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Running Head: Group climate in Prison

Measuring Group Climate in Prison

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Abstract

The present study examines the construct validity and reliability of the Prison Group Climate Instrument (PGCI) in a sample of 77 adolescents placed in a Dutch youth prison and 49 adult prisoners living in a Dutch psychiatric prison with a therapeutic living group structure. Confirmatory factor analysis of a four-factor model – with ‘repression’, ‘support’, ‘growth’ and ‘group atmosphere’ as first order factors – and ‘overall group climate’ as a second order factor showed an adequate fit to the data, indicating construct validity of the PGCI. Cronbach’s alpha reliability coefficients were good for all factors. The PGCI is a parsimonious instrument, enabling future research on group climate in youth prisons and secure forensic psychiatric institutions. The instrument can be used as an assessment tool for judicial interventions that use group climate to improve outcomes in delinquent youth and adult delinquents receiving treatment for psychiatric problems.

Key words: Prison group climate instrument (PGCI); youth prison; psychiatric prison; validation study

Introduction

In systematic reviews of the effectiveness of correctional treatment, questions have been raised about the effects of incarceration and coercion on successful reintegration (Andrews et al., 1990; Garrido & Morales, 2007; Gatti, Tremblay & Vitaro, 2009; Huizinga & Henry, 2008; Parhar, Wormith, Derkzen & Beauregard, 2008; Pritikin, 2009). Some researchers argue that the failure to reintegrate into society after incarceration is due to the problems delinquents experienced before they entered prison ('import hypothesis'), and that a prison stay has no substantial effect on behavior after detention ('deep freeze hypothesis') (Liebling & Maruna, 2005; Loughran et al, 2009). These same researchers contend that the degree to which reintegration is successful not only depends on initial risks for maladjustment, but also on the availability of efficacious aftercare, the avoidance of environmental risks, such as dangerous neighbourhoods and antisocial friends, and the presence of protective factors in the domains of relationships, formal education, work and housing.

The 'import' and 'deep freeze' hypotheses have been criticized for neglecting the susceptibility of people to their environment. For instance, research in the field of social neuroscience has shown that a stimulating environment can result in better executive functioning of the brain, more advanced social cognition and social learning (Gazzola, Aziz Zadeh, & Keysers, 2006; Jacoboni & Dapretto, 2006; Vignemont & Singer, 2006), less impulsivity and fear (Wykes et al., 2002), and improved ability to show feelings and empathy (Corrigan 2004, Jolliffe & Farrington, 2004; Wicker et al., 2003).

Neurohormones connected with aggression (Fishbein & Sheppard, 2006; Nelson & Trainor, 2007; Popma & Raine, 2006) are often produced by an environment that is

characterised by stress, fear and aggression. In addition, there is empirical evidence showing that stress, fear and aggression, being induced by the immediate social environment, are associated with lower levels of oxytocine and higher levels of vasopressine and cortisol, which may engender negative emotions, hostility bias, antisocial behavior, and low social involvement (Tremblay, 2008; for a review see: Van Goozen, Fairchild, & Snoek, 2007).

Some researchers found empirical support for the criminogenic effects of incarceration (Camp & Gaes, 2005; Gatti et al., 2009; Kimberly & Huizinga, 2008; Liebling & Maruna, 2008; Osgood & O'Neill Briddell, 2006). These criminogenic effects of incarceration may be ascribed to the negative impact of imprisonment on moral development (Stams et al., 2006), socialization into criminality during imprisonment, exposure to the prison's antisocial subculture, strengthening of deviant bonds (Osgood, O'Neill Briddell, 2006), labeling (Huizinga & Henry, 2008), weakening of protective social bonds and brutalization (for a review, see Pritikin, 2008).

It is plausible to suggest that the occurrence of a criminogenic effect depends on the degree to which efficacious treatment targeting criminological needs is available during detention. For instance, Garrido and Morales (2007) conducted a systematic review, and found reduced recidivism rates in incarcerated serious criminal adolescents who had received cognitive behavioral treatment. In most adult prisons and some youth prisons, however, rehabilitation and treatment are almost absent and (repressive) control is the main concern. Otherwise, in psychiatric detention centers for adult offenders and most youth prisons rehabilitation and treatment are considered of primary importance and (repressive) control of secondary importance (Clark Craig, 2004; Drost, 2008). The

delicate balance between control and flexibility that is required for successful rehabilitation or treatment in secure forensic facilities¹ is probably one of the main factors that shape institutional climate². Flexibility is needed to practice newly acquired social competences at the living group, whereas too much reliance on repressive control fosters distrust and damages (therapeutic) relationships between staff and inmates (De Dreu, Giebels & Van der Vliert on the effects of punitive power, 1998).

