveniles have about the institution rules. *Enforcement of rules* concerned the perceived consistency in the maintenance of rules by staff (7 items). *Fairness* referred to the experienced fairness of rules and treatment by staff (10 items).

Four variables related to interactions with staff and one variable concerned experienced interactions with inmates. *Contact with staff* concerned the daily interactions with staff in the residential group (8 items). *Support of staff* concerned the experienced help, aid or approval by staff members (4 items). *Humanity* reflected regard for the person that involved as little degradation as possible (5 items). *Trust* referred to the level of reliability that is experienced by individuals in the institution (2 items). *Interactions with inmates* referred to the experienced acceptance, respect and aid by other group members (7 items).

Finally, we included three situational variables. *Daily activities* referred to the experienced quality of leisure-time activities (9 items). The *number of juveniles in the group* was based on a count by staff members at the time the juvenile was inside. *Time spent in the institution* was measured by subtracting the date of the interview from the date of arrival in the institution.

## Interviews

Juveniles who participated in the survey were also asked to take part in a semi-structured interview. These interviews were held some days after filling in the survey. Psychological adaptation was investigated in more depth. With regard to safety, control and well-being, we asked open-ended questions such as 'What can you tell us about unsafe situations or moments in prison?', or 'What can you tell us about situations in prison that made you (un)comfortable?' In addition, questions were asked about the way juveniles experienced specific situations in the CC. The interviews were transcribed in detail.

## Analysis

With regard to safety, autonomy and well-being, quantitative and qualitative analyses were conducted. With regard to misconduct, only quantitative analyses were undertaken.

We investigated bivariate associations between the dependent and independent variables by computing correlations and ANOVAs. Next, for each dependent variable we ran a series of multiple regression analyses. First, importation variables were entered, followed by the deprivation variables justice, interaction with staff, interaction with inmates and situational deprivations. We show only the final models in which non-significant variables were excluded.

Qualitative analyses were conducted in order to explore the psychological adaptation to imprisonment more in depth. The semi-structured interviews were analysed with MAXqda software (Kuckartz, 2012). Transcriptions of the interviews were coded independently by two researchers. First, relevant parts were coded with key words related to the central concepts of the quantitative models in order to be able to link the qualitative analysis to our quantitative data analysis. Second, the coded parts of the transcripts were read again and, if necessary, marked with more specific key words. Third, we analysed associations between the coded parts by checking if sets of codes (for example, safety and fair treatment) were found in similar fragments and how these related to one another. For this paper, we focused on associations that were found in the quantitative analyses in order to investigate these relations in more depth.

## Results

There were two significant ( $p < .01$ ) associations of importation variables with adaptation to imprisonment (Table 2). The number of previous imprisonments was positively correlated with safety; and gender was associated with aggressive misconduct. The percentage of boys registered for aggressive misconduct during their stay was significantly higher than that of girls.

All deprivation variables showed positive and significant correlations with safety, autonomy and well-being (Table 3). With regard to safety, interaction with inmates showed a strong correlation ( $r > .5$ ) and the other variables showed medium-strength associations. With regard to autonomy, strong correlations were found with justice, interaction with staff and daily activities. With regard to well-being, strong associations were found with interaction with staff and with daily activities. The deprivation variables showed negative and small associations with misconduct. The strongest correlations were found with situational deprivation variables.

The bivariate analyses also revealed strong correlations between justice variables and between interactions with staff variables. This could cause collinearity problems. Factor analyses (PCA) revealed a one-factor structure for justice ( $\alpha = .82$ ). The four variables that measured interactions with staff were also highly correlated. Factor analyses showed a one-factor structure ( $\alpha = .93$ ). In the multivariate regression analyses we used two regressed factor scores: *justice* and *interaction with staff*.

### Multiple regressions

Table 4 shows the final models for safety, autonomy, well-being and misconduct. The adjusted  $R^2$  shows that the psychological aspects of adaptation to imprisonment were explained fairly well (the models explained between 41 percent and 56 percent of the variance).

