Personality Disorder, Institutional Violence and Self-Esteem in three Forensic Intellectual Disability Samples

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ABSTRACT

The relationship between personality disorder and institutional violence and the mediating effect of self-esteem are investigated among offenders in specialist forensic services for individuals with intellectual disability. Additionally, attention has been paid to the predictive ability of two diagnostic approaches in this respect. The results of the analyses are distinguished across three levels of security. Differing results has been found for the various samples. This study makes clear that it is important to focus on strengthening self-esteem in intervention programs in high secure settings to reduce the prevalence of institutional violence in individuals with intellectual disability with comorbid personality disorder.

Keywords
Personality disorder, intellectual disability, self-esteem, violence, clinical assessment, multi-model assessment

INTRODUCTION
Research has shown that individuals with intellectual disability (ID) show violent behaviour in institutions [1]. This leads to a deterioration of the physical and mental condition, cause a decrease in the quality of the treatment and lead to a longer and more restrictive treatment period which, in turn, causes increased costs [2]. Likewise, a negative association between institutional violence and quality of life and subjective well-being has been found [3; 4]. Furthermore, committing violence is related to factors such as bullying perpetration/victimization[5], maltreatment in childhood [6], stressful life events [7], alcohol/substance abuse [8], major mental disorders [9].

With regard to major mental disorders, personality disorder (PD) merits attention because research has shown that 89% of the forensic psychiatric patients is diagnosed with PD [10; 11]. PD is defined as "an enduring pattern of inner experience and behaviour that deviates markedly from the expectations of the individual's culture", which "is inflexible and pervasive", "leads to clinically significant distress or impairment", which "is stable and of long duration, and its onset can be traced back at least to adolescence or early adulthood" and which "is not due to the direct physiological effects of a substance of general medical condition" [12]. It is important to investigate the relationship between PD and violence because research has shown that violence is a risk factor for criminal recidivism and delinquency [13] and that 81% of the recidivists are diagnosed with a PD [10; 11]. Refined insight in institutional violence is important for the development of better geared protocols and programs for intervention, which could lead to better treatment outcomes which are, in turn, beneficial to public health and national safety.

The present research focussed on the relationship between PD and institutional violence. Although some research did not find clear evidence for this association[14], other research found a higher risk of violent or aggressive incidents in individuals with a severe mental disorder [9].

It also focussed on the mediating effect of self-esteem in this relationship. Both Individuals with PD and individuals with ID have been found to have significantly lower self-esteem [15; 16; 17; 18]. Next, it is stated that low self-esteem is related to committing violence [19].

Furthermore, there is a lack of reliable instruments for diagnosing PD in individuals with ID because of the lack of skills that are required for reliable self-report [20; 21]. Accordingly, a multi-model assessment approach is introduced to strengthen the reliability [22; 23]. However, clinical assessment is often used in practice[24]. The current study paid attention to the predictive ability of these diagnostic approaches in the light of this study.

Hardly any research on violence in individuals with PD focused on a population that suffers from a comorbid ID. Besides, the population of the majority of previous research consisted of individuals suffering from Cluster B PD only. Moreover, earlier research failed to examine the mediating effects of self-esteem in a population with PD.

The current study aimed to improve the understanding of institutional violence by focussing on a common population in institutions. The first main research question is: 'Does PD have an effect on the prevalence of institutional violence?' It is hypothesised that the prevalence of institutional violence is significantly higher in individuals with PD in comparison with others without PD. The second main research question is: 'Does self-esteem have a mediating effect on the association between PD and institutional violence?' It is anticipated that self-esteem has a significant mediating effect in this relationship. In addition, attention will be paid to the predictive ability of both the multi-model assessment approach and the clinical assessment approach. It is

expected that the multi-model assessment approach is a more accurate predictor in this respect.