There is ample empirical evidence showing that the prison in general is a stressful and fear- and aggression-eliciting environment, starting from the seminal work of Goffman on 'total institutions (1957), the 'pains of imprisonment' research in 1958 by Sykes (1958), the climate research by Hans Toch (Toch, 2008; Toch & Kupers, 2007) to recent studies of prison climate (Bell, Ridolfi, Finly, & Lacy, 2009; Harvey, 2005; Holman & Ziedenberg, 2006; Van Binsbergen, 2003; Ross, Diamond, Liebling, & Saylor, 2008; Van der Helm, Klapwijk, Stams, & van der Laan, 2009). Recently, White, Shi, Hirschfield, Mun and Loeber (2009) found elevated levels of depression and anxiety among incarcerated boys compared to released- and non-incarcerated criminal boys.

Climate research in adult prisons

In the seventies a lot of climate research was done in adult prisons. For example, Moos (1975) developed the Correctional Institutions Environment Scale (CIES) in the early seventies to assess three dimensions that had been suggested by Campbell in 1970, namely: 'autonomy', 'structure' and 'support'. He also developed the Group Environment Scale (GES) for use in psychiatric wards (Moos & Houts, 1986). This instrument contains three meaningful dimensions: 'relations within group', 'growth' and

‘group structure’. However, validity and reliability of the GES proved to be unsatisfactory (Wright & Boudouris, 1986). The Ward Atmosphere Scale (Moos, 1974) and the Sheltered Care Environment Scale or abbreviated SCES (Moos & Lemke, 1992) were also developed by Moos and fellow researchers. Kevin Wright (1985) based the Prison Environment Inventory (PEI) on the seminal work of Hans Toch on prison climate, and added the dimensions of ‘privacy’, ‘safety’, ‘activity’, ‘social stimulation’ and ‘freedom’ to the original three Moos dimensions.

Besides the CIES and PEI, other frequently used instruments in adult prison research are the Prison Social Climate Survey (Camp, Gaes, Klein-Saffron, Daggett, & Saylor, 2002; Ross et al., 2008), the Dutch Patient satisfaction Scale (Timmerman & Lucker, 2006), and Measuring the Quality of Prison Life scale (MQPL) (Ross et al., 2008). These instruments assess more or less the same dimensions, though often naming scales differently and using slightly different items (appendix 1). In these instruments that assess climate in adult forensic settings, ‘support’, ‘growth’ (‘activity’, ‘social stimulation’ and ‘autonomy’), ‘atmosphere’ and ‘repression’ are recurring dimensions (appendices 1 and 2).

These four dimensions make up the (adult) prison climate. If the ‘support’ dimension is well taken care of, group workers are responsive to the needs of the inmates, and they invest in building positive relationships (Bottoms, 2003; Ross et al., 2008). ‘Growth’ pertains to facilitation of learning and preparation for a meaningful life both within and outside prison. The ‘atmosphere’ dimension concerns the degree to which the physical as well as the social environment foster feelings of safety and trust among inmates. Features of ‘repression’ are harsh and unfair control, a weak

organizational structure, no flexibility, incremental rules, little privacy, extreme boredom and (frequent) humiliation of inmates (Akers, 1977; Toch, 2007, 2008).

The prison climate may be regarded as 'open' when support is high, opportunities for growth are evident, and the prison is a safe and orderly structured environment where flexibility is in balance with the organizational needs for control and repression is minimal (Clark Craig, 2004; Ule, Schram, Riedl, & Cason on trust and control, 2009). In contrast, the prison climate should be regarded as closed when support from staff is (almost) absent and opportunities for 'growth' are minimal. A closed prison climate is also reflected by a grim and uninviting atmosphere (e.g., lack of safety and boredom) and high repression, including incremental rules, little privacy, and (frequent) humiliation of inmates (Harvey, 2005; Irwin & Owen, 2005; Liebling & Maruna, 2005; Little, 1990; Wright & Goodstein, 1989).

Although the relation between an open or closed prison climate and recidivism still needs to be empirically confirmed (Liebling & Maruna, 2005; Ross et al., 2008), a focus on treatment and rehabilitation instead of repression has yielded promising results. For instance, Beech and Hamilton-Giachritsis (2005) found a relation between therapeutic alliance within groups of sex offenders and diminished pro-offending attitudes, and Van der Helm et al. (2009) found a relation between an open climate, better treatment motivation and a higher internal locus of control. Recent systematic reviews by Garrido and Morales (2007) and Parhar et al. (2008) found evidence for positive effects of cognitive-behavioral treatment and multi-focus programs for serious and violent adolescent offenders.

Prison climate versus group climate in a secure forensic setting

Whereas in most adult prisons social interaction between inmates is mostly limited to recreation and work and inmates spend a lot of time in their cells, this is different for most youth prisons and detention centres for offenders requiring psychiatric treatment. Incarcerated adolescents and delinquents placed in psychiatric residential treatment facilities often live in special units or supervised living groups that should provide a structured, educational and rehabilitative environment (Harvey, 2005; Janzing & Kerstens, 2000). The use of social interaction as a therapeutic tool in these special units or supervised living groups makes it imperative to focus on group climate instead of prison climate (Saylor, 1984).

