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Abstract

Aggression and callous-unemotional (CU) traits are common problems in incarcerated delinquent youth. The present study was conducted to examine whether living group climate was associated with aggression and CU traits in late adolescent male offenders ($N = 156$) in a German youth prison. A structural equation model was fitted to the data and showed associations between repression and reactive aggression and CU traits, but no associations between an open and supportive living group climate and aggression and CU traits. Previous research in Dutch youth prisons did not find a relation between repression and aggression, but a relation between a positive living group climate and less aggression. These different findings may reflect differences in the German and Dutch prison system. Implications for practice are discussed.

Keywords

living group climate, aggression, CU traits, youth detention

Aggression and criminal behavior by adolescents constitute a major social problem. While a decrease in youth crime in Europe is evident, there are still problems with the severity and violent nature of it (Blumstein, 2002; Centers for Disease Control and

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Prevention, 2013;; Stelly & Thomas, 2013). A subgroup of young delinquents, up to 18 years old, are often described as “callous” and “unemotional” (Asscher et al., 2011), and show high rates of aggression and conduct disorder (Fazel, Doll, & Långström, 2008).

Callous-unemotional (CU) traits are characterized by a persistent pattern of behavior that reflects a disregard for others, lack of empathy (Frick & Ray, 2014), and an increased risk for (severe) aggression (Frick & White, 2008; Frick, Ray, Thornton, & Kahn, 2014; Kimonis et al., 2014). Previous research reported the importance of distinguishing between reactive aggression (e.g., in response to provocation, threat, or other adverse social risks), which is based on the frustration-aggression model (Dollard, Doob, Miller, Mowrer, & Sears, 1939), and proactive aggression, which is goal directed and instrumental (Dodge, 1991; Polman et al., 2007) and considered to be a product of social learning (Bandura, 1973). The difference between reactive and proactive aggression is apparent in different causes (etiology) and effects (Raine et al., 2006). Reactive aggression is related to internalizing problems (Card & Little, 2006), deficits in information processing (Crick & Dodge, 1996; Raine et al., 2006) and executive functioning (Raine et al., 2006) and is associated with negative emotionality and anxiety (Fite, Raine, Stouthamer-Loeber, Loeber, & Pardini, 2009), whereas proactive aggression is driven by relatively positive outcome expectancies (Bandura, 1973) and is more common in delinquents (Card & Little, 2006) and individuals with poor peer relationships or antisocial personality traits (Cima & Raine, 2009; Raine et al., 2006). Youth high on CU traits tend to demonstrate both more reactive and proactive aggression (Frick, Cornell, Barry, Bodin, & Dane, 2003), which is not only associated with the development of criminal behavior but may also form a problem during incarceration (Frick & Dickens, 2006; Marsee, Silverthorn, & Frick, 2005; Ros, Van der Helm, Wissink, Stams, & Schaftenaar, 2013).

When entering the juvenile justice facility, juveniles take along several difficulties, such as aggression, criminal behavior, substance abuse, and psychiatric problems, often related to mild intellectual disabilities (importation hypothesis: Cline & Wheeler, 1968; Gover, MacKenzie, & Armstrong, 2000; Kaal, Negenman, Roeleveld, & Embregts, 2011; Kaal, Overvest, & Boertjes, 2014). Problems often start in early childhood and are related to stress, neglect, maltreatment, or deprivation (Asscher, Van der Put, & Stams, 2015), resulting in failure of treatment and social isolation (Spinhoven et al., 2010; Van Vliet & Oei, 2006). At present, research is conducted to examine the degree to which CU traits are stable personality characteristics (Frick & Moffitt, 2010; Frick, Stickle, Dandreaux, Farrell, & Kimonis, 2005) and if they can be influenced by the environment (Viding, Blair, Moffitt, & Plomin, 2005). Van der Helm, Stams, van der Stel, van Langen, and van der Laan (2012) argue that an open living group climate in youth prison, especially positive contact between staff and inmates (see also Listwan, 2013), a structured and safe environment and possibilities for personal development and growth, can stimulate empathy and subsequently reduction of CU traits (De Waal, Smith-Churchland, Pievani, & Parmigiani, 2014; Viding et al., 2005).

Research has shown that juvenile prisoners can change their behavior if they gain more positive perceptions of the setting they live in (Schubert, Mulvey, Loughran, & Losoya, 2012). In Europe, young prison inmates often live in so-called living groups

of eight to 12 juveniles under supervision of group workers. Those group workers play a central role in the creation of the living group climate, which can be defined as open (responsive) or closed (repressive; Van der Helm, Klapwijk, Stams, & van der Laan, 2009; Van der Helm, Stams, & Van der Laan, 2011). In fact, it is most likely a continuum between these two extremes. An “open” living group climate is characterized by support, clear opportunities for growth, safety, structure, and flexibility, and can increase treatment motivation, internal locus of control and decrease criminal cognitions (Van der Helm, Stams & Van der Laan, 2011). Especially if group workers offer support and good possibilities for growth (i.e., going back to school), aggressive incidents can decrease (Ros et al., 2013). An open climate can also result in advanced social cognition, social learning, and more empathy (Groeneweg, Van der Helm, Stams, & Asscher, 2013; Iacoboni & Dapretto, 2006; Van der Helm et al., 2012).

The living group climate is defined as “closed” if there are few opportunities for growth, if support by prison staff is almost absent, and if group atmosphere is negative (Liebling & Maruna, 2005; Ross, Diamond, Liebling, & Saylor, 2008; Ross, Liebling, & Tait, 2011; Van der Helm, Stams & Van der Laan, 2011). A closed living group climate is highly repressive, can damage the therapeutic alliance and treatment motivation during detention, but can also lead to more aggressive behavior of juveniles and increased stress levels (Van der Helm & Stams, 2012; Van der Helm, Boeke, Stams & Van der Laan, 2011).

Several authors (Popma & Raine, 2006; Sato, Uono, Matsuura, & Toichi, 2009) have argued that prolonged stress can lead to a shift in the stress hormone cortisol, released by the Hypothalamic Pituitary Adrenal (HPA) Axis, resulting in less empathy and more callousness. A closed living group climate in youth prison, characterized by few opportunities for growth, lack of support by prison staff, and a lack of safety, has been shown to result in stress and violence among inmates (Liebling & Maruna, 2005; Ross et al., 2008; Ross et al., 2011; Van der Helm, Stams & Van der Laan, 2011).