**Table 2.** Bivariate associations of safety, autonomy, well-being and misconduct with importation characteristics.

	Psychological adaptation <sup>a</sup>				Behavioural adaptation <sup>b</sup>	
	Safety		Autonomy	Well-being	Misconduct (aggression)	
	N	M (SD)			N	Percent
<i>Gender</i>						
Boys	180	4.22 (0.65)	3.48 (0.89)	3.25 (0.93)	127	43.3**
Girls	27	4.36 (0.52)	3.46 (0.91)	3.10 (0.92)	26	11.5
<i>Age</i>						
13–15	37	4.18 (0.62)	3.59 (0.79)	3.28 (0.90)	28	50.0
16–17	158	4.24 (0.64)	3.45 (0.92)	3.20 (0.91)	115	35.7
18+	12	4.35 (0.70)	3.42 (0.86)	3.46 (1.24)	10	30.0
<i>Ethnicity</i>						
Native Dutch	72	4.20 (0.67)	3.49 (0.79)	3.17 (0.93)	56	28.6
Non-native Dutch <sup>c</sup>	135	4.25 (0.61)	3.46 (0.94)	3.26 (0.93)	97	43.3
<i>Indication of mental problems</i>						
No	93	4.27 (0.69)	3.50 (1.01)	3.29 (0.94)	83	41.0
Yes	30	4.25 (0.52)	3.56 (0.83)	3.11 (0.98)	29	34.5
<i>Seriousness of offence</i>						
Non-serious	99	4.28 (0.66)	3.47 (0.85)	3.34 (0.98)	70	35.7
Serious	108	4.20 (0.61)	3.48 (0.93)	3.13 (0.86)	83	39.8
Number of previous imprisonments <sup>d</sup>		$r = .20^{**}$	$r = .04$	$r = .07$	$M = 1.1$ (SD = 1.57)	

*Notes:*

a. We performed ANOVAs to test if the differences were significant.

b. Chi-square is calculated to test whether the juveniles registered for aggressive conduct differed from the group of juveniles who were not registered.

c. If we distinguish different ethnic groups, no differences are found.

d. We used correlations and ANOVAs to test the significance of the relationship.

\*\* $p < .01$ .

Safety and well-being were associated with both importation and deprivation variables. Juveniles who had more previous experiences of imprisonment experienced the institution as safer. Next, the more juveniles experienced justice in the CC, and the more positive they were about their interactions with other inmates, the safer they felt. Well-being was positively associated with being male, interactions with staff, interactions with inmates and daily activities. Thus, juveniles who were more positive about their interactions with staff, other inmates and their daily activities reported higher levels of well-being.

Autonomy was positively associated with staff interactions and daily activities. The more positively juveniles experienced contact with staff, support by staff and daily activities, the more autonomy they experienced in prison.

Table 3. Association of safety, autonomy, well-being and misconduct with deprivation variables (correlations).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Independent deprivation variables</b>															
Justice															
1 Clarity of rules and rights	–														
2 Enforcement of rules	.59***	–													
3 Fairness	.61***	.64***	–												
Social															
4 Contact with staff	.60***	.67***	.75***	–											
5 Support	.55***	.57***	.65***	.85***	–										
6 Humanity	.57***	.57***	.72***	.81***	.75***	–									
7 Trust	.53***	.59***	.62***	.78***	.78***	.67***	–								
8 Interactions with inmates	.38***	.28***	.39***	.43***	.35***	.41***	.38***	–							
Situational															
9 Daily activities	.43***	.46***	.49***	.50***	.46***	.40***	.43***	.30***	–						
10 Number of juveniles in the group	–.09	–.13	–.06	–.11	–.08	–.10	–.01	–.08	.07	–					
11 Time spent in the institution	–.10	–.16*	–.16*	–.16*	–.12	–.12	–.20*	–.07	–.13	.09	–				
<b>Dependent adaptation variables</b>															
12 Safety	.43***	.35***	.44***	.48***	.40***	.45***	.33***	.58***	.31***	–.08	–.11	–			
13 Autonomy	.53***	.53***	.59***	.73***	.68***	.62***	.59***	.38***	.54***	.01	–.08	.42***	–		
14 Well-being	.46***	.40***	.54***	.55***	.51***	.52***	.44***	.42***	.57***	.07	–.12	.58***	.71***	–	
15 Misconduct <sup>a</sup>	–.11	–.22**	–.19*	–.20*	–.17*	–.15	–.24**	–.18*	–.21**	.26**	.22**	–.19*	–.17*	–.17*	–

Notes:  
a. Dichotomous variable (No / Yes). F-statistics following ANOVAs showed the same significance levels.  
\*p < .05; \*\*p < .01; \*\*\*p < .001.