As there is currently no instrument available to assess group climate in secure forensic settings, the present study examines the construct validity and reliability of a new instrument, the Prison Group Climate Instrument (PGCI), which has been developed to assess group climate in youth prisons and secure residential treatment facilities where inmates reside in living groups. The Prison Group Climate Instrument is based on the four dimensions that constitute (adult) prison climate: 'repression', 'support', 'growth' and 'group atmosphere'³. These four dimensions together are responsible for the quality of forensic group climate.

The PGCI differs from existing prison climate instruments in that all items are meaningful in the context of living groups, and mainly focus on social interaction and treatment. A number of items are relevant from the perspective of international research on treatment effectiveness (Andrews & Bonta, 2007; Asay & Lambert, 1999) and pertain to support delivered by the staff. One of the most important ingredients of

support, especially in group based forensic facilities, where group workers and inmates interact on a regular basis, is responsiveness of group workers to the specific needs of the inmates, which features prominently in the ‘Risks-Needs-Responsivity’ (RNR) principle of successful rehabilitation (Langton, 2007). The RNR principle holds that the intensity of the behavioral intervention matches the risk for recidivism, that treatment should target criminogenic needs, and that treatment should be fine-tailored to the learning style, motivation, abilities and strength of the offender (Andrews & Bonta, 2007). The ‘support’ items also pertain to the way group workers act professionally regarding fairness and flexibility (as opposed to strict control, Clark Craig, 2004).

In the present study, construct validity of the PGCI will be assessed by means of confirmatory factor analysis in a sample of adolescents placed in a Dutch youth prison and 49 adult prisoners living in a Dutch psychiatric prison with a therapeutic living group structure. Internal consistency reliability will be established by computing Cronbach’s alpha.

Method

Participants

The first group of participants consisted of $n = 77$ serious and violent juvenile offenders ($M = 15.4$ years of age, $SD = 1.64$), $n = 61$ boys and $n = 16$ girls, residing in a Dutch youth prison. The mean incarceration period was 14 months ($SD = 1.67$). The second group of participants consisted of $n = 49$ adult inmates ($n = 41$ males and $n = 8$ females) of a Dutch psychiatric prison. The mean age was $= 34.6$ years ($SD = 2.63$), with a mean incarceration period of 9.5 years ($SD = 6.7$).

Prison Group Climate Instrument (PGCI)

Items from the PGCI were derived from existing instruments measuring prison climate and were adapted for specific use at the living group level. The PGCI consists of 63 items rated on five-point Likert-type scales, ranging from 1 = ‘I do not agree’ to 5 = ‘I totally agree’. Each item belongs to only one of the four scales for group climate. The support scale (19 items) assesses professional behavior and in particular the responsiveness of group workers towards specific needs of the inmates. Paying attention to inmates, taking complaints seriously, respect and trust are important characteristics of support. An example of a support item is: ‘group workers treat me with respect’. The growth scale (12 items) assesses learning perceptions, hope for the future and giving meaning to prison stay. An example for a growth item is: ‘I learn the right things here’. The repression scale (18 items) assesses perceptions of strictness and control, unfair and haphazard rules and lack of flexibility at the living group. An example of a structure item is: ‘You have to ask permission for everything here’. The group atmosphere scale (14 items) assesses the way inmates treat and trust each other, feelings of safety towards each other, being able to get some peace of mind and having enough daylight and fresh air. An example of a relationship item is ‘We trust each other here’.

Statistical analysis

Construct validity and internal consistency reliability of the PGCI were examined by means of confirmatory factor analysis in Mplus (Muthén & Muthén, 1998) and the computation of Cronbach’s alpha in SPSS, respectively. A multi-factor model was

specified in which each item loaded on only one factor, allowing reverse-worded, very similarly worded items (e.g. “We take initiative together” and “Taking initiative is welcomed by group workers”) or items prone to social desirability to correlate. Both the model’s Chi-Square and fit-indices, which are non-sensitive to sample size (CFI, TLI, and RMSEA), were used to evaluate model fit (Kline, 2005). The following fit index cut-off values are indicative of good model fit: CFI > .90, TLI > .90, and RMSEA < .05 (Kline, 2005). Whereas a non-significant Chi-Square indicates exact model fit, a ratio between the X^2 statistic and the degrees of freedom (df) that is lower than 2.5 indicates a close fit to the data (Hu & Bentler, 1999). To account for non-independence (delinquents are nested into living groups) and non-normality, we chose to use the robust MLR maximum likelihood estimation procedure (Muthen & Muthen, 1998). A modification index, giving the expected drop in Chi-Square if a parameter in question is freely estimated, was used to improve model fit. We thus identified parameters that could improve model fit by freeing those parameters. Examples of such parameters were items loading on more than one factor or the wrong factor. In stead of freeing those parameters, we removed them. Further improvement of model fit was achieved by removing items that did not load significantly on their respective factors.