To date, there has been no study investigating the relation between living group climate and CU traits. Because high levels of CU traits in combination with aggressive behavior are a common problem in youth detention and create a central component of violent behavior in young prisoners, the present study focuses on how living group climate is related to the behavior of delinquent youth in residential care.

The following hypothesis will be investigated: A positive and open living group climate is associated with less aggressive behavior and less CU traits in detained youth offenders. As the present study was conducted in a diverse sample of young prison inmates, we will account for the effects of age, ethnicity, and type of offense on living group climate, aggression, and CU traits.

Method

Participants and Procedure

The present study was conducted in a German youth prison. An opportunity sample of 156 delinquent, adolescent, male prisoners was selected from the prison population

that was accessible at the start of our study. All prisoners lived in groups of 15 to 20 young inmates. Participants were aged between 17 and 25 years ($M = 20.44^1$; $SD = 1.64$). In the participating prison, delinquents between the ages of 14 and 27 were incarcerated. The main reason for detention was “inflicting personal injury” (62%). Most respondents had a German nationality (73%), and 13% had Turkish and 14% other nationalities. Education levels were generally low: 33% had not completed any formal education, 45% had completed the lowest level of education (secondary school/Hauptschule). The age range, reasons for detention, education levels, and ethnical diversity of the present sample largely concur with characteristics of the German youth prison population (see Dünkler, 2006). All adolescents voluntarily agreed to participate in this study, signed an informed consent declaration, and were told that their answers would be treated confidentially and anonymously and would be accessed only by the researchers. Participants received a compensation (chocolate, cigarettes, or coffee) worth of 5€ as a token of gratitude. Participants completed the Prison Group Climate Inventory (PGCI), Inventory of Callous-Unemotional traits (ICU), and the Reactive–Proactive Aggression Questionnaire (RPQ).

Instruments

PGCI. The PGCI (original version: Van der Helm, Stams & Van der Laan, 2011) consists of 36 questions with a 5-point Likert-type scale ranging from 1 = *don't agree* to 5 = *fully agree*. Each question belongs to only one of the four aspects of living group climate: *support*, *growth*, *atmosphere*, and *repression*. The scale for “support” assesses the professional behavior of group workers and describes juvenile’s experience of support by staff. An example of an item from the “support” scale is “Group workers treat me with respect.” The “growth” scale assesses developmental possibilities, hope for the future, and feelings and thoughts about detention. An example of a growth scale item is “I learn the right things here.” The “repression” scale assesses repression, strictness of rules, and the control prisoners experience during their imprisonment. An example of a repression item is “You have to ask permission for everything.” Finally, the “atmosphere” scale assesses group atmosphere related to prisoners’ own feelings of safety and trust. An example of an atmosphere item is “We trust each other here” (Heynen, van der Helm, Stams, & Korebrits, 2014; Van der Helm, Stams & Van der Laan, 2011). The questionnaire measures whether the living group climate in a group setting is open and therapeutic or closed and repressive. An open group climate is defined by high levels of support, ample opportunities for growth, minimal repression, and a clean, safe, and structured environment (Heynen et al., 2014; Van der Helm Stams & Van der Laan, 2011). In the present study, the German version of the PGCI was used (Heynen et al., 2014). For the German version, a confirmatory factor analysis with four factors (support, growth, repression, atmosphere) indicated construct validity. Preliminary support was found for convergent validity. Internal consistency, measured by Cronbach’s alpha, of the German questionnaire was good for “support” ($\alpha = .85$) and “growth” ($\alpha = .85$), and sufficient for “repression” ($\alpha = .67$) and “atmosphere” ($\alpha = .66$; Heynen et al., 2014). Cronbach’s alpha internal consistencies for the

present study were also good for growth ($\alpha = .86$) and support ($\alpha = .84$), and sufficient for repression ($\alpha = .61$) and atmosphere ($\alpha = .63$).

ICU. The ICU scale developed by Frick (2003) is a 24-item self-report measure, with four response categories ranging from 0 = *not at all true* to 3 = *definitely true*. In the present study, the German version of the self-report questionnaire was used. This self-report scale has been shown to be a reliable and valid instrument to investigate CU traits in adolescent offenders. Confirmatory factor analysis resulted in three subscales: *Callousness* (e.g., “The feelings of others are unimportant to me”; $\alpha = .70$), *Unemotional* (e.g., “I hide my feelings from others”; $\alpha = .64$), and *Uncaring* (e.g., “I try not to hurt others’ feelings”; $\alpha = .73$, this item is reversely coded; Kimonis et al., 2014) and indicated construct validity. The present study showed good internal consistencies for Callousness ($\alpha = .72$) and Uncaring ($\alpha = .76$), and a sufficient internal consistency for Unemotional ($\alpha = .60$).

RPQ. The RPQ, a self-report questionnaire, developed by Raine and colleagues in 2006, consists of 23 items ranging on a 3-point scale (from 0 = *never*, 1 = *sometimes*, to 2 = *often*) and makes a differentiation between reactive (11 items, “gotten angry when frustrated”) and proactive (12 items, “vandalized something for fun”) aggression. The RPQ assesses both physically and verbally aggressive behaviors, and in the case of reactive aggression assesses anger generated in response to external stimuli (Raine et al., 2006). The RPQ has shown to be a valid and reliable instrument to investigate reactive and proactive aggression with a significant proactive-reactive intercorrelation ($r = .67$, $N = 334$, $p < .0001$) and good internal consistencies (Raine et al., 2006; see also Cima, Raine, Meesters, & Popma, 2013). In the present study, we administered this questionnaire during the last month. As there was no translated German version of the RPQ, the first author of this study, a bilingual native Dutch and German speaker, translated the Dutch version of the test into German. The German version was then back-translated by another Dutch and German native speaker. In the present study, the scale has a good internal consistency for reactive aggression ($\alpha = .80$) and proactive aggression ($\alpha = .84$).

