

Summary and conclusions

Aggression and violence, posttraumatic stress, and absenteeism among employees in penitentiaries

The study about which we have reported here was commissioned by the Sector Directorate of the Prison System. Its primary goal was to gain insight into the possible consequences of aggression and violence among penitentiary workers, and into the determinants at its source. Special attention was to be paid to absenteeism as a possible consequence of aggression and violence among employees and to the psychosocial factors that play a role in it. For the purpose of this research, 174 penitentiary workers were interviewed about their experiences with violence during their work. The interviews, which were structured, were conducted by process supervisors. They were employed by the participating penitentiaries in the context of dealing with the issue of aggression and violence among employees. In addition to the interviews, the interviewed penitentiary workers were presented with three standardised questionnaires. The empirical part of the research was preceded by an extensive study of the literature.

The results of the literature study and the construction of the hypothetical model

The literature study revealed that hardly any research has been done on either the possible consequences of aggression and violence among penitentiary workers, or the psychosocial factors responsible for it. Most of the earlier studies on violence on the job were limited to incidents within other settings than prisons. Moreover, earlier researchers were hardly interested in expressions of violence between co-workers. Yet, the existing literature provided enough insights to set up a hypothetical model that could serve as an adequate theoretical foundation for the empirical part of the study. The literature showed that aggression and violence among employees is a very complex phenomenon; it seems that it can have various negative effects on the health of the employee involved. Posttraumatic stress and absenteeism seem to be the most common effects. Various psychosocial factors seem to contribute, either directly or indirectly, to the occurrence of these effects. Social support, attachment style, the personality trait negative affectivity, and type D personality seem to be the most important factors playing a role in the occurrence of effects of aggression and violence among employees. Social support seems to induce less posttraumatic stress, while an unsafe attachment style, negative affectivity, and type D personality seem to be positively associated with posttraumatic stress. Through posttraumatic stress, all these factors can result in absenteeism. Possibly, the relation between

attachment style and posttraumatic stress runs via negative affectivity, type D personality, or violent experiences such as aggression and violence among co-workers. Negative affectivity seems also to be related to absenteeism independent of the development of posttraumatic stress.

All the mutual relations that could be assumed to exist on the basis of the literature study were included in the hypothetical model. A graphical representation of the hypothetical model we constructed with the aid of the findings from the literature was presented in section 3.3.

The empirical validity of the hypothetical model

We tested the empirical validity of the constructed hypothetical model by using a covariance structure analysis. For this, we used the statistical programme Lisrel. The variables included in the hypothetical model on the basis of the literature study were operationalised in the following way: violence was understood as falling victim to aggression and violence among colleagues and/or violence committed by detainees during the past twelve months (affirmed/disaffirmed); social support was operationalised as talking with colleagues about aggression and violence among employees and/or violence committed by detainees during the past twelve months (affirmed/disaffirmed). Attachment style was split up in a safe and an unsafe attachment style. The safely attached group consisted of respondents who had reported a safe attachment style when filling in the RQ. Together, the other respondents constituted the group of unsafely attached penitentiary workers. Negative affectivity was operationalised as the total score on the negative affectivity sub-scale of the DS 14. Respondents were assumed to have type D personality when the score on the DS 14 was 10 or higher on the negative affectivity sub-scale, combined with a score of 10 or higher on the social inhibition sub-scale. With regard to posttraumatic stress, a distinction was made between respondents with a ZIL score indicating the presence of PTSD, and respondents who did not have such a score. Finally, absenteeism was understood as the total number of days of absence during the past twelve months.

Basing ourselves on various fit indices, we assessed whether the hypothetical model fit in with the observed values (that is, the answers given by the respondents during the interviews and while filling out the questionnaires). We found no significant difference between the hypothetical model and the measured model. Testing the separate parameters showed that there were significant paths between type D personality and posttraumatic stress disorder, between type D personality and attachment style, and between posttraumatic stress disorder and absenteeism. The other paths within the model were not

significant. 36% of the model's variance, with absenteeism being its ultimate dependent variable, was explained by the variables that were part of the model.

Testing the hypothetical model was followed by two extra analyses. During the first analysis, the hypothetical model was tested once more for the separate ZIL sub-scales renewed experience (sub-model 1), hyper-arousal (sub-model 2), and avoidance (sub-model 3). During the second analysis, violence was operationalised as 'has fallen victim to more than one violent incident committed by co-workers and/or detainees' ('combined violence') (sub-model 4). The assumption was that being the victim of more violent incidents would be a better predictor of PTSD than being the victim of a single violent incident. The paths between the three separate ZIL sub-scales and absenteeism were significant. The path between violence and the PTSD symptom cluster avoidance was significant as well. This did not apply to the paths between violence and the symptom clusters renewed experience and hyper-arousal. The assumed path between combined violence and PTSD was nearly significant. Significant paths were found between negative affectivity and the ZIL sub-scales hyper-arousal and avoidance and also between negative affectivity and PTSD in sub-model 4. Finally, we found a significant path between type D personality and the PTSD symptom cluster renewed experience, while in sub-model 4 a significant path was also found between type D personality and PTSD, just like it was found in the hypothetical model.