Results

Confirmatory factor analysis was performed on all 63 PGCI-items. Table 1 presents the final factor solution, showing the items and the corresponding factor loadings that were all significant. The model that best fitted the data contained four first order factors –

‘support’ (14 items), ‘growth’ (9 items), ‘group atmosphere’ (7 items) and ‘repression’ (7 items) – and a second order factor for overall climate (37 items). The model showed a satisfactory fit tot the data: RMSEA=0.048, CFI= 0.91; TLI=0.90, $X^2(586) = 748.9$, $p < 0.00$. The root mean square error of approximation (RMSEA) was lower than 0.05, the ratio between the X^2 statistic and the degrees of freedom was 1.28 and lower than 2.5, and the centrality fit index (CFI) and Tucker-Lewis index (TLI) were larger than 0.90. ‘Support’, ‘growth’, ‘group atmosphere’ and ‘repression’ proved to be reliable, with internal consistency reliabilities of $\alpha > .77$ (Table 1). Cronbach’s alpha for the overall climate scale was .82 (4 items), and was a summation of the four subscales divided by four.

Discussion

This study examined the validity and reliability of the Prison Group Climate Instrument (PGCI) in a group of juvenile delinquents placed in a Dutch youth prison and a group of adult prisoners living in a Dutch psychiatric prison with a therapeutic living group structure. Evidence for construct validity and good internal consistency reliability was found in a confirmatory factor analysis and a series of reliability analyses, showing that ‘support’, ‘growth’, ‘group atmosphere’, ‘repression’ and the ‘overall climate’ scale of the PGCI can be used to validly and reliably assess group climate within prison.

From the original 63 items, only 37 survived in the final solution. Some deleted items pertained to security staff and guards, which play a less prominent role in group based forensic facilities compared to normal adult prisons (most security tasks are delegated to group workers, like restraining measures and internal investigation of

inmates after a visit). Other 'classic' prison items concerned privacy, noise from other cells, cleanliness, food quality, which play a less prominent role in a group climate instrument that mainly focuses on social interaction.

The 'support' and 'growth' dimension loaded highest on the 'overall climate' scale, which indicates that support and growth are the most important indicators of group climate within prison. Support provided by group workers or staff, which builds on meaningful relationships (Ward, Melser & Yates, 2007) and responsiveness to the specific needs of each individual inmate, sets the groundwork for successful rehabilitation according to the 'Risks-Needs-Responsivity' principle (Andrews & Bonta, 2007; Andrews, Bonta, & Wormith, 2006; Mc Guire, 2004). Growth is intimately connected with the concept of 'learning', and reflects the need of inmates to give meaning to life in prison. This construct also features prominently in research on adult prison climate (Moos, 1975) and pertains to the criminogenic 'Needs' part of the RNR principle, as the target is improvement in domains that are associated with desistance, such as education, work and relationships (Langdon, 2007).

'Group atmosphere' and 'repression' had relatively lower loadings on the overall climate scale, and also proved to be less reliable than the 'support' and 'growth' factors. Lower reliabilities for the 'group atmosphere' and 'repression' scales can simply be explained by the fact that these scales contain fewer items, but also to the heterogeneity among the items (Streiner, 2003). The items of the 'group atmosphere' scale deal with positive relationships between inmates, experiences of safety and quality of the physical environment, and 'repression' is composed of items that also differ widely in content, assessing compliance, (lack of) trust, understanding, and (lack of) stimulation.

The PGCI instrument could be important not only for measuring the positive and therapeutic effects of group climate, but also for maintaining safety and control in the living group. Competition and aggression among inmates and workers are often characteristic of a closed and repressive climate, where group workers tend to shift from support to control and adolescents display reactance or try to 'play the system' with decreased treatment motivation as a result (Harambolos & Holborne, 1995; Harvey, 2005, Van der Helm et al., 2009). A predominantly negative group climate, with a lack of responsiveness from group workers, insufficient possibilities for growth, a grim and competitive group atmosphere and violence among the incarcerated delinquents and staff may have great consequences for the safety of both the inmates and workers (Kury & Smartt, 2002; Maitland & Sluder, 1998). Notably, the instrument can also be used as a tool for assessing safe work conditions and training purposes at the workplace.

The four climate dimensions of the PGCI, designated as support, growth, atmosphere, and repression, probably reflect the difficult task of group workers to combine therapeutic flexibility with control. The overall climate scale of the PGCI includes all four dimensions and is bipolar. At the 'positive' end of the scale the prison climate should be regarded as open and therapeutic, whereas at the negative end of the scale the prison climate should be regarded as closed and extremely repressive, hampering treatment of any form. The PGCI instrument is different from traditional prison climate instruments to the extent that it is sensitive to the balance between on the one hand 'therapeutic flexibility and openness' and on the other hand 'restrictive control and closeness'.

There are some limitations of this study that need to be acknowledged.