Statistical Analysis

Pearson’s correlation analyses were conducted using SPSS 21.0 to examine associations between the different dimensions of living group climate, reactive and proactive aggression, and CU traits. Subsequently, structural equation modeling (SEM) was conducted using Mplus (version 6.11) to test a model (maximum likelihood) with direct paths between the latent variable living group climate (support, growth, repression [reversed], and atmosphere), reactive and proactive aggression, and CU traits (callousness, uncaring, and unemotional). The model also included the effects of age, ethnicity, and type of offense on living group climate, reactive and proactive aggression, and CU traits, and accounted for associations among reactive and proactive aggression and CU traits. The sample size was considered to be sufficient to conduct

reliable SEM, given the favorable ratio between the sample size and free parameters to be estimated of 5 to 1 (Bentler & Chou, 1987), because a reasonable sample size for a simple SEM model is estimated to be $N = 150$ (Muthén & Muthén, 2002), and because the sample size of our study guaranteed sufficient statistical power (.80) to detect small effects at $p < .05$ (Cohen, 1988; Westland, 2010). Moreover, SEM results were largely consistent with simple correlation analyses (see below).

Both the fit indices (comparative fit index [CFI], Tucker–Lewis index [TLI], and root mean square error of approximation [RMSEA]²) and the model chi-square statistic, also designated as the generalized likelihood ratio, were used to evaluate model fit (Kline, 2005). The following cut-off values are indicative of a close model fit: CFI > .95, TLI > .95, and RMSEA < .06, whereas a non-significant chi-square indicates exact model fit (Arbuckle, 2007; Hu & Bentler, 1999; Kline, 2005). Modification indices (MIs) were used to guide improvement of model fit between the hypothesized and alternative (modified) model.

Results

Preliminary Analyses

Table 1 presents the means and standard deviations of the sub(scales) for living group climate (support, growth, repression, atmosphere), reactive and proactive aggression, and CU traits (callousness, unemotional, uncaring) as well as the correlations among these variables. Significant and positive (two-tailed) correlations were found between repression and callousness ($r = .229, p = .001$), atmosphere and unemotional traits ($r = .159, p = .05$), and also between repression and reactive aggression ($r = .275, p = .01$). There were also significant and positive correlations between all subscales of the ICU and proactive aggression (callousness: $r = .468, p = .001$; uncaring: $r = .285, p = .001$; unemotional: $r = .214, p = .01$). Furthermore, there were significant correlations between reactive aggression and callousness ($r = .488, p = .001$), uncaring ($r = .213, p = .01$) and support ($r = -.172, p = .05$). Finally, there was a significant and positive correlation between reactive and proactive aggression ($r = .734, p = .001$).

SEM

To investigate the relations between living group climate, reactive and proactive aggression, and CU traits, a structural equation model was fitted to the data ($N = 156$), accounting for the effects of age, ethnicity, and type of offending on living group climate, aggression, and CU traits, and allowing correlations among reactive aggression, proactive aggression, and CU traits. The initial model did not show a good fit to the data: $\chi^2(38) = 73.893, p = .000$, CFI = .902, TLI = .838, and RMSEA = .078. Therefore, a second model was fitted to the data, with changes made on the basis of MIs. However, no valid model could be fitted to the data including paths from the latent variable open living group climate to aggression and CU traits. Because the model only became satisfactory when paths were included from repression to other indicators of latent

Table 1. Means, Standard Deviations, and Correlations Among the PGCI, ICU, and RPQ.

	M (SD)	ICU			PGCI			RPQ	
		Callousness	Uncaring	Unemotional	Support	Growth	Repression	Atmosphere	Reactive aggression
ICU									
Callousness	1.02 (0.44)	I							
Uncaring	1.17 (0.54)	.370***	I						
Unemotional	1.72 (0.60)	.322***	.332***	I					
PGCI									
Support	2.84 (0.81)	-.132	-.006	.063	I				
Growth	3.41 (0.89)	.018	-.072	.001	.540***	I			
Repression	3.39 (0.71)	.229**	-.119	.073	-.324***	-.245**	I		
Atmosphere	3.03 (0.65)	.007	-.108	.159*	.539***	.331***	-.189*	I	
RPQ									
Reactive aggression	14.82 (4.19)	.488***	.213**	.157	-.172*	.069	.275**	-.022	I
Proactive aggression	11.00 (5.30)	.468***	.285***	.214**	-.114	.157	.106	-.021	.734***

Note. N = 156. PGCI = Prison Group Climate Inventory; ICU = Inventory of Callous-Unemotional traits; RPQ = Reactive-Proactive Aggression Questionnaire. * $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed significance).

Figure 1. Structural equation Model of living group climate, aggression and CU-traits

Note. CU = callous-unemotional.

variables, we fitted a model that only incorporated repression as a manifest variable. The alternative model showed a good fit to the data: $\chi^2(11) = 15.283$, $p = .169$, CFI = .982, TLI = .945, and RMSEA = .050. It can be derived from Figure 1 (showing standardized coefficients, dashed lines representing non-significant paths, and solid lines representing significant paths) that repression was positively related to reactive aggression (.274, $p = .000$) and CU traits (.240, $p = .004$). Furthermore, reactive and proactive aggression were positively associated with CU traits (both .503, $p = .000$), reactive aggression was positively associated with proactive aggression (.746, $p = .000$), and uncaring was positively associated with unemotional (.221, $p = .007$). The control variable “age” showed a borderline-significant association with CU traits ($-.154$, $p = .082$), indicating that CU traits were more common in younger inmates (the appendix shows all standardized coefficients, standard errors, z values, and p values).

Discussion

There is accumulating empirical evidence showing that the social environment can be more influential than individual factors in explaining both antisocial (Pinker, 2011; Raine, 2013; Zimbardo, 2004) and prosocial behavior (Van IJzendoorn & Bakermans-Kranenburg, 2014). Also, juvenile offenders change their behavior in response to the