METHOD

Participants

Data were collected in three specialist forensic services for individuals with ID. The 212 participants were male offenders (M = 37.43 years, SD = 11.53, range = 18-69) with an average IQ of 66.01 (SD = 8.62, range= 43-89) [25]. The majority of the participants (31.7%) had court as approach of admission, followed by prison (19.3%), secure hospital (14.2%), high secure hospital (9.9%) and psychiatric hospital (5.2%) or other (18.4%). With regard to the index offenses, the categories sexual (30.7%) and assault (25%) are the most common, followed by arson (10.4%), serious sexual (8.5%) and murder (7.1%). The mean age at the index offence was 26 years (SD = 9.68, range = 14-59).

Three different levels of security of the study locations were distinguished: high secure (L1), medium/low secure (L2) and community (L3). L1 consisted of 73 participants from a national security facility. They were referred from prison, court and (high) secure hospitals. L2 consisted of 70 participants from local, regional and national security or rehabilitation facilities, who were referred from prison, court and health care authorities. L3 consisted of 69 participants from open units and day places. Significant differences have been found between these groups with regard to age and mental illness. Specifically, a significantly lower age has been found in L3 (F = 3.60, df = 2.211, p = .025) and a significantly lower percentage of mental illness has been found in L2 (χ^2 = 9.12, df = 2, p = .01).

Materials

Personality disorder. Two methods of diagnosis were used. First, a multi-model assessment approach was used in which all participants underwent an assessment procedure on the basis of DSM-IV [12]. All 93 traits of PD are reformulated in a question [26]. Each question was scored four times: by a file review, by the treating psychiatrist/psychologist, by observer rating from care staff and a SAP interview. The presence of a trait was determined by a research assistant if at least three out of the four approaches confirmed the presence. On the basis of that judgement, the final diagnosis was made in accordance with the DSM-IV guidelines. The inter-rater reliability, based on the percentage agreement between raters judgement on the presence/absence of a specific PD, was over 80% for each classification. Second, a clinical assessment approach on the basis of a file review by the research assistants. The percentage agreement with regard to the recording of PD was 79%.

Self-esteem. This was measured in the subscale 'Low Self-esteem' of the EPS Behavior Rating Scales [27]. Regarding the reliability, Cronbach's alpha coefficients (α) of at least .90 (large effect size) have been found. A member of the care staff who was familiar with the participant scored the 15 items of this subscale on a four-point Likert-type scale ranging from 0 ('almost never') to 3 ('often').

Incidents of violence. Violence exists of every physical or sexual violent act that (is intended to) cause(s) harm to oneself or others or that (is intended to) damage(s) objects. Violence was recorded according to the convention of each separate service. With regard to L1, there was a standard centralised system for recording violent incidents, developed by the security service. With regard to L2, the system for recording incidents was common to each ward in the hospital, developed by the clinical/nursing staff. With regard to L3, all incidents were recorded through the three monthly multidisciplinary meeting for each client. There is no indication of underreporting. The researcher noted for each participant on a dichotomous level (yes/no) whether violent incidents were recorded in the past 6 months.

This study is part of a wider research into individuals with ID in forensic services in the United Kingdom that has been started in 2004. Each participating service received an application for ethical approval. If required, the participants were informed about the study and their consent was obtained.

Statistical analyses

The data were analysed using the Statistical Package for Social Sciences (SPSS, standard version 6.1.2, 1995). For investigating the predictive ability of both diagnostic approaches, Receiver Operating Characteristics (ROC) curves are plotted. With regard to the first main research a chi-square test is performed. With regard to the second main research question a combination of several logistic regression analyses and a linear regression analysis are performed. The results of all analyses are distinguished for the three security levels.

RESULTS

Receiver Operating Characteristics' (ROC) curves make clear that the multi-model assessment approach is a more accurate predictor of institutional violence in this client group in comparison with the clinical assessment approach. More precisely, the multi-model assessment approach shows significant values in the total sample (AUC = .47, p = .005; small effect size) and in L1 (AUC = .65, p = .032; medium effect size). However, the multi-model assessment approach shows no significant value in L2 (AUC = .62, p = .096) and L3 (AUC = .63, p = .219). The clinical assessment approach fell of significance in both the total sample (AUC = .47, p = .451) and the different cohorts (L1: AUC = .46, p = .543; L2: AUC = .36, p = .053; L3: AUC = .52, p = .831). This means that the clinical assessment approach did not have any predictive value in the light of this study. For this reason, analyses on the basis of the clinical assessment approach were excluded.

