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Correspondence

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Predicting violent offences by released prisoners

For a pejorative term without proven clinical utility, psychopathy has generated some very catchy sayings. Some bear little relationship to the research that generated them. 'Treatment makes psychopaths worse' is one (see Rice *et al*[1]). I fear that without urgent corrective action, 'Risk assessment doesn't work for psychopaths' (see Coid *et al*[2]) will be another.

Coid *et al* compared the ability of three structured risk assessment instruments – the Violence Risk Assessment Guide (VRAG), the Historical, Clinical, Risk Management-20 (HCR-20) and the Offender Group Reconviction Scale-II (OGRS-II) – to predict violent offences by released prisoners in different diagnostic groups. They defined one such group, 'psychopathic personality', using a score of over 30 on the Psychopathy Checklist-Revised (PCL-R). For most instruments and groups, Coid *et al* found moderate levels of predictive accuracy. For the 5.7% of the sample scoring over 30 on the PCL-R, however, no risk assessment instruments performed better than flipping a coin. The authors see major implications for risk assessment. They state that new actuarial tools may be required.

A better conclusion would be that if you define a group using a high score on one instrument that predicts violence, other such instruments will struggle to predict violence in that group. Originally designed to measure a psychological construct, psychopathy, the PCL-R has proved to be one of several instruments that consistently predict violence better than chance (area under the curve (AUC) 0.65–0.75; see Singh *et al*[3]). The VRAG and the HCR-20 are others. The other instruments could only have successfully predicted violence among Coid *et al*'s 'psychopathic personalities' if structured risk assessment instruments could be applied serially with increasing success.

We know that they cannot. When Seto[4] combined the results of using instruments sequentially to predict serious offending, also in ex-prisoners, he did no better than he had using one instrument alone. These data, and others suggesting the particular items on a scale are less important than the constructs, such as past behaviour and substance use, that the items represent,[5] have led some to suspect that a ceiling effect may apply to the prediction of violence in psychiatric and other populations.[6] Efforts to improve the accuracy of structured risk assessment instruments are probably better directed at reducing the quantity of missing data than at adding new instruments.[7]

I have a wager for Coid *et al*: try the process in reverse. Select the 5.7% of the sample with the highest HCR or VRAG scores and test whether the PCL-R is predictive in these groups. My five pounds says it will not be, and for the same reason. More is not necessarily better. Or, once you have squeezed the fruit, there usually isn't much point squeezing it again.

1 Rice M, Harris G, Cormier C. An evaluation of a maximum security therapeutic community for psychopaths and other mentally disordered offenders. *Law Hum Behav* 1992; **16**: 399–412.

2 Coid J, Ullrich S, Kallis C. Predicting future violence among individuals with psychopathy. *Br J Psychiatry* 2013; **203**: 387–8.

3 Singh J, Grann M, Fazel S. A comparative study of violence risk assessment tools: a systematic review and metaregression analysis of 68 studies involving 25,980 participants. *Clin Psychol Rev* 2011; **31**: 499–513.

4 Seto M. Is more better? Combining actuarial risk scales to predict recidivism among adult sex offenders. *Psychol Assess* 2005; **17**: 156–67.

5 Kroner D, Mills J, Reddon J. A coffee can, factor analysis and prediction of antisocial behavior: the structure of criminal risk. *Int J Law Psychiatry* 2005; **28**: 360–74.

6 Buchanan A. Risk of violence by psychiatric patients: beyond the ''actuarial versus clinical'' assessment debate. *Psychiatr Serv* 2008; **59**: 184–90.

7 Harris G, Rice M. Actuarial assessment of risk among sex offenders. *Ann N Y Acad Sci* 2003; **989**: 198–210.

Alec Buchanan, Associate Professor, Yale University Department of Psychiatry, New Haven, Connecticut, USA. Email: alec.buchanan@yale.edu

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Authors' reply: In the introduction of his letter, Buchanan refers to psychopathy as a 'pejorative term' but later categorises it as a risk assessment instrument. It is neither. Psychopathy as a psychiatric syndrome was first described by a general psychiatrist[1] and further developed into a diagnostic construct operationalised with the PCL-R.[2] It is retained within dissocial personality disorder in ICD-10 and as an alternative model of antisocial personality disorder in DSM-5. The PCL-R is recognised internationally as the gold standard for assessment of psychopathy. Proficiency in its use should be a core competency for clinicians who work with offenders. Sadly, many are not adequately trained and struggle to comprehend why their treatments usually fail with these individuals and sometimes make their behaviour worse.

Buchanan may have misunderstood Seto's[3] method. The instruments were applied simultaneously, not sequentially. However, he is right that sequential screening does not improve accuracy. We would suggest a better reference for an explanation.[4] We would also emphasise that risk assessment instruments are no more than screening instruments. Most importantly, there is currently no evidence base to demonstrate that routine clinical use of these screens can prevent violence, despite mandatory use in some UK services.

With regard to the 'glass ceiling' effect that we have previously investigated,[5,6] reducing missing data will achieve little to break through this. Trigger factors precede many violent events. They may occur in the context of static and dynamic risk factors which have predictive efficacy. But trigger factors are causal, can occur within seconds to trigger violence and, most importantly, are not predictable.

Finally: the wager. There is no purpose in doing this if psychopathy is a personality construct. Furthermore, we have previously shown that few PCL-R items are predictive.[5] But we did rise to the challenge of Buchanan and tested the predictive accuracy of the VRAG, OGRS and HCR-20 in high-risk groups defined by these instruments. Using 32 as the HCR-20 cut-off and 27 for VRAG to be as close as possible to Buchanan's 5.7%, we estimated AUCs for VRAG and OGRS in the same HCR-20 high-risk group, and AUCs for HCR-20 and OGRS in the corresponding VRAG high-risk group. In the VRAG high-risk group, the HCR-20 showed a low AUC of 0.44 (95% CI