social environment, that is, perceived environmental demands and pressures (Steinberg, 2009; Schubert et al., 2012; Van der Helm & Stams, 2012). Research has shown that an open living group climate could influence successful rehabilitation and secure institutional treatment (Van der Helm et al., 2012; for an overview, see Souverein, Van der Helm, & Stams, 2013). Although the rate of violent delinquency has been declining during the past three decades, serious and violent (juvenile) offending remains a significant problem (e.g., Clarke, 2013; Hanslmaier, Kemme, Stoll, & Baier, 2014; LaFree, Curtis, & McDowall, 2015; Office of Juvenile Justice and Delinquency Prevention [OJJDP], 2011; Snyder, 2012). The most violent offenders often show high levels of aggression and CU traits (Frick & Dickens, 2006; Salekin, Rogers, & Sewell, 1996). The present study is to our knowledge the first to examine the relation between living group climate and both aggression and CU traits in a juvenile justice institution. Results of this study show that perception of a more repressive living group climate is associated with higher levels of CU traits and reactive (but not proactive) aggression in incarcerated juvenile offenders, which is consistent with the deprivation hypothesis, indicating that a repressive climate is related to more antisocial behavior within prison (Harer & Steffensmeier, 1996). Our study results are also in line with research showing the distinctiveness of reactive aggressive behavior in response to perceived adverse environmental circumstances, including repression (the present study), and proactive aggressive behavior, which is instrumental and anticipates reward (Card & Little, 2006; Kempes, Matthys, De Vries, & Van Engeland, 2005; Polman, Orobio de Castro, Koops, Van Boxtel, & Merk, 2007; Raine et al., 2006). However, outcomes of this study are not in line with previous research on living group climate in Dutch youth prisons, which showed that an open and supportive living group climate was associated with less aggression, whereas repression was unrelated to aggression (Ros et al., 2013; Van der Helm, Boeke, Stams & Van der Laan, 2011). In the Netherlands, juvenile delinquents receive structured clinical treatment during detention to reduce the risk for criminal offense recidivism (Hoogsteder et al., 2014). As the present study was carried out in a German youth prison, it seems plausible to suggest that the relation between living group climate and aggression might be affected by differences in the juvenile prison system between Germany and the Netherlands, and the respective goals of retribution, deterrence, or rehabilitation.

The German juvenile prison system particularly focuses on formal education, reduction of drug use and aggression (Bundesministerium der Justiz, 2009; Walter, 1999) but does not target reduction of aggression of juvenile offenders by means of psychiatric care, evidence-based offender rehabilitation programs, such as Equip (Helmond, Overbeek, & Brugman, 2012) and responsive aggression replacement therapy (Hoogsteder et al., 2014). The recent 2013 vision of the nine Dutch youth prisons (Van der Helm, Van Tol, & Stams, 2012) explicitly states that an open living group climate and psychiatric help are the two main pillars of the system.

De Swart et al. (2012) conducted a meta-analysis on the effectiveness of residential care and showed general group care to be ineffective without the delivery of evidence-based treatment. Another review of young offenders (Koehler, Loesel, Akoensi, & Humphreys, 2013) showed that purely deterrent and supervisory interventions even

slightly increased juvenile recidivism. When treatment was the main goal, results were more positive in terms of recidivism reduction, especially when cognitive behavioral therapy was applied. Given that the Dutch forensic juvenile justice institutions deliver evidence-based treatment and psychiatric care, an open and supportive living group climate may reduce aggression problems and eliminate the negative effects of repression. In Germany, however, an open and supportive living group climate may possibly have no positive effects on CU traits and aggression because evidence-based treatment is lacking, while the negative effects of repression are not dampened by the use of evidence-based treatment.

Other explanations for different results in Germany and the Netherlands may be found in measurement issues. The Dutch study by Van der Helm et al. used the Buss Durkee Hostility Inventory (BDHI; Buss & Durkee, 1957) to assess self-reported aggression, whereas the present German study used the RPQ. The BDHI is more focused on trait-like features of aggression, whereas the RPQ is more focused on state-like features of aggression. We suggest that a repressive prison environment may have negative effects on state-like features of aggression but less on trait-like features of aggression. Notably, the repression experienced by incarcerated juvenile delinquents may partly be a continuation of their aversive child-rearing experiences, as was recently demonstrated by Asscher et al. (2015), which may explain why repression did not show a significant association with trait-like aggression. However, such an explanation does not seem in agreement with the significant relation between repression and callousness in the present study. However, Baron-Cohen (2011) has argued that empathy, which is difficult to combine with CU traits, can be “shut on or shut off,” depending on the quality of the environment. In prison, where the environment is thought to have a great (or even extreme) impact on the behavior of inmates (Van der Helm, 2011), callous and unemotional behavior can therefore be more state- than trait like. This may particularly be the case for adolescents whose brain is still maturing and personality is still developing (Lenroot & Giedd, 2006).

Although the PGCI has been shown to be a valid and reliable measurement instrument to assess living group climate in juvenile justice institutions in Germany and the Netherlands, measurement invariance for the German and Dutch versions of the PGCI has never been demonstrated, which means that the size of the factor loadings may differ across the German and Dutch versions. Notably, the Repression scale of the PGCI consists of items measuring both repression and deprivation. Deprivation items load relatively high on the German Repression scale of the PGCI, whereas repression items load relatively high on the Dutch Repression scale of the PGCI. It can therefore be concluded that the association between repression and aggression particularly signals the negative effects of deprivation in the German youth prison, interpretation of which is in line with the lack of attention paid to psychosocial development in the German prison system.

The present results have to be considered in light of some limitations. A first limitation is that the PGCI does not distinguish between repression and deprivation. We therefore argue that the PGCI needs further development to account for repression

and deprivation in separate scales, which facilitates research on the unique effects of repression and deprivation and their combination. A second limitation is that living group climate and aggression were assessed using adolescent self-report only, which was not supplemented with independent objective observations or assessment of the perspective of prison staff and group workers. A third limitation pertains to the cross-sectional nature of this study, which does not permit testing the transactional relation between environment and individual characteristics, and sets limits to the causal interpretation of the results. While the present study showed that a hard prison environment may have adverse effects on (reactive) aggression and callous and unemotional behavior, the opposite could also be true: Prison staff or group workers may resort to a stricter schedule if confronted with inmates who are both callous/unemotional and prone to show aggressive behavior. As the analysis is correlative, based on self-reports of inmates only, and does not compare various institutions (and living groups) with each other that differ in terms of climate (e.g., using multilevel analysis), it cannot be excluded that juvenile delinquents with pronounced CU traits and a greater propensity toward aggression may be more inclined to view their surroundings as hostile. Hence, hostile attribution bias (Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002) could be an alternative explanation for the results of our study, at least in part. A fourth limitation is that subjects were selected using convenience sampling, which may restrict generalizability, although the age range, reasons for detention, low educational levels, and ethnic diversity of the sample did largely concur with characteristics of the German youth population in secure juvenile justice institutions (Dünkel, 2006). Finally, the sample consisted of male offenders only. It would be interesting to compare a sample of boys and girls because of the expected differences in the development of aggression during detention (Asscher et al., 2015; Crick, Bigbee, & Howes, 2008). Future research should examine the longitudinal relations between living group climate, aggression, and CU traits in a more diverse sample of detained juvenile offenders.