With regard to the prevalence of individuals classified with PD, 30% of the individuals were classified with PD in the total sample (L1:41%; L2: 16%; L3: 33%). The chi square test shows that the prevalence of institutional violence is significantly higher in individuals with PD than in individuals with no PD in the total sample ($\chi^2(1)$ = 12.81, p < .01); weak relationship (ϕ = .25). The analysis shows a moderate association in the same direction L1

($\chi^2(1) = 6.41$, $p < .05$, $\phi = .30$) and L2 ($\chi^2(1) = 7.08$, $p < .05$, $\phi = .32$). However, the chi square test shows no significant relationship in L3 ($p > .05$).

A combination of logistic and linear regression analyses is performed. In the first step, the results of logistic regression analyses confirm that PD is a significant predictor of institutional violence in the total sample ($B = 1.11$, $p = .000$), L1 ($B = 1.24$, $p = .013$) and L2 ($B = 1.80$, $p = .014$); This means that PD explains a significant proportion of variance in the prevalence of institutional violence in these samples (total sample: *Nagelkerke R^2* = .08; L1: *Nagelkerke R^2* = .11; L2: *Nagelkerke R^2* = .13). In the second step, linear regression analyses show that PD is a significant predictor of self-esteem in the total sample ($B = -5.82$, $p = .000$), L1 ($B = -6.14$, $p = .033$) and L2 ($B = -6.93$, $p = .022$). This means that PD explains a significant proportion of variance in the scores on self-esteem in these samples (total sample: $R^2 = .08$; L1: $R^2 = .08$; L2: $R^2 = .10$). In the third step, logistic regression analyses show that self-esteem is a significant predictor of institutional violence in the total sample ($B = -.07$, $p = .000$), L1 ($B = -.05$, $p = .041$) and L2 ($B = -.09$, $p = .013$). This means that self-esteem explains a significant proportion of variance in the prevalence of institutional violence in these samples (total sample: *Nagelkerke R^2* = .12; L1: *Nagelkerke R^2* = .10; L2: *Nagelkerke R^2* = .17). In the last step, logistic regression analyses provide evidence for a partial mediating effect of self-esteem in the total sample because both PD ($B = .79$, $p = .023$) and self-esteem ($B = -.06$, $p = .001$) are significant. Furthermore, it provides evidence for a full mediating effect of self-esteem in L2 because self-esteem is significant ($B = -.08$, $p = .042$) and PD is not significant ($p > .05$). Moreover, it does not provide evidence for a mediating effect of self-esteem in L1 because both PD and self-esteem fell off significance ($p > .05$). These findings suggest that the fact that the prevalence of institutional violence in individuals with PD is significantly higher than in individuals without PD in the above mentioned samples can be explained by a lower level of self-esteem in the total sample and L2.

DISCUSSION

The main purpose of this study was to gain more insight in institutional violence in individuals with ID with comorbid PD. The main hypotheses are partially supported by the results of the current study.

First, the hypothesis that there is a relationship between PD and institutional violence in individuals with ID is confirmed in all samples, except for L3. The finding in the community sample is in contrast with the results of studies that showed structural alterations and cognitive deficits in the brain of this target group that predispose to exhibit violence [28; 29]. These contrasting results are probably due to the fact that the findings of previous studies were solely based on research among individuals with antisocial and borderline PD, while the current study included all types of PD. Additionally, the relationship between PD and violence changes over time, because PD does not change much across time, while the prevalence of violent incidents significantly decreases if clients progress through the three security levels.

Second, the findings in the total sample and L2 confirm the hypothesis that self-esteem has a mediating effect in this association. The findings in L1 and L3 are in contrast with the hypothesis and other studies that mentioned an external attribution that is caused by low self-esteem and which is, in turn, followed by an attitude of hostility [30]. Moreover, the findings of existing literature were solely based on research among individuals with narcissistic PD and borderline PD, while the current study included all types of PD.

