

The Influence of Harsh Parenting and Parental Warmth During Childhood on Later Involvement in Prison Misconduct

Journal of Interpersonal Violence

1–21

© The Author(s) 2019

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/0886260518820675

journals.sagepub.com/home/jiv

Thimna Klatt¹  and Sören Kliem¹

Abstract

Research has shown that childhood victimization is associated with later involvement in delinquency. Prevalence rates of childhood victimization also tend to be higher among prison inmates compared with the general population. However, it has rarely been examined if childhood experiences—both negative and positive—have an effect on prison misconduct. We analyzed self-report data from more than 4,800 male and female adult prisoners in Germany to examine if childhood experiences of harsh parenting and parental warmth are associated with physical inmate-on-inmate violence. We also assessed the inmates' attitude toward violence and examined if violence approval mediates the relationship between childhood experiences and violent misconduct. The results of the structural equation models show that both harsh parenting and positive, caring parental behavior have a small, but significant effect on violent prison misconduct, which is completely mediated by the inmates' attitude toward violence. Furthermore, the results suggest that the same model holds for both male and female inmates, indicating that childhood victimization is not a gender-responsive need. The strength of the direct association between violence approval and violent misconduct

¹Criminological Research Institute of Lower Saxony, Hanover, Germany

Corresponding Author:

Thimna Klatt, Criminological Research Institute of Lower Saxony, Lützerodestr. 9,
30161 Hanover, Germany.

Email: thimna.klatt@kfn.de

underscores the need to assess the inmates' attitude toward violence to identify those most at risk of engaging in violence during incarceration.

Keywords

prison misconduct, violence, childhood victimization, cycle of violence, structural equation modeling

Background

Research on the Cycle of Violence

Numerous researchers have investigated the long-term consequences of parental abuse and neglect, particularly with regard to the children's later involvement in delinquency (e.g., Nofziger & Kurtz, 2005; Shields & Cicchetti, 2001; Widom, 1989). Widom (1989; Maxfield & Widom, 1996) found in her seminal study on the long-term consequences of childhood victimization that subjects who had been abused or neglected as a child had an elevated risk of committing violent crimes as juveniles or adults. Furthermore, violent offending has been shown to be particularly common in victims of physical abuse (van der Put, Lanctôt, de Ruiter, & van Vugt, 2015). Stewart, Dennison, and Waterson (2002) reported that physical abuse and neglect had a significant impact on official delinquency in a large sample of juveniles in Australia. Furthermore, their results suggest that the association between maltreatment and delinquency is stronger for more severe forms of abuse. However, violence and antisocial behavior have also been found to be associated with less serious forms of childhood victimization, including harsh or coercive parenting and spanking (Burnette, Oshri, Lax, Richards, & Ragbeer, 2012; Gershoff & Grogan-Kaylor, 2016; Moffitt, Caspi, Rutter, & Silva, 2001). In line with these studies on the "cycle of violence," research has shown that prevalence rates of childhood victimization are much higher among samples of prisoners, compared to the general population (e.g., Bonta, Pang, & Wallace-Capretta, 1995; Browne, Miller, & Maguin, 1999; Hosser & Raddatz, 2005).

In addition to violent parental behavior, some studies have included measures of the parent-child relationship as a predictor. In a 20-year prospective study, Ehrensaft et al. (2003) examined the influence of a number of variables, including childhood abuse, parental punishment, and maternal closeness during adolescence on adult partner violence. They found that net of demographic characteristics, childhood abuse and punishment level were positively related to perpetrating partner violence. Maternal closeness, which comprised measures of maternal availability, communication, and support, had a significant negative effect on partner violence. In another study, Herrenkohl, Huang, Tajima, and

Whitney (2003) found that parental attachment, which included measures of communication, trust, and alienation between the parents and their child, had a negative direct effect on the child's violence during adolescence. However, overall research on the influence of positive parenting behavior on adolescent and adult use of violence is scarce.

A number of studies have investigated if the "cycle of violence" operates similarly or differently for men and women, producing mixed and partially contradicting results. Asscher, van der Put, and Stams (2015) found that a history of physical abuse, inside or outside the family, significantly predicted involvement in violent offending for juveniles of both sexes. Moffitt et al. (2001) reported that harsh parental discipline was correlated with adolescent antisocial behavior for both males and females. Contrary to these results, Burnette et al. (2012) found a significant indirect effect of harsh parenting on adolescent antisocial behavior, mediated by externalizing behavior for females, but not for males. These different findings might be due to different definitions or operationalization of the variables analyzed (e.g., harsh discipline vs. abuse and neglect; antisocial behavior vs. violent arrest). In their study of maltreated and non-maltreated children, Cullerton-Sen and colleagues (2008) differentiated between different types of abuse. They found that physical aggression was predicted by sexual abuse for girls, but not for boys. On the contrary, the interaction terms of gender and physical abuse, as well as gender and neglect, were not significant.

Childhood Victimization as a Predictor of Prison Misconduct

Inmate-on-inmate violence is a common issue in prisons worldwide, with prevalence rates of up to 50% (e.g., Morris & Worrall, 2014). Previous research has identified a number of risk factors that are related to violent misconduct, including age, ethnicity, criminal history, and antisocial attitudes (for a review, see Steiner, Butler, & Ellison, 2014). Although parental violence has been found to be associated with aggressive behavior toward others, only a few studies have examined if childhood victimization is also related to involvement in violent behavior during imprisonment (e.g., Celinska & Sung, 2014; Salisbury, Van Voorhis, & Spiropoulos, 2009; Schmidt, 2013; Steiner & Wooldredge, 2009). Nevertheless, the majority of these studies have found a significant positive association of physical abuse prior to incarceration and inmate misconduct (Steiner et al., 2014).

Research on the association of childhood victimization and prison violence has mostly focused on female inmates, because childhood abuse is sometimes assumed to be a gender-responsive need (e.g., Salisbury et al., 2009; Wright, Salisbury, & Van Voorhis, 2007). Salisbury et al. (2009), for

example, investigated a sample of female prisoners in the United States and found that childhood physical abuse significantly predicted the number of serious prison misconducts. Similarly, Steiner and Wooldredge (2009) found that having experienced physical or sexual abuse was positively related to the prevalence of violent misconduct among two large samples of women inmates. Loucks and Zamble (2000) also studied a sample of incarcerated female offenders. Contrary to Salisbury et al. (2009) and Steiner and Wooldredge (2009), they found that physical abuse was not related to violent prison misconduct. Sexual abuse, however, showed a significant positive association with prison violence.