Despite these limitations, the present study is the first to investigate whether there is a relation between living group climate and both aggression and CU traits, showing that repression is associated with aggressive behavior and callousness in detained youth. This study provides empirical support for the association between repression and antisocial behavior in a context where social support from professional staff appears to be low, the group atmosphere among inmates is relatively negative, and evidence-based treatment for detained youth is lacking. The prevalence rate of any mental disorders among detained male adolescents is high (almost 70%; Colins et al., 2010), a negative climate could worsen psychiatric problems, and the longitudinal relation between on one hand externalizing and comorbid disorders and on the other hand criminal offense recidivism is substantial (Wibbelink, Hoeve, Stams, & Oort, 2015). The outcomes of this study also raise doubts about “get tough” approaches in prison in general (Collier, 2014; Gendreau, Goggin, French, & Smith, 2006) and call for a more effective and rehabilitative prison management (Lipsey, 2009; Listwan, 2013; Parhar, Wormith, Derkzen, & Beauregard, 2008).

Appendix

SEM Results Estimates From Mplus.

	Estimate	SE	z	Two-tailed <i>p</i> value
CU-traits BY				
Callous	.914	0.113	8.080	.000
Uncaring	.405	0.087	4.686	.000
Unemotional	.351	0.084	4.185	.000
CU-traits ON				
Repression	.240	0.082	2.912	.004
Age	-.154	0.088	-1.739	.082
Ethnicity	.085	0.084	1.007	.314
Type of offense	.040	0.085	0.476	.634
Reactive aggression ON				
Repression	.274	0.074	3.691	.000
Age	.011	0.077	0.144	.885
Ethnicity	.079	0.077	1.027	.304
Type of offense	-.015	0.077	-0.198	.843
Proactive aggression ON				
Repression	.108	0.079	1.364	.172
Age	-.108	0.079	-1.376	.169
Ethnicity	.022	0.079	0.279	.781
Type of offense	-.008	0.080	-0.094	.925
Repression ON				
Age	.021	0.080	0.259	.795
Ethnicity	.028	0.080	0.350	.726
Type of offense	-.0114	0.079	-1.440	.150
Reactive aggression WITH				
CU traits	.503	0.092	5.441	.000
Proactive aggression WITH				
CU traits	.503	0.099	5.081	.000
Reactive aggression	.746	0.036	20.968	.000
Unemotional WITH				
Uncaring	.221	0.082	2.682	.007

Note. SEM = structural equation modeling; CU = callous-unemotional.

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Notes

1. In Germany, since the 1990 justice reform also young adults up to 25 years can be detained in youth prison.
2. CFI (comparative fit index), TLI (Tucker–Lewis index), NFI (normed fit index) and RMSEA (root mean square error of approximation) are indices of goodness of fit that are independent of sample size. Models that fit well score favorably on these fit-indices. For further references, see Arbuckle (2007).

References

- Arbuckle, J. L. (2007). *Amos 16.0 user's guide*. Chicago, IL: SPSS.
- Asscher, J. J., Van der Put, C. E., & Stams, G. J. J. M. (2015). Gender differences in the association between child maltreatment and adolescent offending. *Journal of Family Violence*, 30, 215-225. doi:10.1007/s10896-014-9668-4
- Asscher, J. J., Van Vugt, E. S., Stams, G. J. J. M., Deković, M., Eichelsheim, V. I., & Yousfi, S. (2011). The relationship between juvenile psychopathic traits, delinquency and (violent) recidivism: A meta-analysis. *Journal of Child Psychology and Psychiatry*, 52, 1134-1143. doi:10.1111/j.1469-7610.2011.02412.x
- Bandura, A. (1973). *Aggression: A social learning theory analysis*. New York, NY: Prentice Hall.
- Baron-Cohen, S. (2011). *Zero degrees of empathy: A new theory of human cruelty*. London, England: Penguin UK.
- Bentler, P. M., & Chou, C. P. (1987). Practical issues in structural equation modeling. *Sociological Methods & Research*, 16, 78-117. doi:10.1177/0049124187016001004
- Blumstein, A. (2002). Youth, guns, and violent crime. *The Future of Children*, 12(2), 38-53.
- Bundesministerium der Justiz, Berlin, Bundesministerium für Justiz, Wien, Eidgenössischen Justiz-, Polizeidepartement, & Bern. (2009). *Freiheitsentzug-Die Empfehlungen des Europarates: Rec (2006) 13 über die Anwendung von Untersuchungshaft, die Bedingungen, unter denen sie vollzogen wird, und Schutzmaßnahmen gegen Missbrauch/Rec (2008) 11 über die Europäischen Grundsätze für die von Sanktionen und Maßnahmen betroffenen jugendlichen Straftäter und Straftäterinnen [Detention: Suggestions of the European board REC (2016) 13 on the application of pre-trial detention, the conditions under which it is carried out, and safeguards against abuse]*. Mönchengladbach, Germany: Forum Verlag Godesberg.
- Buss, A. H., & Durkee, A. (1957). An inventory for assessing different kinds of hostility. *Journal of Consultative Psychology*, 21, 343-349.
- Card, N. A., & Little, T. D. (2006). Proactive and reactive aggression in childhood and adolescence: A meta-analysis of differential relations with psychosocial adjustment. *International Journal of Behavioral Development*, 30, 466-480. doi:10.1177/0165025406071904
- Centers for Disease Control and Prevention. (2013). *Homicide rates among persons aged 10–24 years — United States, 1981–2010*. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6227a1.htm>
- Cima, M., & Raine, A. (2009). Distinct characteristics of psychopathy relate to different subtypes of aggression. *Personality and Individual Differences*, 47, 835-840. doi:10.1016/j.paid.2009.06.031
- Cima, M., Raine, A., Meesters, C., & Popma, A. (2013). Validation of the Dutch Reactive Proactive Questionnaire (RPQ): Differential Correlates of Reactive and Proactive Aggression from childhood to adulthood. *Aggressive Behavior*, 39, 99-113.