Additionally, it is found that the multi-model assessment approach is a more accurate predictor. Although, this diagnostic approach showed significant values in the total sample and L1; no significant values were found among L2 and L3. This drawback leads to the importance of a cautionary interpretation of the findings in L2 and L3

One limitation of this study concerns the generalizability of the results to other populations with ID. Furthermore, implementing institutional violence on a ratio level would have lead to a more refined insight. A replication of this study with an assessment approach that is based on the newest edition of the DSM will be of great importance. Moreover, the current study could be extended by examining the relationship of other types of major mental disorders and institutional violence and the mediating effect of other factors.

On the whole, the current study leads to differing results with regard to the relationship between PD, institutional violence and self-esteem in individuals with ID for the various samples. Notwithstanding the limitations, this study makes clear that it is important to focus on strengthening self-esteem in intervention programs in high secure settings to reduce the prevalence of institutional violence in this target group. With regard to medium/low secure settings, the explanatory factor for this phenomenon is still unknown and should be examined in further research. Since this phenomenon is not identified in the community sample, no further steps in terms of intervention in this respect are needed.

ROLE OF THE STUDENT

Anne van Logten was an undergraduate student working under supervision of prof. dr. H. C. M. Didden (Radboud University – The Netherlands) and prof. dr. W. R. Lindsay (The Danshell Group – UK) when this research was performed. The topic was proposed by the student. The processing of the results was done by the student on the basis of existing data. Besides, the formulation of the conclusions and the writing were done by the student.

REFERENCES

1. Strand, M., Benzein, E., & Saveman, B. (2004). Violence in the care of adult persons with intellectual disabilities. *Journal of Clinical Nursing, 13*, 506-514.
2. Gadon, L., Johnstone, L., & Cooke, D. (2006). Situational variables and institutional violence: A

systematic review of the literature. *Clinical Psychology Review, 26*, 515-534.

3. Schneider, H. J. (1996). Violence in the institution. *International Journal of Offender Therapy and Comparative Criminology, 40*, 5-18.

4. Eitle, D., & Turner, R. J. (2002). Exposure to community violence and young adult crime: The effects of witnessing violence, traumatic victimization, and other stressful life events. *Journal of Research in Crime and Delinquency, 39*, 214-237.

5. Ttofi, M. M., Farrington, D. P., & Losel, F. (2012). School bullying as a predictor of violence later in life: A systematic review and meta-analysis of prospective longitudinal studies. *Aggression and Violent Behavior, 17,* 405-418.

6. Williams, L. M., & Herrera, V. M. (2007). Child maltreatment and adolescent violence: Understanding complex connections. *Child Maltreatment, 12*, 203-207.

7. Ngo, H. M., & Le, T. N. (2007). Stressful life events, culture, and violence. *Journal of Immigrant and Minority Health, 9*, 75-84.

8. Ellickson, P. L., & McGuigan, K. A. (2000). Early predictors of adolescent violence. *American Journal of Public Health, 90,* 566-572.

9. Das, M., Barkataki, I., Kumari, V., & Sharma, T. (2002). Neuroimaging violence in the mentally ill: What can it tell us? *Hospital Medicine, 63*, 604-609.

10. Hildebrand, M., & de Ruiter, C. (2004). PCL-R psychopathy and its relation to DSM-IV Axis I and II disorders in a sample of male forensic psychiatric patients in the Netherlands. *International Journal of Law and Psychiatry, 27*, 233-248.

11. Putkonen, H., Komulainen, E. J., Virkkunen, M., Eronen, M., & Lönnqvist, J. (2003). Risk of repeat offending among violent female offenders with psychotic and personality disorders. *American Journal of Psychiatry, 160*, 947-951.

12. American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.).Washington, DC: Author.

13. Walters, G. D., & Crawford, G. (2014). Major mental illness and violence history as predictors of institutional misconduct and recidivism: Main and interaction effects. *Law and Human Behavior, 38*, 238-247.