Celinska and Sung (2014) obtained survey data from both male and female inmates of state and federal prisons. Contrary to the above mentioned studies, they found physical as well as sexual abuse to be a predictor of prison misconduct only for the male inmates, not for the female sample. DeLisi et al. (2010) investigated the relationship between early life trauma (including, but not limited to, parental violence) and institutional misconduct, using a large sample of confined juvenile delinquents. The authors reported that the level of traumatization was significantly related to the number of misconduct incidents, which included assaults against staff or other wards. Gender was not associated with misconduct incidents. The inconsistencies in the findings on the role of gender in predicting misconduct, which are also found in research on the “cycle of violence” among members of the general population, are probably due to different samples, different types of abuse (e.g., sexual, physical, emotional), and different outcome measures (e.g., violent misconduct, any rule-breaking).

Potential Mechanisms Underlying the Cycle of Violence

Researchers have proposed and examined several mechanisms to explain the link between childhood experiences, especially maltreatment, and later use of violence (e.g., Bandura, 1973; Herrenkohl et al., 2003; Magdol, Moffitt, Caspi, & Silva, 1998; Widom, 2000; for an overview of theories, see Kerig & Becker, 2010). Bandura’s (1973) Social Learning Theory posits that children who are subjected to violence learn to use violence as a strategy to achieve their goals. Building on this theory, Dodge, Bates, and Pettit (1990) suggested that childhood victimization influences social information processing in a negative way, which in turn increases the risk of future violent behavior against other people. In line with their hypothesis, the authors found in their prospective study of more than 300 children that early abuse was associated with biased social information processing styles,

which in turn were predictive of aggressive behavior. Similarly, Herrenkohl and colleagues (2003) hypothesized that childhood experiences of abuse could foster the development of violent beliefs, which in turn influence the use of violence. Their analysis of self-report data from the Lehigh Longitudinal Study showed that childhood abuse had a positive effect on violent attitudes, which in turn were related to using violence as a youth via involvement with antisocial peers. Vernberg, Jacobs, and Hershberger (1999) also reported a substantial positive association between attitudes supporting the use of aggression and involvement in violence against others in a sample of male and female adolescents. However, the study did not find violence approval to be a moderator of the association between being victimized and using violence.

Several studies have found that violence approval or, more generally, pro-criminal attitudes are also a strong predictor of violent behavior inside prison. For example, Arbach-Lucioni, Martínez-García, and Andrés-Pueyo (2012) found in a study of prison inmates in Spain that procriminal attitudes were positively and significantly related to violent misconduct. With regard to violent beliefs in particular, Klatt, Hagl, Bergmann, and Baier (2016) reported that violence approval significantly predicted inmate-on-inmate violence among a sample of incarcerated juvenile offenders. Mears, Stewart, Siennick, and Simons (2013) found that adherence to the “street code,” which entails viewing the use of violence as appropriate to gain respect, significantly predicted involvement in violent misconduct even after controlling for inmate background characteristics. Contrarily, Lahm (2008) did not find a significant effect of violent beliefs on inmate-on-inmate violence among a sample of male prisoners. The author noted that this null effect might be due to the fact that she asked participants to recall their violent beliefs prior to incarceration instead of during incarceration.

The experience of imprisonment itself might in fact shape a prisoner’s attitude toward violence. Blevins, Listwan, Cullen, and Jonson (2010) noted in their review of the literature that prisoners’ characteristics probably influence the prison subculture as much as the prisoners are influenced by the subculture. The inmate subculture or “prison code” consists of a set of specific values and norms that equip the prisoners with “informal means to gain power and status” (Einat & Einat, 2000, p. 309). Inmates might adhere to the “prison code,” because it is in line with the values they already had before their imprisonment, or because they simply try to avoid victimization by other prisoners (e.g., as a sanction for breaking the code). Joining the inmate subculture and associating with other offenders can foster antisocial attitudes and consequently lead to violent misconduct (cf. Blevins et al., 2010).

The Present Study

DeLisi and colleagues (2010) noted that “more research is needed to explore the cycle of violence and its negative effects on the administration of justice and its bearing on theories of inmate behavior” (pp. 117-118). Our study adds to the existing research by testing if harsh parenting, which can meet the criteria of physical abuse, is associated with violent misconduct among a sample of adult male and female prisoners. In addition, our study extends previous research by also including positive, caring parental behavior as a predictor of inmate-on-inmate violence, and by analyzing if the effects are mediated by violence approval. We hypothesized that parental violence predicts violence approval and that both variables are positively associated with prison misconduct. Parental warmth, however, is assumed to have a negative effect on violence approval and on violent misconduct. We furthermore tested if the same model applies to male and female inmates, because some studies indicate the pathways linking childhood experiences to later delinquent behavior differ for males and females (e.g., Topitzes, Mersky, & Reynolds, 2011, 2012; Widom, Schuck, & White, 2006).

Method

Sample and Data

The survey took place in five of the 16 federal states of Germany in the years 2011 and 2012. It was first conducted in Lower Saxony, where the research institute is located, and then rolled out to the federal states of Brandenburg, Bremen, Saxony, and Thuringia. Inmates of 48 youth and adult prisons located in these federal states were surveyed. The overall response rate was 50.3%. In the present study, only survey data from the male and female adult inmates were analyzed.

The questionnaire contained items referring to childhood experiences (i.e., experiences of harsh parenting and positive, caring parental behavior), prison misconduct, violence approval, and demographic data. To also allow prisoners with little knowledge of the German language to take part in the survey, the questionnaire was translated into 18 different languages. Participants completed the questionnaire alone and were not asked to provide their name or any other personal information that could be used to identify them. Completed questionnaires were then put into unlabeled envelopes by the participants. The envelopes were sent to the research institute collectively to ensure participants' anonymity.