- Clarke, S. (2013). *Trends in crime and criminal justice, 2010. Eurostat: Statistics in Focus*. Luxembourg: European Commission.
- Cline, H. F., & Wheeler, S. (1968). The determinants of normative patterns in correctional institutions. *Scandinavian Studies in Criminology*, 2, 173-184.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Colins, O., Vermeiren, R., Vreugdenhil, C., Van den Brink, W., Doreleijers, T., & Broekaert, E. (2010). Psychiatric disorders in detained male adolescents: A systematic literature review. *Canadian Journal of Psychiatry/Revue Canadienne de Psychiatrie*, 55, 255-263.
- Collier, G. (2014). *Emotional expression*. New York, NY: Psychology Press.
- Crick, N. R., Bigbee, M. A., & Howes, C. (2008). Gender differences in children's normative beliefs about aggression: How do I hurt Thee? Let me count the ways. *Child Development*, 76, 1003-1014. doi:10.1111/j.1467-8624.1996.tb01779.x
- Crick, N. R., & Dodge, K. A. (1996). Social information-processing mechanisms in reactive and proactive aggression. *Child Development*, 67, 993-1002. doi:10.1111/j.1467-8624.1996.tb01778.x
- De Swart, J. J. W., Van den Broek, H., Stams, G. J. J. M., Asscher, J. J., Van der Laan, P. H., Holsbrink-Engels, G. A., & Van der Helm, G. H. P. (2012). The effectiveness of institutional youth care over the past three decades: A meta-analysis. *Children and Youth Services Review*, 34, 1818-1824.
- De Waal, F. B. M., Smith-Churchland, P., Pievani, T., & Parmigiani, S. (2014). *Evolved morality: The biology and philosophy of human conscience*. Leiden, The Netherlands: Brill.
- Dodge, K. A. (1991). The structure and function of reactive and proactive aggression in the development and treatment of childhood aggression. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression* (pp. 201-218). Hillsdale, NJ: Lawrence Erlbaum.
- Dollard, J., Doob, C. W., Miller, N. E., Mowrer, O. H., & Sears, R. R. (1939). *Frustration and aggression*. New Haven, CT: Yale University Press.
- Düinkel, F. (2006). Juvenile justice in Germany: Between welfare and justice. In J. Junger-Tas & S. H. Decker (Eds.), *International handbook of juvenile justice* (pp. 225-262). The Netherlands: Springer.
- Fazel, S., Doll, H., & Långström, N. (2008). Mental disorders among adolescents in juvenile detention and correctional facilities: A systematic review and metaregression analysis of 25 surveys. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47, 1010-1019. doi:10.1097/CHI.ObO13e31817eef3
- Fite, P. J., Raine, A., Stouthamer-Loeber, M., Loeber, R., & Pardini, D. A. (2009). Reactive and proactive aggression in adolescent males: Examining differential outcomes 10 years later in early adulthood. *Criminal Justice and Behavior*, 37, 141-157. doi:10.1177/0093854809353051
- Frick, P. J. (2003). *The inventory of callous-unemotional traits*. Unpublished rating scale, The University of New Orleans, LA.
- Frick, P. J., Cornell, A. H., Barry, C. T., Bodin, S. D., & Dane, H. E. (2003). Callous-unemotional traits and conduct problems in the prediction of conduct problem severity, aggression, and self-report of delinquency. *Journal of Abnormal Child Psychology*, 31, 457-470. doi:10.1023/A:1023899703866
- Frick, P. J., & Dickens, C. (2006). Current perspectives on conduct disorder. *Current Psychiatry Reports*, 8, 59-72. doi:10.1007/s11920-006-0082-3

- Frick, P. J., & Moffitt, T. E. (2010). *A proposal to the DSM-V childhood disorders and the ADHD and disruptive behavior disorders work groups to include a specifier to the diagnosis of conduct disorder based on the presence of callous-unemotional traits* (pp. 1-36). Washington, DC: American Psychiatric Association.
- Frick, P. J., & Ray, J. V. (2014). Evaluating callous-unemotional traits as a personality construct. *Journal of Personality*, 83, 710-722. doi:10.1111/jopy.12114
- Frick, P. J., Ray, J. V., Thornton, L. C., & Kahn, R. E. (2014). Can callous-unemotional traits enhance the understanding, diagnosis, and treatment of serious conduct problems in children and adolescents? A comprehensive review. *Psychological Bulletin*, 140, 1-57. doi:10.1037/a0033076
- Frick, P. J., Stickley, T. R., Dandreaux, D. M., Farrell, J. M., & Kimonis, E. R. (2005). Callous-unemotional traits in predicting the severity and stability of conduct problems and delinquency. *Journal of Abnormal Child Psychology*, 33, 471-487. doi:10.1007/s10648-005-5728-9
- Frick, P. J., & White, S. F. (2008). Research review: The importance of callous-unemotional traits for developmental models of aggressive and antisocial behavior. *Journal of Child Psychology and Psychiatry*, 49, 359-375. doi:10.1111/j.1469-7610.2007.01862.x
- Gendreau, P., Goggin, C., French, S., & Smith, P. (2006). Practicing psychology in correctional settings. In I. B. Weiner & A. K. Hess (Eds.), *The handbook of forensic psychology* (3rd ed., pp. 722-750). Hoboken, NJ: Wiley.
- Gover, A. R., MacKenzie, D. L., & Armstrong, G. S. (2000). Importation and deprivation explanations of juveniles' adjustment to correctional facilities. *International Journal of Offender Therapy and Comparative Criminology*, 44, 450-467.
- Groeneweg, M. J., Van der Helm, G. H. P., Stams, G. J. J. M., & Asscher, J. J. (2013). When I don't get what I want, I take it because it's mine. I-D compensation and incarcerated adolescents in a delayed-return society: An application of Martin's theory. *Psychiatry, Psychology and Law*, 20, 735-748. doi:10.1080/13218719.2012.730902
- Hanslmaier, M., Kemme, S., Stoll, K., & Baier, D. (2014). Der qualitative Teil der Untersuchung: die Expertenbefragung. In *Kriminalität im Jahr 2020* [The qualitative part of the study: The expert forecast. In crime in the year 2020] (pp. 29-46). Wiesbaden, Germany: Springer Fachmedien.
- Harer, M. D., & Steffensmeier, D. J. (1996). Race and prison violence. *Criminology*, 34, 323-355. doi:10.1111/j-1745-9125.1996.tb012.10.x
- Helmond, P., Overbeek, G., & Brugman, D. (2012). Program integrity and effectiveness of a cognitive behavioral intervention for incarcerated antisocial youth on cognitive distortions, social skills, and moral development. *Children and Youth Services Review*, 34, 1720-1728. doi:10.1016/j.childyouth.2012.05.001
- Heynen, E. J. E., van der Helm, G. H. P., Stams, G. J. J. M., & Korebrits, A. M. (2014). Measuring group climate in German youth prison—A German validation of the "Prison Group Climate Instrument" (PGCI). *Journal of Forensic Psychology Practice*, 14, 45-54. doi:10.1080/15228932.2013.868176
- Hoogsteder, L. M., Kuijpers, N., Stams, G. J. J. M., Van Horn, J. E., Hendriks, J., & Wissink, I. B. (2014). Study on the effectiveness of responsive aggression regulation therapy (Re-ART). *International Journal of Forensic Mental Health*, 13, 25-35. doi:10.1080/14999013.2014.893711
- 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. doi:10.1080/10705519909540118