14. Fazel, S., & Danesh, J. (2002). Serious mental disorder in 23000 prisoners: A systematic review of 62 surveys. *The Lancet, 359*, 545-550.

15. Walker, J. S., & Knauer, V. (2011). Humiliation, self-esteem and violence. *The Journal of Forensic Psychiatry and Psychology, 22*, 724-741.

16. Korrelboom, K., Marissen, M., & Assendelft, T. van (2011). Competitive memory training (COMET) for low self-esteem in patients with personality disorders: A randomized effectiveness study. *Behavioural and Cognitive Psychotherapy, 39*, 1-19.

17. Vater, A., Ritter, K., Schröder-Abé, M., Schütz, A., Lammers, C., Bosson, J. K., & Roepke, S. (2013). When grandiosity and vulnerability collide: Implicit and explicit self-esteem in patients with narcissistic personality disorder. *Journal of Behavior Therapy and Experimental Psychiatry, 44*, 37-47.

18. La Greca, A. M., & Stone, W. L. (1990). LD status and achievement: Confounding variables in the study of children's social status, self-esteem, and behavioral functioning. *Journal of Learning Disabilities, 23*, 483-490.

19. Walker, J. S., & Bright, J. A. (2009). False inflated self-esteem and violence: A systematic review and cognitive model. *The Journal of Forensic Psychiatry and Psychology, 20*, 1-32.

20. Alexander, R., & Cooray, S. (2003). Diagnosis of personality disorders in learning disability. *The British Journal of Psychiatry, 182*, 28-31.

21. Reid, A. H., Lindsay, W. R., Law, J., & Sturmey, P. (2004). The relationship of offending behaviour and personality disorder in people with developmental disabilities. In W. R. Lindsay, J. L. Taylor, & P. Sturmey (Eds.), *Offenders with Developmental Disabilities* (pp. 289-304). Chichester, UK: John Wiley & Sons Ltd.

22. Lindsay, W. R., Hogue, T. E., Taylor, J. L., Mooney, P., Steptoe, L., Johnston, S., O'Brien, G., & Smith, A. H. W. (2006). Two studies on the prevalence and validity of personality disorder in three forensic intellectual disability samples. *The Journal of Forensic Psychiatry and Psychology, 17*, 485-506.

23. Lindsay, W. R., Steptoe, L., Hogue, T. E., Taylor, J. L., Mooney, P., Haut, F., Johnston, S., & O'Brien, G. (2007). Internal consistency and factor structure of personality disorders in a forensic intellectual disability sample. *Journal of Intellectual and Developmental Disability, 32*, 134-142.

24. Fridell, M., & Hesse, M. (2006). Clinical diagnosis and SCID-III assessment of DSM-III-R personality disorder. *European Journal of Psychological Assessment, 22*, 104-108.

25. Wechsler, D. (1997). *Wechsler Adult Intelligence Scale (3th ed.)*. San Antonio, TX: Harcourt Assessment.

26. D'Silva, K., & Hogue, T. (2002). *Directions for the classification of DSM-IV personality disorder diagnosis.* Unpublished manuscript, available from the authors.

27. Hoy, C. (1996). Book review: Emotional problems scales. *Journal of Psychoeductional Assessment, 14*, 303-307.

28. Raine, A., Lencz, T., Bihrle, S., LaCasse, L., & Colletti, P. (2000). Reduced prefrontal gray matter volume and reduced autonomic activity in antisocial Personality disorder. *Archives of General Psychiatry, 57*, 119-127.

29. Koeningsberg, H. W., Siever, L. J., Lee, H., Pizzarello, S., New, A. S., Goodman, M., Cheng, H., Flory, J., & Prohovnik, I. (2009). Neural correlates of emotion processing in borderline personality disorder. *Psychiatry Research, 172*, 192-199.

30. Tracy, J. L., & Robins, R. W. (2003). "Death of a (narcissistic) salesman": An integrative model of fragile self-esteem. *Psychological Inquiry, 14*, 57-62.