A total of 4,874 inmates ($n = 451$ females) in 40 prisons completed the questionnaire. Participants ranged in age from 18 to over 55 years ($M = 35.8$ years;

$SD = 10.2$ years), with males being slightly, but significantly, older than female inmates (male sample: $M = 35.9$ years, $SD = 10.1$ years; female sample: $M = 34.7$ years, $SD = 10.9$ years), $t(515.53) = 2.32, p = .021$. A quarter of the participants (26.6% of the male sample, 24.9% of the female sample; $\phi = -.01, p = .451$) had a migration background, meaning they held a citizenship other than German or their parents were from a country other than Germany. In all, 26.0% of the male sample and 24.1% of the female sample were serving a sentence for a violent crime (total sample: 25.8%; $\phi = -.01, p = .397$).

Measures

Engaging in violent misconduct was used as the dependent variable and measured using items of the Direct and Indirect Prisoner Behaviour Checklist–Scaled version revised (DIPC-SCALED-r; ©Ireland, 2007). The DIPC-SCALED-r measures different forms of bullying behavior in prison, including physical, sexual, psychological, and verbal aggression (Allison & Ireland, 2010). Because the focus of the present study is on physical inmate-on-inmate violence, we excluded items relating to other forms of aggression. The questionnaire asked participants to indicate how often they had (a) deliberately pushed, (b) hit or kicked, and (c) beaten other prisoners with something during the 4 weeks preceding the survey (4-point scale: 1 = “never,” 2 = “seldom,” 3 = “sometimes,” 4 = “often”; Cronbach’s $\alpha = .73$). This rather short timeframe was chosen to achieve an accurate account of the inmates’ involvement in misconduct, which is not biased by the length of time already spent in prison.

Harsh parenting and positive, caring parental behavior (e.g., comforting the child, hugging the child) served as predictor variables. Six items from an adapted German version of the Conflict Tactics Scale (Straus, 1979; Wetzels, 1997) were included in the questionnaire to measure harsh parenting. Participants were asked how often their parents threw something at them, grabbed them, slapped them, punched them with their fist, hit them with something, and battered them when they were children (Cronbach’s $\alpha = .94$). Parental warmth was measured using four items, which covered how often the participants’ parents hugged them, praised them, calmly explained something to them, and comforted them when they were children (Cronbach’s $\alpha = .87$). All of these items were measured retrospectively on a scale ranging from 1 = “never” to 4 = “often.”

Violence approval was measured using five items from the Measures of Criminal Attitudes and Associates questionnaire (e.g., “Someone who makes you very angry deserves to be hit”; Mills, Kroner, & Forth, 2002), and served as the mediator variable. This variable was also measured on a 4-point scale, with higher scores indicating a stronger approval of violence (Cronbach’s $\alpha = .88$).

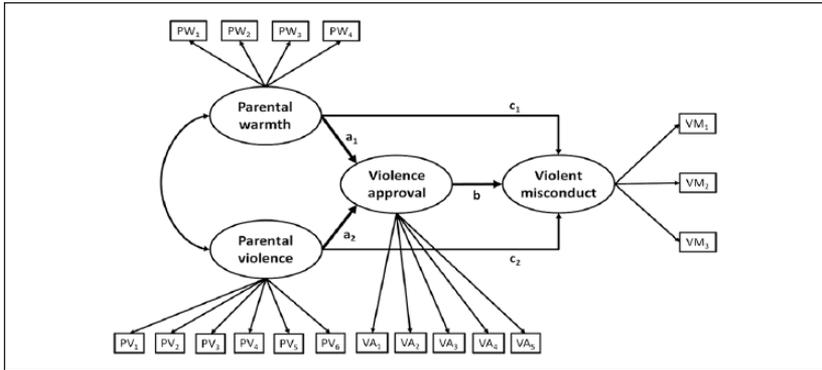


Figure 1. Conceptual model of the relationships between parental warmth and parental violence (independent variables), violence approval (mediator), and violent prison misconduct (dependent variable).

Statistical Analysis

The data were subjected to structural equation modeling (SEM) using maximum likelihood estimation with robust standard errors (MLR). To account for missing data, parameters and standard errors were estimated using the full information maximum likelihood (FIML) approach. We first estimated models for male and female prisoners separately, because some studies (e.g., Fagan, 2001; Herrera & McCloskey, 2001; Topitzes et al., 2011, 2012; Widom et al., 2006) indicate that the “cycle of violence” might operate differently for men and women. The conceptual model is presented in Figure 1. We assumed that the two independent variables (parental warmth and harsh parenting practices) were both directly and indirectly (via violence approval) related to the criterion (violent misconduct).

The relevant indirect effects ($a_1 \times b$, $a_2 \times b$; see Figure 1) were tested for statistical significance. As these indirect effects do not usually follow a normal distribution, 95% confidence intervals (CI) were calculated using bootstrap resampling (Preacher & Hayes, 2008). Partial samples are repeatedly taken from the original data set and the respective indirect effects are determined. On the basis of many such drawings (5,000 in this study), an empirical distribution of the relevant effect estimators can be generated. Then, the 125th highest value (corresponding to 2.5% of 5,000 values) and the 4,875th highest value (corresponding to 97.5% of 5,000 values) are selected from the empirical distribution of effect estimators and combined to form the 95% CI. If the resulting interval does not include zero, the indirect effect can be classified as statistically significant at an alpha level of 5%. In simulation studies

(e.g., MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002), this method was found to have higher statistical power than the classical methods for mediator analysis (e.g., Baron & Kenny, 1986; Sobel, 1982).

To evaluate the goodness of fit of the models, we used four different criteria. The standardized root mean square residual (SRMR) and the root mean square of approximation (RMSEA) with its 90% CI were used to assess absolute model fit. The comparative fit index (CFI) and the Tucker–Lewis index (TLI) were used to assess the relative fit compared to the “null model”. RMSEA as well as SRMR values below .050 indicate a close fit, values between .050 and .080 indicate a reasonably close fit, and values greater than .080 indicate an unacceptable model fit (Browne & Cudeck, 1993; Hu & Bentler, 1999). Regarding CFI and TLI, Hu and Bentler (1999) suggested values greater than .900 for an adequate model fit, and values greater than .950 for a good model fit.