- Iacoboni, M., & Dapretto, M. (2006). The mirror neuron system and the consequences of its dysfunction. *Nature Reviews Neuroscience*, 7, 942-951. doi:10.1038/nrn2024
- Kaal, H. L., Negenman, A. M., Roeleveld, E., & Embregts, P. J. C. M. (2011). *De problematiek van gedetineerden met een licht verstandelijke beperking in het gevangeniswezen* [Problems of detainees with a mild intellectual disability in detention]. Tilburg, The Netherlands: Prismaprint.
- Kaal, H. L., Overvest, N., & Boertjes, M. (2014). *Beperkt in de keten. Mensen met een licht verstandelijke beperking in de strafrechtketen* [People with a mild intellectual disability in prison care]. Den Haag, The Netherlands: Boom Lemma.
- Kempes, M., Matthys, W., De Vries, H., & Van Engeland, H. (2005). Reactive and proactive aggression in children. A review of theory, findings and the relevance for child and adolescent psychiatry. *European Child & Adolescent Psychiatry*, 14, 11-19. doi:10.1007/s00787-005-0432-4
- Kimonis, E. R., Fanti, K., Goldweber, A., Marsee, M. A., Frick, P. J., & Cauffman, E. (2014). Callous-unemotional traits in incarcerated adolescents. *Psychological Assessment*, 26, 227-237. doi:10.1037/a0034585
- Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York, NY: Guilford Press.
- Koehler, J. A., Loesel, F., Akoensi, T. D., & Humphreys, D. K. (2013). A systematic review and meta-analysis on the effects of young offender treatment programs in Europe. *Journal of Experimental Criminology*, 9, 19-43. doi:10.1007/s11292-012-9159-7
- LaFree, G., Curtis, K., & McDowall, D. (2015). How effective are our "better angels"? Assessing country-level declines in homicide since 1950. *European Journal of Criminology*, 12, 482-504. doi:10.1177/1477370815584261
- Lenroot, R. K., & Giedd, J. N. (2006). Brain development in children and adolescents: Insights from anatomical magnetic resonance imaging. *Neuroscience & Biobehavioral Reviews*, 30, 718-729. doi:10.1016/j.neubiorev.2006.06.001
- Liebling, A., & Maruna, S. (2005). Introduction: The effects of imprisonment revisited. In A. Liebling & S. Maruna (Eds.), *The effects of imprisonment* (pp. 1-32). Cullompton, UK: Willan.
- Lipsey, M. W. (2009). The primary factors that characterize effective interventions with juvenile offenders: A meta-analytic overview. *Victims and offenders*, 4(2), 124-147.
- Listwan, S. J. (2013). *Introduction to juvenile justice*. San Diego, CA: Bridgepoint.
- Marsee, M. A., Silverthorn, P., & Frick, P. J. (2005). The association of psychopathic traits with aggression and delinquency in non-referred boys and girls. *Behavioural Sciences & the Law*, 23, 803-817. doi:10.1002/bsl.662
- Muthén, L. K., & Muthén, B. (2002). How to use a Monté Carlo study to decide on sample size and determine power. *Structural Equation Modeling*, 4, 599-620. doi:10.1207/S15328007SEM0904_8
- Office of Juvenile Justice and Delinquency Prevention. (2011). *Juvenile arrests 2009*. Washington, DC: Department of Justice.
- Orbó de Castro, B., Veerman, J. W., Koops, W., Bosch, J. D., & Monshouwer, H. J. (2002). Hostile attribution of intent and aggressive behavior: A meta-analysis. *Child Development*, 73, 916-934. doi:10.1111/1467-8624.00447
- Parhar, K. K., Wormith, S. J., Derksen, D. M., & Beauregard, A. M. (2008). Offender coercion in treatment: A meta-analysis of effectiveness. *Criminal Justice and Behavior*, 35, 1109-1135. doi:10.1177/0093854808320169
- Pinker, S. (2011). *The better angels of our nature: Why violence has declined*. New York, NY: Viking.