**Table 4.** Final multivariate regression models of the association of adaptation to imprisonment with deprivation and importation factors.

	Adaptation to imprisonment			
	Safety	Autonomy	Well-being	Misconduct <sup>a</sup>
	(N = 207)	(N = 207)	(N = 207)	(N = 150)
	SB			B (SE)
<i>Importation</i>				
Gender (male)			.11*	1.25 (.67) <sup>+</sup>
Number of previous detentions	.16**			
<i>Deprivation</i>				
Justice (factor)	.23*			
Interaction with staff (factor)	.08	.69***	.30***	
Interaction with inmates	.44***		.21***	
Daily activities		.25***	.36***	-.49 (.21)*
Number of juveniles in the group				.27 (.10)**
Time spent in the institution				.01 (.06) <sup>+</sup>
Adjusted R <sup>2</sup>	.41	.56	.48	
Pseudo R <sup>2</sup>				.23

+ $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Logistic regression analyses showed that both importation and situational deprivation variables were associated with aggressive misconduct. Being male increased the odds of being charged with aggressive incidents in the institution, as did the number of juveniles in the residential group and the time spent in prison.

### Qualitative analyses

The regression analyses showed that psychological adaptation was associated with justice, social and practical factors. Qualitative interviews with 38 juveniles explored these relations in more depth.

The positive association between justice and feelings of safety was confirmed in the interviews. Juveniles also stated that staff members who were extremely consistent in rule enforcement created unsafe situations. In particular, inexperienced staff members were said to be inclined to strict rule enforcement by sanctioning every minor fraction. According to the juveniles, being 'easy' in rule enforcement created a more relaxed atmosphere in the group, which, according to the juveniles, led to a decrease in dangerous situations: 'They [staff] are very different, some like rules, some are easy. This depends on the individual staff and the atmosphere. . . . I am not often angry. But when they act unfair and rigid . . . We have our rights and I get fucked up when they mess with our rights' [#2].

Supportive interactions with staff members were relevant for well-being, especially when juveniles experienced problems with external situations: 'If you face difficulties

you can talk with staff members. For example I spoke with them about the absence of contact with my family' [#6].

In difficult situations staff members could be supportive of the juveniles: 'If they see that you have problems, they'll ask about it. They offer support and help' [#4]. Supportive interactions also had their limits. Some juveniles mentioned that it is not done to look for support among staff members when facing problems with other inmates. Doing so would lead to sanctions by peers: 'Most things are often not seen by staff. I think most juveniles do not tell. They are afraid of being beaten up' [#33]. In such situations, juveniles trusted in their own attitude. According to these juveniles, an aggressive and hostile attitude towards other inmates could increase one's status in the group and create less dangerous situations for yourself.

Surveillance by staff members was mentioned as an important factor in safety and well-being. The presence of staff members in the group could make the difference between a safe and an unsafe experienced environment: 'I feel safe everywhere. Staff know what's going on' [#5]; 'Staff members foresee dangerous situations ... problems are also solved' [#29]. The sensitivity of staff members to things going on in a group was important: 'If the atmosphere in the group is not that bad, they [the staff] relax. However, if the threat of a quarrel is in the air, then they definitely say stop and let's talk about it' [#38]. Staff differed in the amount of control they exercised: 'They are very different, some like rules, some are easy going. It depends on the situation and the atmosphere in the group. When the atmosphere is ok, they are more chilled' [#2]. Total surveillance by staff members, however, was perceived as impossible: 'Baiting (harassment), pressurizing, assault or selling drugs. A lot happens that staff members are not aware of' [#26].