First, the small sample size and the inclusion of only two prisons hamper the generalizability of the study findings. The sample size was too small to examine measurement invariance in a multi-group factor analysis that distinguishes between the juvenile and adult offenders, testing the equality of the factor solution in these different groups.

As the present study only provides preliminary evidence for the validity and reliability of the PGCI, results should be replicated in a large sample study that enables a robust test of measurement invariance in a multi-group confirmatory factor analysis, focusing on possible differences between male and female inmates, different age groups, and between youth prisons and psychiatric prisons for adult offenders. A future validity study of the PGCI should also examine convergent, divergent and criterion validity of the PGCI, including concurrent and predictive validity. Concurrent validity can be assessed by relating group climate to antisocial behavior during detention, whereas predictive validity can be established by predicting recidivism from differences in group climate.

Despite the preliminary status of the evidence for the validity and reliability of the PGCI, the newly developed PGCI is unique to the extent that it measures group climate in prisons and accounts for the balance between treatment and control. Therefore, the PGCI has the potential to be an important instrument for studies examining prison climate and research on treatment effectiveness of judicial interventions targeting rehabilitation of delinquent youth and adult delinquents in secure forensic psychiatric institutions.

References

- Andrews, D. A., Zinger, I., Hoge, R. D., Bonta, J., Gendreau, P., & Cullen, F. T. (1990). Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. *Criminology*, 28, 369–404.
- Andrews, D. A., Bonta, J., & Wormith, J. S. (2006). The recent past and near future of risk and/or need assessment. *Crime & Delinquency*, 52, 7-27.
- Andrews, D. A., & Bonta, J. (2007). *The psychology of criminal conduct*. (4rd ed.). Cincinnati, OH: Anderson.
- Akers, R. (1977). *Deviant behavior: A social learning approach*. Wadsworth, Belmont, CA.
- Asay, T. P., & Lambert, M.J. (1999). The empirical case for the common factors in therapy: quantitative findings. In M.A. Hubble, B. Duncan, & S. Miller (eds.), *The heart and soul of change: what works in therapy* (pp 23-55). Washington. D.C.: American Psychological Association.
- Beech, A.R., & Hamilton-Giachritsis C.E. (2005). Group-Based Sexual Offender Treatment Programs Relationship Between Therapeutic Climate and Treatment Outcome. *Sexual Abuse: A Journal of Research and Treatment*: 17; 127.
- Bell, J.B., Ridolfi, L.J, Finly, M, & Lacy, C. (2009). *The Keeper and The Kept, reflections on local obstacles to Disparities Reduction in Juvenile Justice Systems and a Path to Change*. San Francisco, Way-Haywood Burns Institute.
- Binsbergen, van, M.H. (2003). *Treatment motivation in a Dutch youth prison* (Du). Antwerpen/Apeldoorn: Garant.

- Bottoms, A.E. (2003) 'Theoretical reflections on the evaluation of a penal policy initiative', in L. Zedner and A. Ashworth (eds). *The criminological foundations of penal policy: Essays in honor of Roger Hood*, pp. 107–94. Oxford: Oxford University Press.
- Drost, J.Y. (2008). *Residential Forensic Upbringing (Du)*. University Groningen, dissertation. Amersfoort: Agiel.
- Camp, S.D., Gaes, G.G. (2005). Criminogenic Effects of the Prison Environment on Inmate Behavior: Some Experimental Evidence. *Crime & Delinquency*, 51; 425.
- Camp, S.D., Gaes, G.G., Klein-Saffron, J., Daggett, D.M., & Saylor, W.G. (2002) Using inmate survey data in assessing prison performance: A case study comparing private and public prisons', *Criminal Justice Review* 27(1): 26–51.
- Clark Craig, S. (2004). Rehabilitation versus Control: an organizational theory of prison management. *The Prison Journal*, 84 (4), 928-1148.
- Corrigan, F. (2004). Psychotherapy as assisted homeostasis: activation of emotional processing mediated by the anterior cingulate cortex. *Medical Hypotheses*, 63 (6), 968-973.
- De Dreu, C.K.W., Giebels, E., & Van de Vliert, E. (1998). Social motives and trust in integrative negotiation: The disruptive effects of punitive capability. *Journal of Applied Psychology*, 83, 408-422.
- Fishbein, D., & Sheppard, M. (2006). *Assessing the role of neurophysiological functioning in inmates treatment response*. Baltimore: RTI International.
- Garrido, V., & Morales, L. A. (2007). *Serious (Violent or Chronic) juvenile offenders: a systematic review of treatment effectiveness in secure corrections*. Campbell Collaboration.