In the next step, we examined if the same model can be applied to both male and female prisoners. To allow unbiased comparison of paths between male and female prisoners, we constrained factor loadings to be equal across gender, testing for weak invariance by constraining the estimated factor loadings to be equal across groups. If empirical support for weak invariance is provided, it allows for the comparison of structural relationships between latent constructs in groups (e.g., correlation coefficients, structural [path] coefficients). As noted by Chen (2007), the commonly used chi-square difference tests of nested models are almost always significant in large samples and are highly sensitive to deviations from multivariate normality. Thus, in the current study, we used CFI differences (ΔCFI : $\text{CFI}_{\text{constrained}} - \text{CFI}_{\text{unconstrained}}$) as well as RMSEA differences (ΔRMSEA : $\text{RMSEA}_{\text{constrained}} - \text{RMSEA}_{\text{unconstrained}}$) to compare the different stages of measurement invariance (Chen, 2007; Chen, Sousa, & West, 2005). We used the cutoff values suggested by Chen (2007), with values of $\Delta\text{CFI} \geq -.010$ in addition to values of $\Delta\text{RMSEA} \geq .015$ indicating measurement noninvariance. Then, we constrained the relevant paths in the SEM between male and female prisoners, testing if the relevant paths can be assumed to be equal for male and female inmates.

We statistically controlled for the effects of age, migration background, and being incarcerated for a violent offense, because these variables have been found to predict inmate-on-inmate violence in previous research (for a review, see Steiner et al., 2014).

Results

Descriptive Statistics and Bivariate Analyses

Descriptive statistics for the total sample and the male and female subsamples are presented in Table 1. The prevalence rate of violent misconduct

Table 1. Descriptive Statistics.

Variable	Male Sample ($n_{\max} = 4,423$)	Female Sample ($n_{\max} = 451$)	Total Sample ($N_{\max} = 4,874$)
Violent misconduct	388 (10.1%)	37 (8.9%)	425 (10.0%)
Parental warmth	2,034 (49.2%)	218 (51.8%)	2,252 (49.4%)
Parental violence	2,821 (69.6%)	258 (61.3%)	3,079 (68.8%)
Violence approval (<i>M</i> , <i>SD</i>)	2.26 (1.06)	2.00 (0.97)	2.23 (1.05)

Note. Valid percentages are displayed. All scales range from 1 to 4. With regard to violent misconduct and harsh parenting, prevalence rates refer to the number of participants who indicated that they experienced harsh parenting/engaged in violent misconduct at least "seldom." The prevalence rates for parental warmth indicate how many participants scored ≥ 3.0 on average (i.e., at least "sometimes").

Table 2. Pearson Correlations Between the Independent, Mediator, and Dependent Variables.

	Male Sample			Female Sample			Total Sample		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
(1) Violent misconduct									
(2) Parental warmth	-.08***			-.04			-.07***		
(3) Parental violence	.10***	-.54***		.11*	-.64***		.10***	-.55***	
(4) Violence approval	.31***	-.12***	.15***	.30***	-.13*	.13*	.31***	-.12***	.14***

* $p < .05$. ** $p < .01$. *** $p < .001$.

during the 4 weeks preceding the survey was 10.0% for the total sample and did not vary significantly between the sexes ($\phi = -.01$, $p = .441$). Regarding childhood victimization, male inmates showed a significantly higher prevalence rate than females ($\phi = -.05$, $p < .001$). The inmates' rating of their parents' positive, caring behavior was 2.77 on average ($SD = 0.87$)—no significant difference between the subsamples; $t(490.32) = -1.57$, $p = .118$. The mean value for violence approval was 2.23, $SD = 1.05$, with males scoring significantly higher than female inmates, $t(501.14) = 5.03$, $p < .001$.

Both parental warmth and harsh parenting practices were correlated with violent misconduct and violence approval (see Table 2). Violence approval in turn was positively and significantly associated with violent misconduct. Parental warmth and parental violence were also significantly correlated.

Results of the SEM: Male Sample

For the male sample, we found significant paths from positive, caring parental behavior ($a_1: \beta = -0.08$, $z = -3.16$, $p = .002$) and parental violence

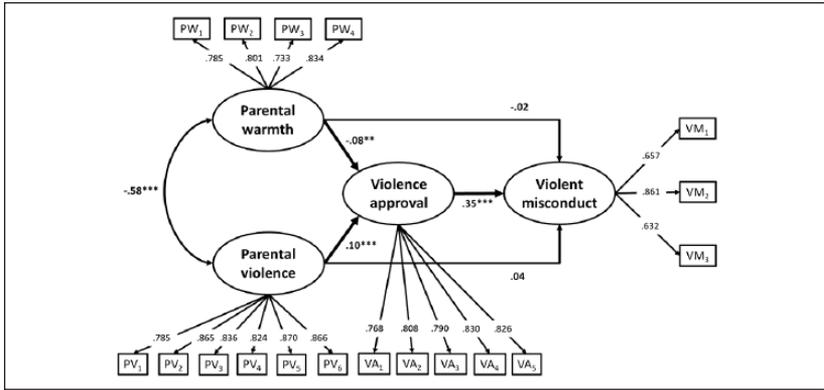


Figure 2. Structural equation model of the relationships between parental warmth, parental violence, violence approval, and violent prison misconduct for the male sample ($N = 4,423$). $^{***}p < .01$. $^{**}p < .001$.

(a_2 : $\beta = 0.10$, $z = 4.16$, $p < .001$) to violence approval, and a significant positive effect of violence approval (b: $\beta = 0.35$, $z = 8.85$, $p < .001$) on misconduct (see Figure 2). The indirect effects from parental violence (95% CI = [0.006, 0.019]) and positive parenting behavior (95% CI = [-0.017, -0.007]) to violent misconduct were statistically significant. With regard to both parental warmth (c_1' : $\beta = -0.02$, $z = -0.64$, $p = .520$) and parental violence (c_2' : $\beta = 0.04$, $z = 1.54$, $p = .124$), no significant direct effects emerged net of the mediation effect, which means that the relationship of the independent variables with misconduct was completely mediated by violence approval. All indices assessed show an adequate model fit (Robust RMSEA = .049, 90% CI = [0.047, 0.052], Robust CFI = .969, TLI = .963; SRMR = .024).¹