Positive experienced interactions with peers were associated with stronger feelings of safety, autonomy and well-being. Supportive interactions with peers were important, although in the interviews juveniles mentioned that real friendships with inmates did not exist. In the interactions with peers, bonds were formed that could be tactical and beneficial for the juvenile himself. An aggressive attitude and showing guts were important in forming such bonds: 'When you arrive it is important that others cannot influence you too much, careful of being pressurized. You need to show you're a man' [#2]; 'I had a fight with another guy, but we made it up the same day. At that time I was in for two weeks. The fight was really worth nothing' [#5]. Incidents could occur when the confidence given by these bonds was damaged.

Daily activities showed a positive association with autonomy and well-being. Structured activities in particular were important according to some juveniles: 'These small things make you feel good. School, education, fitness, I enjoy these activities. The more you do these things, the faster time flies' [#19]. Daily activities could reduce feelings of stress: 'I go to school. If I didn't do that I would be stressed' [#29].

Juveniles also mentioned that specific situations in prison characterized by an absence of staff affected their psychological adaptation: 'Quiet places, shower, toilet. If you want to, you can beat someone up in a second' [#33]; 'If I want a fight, I'll go to the shower cubicles, beat him up totally without being noticed by anyone' [#8]. Some juveniles, on the other hand, mentioned feeling unsafe when they were in the group. They felt safe only in their private room where they could be on their own.

## Discussion

In this study we focused on four different aspects of adaptation to imprisonment and their correlates among juveniles in six custodial centres in the Netherlands. In line with Anglo-Saxon literature (Gover et al., 2000; Jiang and Fisher-Giorlando, 2002), our results showed that importation and deprivation factors were both related to adaptation to imprisonment. Regardless of importation characteristics, psychological adaptation mainly showed moderate to strong significant associations with social and justice deprivation factors, and behavioural adaptation showed moderate associations with situational factors.

Social interactions with inmates showed positive associations with safety and well-being. The more positively juveniles experienced their interactions with inmates, the safer they felt and the better well-being they experienced. The interviews added that real friendships among inmates did not exist, but that juveniles found 'tactical friendships' in order to survive prison. Safety and well-being in prison depend on who you are locked up with and who you can trust (Liebling, 2011; Sykes, 1958). Support among inmates can be protective against unsafe situations (O'Donnell and Edgar, 1999), can help one to survive dangerous moments and increase feelings of safety. Social support from peers also can increase a general feeling of well-being (Cohen and Wills, 1985). Juveniles experiencing social support are better able to cope with the stress associated with imprisonment (Biggam and Power, 1997; Harvey, 2007; Maitland and Sluder, 1996). Social interactions reduce the pains of imprisonment (Sykes, 1958), make confinement easier and offer possibilities to obtain important information, goods and emotional support (Harvey, 2007).

Interactions with staff showed positive associations with well-being and feelings of autonomy regardless of individual factors. The interviews added that support by staff also had its limits. Juveniles facing problems with other juveniles did not often seek support for that because they could be punished by their peers. On the other hand, just like with other inmates, interactions with staff can be supportive and increase well-being (Biggam and Power, 1997; Maitland and Sluder, 1996). A prison situation severely restricts the opportunity for choice. Having no influence on when to wake up, to eat, to go to school or to take recreation limits one's personal autonomy and can be very stressful. According to Goodstein et al. (1984), social interactions in daily life offer opportunities for personal control. Positive experienced interactions with staff, including support, humanity and trust, offer opportunities for some personal control and relieve stress. The reverse is also possible. Harvey (2007) found that seriously distressed young prisoners were less willing to seek support from staff members and act in response to this.