The exploratory study

In addition to the testing of the hypothetical model, twelve specific research questions deserved to be explored more closely. The first three questions were descriptive in character; their primary goal was to provide insight into the group of penitentiary workers who had fallen victim to aggression and violence among employees. The other nine questions were in logical keeping with the hypothetical model, in the sense that they dealt with the relations which were assumed to exist between the different variables in the model. We formulated the following research questions:

- 1 *How often did penitentiary workers report that they had fallen victim to aggression and violence among employees during the past twelve months?*
- 2 *In what respects do victims of aggression and violence among employees differ from non-victims?*
- 3 *Does the extent to which penitentiary workers report posttraumatic stress differ according to the type of aggression and violence among employees*

that they have experienced (unwanted sexual attention, intimidation, and physical violence)?

- 4 *Is there a relation between aggression and violence among employees on the one hand, and posttraumatic stress on the other?*
- 5 *Is there a relation between violence committed by detainees and posttraumatic stress?*
- 6 *Is there a relation between social support and posttraumatic stress?*
- 7 *Is there a relation between the style of attachment and posttraumatic stress?*
 - 7a *Is the relation between attachment style and posttraumatic stress mediated by aggression and violence among employees?*
 - 7b *Is the relation between attachment style and posttraumatic stress mediated by violence committed by detainees?*
 - 7c *Is the relation between attachment style and posttraumatic stress mediated by social support?*
 - 7d *Is the relation between attachment style and posttraumatic stress mediated by negative affectivity?*
 - 7e *Is the relation between attachment style and posttraumatic stress mediated by type D personality?*
- 8 *Is there a relation between negative affectivity and posttraumatic stress?*
- 9 *Is there a relation between type D personality and posttraumatic stress?*
- 10 *Is there a relation between aggression and violence among employees on the one hand, and absenteeism on the other?*
 - 10a *Is the relation between aggression and violence among employees on the one hand, and absenteeism on the other mediated by posttraumatic stress?*
- 11 *Is there a relation between violence committed by detainees and absenteeism?*
 - 11a *Is the relation between violence committed by detainees and absenteeism mediated by posttraumatic stress?*
- 12 *Is there a relation between negative affectivity and absenteeism?*
 - 12a *Is the relation between negative affectivity and absenteeism mediated by posttraumatic stress?*

All questions were analysed by using the statistical programme SPSS. We answered the first question by means of a frequency analysis. With regard to question 2 a distinction was made between socio-demographic factors (age and gender), experiences with violence committed by detainees (affirmed/disaffirmed), social support (talking to colleagues about violence committed by detainees or talking to colleagues about aggression and violence among employees, (affirmed/disaffirmed)), personal predispositions (a safe or an unsafe attachment style; a score of 10 or higher on the DS 14 for negative affectivity against a score below 10; type D personality (affirmed/disaffirmed)), and the effects of aggression and violence among employees (posttraumatic stress, the average number

of reported posttraumatic symptoms; absenteeism, the average number of days that penitentiary workers were absent from work). For the categorical variables, we examined whether their frequencies differed between the group of penitentiary workers who had fallen victim to aggression and violence among employees and the group of non-victims. For this, we used chi-square tests. We analysed the differences in averages between the continuous variables with the aid of t-tests. Question 3 was explored by means of a one-way Analysis of Variance (ANOVA). We answered the questions 4, 5, 6, 7, 8, 9, 10, 11, and 12 by using t-tests.

54 penitentiary workers reported to have been confronted with aggression and violence among employees during the past twelve months. The victims of aggression and violence among employees had fallen victim to violence committed by detainees more often than non-victims, talked more often to colleagues about aggression and violence among employees, more often attached unsafely to others, experienced more posttraumatic stress, and were absent from work more often. The extent to which the victims of aggression and violence among employees experienced posttraumatic stress did not differ per type of aggression and violence among employees. We did not find a relation between violence committed by detainees and posttraumatic stress. The relation between social support and posttraumatic stress was moderated by aggression and violence among employees. Aggression and violence among employees, negative affectivity, or type D personality mediated the relation between attachment style and posttraumatic stress. We found strong correlations between negative affectivity and posttraumatic stress, and between type D personality and posttraumatic stress. The relation between aggression and violence among employees on the one hand, and absenteeism on the other was mediated by posttraumatic stress. Finally, no relations were found between, respectively, violence committed by detainees and absenteeism, and negative affectivity and absenteeism.