Results of the SEM: Female Sample

For the female sample, we found non-significant effects of positive parenting behavior (a_1 : $\beta = -0.07$, $z = -0.77$, $p = .439$) and parental violence (a_2 : $\beta = 0.12$, $z = 1.33$, $p = .184$) on violence approval, as well as on violent misconduct (net of the mediation effect: c_1' : $\beta = 0.09$, $z = 0.93$, $p = .351$; c_2' : $\beta = 0.13$, $z = 1.54$, $p = .124$). However, violence approval was positively and significantly related to violent misconduct (b: $\beta = 0.37$, $z = 2.82$, $p = .005$; see Figure 3). The indirect effects from parental violence and positive parenting behavior on violent misconduct were statistically non-significant. All goodness of fit indices

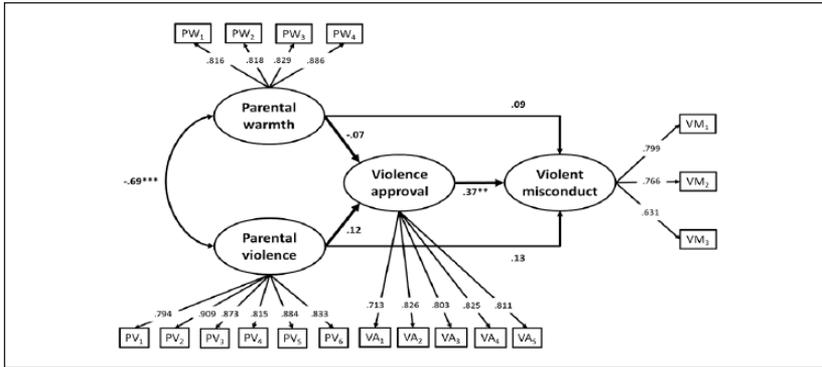


Figure 3. Structural equation model of the relationships between parental warmth, parental violence, violence approval, and violent prison misconduct for the female sample ($N = 451$).

** $p < .01$. *** $p < .001$.

indicated a good model fit (Robust RMSEA = .049, 90% CI = [0.039, 0.060], Robust CFI = .972, TLI = .967; SRMR = .034) (see Note 1).

Results of the SEM: Total Sample

The direction and strength of the relevant paths of the female sample model corresponded to those obtained for the male inmates. It thus seemed reasonable that the nonsignificance of the relevant paths in the female model (i.e., positive parenting behavior and parental violence on violence approval, as well as on violent misconduct) might be due to the much smaller sample size of the female sample (<10% of the total sample). In the next step, we thus examined if the same model can be applied to both male and female prisoners. As noted above, we first tested for weak invariance, assuming the same SEM for both genders. For the Robust CFI, the difference between the conditional and the unconditional model was $\Delta\text{CFI} = -.001$, which is a smaller difference than the cutoff suggested for indicating noninvariance ($\Delta\text{CFI} \geq -.010$; Chen, 2007). For the Robust RMSEA, the difference between the conditional and the unconditional model was $\Delta\text{RMSEA} = .000$, which falls below the suggested threshold of $\Delta\text{RMSEA} \geq .015$ (Chen, 2007). Hence, weak invariance can be assumed. All indices showed a good model fit for the total sample (Robust RMSEA = .049, 90% CI = [0.046, 0.051], Robust CFI = .968, TLI = .965; SRMR = .027).

In a second step, we constrained the relevant paths in the SEM between male and female prisoners and compared this constrained model with the less

constrained weak invariance model. For the Robust CFI, the difference between the conditional and the unconditional model was $\Delta\text{CFI} = .000$, thus lying below the denoted threshold of $\Delta\text{CFI} \geq -.010$ (Chen, 2007). For the Robust RMSEA, the difference between the conditional and the unconditional model was $\Delta\text{RMSEA} = .000$, which again falls below the suggested threshold of $\Delta\text{RMSEA} \geq .015$ (Chen, 2007). This indicates that the relevant paths can be assumed as equal for male and female inmates. Significant effects of parental violence (95% CI = [0.007, 0.020]) and positive parenting behavior (95% CI = [-0.016, -0.004]) on misconduct, mediated by violence approval, emerged for both genders in the constrained model. Both regarding positive parenting behavior and parental violence, the effect on violent misconduct was completely mediated by violence approval. All indices indicate a good model fit (Robust RMSEA = .049, 90% CI = [0.047, 0.052], Robust CFI = .969, TLI = .963; SRMR = .024) (see Note 1).

Discussion

We examined if childhood experiences of harsh parenting and positive, caring parental behavior are associated with later involvement in violent misconduct in prison, and if these effects are mediated by violent beliefs. The results showed that even among this very selective sample comprising incarcerated adult offenders, childhood experiences had a significant indirect effect on inmate-on-inmate violence via violence approval. These effects also held when controlling for the inmates' age, migration background, and criminal history (i.e., being imprisoned for a violent vs. non-violent crime).

Our study adds to the growing body of literature which aims to uncover the mechanisms linking childhood victimization to adolescent and adult antisocial behavior (e.g., Herrenkohl et al., 2003; Lee, Herrenkohl, Jung, Skinner, & Klika, 2015; Topitzes et al., 2011, 2012; Widom et al., 2006). Many of the previously conducted studies on this topic have included variables relating to the child's social experiences, behaviors, and background characteristics (e.g., Lee et al., 2015; Topitzes et al., 2011, 2012; Widom et al., 2006). Only a few studies have also incorporated measures of the participants' attitudes in their analyses. Similar to findings reported by Herrenkohl and colleagues (2003), we found that violent attitudes constitute a link between childhood experiences and later violent behavior, namely prison misconduct. This finding is in line with the social learning and cognitive processing models (Bandura, 1973; Dodge et al., 1990), which posit that early experiences of violence shape the child's thinking and social interaction patterns, which then translate into behavior. However, further studies are warranted to examine additional potential mediators of the relationship

between childhood experiences and later violent behavior in general, and prison misconduct in particular. Self-control, for example, has been found to be directly associated with inmate misconduct (Steiner et al., 2014) and to partially mediate the association between parental efficacy (including measures of maternal attachment and responses to problem behavior) and adolescent delinquency (Perrone, Sullivan, Pratt, & Margaryan, 2004). Overall, more research is needed to examine the interplay of traits, attitudes, experiences, and behaviors from childhood to adulthood to gain a more complete understanding of the pathways that underlie the “cycle of violence”.