Experienced justice correlated positively with safety. Experienced consistency and fairness in rule enforcement can release the pains of imprisonment (Harvey, 2007; Liebling, 2004) and can contribute to an environment experienced as safe. Fair treatment creates clarity about interactions (Liebling, 2004). Others have shown that fair treatment by staff is associated with reduced feelings of fear among inmates (Biggam and Power, 1997; Harvey, 2007; Liebling, 2004). In the interviews, juveniles stated that fair treatment by staff affects the atmosphere in the group. Fair treatment could make situations less dangerous, because some juveniles would react less aggressively, which could



decrease the risk of incidents. The findings support the procedural justice theory (Tyler, 2003), which assumes that if people experience fair encounters with the authorities they will behave more socially and experience the environment as more safe (Liebling, 2004). On the other hand, juveniles also mentioned that too much consistency in rule enforcement could be frustrating, lead to feelings of anger and sadness, and increase unsafe situations. This shows how difficult it is for staff working in a prison setting to do the right thing (see, for example, Liebling, 2011).

Situational factors were associated with psychological and behavioural adaptation. The findings support a situational prison control theory (Wortley, 2002). Structured daily activities related positively to autonomy and well-being and negatively to aggressive conduct. Some juveniles mentioned that school or recreational activities reduce boredom, decrease worrying thoughts and bring a positive atmosphere to the group. The structure of the activities and the presence of staff in control during these activities also reduce opportunities for unsafe situations and can have a positive effect on well-being. Other researchers have argued that daily activities in prison can be a protective factor that increases well-being among inmates (Gover et al., 2000). It is possible that structured daily activities not only offer the possibility to reduce boredom but also create an environment in which feelings of stress and misconduct can be reduced.

In the interviews, juveniles mentioned that specific situations in the CC affected feelings of safety and well-being. Juveniles felt relatively safe in the institutions, confirming the 'safety paradox' (Bottoms, 1999). In accordance with the literature (Bottoms, 1999; Liebling, 2004), we also found that feelings of safety varied between situations. Places where surveillance by staff was low or absent, such as the shower, were experienced as unsafe. In such places the possibility of becoming a victim of bullying or assault increased. Consistent with the literature we also found a positive association between the number of juveniles in a group and aggressive misconduct, regardless of other factors (Gaes, 1985; Gendreau et al., 1997). Crowded groups can weaken the controls on individual behaviour by hindering effective supervision and management of juvenile inmates (Wortley, 2002).

Some of the findings of the current study are inconsistent with the existing literature, especially the results concerning the relationship with importation factors. We found most importation factors to be not related to adaptation to imprisonment. For example, ethnic origin and misconduct were unrelated, although this association seems to be a robust one in the literature (Harer and Steffensmeier, 1996). It is possible that this association is typical of US prisons. Next, we found no relation between psychiatric problems and adaptation to imprisonment, whereas the literature suggests a robust association (Adams, 1992). The absence of this association might be due to our inclusion criteria. We excluded juveniles who had received an MTO (who are mainly characterized by severe psychiatric problems). However, we found that almost a quarter of our juveniles showed indications of multiple problems. It is possible that our dichotomization of the presence of psychiatric problems meant that we did not find any relationship. Future research could study whether specific types of problems are related to adaptation to imprisonment among juveniles. Furthermore, we did not find a significant association between criminal career and behavioural adaptation, which is also mainly found in US research (DeLisi et al., 2010). On average, the juveniles in our study were young. This limited the possibility

of an extensive criminal career history and might explain the absence of an association. Another explanation could be that we differentiated only between a group of juveniles who were involved in aggressive incidents during their stay and those who were not, whereas other research has used more complex and detailed measures of misconduct in prison. Finally, we did not find an association between the number of inmates in a group and psychological adaptation (Gaes, 1985). This could be owing to differences in the conceptualization of crowding or the level of measurement. Another explanation might be that the number of offenders in Dutch juvenile CI groups is much lower than in US prisons and the number of staff in each group is higher. In Dutch juvenile CCs, groups are limited to 8–12 juveniles, with two staff members for each group (in addition to the security staff and therapist).

Only the importation characteristics of previous detention and individual agency (autonomy) were found to be associated with safety. The more previous prison experience juveniles had, the safer they felt. This might be owing to the familiarity of the recidivist with confinement (Harvey, 2007). However, the literature is not univocal about the association of previous detention with feelings of safety. Safety depends on the amount of control prisoners experience (Liebling, 2004). In the interviews we found that individual agency also seemed to be linked with feelings of safety. Juveniles mentioned that safety in the institution is created by their own attitude towards group members and staff.