- Gatti, U., Tremblay, R.E., & Vitaro, F. (2009). Iatrogenic effect of juvenile justice. *Journal of Child Psychology and Psychiatry* 50:8, pp 991–998
- Gazzola, V., Aziz-Zadeh, L. & Keysers, C. (2006). Empathy and the somatotopic auditory mirror system in humans. *Current Biology*, 16, 1824-1829.
- Goffman, E. (1957). "*Characteristics of Total Institutions*," in: Symposium on Preventative and Social Psychiatry, Sponsored by the Walter Reed Army Institute of Research, the Walter Reed Army Medical Centre, and the National Research Council, Washington, (Government Printing Office, 1957) 43-93.
- Goozen, S.H.M., Fairchild, G., & Snoek, H. (2007). The evidence for a neurobiological model of childhood antisocial behavior. *Psychological Bulletin*, 133 (1), 149-182
- Haralambos, M., & Holborne, M. (1995). *Sociology: Themes & Perspectives*. 4th Ed, Collins Educational.
- Harvey, J. (2005). *Young Men in Prison. Surviving and adapting to life inside*. Cullompton UK: Willan.
- Holman, B & Ziedenberg, J (2006). *The dangers of detention. A Justice Policy report*. Justice Policy Report. Washington DC, Justice Policy Institute.
- Hoy, W.K. (1990). Organizational Climate and Culture: a Conceptual Analysis of the School Workplace. *Journal of Educational and Psychological Consultation*, 1, 1990
- Van der Helm, P., Klapwijk, M., Stams, G.J.J.M., & Van der Laan, P.H. (2009). ‘What Works’ for juvenile prisoners: The role of group climate in a youth prison. *Journal of Children’s Services*, 4 (2), 36-48.
- Hu, L.T., & Bentler, P.M. (1999). Cut-off criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.

- Huizinga, D. & Henry, K. L. (2008). The effect of arrest and justice system sanctions on subsequent behavior: findings from longitudinal and other studies, in: Liberman, A. M. (ed.), *The Long View of Crime: A Synthesis of Longitudinal Research*, New York, Springer.
- Iacoboni, M., & Dapretto, M. (2006). The mirror neuron system and the consequences of its dysfunction. *Nature Reviews Neuroscience*, 7, 942-951.
- Irwin, J., & Owen, B. (2005) 'Harm and the contemporary prison', in Liebling, A., & Maruna, S. (eds). *The effects of imprisonment*, Cullompton, Willan Publishing.
- Janzing, C., & Kerstens, J.(2000). *Werken in een therapeutisch milieu* [Working in a therapeutic context], Houten: Bohn Stafleu & van Loghum.
- Kimberley, H., & Huizinga, D. (2008). The Effect of Arrest on Subsequent Behavior: Findings from Longitudinal and Other Studies. In: Liberman, A.M., Nagin, D. S. (eds). *Long View Of Crime, A Synthesis Of Longitudinal Research*. NY: Springer.
- Kline, R.B. (2005). *Principles and practice of Structural Equation Modeling (2nd edition)*. New York: The Guilford Press.
- Kury, H. U., & Smartt, U. (2002). Prisoner on prisoner violence: victimisation of young offenders in prison. Some German Findings. *Criminal Justice*, 2: 411-437.
- Langdon, C.M. (2007). Assessment implications of "What Works" research for Dangerous and Severe Personality Disorder (DSPD) service evaluation. *Psychology, Crime & Law*, 13(1): 97_111.
- Liebling, A., & Maruna, S. (2005). Introduction: the effects of imprisonment revisited. In: Liebling, A., & Maruna, S. (eds). *The effects of imprisonment*, Cullompton, Willan Publishing.

- Loughran, T.A., Mulvey, E.P., Schubert, C.A., Fadan, J, Piquero, A.R. & Losoya, S.H. (2009). Estimating a dose-response relationship between length of stay and future recidivism in serious juvenile offenders. *Criminology*, 47 (3), 699.
- McGuire, J. (1995). *What works: Reducing reoffending: guidelines from research and practice*. Chichester: John Wiley and Sons.
- Moos, R.H.(1986). *The Correctional Institutions Environment Scale Manual*. Palo Alto: Consulting Psychologists Press, 1974.
- Moos, R.H.: *Evaluating Treatment Environments: A Social Ecological Approach*. New York, Wiley, 1974
- Moos, R.H. (1975). *Evaluating correctional and community settings*. New York: Wiley-Interscience.
- Moos, R.H., & Houts, P.S. (1968). Assessment of the social atmospheres of psychiatric Wards. *Journal of Abnormal Psychology* 73(6): 595–604.
- Moos, R.H., & Lemke, S. (1992). *Sheltered Care Environment Scale: Manual*. Palo Alto, California: Department of Veterans Affairs and Stanford University Medical Centers.
- Maitland, A. S., & Sluder, R. D. (1998). Victimization and youthful prison inmates: An empirical analysis. *The Prison Journal*, 78, 55-73.
- Muthen, L.K., & Muthen, B.O. (1998). *Mplus User's Guide*, Los Angeles, CA: Muthen & Muthen
- Nelson, R.J. & Trainor, B.C. (2007). Neural mechanisms of aggression. *Nature Reviews Neuroscience*, 8, 536-546.
- Osgood, D. W., O'Neill Briddell, L. (2006). "Peer Effects in Juvenile Justice." In *Deviant Peer Influences in Programs for Youth: Problems and Solutions*, K. Dodge, T. Dishion, and J.