The results of this study furthermore indicate that the same associations between childhood experiences, violence approval, and inmate-on-inmate violence apply to male and female inmates. Therefore, physical victimization during childhood does not seem to be a gender-responsive need, as some researches have suggested (cf. Salisbury et al., 2009; Wright et al., 2007). This is in line with research by Steiner and Wooldredge (2014) on gender differences in predictors of violent and nonviolent prison misconduct, which suggests that risk factors for misconduct are very similar for men and women.

Limitations

Some limitations should be considered when evaluating the results of this study. Most importantly, childhood abuse was assessed retrospectively. Therefore, the results might be affected by measurement error, especially due to a possible underreporting of victimization experiences (cf. Hardt & Rutter, 2004; Widom & Shepard, 1996). However, research indicates that the associations between childhood maltreatment and later use of violence as well as potential mediators (e.g., violence approval) are highly similar for prospective and retrospective measures of abuse (Herrenkohl et al., 2003). In addition, a study by Goodman et al. (2003) indicates that memory for childhood victimization might not be as poor as previously suspected. Using a prospective study, the authors found that 81% of participants who were sexually abused as children remembered and reported the abuse when they were young adults.

A second limitation of this study is that we used self-report data only. Widom and Shepard (1996) discovered a substantial amount of shared method variance in their study on the accuracy of adult reports of childhood physical abuse. They found that self-reported physical abuse was predictive of self-reported violent behavior, and official records of physical abuse were predictive of having an arrest record for violence. We chose to collect self-report data, because they have been found to be more reliable than official records on prison misconduct (Hewitt, Poole, & Regoli, 1984). However,

future studies incorporating official reports of childhood victimization and inmate-on-inmate violence are warranted to substantiate the findings presented here. Furthermore, it is possible that participants' perception of abuse differs from its legal definition, leading them to interpret their parents' violent behavior as nonabusive or not harsh. On the contrary, some participants might view their parents' behavior as overly harsh or even abusive, even if it does not meet the legal criteria of abuse. The effects of childhood experiences on violence approval and prison misconduct might be different if the participants' self-assigned victim status is measured instead of the experience of specific parental behaviors (cf. Kim, 2017).

Another limitation applies to the generalizability of our findings. Due to the special sample and outcome examined here, our results are difficult to generalize to other populations, including inmates of other criminal justice systems. Nevertheless, the finding that parental violence and parental warmth significantly impact a person's attitudes and beliefs about violence, which in turn influence violent behavior in a specific environment, deepens our understanding of the long-term effects of childhood experiences. Further research is needed to examine if the effects found in this study also exist within other institutionalized and non-institutionalized populations. To achieve results that can be generalized to other populations and settings more easily, future research should also include additional control variables related to the prisoners' background and institutional routines, for example, the institutional climate, programming, and time served.

Practical Implications

The findings of this study have some implications for violence risk assessment of prison inmates. Harsh parenting and parental warmth have significant, but only small effects on the inmates' attitudes toward violence, which in turn affect violent prison misconduct. Therefore, childhood experiences of victimization and positive, caring parental behavior probably do not constitute powerful indicators of risk for violent misconduct. However, the strength of the association between attitudes toward violence and violent misconduct underscores the importance of assessing a prisoner's violent beliefs upon intake. Some risk assessment instruments already include subscales or single items relating to violent attitudes, such as the Historical-Clinical-Risk Management–20, Version 3 (HCR-20^{V3}; Douglas, Hart, Webster, & Belfrage, 2013). The results of our study indicate that this information can be very useful to predict violent behavior during incarceration. Our findings furthermore suggest that the same risk indicators can be used to predict misconduct in men and women (see also Harer & Langan, 2001).

Authors' Note

An earlier version of this article was presented at the 2018 American Psychology-Law Society Conference, Memphis, TN.

Acknowledgments

The authors would like to thank Prof. Dr. Daniela Hosser and the anonymous reviewers for their valuable comments on the article.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Thimna Klatt  <https://orcid.org/0000-0003-2937-6020>

Note

1. Comparable results were obtained when controlling for age, migration background, and being incarcerated for a violent offense.

References

- Allison, M. D., & Ireland, J. L. (2010). Staff and prisoner perceptions of physical and social environmental factors thought to be supportive of bullying: The role of bullying and fear of bullying. *International Journal of Law and Psychiatry, 33*, 43-51. doi:10.1016/j.ijlp.2009.10.002
- Arbach-Lucioni, K., Martinez-García, M., & Andrés-Pueyo, A. (2012). Risk factors for violent behavior in prison inmates: A cross-cultural contribution. *Criminal Justice and Behavior, 39*, 1219-1239. doi:10.1177/0093854812445875
- Asscher, J. J., van der Put, C. E., & Stams, G. J. J. M. (2015). Gender differences in the impact of abuse and neglect victimization on adolescent offending behavior. *Journal of Family Violence, 30*, 215-225. doi:10.1007/s10896-014-9668-4
- Bandura, A. (1973). *Aggression: A social learning analysis*. Englewood Cliffs, NJ: Prentice Hall.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Blevins, K. R., Listwan, S. H., Cullen, F. T., & Jonson, C. L. (2010). A general strain theory of prison violence and misconduct: An integrated model of