Conclusions

Based on the research results we obtained, we can draw the following conclusions:

- The violent experiences of penitentiary workers, whether they have fallen victim to violence committed by detainees and or/ violence committed by co-workers only once or more than once, do not seem to go together with a diagnosis of PTSD, or with a clinically significant degree of renewed experience, hyper-arousal, or avoidance.¹⁰ However, penitentiary workers who haven fallen victim to aggression and

¹⁰ That means: a pathological score on one of the separate ZIL sub-scales, as intended in chapter 4.

violence among employees in the course of the past twelve months do suffer more from posttraumatic stress symptoms.¹¹

- Talking to colleagues about aggression and violence among employees seems to protect penitentiary workers who have fallen victim to it from developing posttraumatic stress symptoms.
- When either PTSD or a clinically significant degree of renewed experience, hyper-arousal, or avoidance occurs, this seems to go together with absenteeism.
- Type D personality seems to be an important predictor of posttraumatic stress symptoms among penitentiary workers; it possibly even predicts PTSD.
- As far as a relation exists between adult attachment style and posttraumatic stress, whether this applies to a PTSD diagnosis or posttraumatic stress symptoms, this seems to be explained by other factors. On the basis of the exploratory study, aggression and violence among employees, negative affectivity, and type D personality seem to be potential mediators.

The interpretation of the study's results

Our findings can be interpreted in the following way. In the first place, violent experiences among penitentiary workers do not automatically result in posttraumatic stress. Once someone has fallen victim to such violence, it seems important to talk about it with colleagues, although this only seems to apply to talking about aggression and violence among employees. It seems plausible that most penitentiary workers view violent incidents in which detainees are involved as an inherent part of their work. Apparently, it is seen as only natural that penitentiary workers regularly talk among themselves about violence committed by detainees; no less than 162 penitentiary workers indicated that they talk about it with colleagues. The small group of penitentiary workers who refrain from this is not more susceptible to posttraumatic stress. It is possible that this group consists of those who are not very talkative regardless of the subject. Aggression and violence among co-workers is much talked about as well, although a substantial group does not. This group, however, actually does run a greater risk of developing posttraumatic stress, but only if they themselves are the ones to have fallen victim to this kind of aggression and violence. There are several explanations for this. To begin with, the victim might be afraid to fall victim to violence again. A second explanation might be that, in the victim's opinion, the nature of the violence is disproportionate to the consequences for the perpetrator, when he or she

¹¹ That is: posttraumatic stress symptoms as intended in chapter 5. This must be distinguished from a pathological score on one of the separate ZIL sub-scales.

talks about it with colleagues. According to a third explanation, the victim might be afraid that colleagues will not believe him or her, and wishes to spare him- or herself that form of 'secondary' victimisation. Perhaps the availability of an intermediary *outside* the work location might contribute to the prevention of posttraumatic stress among this group.

In the second place, it seems possible to reduce the amount of absenteeism among penitentiary workers by preventing posttraumatic stress. Specific personal predispositions, of which type D personality seems as yet to be the most important, seem to make penitentiary workers more susceptible to the development of posttraumatic stress. Such predispositions can be assumed to be already present at the moment the employment started.

The study's limitations

This study's most important limitation is the fact that it was a cross-sectional study. For this reason, it is impossible to make statements about the causality of the relations we found. On the basis of our results, we can only say something about the direction of the relations between the observed variables.

A second limitation is that we made use of self-reported data, since no administrative data about incidents were present. It is possible that respondents have given socially desirable answers during the interviews. Furthermore, there is a possibility that not all of the respondents were equally capable of remembering the moment of the violent incident they were involved in. It is also possible that incidents were reported which took place outside the twelve-month period. Nor is it impossible that the less serious incidents were underreported. After all, such incidents are easier to forget.

Another point involves the study's chosen line of approach, that is, our decision to opt for personal factors only. We did not take into account, among other things, the organisational and economic factors at work in the institutions, or the age and structure of the penitentiaries, or the managerial method (for instance: multi-division or central management) (Gray, Jenkins, Mayne & Leeuw, 2003). Nor did we look at the ways of getting attuned or making decisions. To give an example: the vertical, informal attuning (the mutual association, expectations, and reputations) becomes important when organisations no longer use a hierarchic approach to achieve goals, or when such an approach no longer works (Bulder, 2000). In this study, we did not have the opportunity to examine the quality of the vertical formal and hierarchic attuning and decision making, in order to relate these to aggression and violence among employees. Instead, we made the conscious choice to limit ourselves in this study to personal factors.

We already announced in the introduction that the Research and Documentation Centre (WODC) will start another study in the autumn of 2007, called 'Benchmark Penitentiaries'. In this study, indicators about, among other things, personnel and organisation, quality standards and performance indicators will be mapped out, in addition to personal factors, in order to make pronouncements upon certain qualitative characteristics of penitentiaries. To begin with, this research will be seen as a feasibility study.