- Lansford, Eds., p. 141-161. New York: Guilford Press.
- Parhar, K.P., Wormith, S.W., Derkzen, D.M., & Beauregard, A.M. (2008). Offender Coercion in Treatment: A Meta-Analysis of Effectiveness. *Criminal Justice and Behavior*, 35, 1109-1135.
- Popma, A. & Raine, A. (2006). Will future forensic assessment be neurobiological? *Child and Adolescent Psychiatric Clinics of North America*, 15 (2), 429-444.
- Pritikin, M.H. (2009). Is prison increasing crime? *Wisconsin Law Review*, Vol. 2008, p. 1049, 2008.
- Ross, M.W., Diamond, P.M., Liebling, A. & Saylor, W.G. (2008). Measurement of prison social climate: A comparison of an Inmate measure in England and the USA. *Punishment & Society*, 10, 447.
- Saylor, W. (1984). *Surveying Prison climates*. Department of Justice: Federal Bureau of Prisons.
- Stams, G.J., Brugman, D., Dekovic, M., Rosmalen, L., van; Laan, P.v.d. & Gibbs, J. (2006). The Moral Judgment of Juvenile Delinquents: A Meta-Analysis. *Journal of Abnormal Child Psychology*, 34, 697-713.
- Streiner, D.L. (2003). Starting at the Beginning: An Introduction to Coefficient Alpha and Internal Consistency. *Journal of Personality Assessment*, 80(1), 99-103.
- Sykes, G. (1958). *The Society of Captives*. Princeton: Princeton University Press.
- Timmerman, I.G.H. & Lucker, T.P.C. (2007). *Patient satisfaction within forensic psychiatry. PTV manual*. Oostvaarderkliniek, FPC Veldzicht.
- Toch, H. (2008). Punitiveness as 'behavior management'. *Criminal Justice and Behavior*, 35(3), 388-397.

- Toch, H., & Kupers, T.A. (2007). Violence in Prisons, Revisited. *Journal of Offender Rehabilitation*, 45 Issue 3/4, 1-28.
- Tremblay, R.E. (2008). Understanding development and prevention of chronic physical aggression: towards experimental epigenetic studies. *Phil. Trans. R. Soc. B* (2008) 363, 2613–2622.
- Schram, A., Riedl, A. & Cason, T.N. (2009). Indirect Punishment and Generosity Toward Strangers. *Science*, 18-12.
- Vignemont, F. de, & Singer, T. (2006). The empathic brain: how and when and why? *Trends in Cognitive Sciences*, 10 (10), 435-441.
- Ward, T. Melsler, J., & Yates, P.M. (2007). Reconstructing the Risk–Need–Responsivity model: A theoretical elaboration and evaluation. *Agression and Violent Behavior*, 12, 208-228.
- White, H.R., Shi, J., Hirschfield, P. , Mun, E.I., & Loeber, E.R. (2009). *Effects of institutional confinement for delinquency on levels of anxiety and depression among male adolescents*. Presentation at the ASC Philadelphia.
- Wicker, B., & Keysers, C., Plailly, J., Royet, J.P., Gallese, V. & Rizzolatti, G. (2003). Both of us disgusted in my insula: the common neural basis of seeing and feeling and disgust. *Neuron*, 40, 665-664.
- Wright, K.N. (1985). ‘Developing the prison environment inventory’, *Journal of Research in Crime and Delinquency* 22(3): 257–77.
- Wright, K.N., Boudouris, J. (1982). An Assessment of the Moos Correctional Institutions Environment Scale. *Journal of Research in Crime and Delinquency*, Vol. 19, No. 2, 255-276 .
- Wright, K., & Goodstein, L. (1989). Correctional environments. In L. Goodstein & D.

McKenzie.(Eds.). *The American Prison* (pp. 253-270). New York: Plenum.

Wykes, T., Brammer, M., Mellers, J., Bray, P., Reeder, C. & Williams, C. (2002). Effects on the brain of psychological treatment.: Cognitive remediation therapy: Functional magnetic resonance imaging in schizophrenia. *British Journal of Psychiatry*, 181, 144-152.

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Appendix 1: Climate Instruments for Adult Prisons

Instrument	Reported	scales	references
	Validity/reliability		
1. Prison Social Climate Survey	good	Privacy Safety Structure Support Emotional feedback Social stimulation Activity Freedom	Camp et al., 2002
2. Correctional Environment Scale (CIES)	Doubtful	Relations Growth and development Systems maintenance	Moos, 1975 Wright & Boudouris, 1982
3. Group Environment Scale (GES)	Doubtful	Relations within group Personal growth Structure group	Moos & Houts, 1986, Wright & Boudouris, 1982