- inmate behavior. *Journal of Contemporary Criminal Justice*, 26, 148-166. doi:10.1177/1043986209359369
- Bonta, J., Pang, B., & Wallace-Capretta, S. (1995). Predictors of recidivism among incarcerated female offenders. *The Prison Journal*, 75, 277-294. doi:10.1177/0032855595075003002
- Browne, A., Miller, B., & Maguin, E. (1999). Prevalence and severity of lifetime physical and sexual victimization among incarcerated women. *International Journal of Law and Psychiatry*, 22, 301-322. doi:10.1016/s0160-2527(99)00011-4
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: SAGE.
- Burnette, M. L., Oshri, A., Lax, R., Richards, D., & Ragbeer, S. N. (2012). Pathways from harsh parenting to adolescent antisocial behavior: A multidomain test of gender moderation. *Development and Psychopathology*, 24, 857-870. doi:10.1017/s0954579412000417
- Celinska, K., & Sung, H.-E. (2014). Gender differences in the determinants of prison rule violations. *The Prison Journal*, 94, 220-241. doi:10.1177/0032885514524882
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling*, 14, 464-504. doi:10.1080/10705510701301834
- Chen, F. F., Sousa, K. H., & West, S. G. (2005). Testing measurement invariance of second-order factor models. *Structural Equation Modeling*, 12, 471-492. doi:10.1207/s15328007sem1203_7
- Cullerton-Sen, C., Cassidy, A. R., Murray-Close, D., Cicchetti, D., Crick, N. R., & Rogosch, F. A. (2008). Childhood maltreatment and the development of relational and physical aggression: The importance of a gender-informed approach. *Child Development*, 79, 1736-1751. doi:10.1111/j.1467-8624.2008.01222.x
- DeLisi, M., Drury, A. J., Kosloski, A. E., Caudill, J. W., Conis, P. J., Anderson, C. A., . . . Beaver, K. M. (2010). The cycle of violence behind bars: Traumatization and institutional misconduct among juvenile delinquents in confinement. *Youth Violence and Juvenile Justice*, 8, 107-121. doi:10.1177/1541204009349399
- Dodge, K. A., Bates, J. E., & Pettit, G. S. (1990). Mechanisms in the cycle of violence. *Science*, 250, 1678-1683. doi:10.1126/science.2270481
- Douglas, K. S., Hart, S. D., Webster, C. D., & Belfrage, H. (2013). *HCR-20V3: Assessing risk for violence—User guide*. Burnaby, British Columbia, Canada: Mental Health, Law, and Policy Institute, Simon Fraser University.
- Ehrensaft, M. K., Cohen, P., Brown, J., Smailes, E., Chen, H., & Johnson, J. G. (2003). Intergenerational transmission of partner violence: A 20-year prospective study. *Journal of Consulting and Clinical Psychology*, 71, 741-753. doi:10.1037/0022-006x.71.4.741
- Einat, T., & Einat, H. (2000). Inmate argot as an expression of prison subculture: The Israeli case. *The Prison Journal*, 80, 309-325. doi:10.1177/0032885500080003005
- Fagan, A. A. (2001). The gender cycle of violence: Comparing the effects of child abuse and neglect on criminal offending for males and females. *Violence & Victims*, 16, 457-474.

- Gershoff, E. T., & Grogan-Kaylor, A. (2016). Spanking and child outcomes: Old controversies and new meta-analyses. *Journal of Family Psychology, 30*, 453-469. doi:10.1037/fam0000191
- Goodman, G. S., Ghetti, S., Quas, J. A., Edelstein, R. S., Alexander, K. W., Redlich, A. D., . . . Jones, D. P. H. (2003). A prospective study of memory for child sexual abuse: New findings relevant to the repressed-memory controversy. *Psychological Science, 14*, 113-118. doi:10.1111/1467-9280.01428
- Hardt, J., & Rutter, M. (2004). Validity of adult retrospective reports of adverse childhood experiences: Review of the evidence. *Journal of Child Psychology and Psychiatry, 45*, 260-273. doi:10.1111/j.1469-7610.2004.00218.x
- Harer, M., & Langan, N. (2001). Gender differences in predictors of prison violence: Assessing the predictive validity of a risk classification system. *Crime and Delinquency, 47*, 513-536. doi:10.1177/0011128701047004002
- Herrenkohl, T. I., Huang, B., Tajima, E. A., & Whitney, S. D. (2003). Examining the link between child abuse and youth violence. *Journal of Interpersonal Violence, 18*, 1189-1208. doi:10.1177/0886260503255558
- Herrera, V. M., & McCloskey, L. A. (2001). Gender differences in the risk for delinquency among youth exposed to family violence. *Child Abuse & Neglect, 25*, 1037-1051. doi:10.1016/s0145-2134(01)00255-1
- Hewitt, J. D., Poole, E. D., & Regoli, R. M. (1984). Self-reported and observed rule-breaking in prison: A look at disciplinary response. *Journal of Criminal Justice, 12*, 437-447.
- Hosser, D., & Raddatz, S. (2005). Opfererfahrungen und Gewalthandeln [Victimization experiences and acts of violence]. *Zeitschrift für Jugendkriminalrecht und Jugendhilfe, 16*, 15-22.
- Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55. doi:10.1080/1070519909540118
- Kerig, P. K., & Becker, S. P. (2010). From internalizing to externalizing: Theoretical models of the processes linking PTSD to juvenile delinquency. In S. J. Egan (Ed.), *Post-Traumatic Stress Disorder (PTSD): Causes, symptoms and treatment* (pp. 33-78). Hauppauge, NY: Nova Science.
- Kim, Y. H. (2017). Associations of adverse childhood experiences with depression and alcohol abuse among Korean college students. *Child Abuse & Neglect, 67*, 338-348. doi:10.1016/j.chiabu.2017.03.009
- Klatt, T., Hagl, S., Bergmann, M. C., & Baier, D. (2016). Violence in youth custody: Risk factors of violent misconduct among inmates of German young offender institutions. *European Journal of Criminology, 13*, 727-743.
- Lahm, K. F. (2008). Inmate-on-inmate assault: A multilevel examination of prison violence. *Criminal Justice and Behavior, 35*, 120-137. doi:10.1177/0093854807308730
- Lee, J. O., Herrenkohl, T. I., Jung, H., Skinner, M. L., & Klika, B. (2015). Longitudinal examination of peer and partner influences on gender-specific pathways from child abuse to adult crime. *Child Abuse & Neglect, 47*, 83-93. doi:10.1016/j.chiabu.2015.07.012