- Polman, H., Orobio de Castro, B., Koops, W., van Boxtel, H. W., & Merk, W. W. (2007). A meta-analysis of the distinction between reactive and proactive aggression in children and adolescents. *Journal of Abnormal Child Psychology*, 35, 522-535. doi:10.1007/s10802-007-9109-4
- Popma, A., & Raine, A. (2006). Will future forensic assessment be neurobiological? *Child & Adolescent Psychiatric Clinics of North America*, 15, 429-444. doi:10.1016/j.chc.2005.11.004
- Raine, A., Dodge, K., Loeber, R., Gatzke-Kopp, L., Lynam, D., Reynolds, C., . . . Liu, J. (2006). The reactive-proactive aggression questionnaire: Differential correlates of reactive and proactive aggression in adolescent boys. *Aggressive Behavior*, 32, 159-171. doi:10.1002/ab.20115
- Raine, A. (2013). *The anatomy of violence: The biological roots of crime*. New York, NY: Vintage.
- Ros, N., Van der Helm, G. H. P., Wissink, I., Stams, G. J. J. M., & Schaftenaar, P. (2013). Institutional climate and aggression in a secure psychiatric setting. *The Journal of Forensic Psychiatry & Psychology*, 24, 713-727. doi:10.1080/14789949.2013.848460
- 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, 447-474. doi:10.1177/1462474508095320
- Ross, M. W., Liebling, A., & Tait, S. (2011). The relationships of prison climate to health service in correctional environments: Inmate health care measurement, satisfaction and access in prisons. *The Howard Journal of Criminal Justice*, 50, 262-274. doi:10.1111/j.1468-2311.2011.00658.x
- Salekin, R. T., Rogers, R., & Sewell, K. W. (1996). A review and meta-analysis of the Psychopathy Checklist and Psychopathy Checklist-Revised: Predictive validity of dangerousness. *Clinical Psychology Science and Practice*, 3, 203-215. doi:10.1111/j.1468-2850.1996.tb00071.x
- Sato, W., Uono, S., Matsuura, N., & Toichi, M. (2009). Misrecognition of facial expressions in delinquents. *Child and Adolescent Psychiatry and Mental Health*, 3, 27-39.
- Schubert, C. A., Mulvey, E. P., Loughran, T. A., & Losoya, S. H. (2012). Perceptions of institutional experience and community outcomes for serious adolescent offenders. *Criminal Justice and Behavior*, 39, 71-93. doi:10.1177/00938548114267107
- Snyder, H. N. (2012). *Arrest in the United States, 1990-2010*. Pittsburgh, PA: U.S. Department of Justice, Office of Justice Programs, The Bureau of Justice Statistics.
- Souverein, F., Van der Helm, G. H. P., & Stams, G. J. J. M. (2013). "Nothing works" in secure residential youth care? *Children and Youth Services Review*, 35, 1941-1945.
- Spinhoven, P., Elzinga, B. M., Hovens, J. G. F. M., Roelofs, K., Zitman, F. G., van Oppen, P., & Penninx, B. W. J. H. (2010). The specificity of childhood adversities and negative life events across the life span to anxiety and depressive disorders. *Journal of Affective Disorders*, 126, 103-112. doi:10.1016/j.jad.2010.02.132
- Steinberg, L. (2009). Adolescent development and juvenile justice. *Annual Review in Clinical Psychology*, 5, 47-73. doi:10.1146/annurev.clinpsy.032408.153603
- Stelly, W., & Thomas, J. (2013). Strukturevaluation des baden-württembergischen Jugend Strafvollzuges [Structural evaluation of the Baden-Württemberg youth prison]. *Forum Strafvollzug*, 6, 344-348.
- Van der Helm, G. H. P. (2011). *First do no harm: Living group climate in secure correctional institutions*. Amsterdam, The Netherlands: SWP.
- Van der Helm, G. H. P., Boekee, I., Stams, G. J. J. M., & Van der Laan, P. H. (2011). Fear is the key: Keeping the balance between flexibility and control in a Dutch youth prison. *Journal of Children's Services*, 4, 248-263.

- Van der Helm, G. H. 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, 36-48. doi:10.1108/17466660200900011
- Van der Helm, G. H. P., Matthys, W., Moonen, X., Stams, G. J. J. M., Giesen, N., & van der Heide, E. S. (2011). Measuring inappropriate responses of adolescents to problematic social situations in secure institutional and correctional youth care: A validation study of the TOPS-A. *Journal of Interpersonal Violence*, 28, 1579-1595. doi:10.1177/0886260512468322
- Van der Helm, G. H. P., & Stams, G. J. J. M. (2012). Conflict and coping by clients and group workers in secure residential facilities. In K. Oei & M. Groenhuizen (Eds.), *Progression in forensic psychiatry: About boundaries* (pp. 553-564). Amsterdam, The Netherlands: Kluwer.
- Van der Helm, G. H. P., Stams, G. J. J. M., van der Stel, J. C., van Langen, M. A., & van der Laan, P. H. (2012). Group climate and empathy in a sample of incarcerated boys. *International Journal of Offender Therapy and Comparative Criminology*, 56, 1149-1160. doi:10.1177/0306624X11421649
- Van der Helm, P., Stams, G. J. J. M., & Van der Laan, P. H. (2011). Measuring group climate in prison. *The Prison Journal*, 91, 158-176. doi:10.1177/0032885511403595
- Van der Helm, G. H. P., & Stams, G. J. J. M. (2012). Conflict and coping by clients and group workers in secure residential facilities. In K. Oei & M. Groenhuizen (Eds.), *Progression in forensic psychiatry: About boundaries* (pp. 553-564). Amsterdam, The Netherlands: Kluwer.
- Van der Helm, G. H. P., van Tol, N., & Stams, G. J. J. M. (2012). De invloed van het orthopedagogisch klimaat in de residentiële justitiële jeugdzorg: recidivevermindering door opvoeding, behandeling en scholing. Een bijdrage aan de visie van Justitiële Jeugdinrichtingen in Nedeland [The influence of the social climate in the residential judicial youth care: Recidivism reduction by education, treatment and training. A contribution to the vision of Judicial Youth establishments in the Netherlands]. Den Haag: DJI/Ministerie van Veiligheid en Justitie.
- Van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (2014). Prosocial development and situational morality, neurobiological, parental and contextual factors. In *Pathways to peace: The transformative power of children and families*. The MIT Press. doi:10.7551/mitpress/9780262027984.003.0010
- Van Vliet, J. A., & Oei, T. I. (2006, July 15). Detention under a hospital order (Tbs) and the functioning of the mental health service in the Netherlands. Conference "Research in Forensic Psychiatry," Regensburg, Germany.
- Viding, E., Blair, R. J. R., Moffitt, T. E., & Plomin, R. (2005). Evidence for substantial genetic risk for psychopathy in 7-year-olds. *Journal of Child Psychology and Psychiatry*, 46, 592-597. doi:10.1111/j.1469-7610.2004.00393
- Walter, J. (1999). Anti-Gewalttraining im Jugendstrafvollzug—Tummelplatz für "crime fighter"? [Anti-aggression training in youth detention—Play area for "crime fighter"?] *Zeitschrift für Strafe und Vollzug*, 1999, 23-28.
- Westland, J. C. (2010). Lower bounds on sample size in structural equation modeling. *Electronic Commerce Research and Applications*, 9, 476-487.
- Wibbelink, C., Hoeve, M., Stams, G. J. J. M., & Oort, F. J. (2015). *Mental health disorder and juvenile recidivism: A three-level meta-analysis*. Manuscript submitted for publication.
- Zimbardo, P. G. (2004). A situationist perspective on the psychology of evil: Understanding how good people are transformed into perpetrators. In A. G. Miller (Ed.), *The social psychology of good and evil* (pp. 21-50). New York, NY: Guilford Press.