Before making concluding remarks with regard to theory and practice, some limitations should be mentioned. Our findings are based on a cross-sectional design, which implies that we cannot say anything about causality or the predictive value of the deprivation factors of prison with regard to, for example, recidivism. Next, the response rate was quite low. Our sample consisted of juveniles who were willing to participate. This might have caused a positive bias about the way juveniles in general adapt to imprisonment.

Our findings are an important contribution to existing theories regarding adjustment to imprisonment. Whereas existing theories are mostly based on studies that focus on adult prisoners in an Anglo-Saxon context, the present study provides valuable information concerning the adaptation of Dutch juvenile detainees. The results show that, regardless of importation factors, positive experiences in daily life encounters with and rule enforcement by staff and with activities in prison are associated with a positive adaptation to imprisonment in terms of feelings of safety, autonomy, well-being and less misconduct. Our design only offers the possibility to speculate about the causal mechanisms. However, the findings support two deprivation models. First, it has been argued that daily life encounters with staff and justice in rule enforcement affect the experienced legitimacy of staff in prison situations, which in turn affects social order and psychological adaptation (Sparks and Bottoms, 1995; Tyler, 2003). Our findings could indicate that this process works regardless of the importation characteristics of the juveniles. Prison work is about authority and power deployed through daily human encounters (Liebling, 2011). Positive experiences by inmates of daily life encounters can increase their legitimization of staff (Franke et al., 2010; Tyler, 2003). In turn this can stimulate obedience, and information between staff and inmates can be communicated more clearly, trust can develop and well-being will be higher (Liebling, 2011). Second, our results support a

situational prison control model that stresses the importance of the prison environment for stress, violence or other unproductive behaviour (Wortley, 2002). In this model it is argued that situational factors such as overcrowding, living conditions or the absence of recreational activities increase stress and motivate prisoners to misbehave. Specific situations such as lapses in security, inadequate surveillance or architectural blind spots create opportunities where poor adaptation is more likely than in others. This model assumes that adaptation results directly from prison conditions. Future research should focus more on the mechanisms responsible for the experienced quality of life in prison.

With regard to practice, we found factors that can be regulated by staff members in daily life encounters and that can influence the poor psychological adaptation of juveniles: social support by staff, justice in rule enforcement and structured daily activities. Fulfilling basic human needs in daily life encounters between staff and inmates (through, for example, support, humanity or trust), justice in rule enforcement (such as fair treatment and having the right to be heard), and situational aspects such as being able to participate in daily activities can all contribute to the prison experience of juveniles in order to maximize positive gains (see Liebling, 2011; Tyler, 2010). In the short term, this could create a safer environment for juveniles and staff. Furthermore, feeling safe, having some sense of freedom of choice and experiencing less stress could increase a juvenile's motivation to participate in training programmes aimed at reducing reoffending.

To conclude, contemporary public opinion emphasizes the importance of prisons having a deterrent effect and being a frightening place. Contrary to that point of view, we think that it is important to improve the quality of life among juveniles in prison. Poor adaptation to imprisonment, such as feelings of stress, losing autonomy or experiencing an unsafe environment, lowers juveniles' quality of life. It does not help them to learn from their prison experience. Juveniles who show poor adaptation to the prison environment are not motivated to participate in training programmes (Goodstein et al., 1984). In our opinion, a rehabilitation process for juvenile offenders in prison settings is based on a risk need responsivity model (Andrews and Bonta, 1994), and should also focus on the basic human needs in daily life encounters that can increase the quality of life in prison (Ward and Gannon, 2006).

## Note

1. Readiness for treatment is an important factor in the success of compulsory treatment programmes in prison settings (Melnick et al., 2001; Tierney and McCabe, 2002). Unwillingness to participate in a treatment programme is linked to the manner in which treatment is presented or to interactions with staff (Melnick et al., 2001).

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