- Loucks, A. D., & Zamble, E. (2000). Predictors of criminal behavior and prison misconduct in serious female offenders. *Empirical and Applied Criminal Justice Review, 1*, 1-47.
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods, 7*, 83-104. doi:10.1037/1082-989x.7.1.83
- Magdol, L., Moffitt, T. E., Caspi, A., & Silva, P. A. (1998). Developmental antecedents of partner abuse: A prospective-longitudinal study. *Journal of Abnormal Psychology, 107*, 375-389. doi:10.1037/0021-843x.107.3.375
- Maxfield, M. G., & Widom, C. S. (1996). The cycle of violence: Revisited 6 years later. *Archives of Pediatrics & Adolescent Medicine, 150*, 390-395. doi:10.1001/archpedi.1996.02170290056009
- Mears, D. P., Stewart, E. A., Siennick, S. E., & Simons, R. L. (2013). The code of the street and inmate violence: Investigating the salience of imported belief systems. *Criminology, 51*, 695-728. doi:10.1111/1745-9125.12017
- Mills, J. F., Kroner, D. G., & Forth, A. E. (2002). Measures of criminal attitudes and associates (MCAA): Development, factor structure, reliability and validity. *Assessment, 9*, 240-253. doi:10.1177/1073191102009003003
- Moffitt, T. E., Caspi, A., Rutter, M., & Silva, P. A. (2001). *Sex differences in anti-social behaviour: Conduct disorder, delinquency, and violence in the Dunedin Longitudinal Study*. Cambridge, UK: Cambridge University Press.
- Morris, R. G., & Worrall, J. L. (2014). Prison architecture and inmate misconduct: A multilevel assessment. *Crime & Delinquency, 60*, 1083-1109. doi:10.1177/0011128710386204
- Nofziger, S., & Kurtz, D. (2005). Violent lives: A lifestyle model linking exposure to violence to juvenile violent offending. *Journal of Research in Crime & Delinquency, 42*, 3-26. doi:10.1177/0022427803262061
- Perrone, D., Sullivan, C. J., Pratt, T. C., & Margaryan, S. (2004). Parental efficacy, self-control, and delinquency: A test of a general theory of crime on a nationally representative sample of youth. *International Journal of Offender Therapy and Comparative Criminology, 48*, 298-312. doi:10.1177/0306624X03262513
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879-891. doi:10.3758/brm.40.3.879
- Salisbury, E. J., Van Voorhis, P., & Spiropoulos, G. V. (2009). The predictive validity of a gender-responsive needs assessment: An exploratory study. *Crime & Delinquency, 55*, 550-585. doi:10.1002/ab.20374
- Schmidt, H. (2013). "Er war halt der Meinung, er kann mich vollquatschen"—Gewaltkarrieren junger Strafgefangener vor und während des Freiheitsentzuges ["He just thought he could piss me off"—Young prisoners' careers of violence before and during imprisonment]. *Soziale Probleme, 24*, 175-212.
- Shields, A., & Cicchetti, D. (2001). Parental maltreatment and emotion dysregulation as risk factors for bullying and victimization in middle childhood. *Journal of Clinical Child & Adolescent Psychology, 30*, 349-363. doi:10.1097/00004703-200202000-00019

- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological Methodology, 13*, 290-312. doi:10.2307/270723
- Steiner, B., Butler, H. D., & Ellison, J. M. (2014). Causes and correlates of prison inmate misconduct: A systematic review of the evidence. *Journal of Criminal Justice, 42*, 462-470. doi:10.1016/j.jcrimjus.2014.08.001
- Steiner, B., & Wooldredge, J. (2009). Individual and environmental effects on assaults and nonviolent rule breaking by women in prison. *Journal of Research in Crime & Delinquency, 46*, 437-467. doi:10.1177/0022427809341936
- Steiner, B., & Wooldredge, J. (2014). Sex differences in the predictors of prisoner misconduct. *Criminal Justice and Behavior, 41*, 433-452. doi:10.1177/0093854813504404
- Stewart, A., Dennison, S., & Waterson, E. (2002). *Pathways from child maltreatment to juvenile offending: Report to the criminology research council (29/00-01)*. Retrieved from <http://crg.aic.gov.au/reports/stewart.pdf>
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) scale. *Journal of Marriage and Family, 41*, 75-88. doi:10.2307/351733
- Topitzes, J., Mersky, J. P., & Reynolds, A. J. (2011). Child maltreatment and offending behavior: Gender-specific effects and pathways. *Criminal Justice and Behavior, 38*, 492-510. doi:10.1177/0093854811398578
- Topitzes, J., Mersky, J. P., & Reynolds, A. J. (2012). From child maltreatment to violent offending: An examination of mixed-gender and gender-specific models. *Journal of Interpersonal Violence, 27*, 2322-2347. doi:10.1177/0886260511433510
- van der Put, C. E., Lanctôt, N., de Ruiter, C., & van Vugt, E. (2015). Child maltreatment among boy and girl probationers: Does type of maltreatment make a difference in offending behavior and psychosocial problems? *Child Abuse & Neglect, 46*, 142-151. doi:10.1016/j.chiabu.2015.05.012
- Vernberg, E. M., Jacobs, A. K., & Hershberger, S. L. (1999). Peer victimization and attitudes about violence during early adolescence. *Journal of Clinical Child Psychology, 28*, 386-395. doi:10.1207/s15374424jccp280311
- Wetzels, P. (1997). *Gewalterfahrungen in der Kindheit* [Violent victimization during childhood]. Baden-Baden, Germany: Nomos.
- Widom, C. S. (1989). The cycle of violence. *Science, 244*, 160-166. doi:10.1126/science.2704995
- Widom, C. S. (2000). Childhood victimization: Early adversity, later psychopathology. *National Institute of Justice Journal, 242*, 2-9.
- Widom, C. S., Schuck, A. M., & White, H. R. (2006). An examination of pathways from childhood victimization to violence: The role of early aggression and problematic alcohol use. *Violence & Victims, 21*, 675-690. doi:10.1891/vv-v21i6a001
- Widom, C. S., & Shepard, R. L. (1996). Accuracy of adult recollections of childhood victimization: Part 1. Childhood physical abuse. *Psychological Assessment, 8*, 412-421. doi:10.1037/1040-3590.8.4.412
- Wright, E. M., Salisbury, E. J., & Van Voorhis, P. (2007). Predicting the prison misconducts of women offenders: The importance of gender-responsive needs. *Journal of Contemporary Criminal Justice, 23*, 310-340. doi:10.1177/1043986207309595

Author Biographies

Thimna Klatt, Dipl-Psych, MSc, is a research assistant at the Criminological Research Institute of Lower Saxony (KFN), Germany. Her research focusses on corrections and short-term detention for young offenders. She is particularly interested in predictors of violent and drug misconduct within correctional institutions.

Sören Kliem, PhD, is a senior researcher and head of the research unit “Monitoring of Unreported Crime” at the Criminological Research Institute of Lower Saxony (KFN), Germany. He held an interim professorship in the Department of Psychological Diagnostics and Psychotherapy at the University of Brunswick. His research interests include parenting interventions, relationship quality, partner violence, and questionnaire development and validation.