4. Prison	acceptable	Toch's 8	Wright, 1985
Environment		environmental	
Inventory (PEI)		concerns:	
		Privacy	
And		Safety	
5. Prison		Structure	
Preference		Support	
Inventory		Emotional	
		feedback	
		Social Stimulation	
		Activity	
		Freedom	
6. Sheltered	good	Conflict	Moos & Lemke,
Care		Cohesion	1992
Environmental		Independence	
Scale (SCES)		Control	
		Leadership	
		Freedom of choice	
7. PTV (Dutch)	good	Treatment	Timmerman &
Patient		Surroundings	Lucke, 2006
satisfaction in a		Attitude group	
forensic setting		workers	
		Response to	
		complaints	

		Temporarily leave	
		Leisure	
		Social contacts	
8. Measuring	acceptable	Respect	Ross et al.,
the Quality of		Humanity	2008
Prison Life		Support	
(MQPL)		Relations	
		Trust	
		Fairness	
		Order	
		Safety	
		Well being	
		Development	
		Decency	
		Power	
		Prisoner social life	
		Compliance	
		Belonging	
		Quality of life	
9. Ward	good	Involvement	Moos, 1974
Atmosphere		Support	
scale		Spontaneity,	
		Autonomy,	

	Practical orientation	
	Personal problems	
	Orientation	
	Anger and aggression,	
	Order and organization,	
	Program clarity and staff control.	
10. State Prison Inmate Survey	good	Akers, 1977
	Inmate work and employment	
	Security	
	Education & training	
	Counseling & treatment	
	Visit and outside contacts	
	Classification and diagnosis	
	Physical structure	

Appendix 2: Climate Properties Described in the Instruments

Climate property (scale)	Scale properties
1. Repression	Lack of safety, control, order, and systems maintenance; lack of privacy, justice and fairness. Problems with program clarity; physical structure mainly constructed for control; limited or no visits at all and limited outside contacts (no leave). Forcing not followed by adequate problem solving.
2. support	Feedback and communication; activity and stimulation; positive attitude group workers coupled with consistent behavior; respect and decency; trust, involvement; innovative leadership; practical orientation; spontaneity; personal problem solving; relations and companionship; counseling and diagnosis.
3. growth	Development; independence and autonomy; choice; wellbeing; power; belonging; involvement; personal problems; activities; program quality.
4. atmosphere	Companionship; communication; social cohesion and stimulation; leisure activities; social contacts; trust and social life; involvement and respect; fresh air and adequate surroundings.

Table 1: Results from Confirmatory Factor Analysis of the PGCI

Item no.	Scale/item	Standardised estimates first order factors	Standardised estimates second order factor
	Support (alpha = .90)		.92
V1	Group workers stimulate me	.83	
V2	When I complain about something, group workers take it seriously	.76	
V3	Group workers treat me with respect, even if I am angry	.70	
V4	when I have a problem, there is always somebody I can turn to	.69	
V5	Group workers pay attention to me and respect my feelings	.68	
V6	Group workers treat me with respect	.66	
V7	There are always enough people to help me	.62	
V8	I trust the group workers	.58	
V9	Complaints are being taken seriously	.58	
V10	We regularly discuss things with the group workers	.58	
V11	Group workers don't have enough time for me	-.58	
V12	Taking initiative is welcomed by group workers	.55	
V13	Group workers show respect to me	.49	
V14	When I complain about something, group workers take it seriously	.42	
	Growth (alpha = .88)		.80
V1	What I am learning here is helping me	.86	
V2	Group workers allow me some space	.79	
V3	I feel I am making progress here	.79	
V4	I work at my future here	.72	
V5	Treatment is helpful for me	.71	
V6	What I learn here will help me when I'm outside	.64	
V7	I learn the right things here	.66	
V8	I know what I am working at	.52	
V9	Life is meaningful here	.48	
	group atmosphere (alpha = .76)		.79
V1	I feel fine here	.79	
V2	We have enough fresh air and daylight	.66	
V3	The atmosphere is good at the group	.62	
V4	We trust each other here	.50	
V5	I get some peace of mind at the group	.41	
V6	You can trust everybody here	.41	
V7	I always feel safe at the group	.38	
	Repression (alpha = .76)		-.78
V1	You always have to comply with requests of the group workers	.95	
V2	We have nothing to do here	.82	
V3	These surroundings make me depressive	.82	
V4	I do not trust group workers	.76	
V5	You better give in and do what group workers tell you to do	.70	
V6	They don't understand me here	.66	
V7	You have to ask permission for everything	.61	

¹ A secure forensic facility differs from other residential settings by the ‘detention’ aspect. Inmates are incarcerated and treatment is mostly enforced, issuing from criminal law. There is the possible use of force in pursuing organizational goals.

² The definition of climate, used in this article is: "those characteristics that distinguish the organization from other organizations and that influence the behavior of people in the organization" (Gilmer, 1966, p.57 in: Hoy, 1990).

³ ‘Atmosphere’ is used here as a more proximal and temporal variable, and part of the overall ‘climate’ construct, pertaining to the ‘feeling’ of the place (Hoy, 1990).

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