

appropriate under the performed model identification. Therefore, it would be necessary to re-evaluate the considered time series in terms of model identification by the Box & Jenkins method and apply them again to the time series. I expect a notable change of results.

- 1 Claassen CA, Carmody T, Stewart SM, Bossarte RM, Larkin GL, Woodward WA, et al. Effect of 11 September 2001 terrorist attacks in the USA on suicide in areas surrounding the crash sites. *Br J Psychiatry* 2010; **196**: 359–64.
- 2 Rinne H, Specht K. *Zeitreihen: Statistische Modellierung, Schätzung und Prognose [Time Series: Statistical Modelling, Estimation, Prognosis]*. Vahlen, 2002.
- 3 Box GEP, Jenkins GM. *Time Series Analysis: Forecasting and Control*. Holden-Day, 1976.
- 4 Helfenstein U. Box–Jenkins modelling in medical research. *Stat Methods Med Res* 1996; **5**: 3–22.
- 5 Montgomery DC, Weatherby G. Modeling and forecasting time series using transfer function and intervention methods. *AIIE Transactions* 1980; **12**: 289–307.
- 6 Box GEP, Tiao GC. Intervention analysis with applications to economic and environmental problems. *J Am Stat Assoc* 1975; **70**: 70–9.

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Little evidence for the usefulness of violence risk assessment

Troquete and colleagues report a cluster randomised trial of the effect of violence risk assessment on future offending.¹ They found that people in the risk assessment group were non-significantly more likely to re-offend than those in the control group. We welcome this analysis of the practical value of risk assessment. There are now literally thousands of published violence risk assessment studies, most of which claim validity for their risk assessment method on the basis of statistical discrimination between violent and non-violent groups using measures such as the area under the curve (AUC) or other indicators of effect size.² Recent criticism of the AUC as an outcome measure has emerged because it does not reflect the accuracy of predictions in the real world, and even high AUC values are associated with a low positive predictive value (PPV) for rare events. However, the PPV of a risk assessment is only a proxy for the usefulness of a risk assessment. A risk assessment alone is not valuable unless it leads reasonable interventions that can reduce future harm. Therefore, the utility of a risk assessment must ultimately be judged by its ability to contribute to harm reduction. In contrast to the large number of papers about the statistical aspects of risk assessment, there may be as few as four published controlled studies of the ability of risk assessment to reduce harm.²

The *British Journal of Psychiatry* has published two earlier studies of the utility of risk assessment. Abderhalden *et al* reported a cluster randomised trial of risk assessment among in-patients that found that intervention wards had a reduction in violence. However, interpretation of this study is difficult because the intervention wards had high rates of violence pre-trial and post-trial rates of violence in the experimental and control wards did not differ.³ Also in the *Journal*, van de Sande and colleagues reported a cluster randomised trial that found that risk assessment was associated with a reduction in violence but not seclusion among in-patients.⁴ In the nursing literature, Kling *et al* reported a study in in-patient settings that found that risk assessment was not helpful in reducing violence.⁵

Risk assessment has become the dominant paradigm in mental health practice, policy and legislation in most high-income countries. It should therefore trouble colleagues who support

‘evidence-based practice’ to know that there is so little evidence for the effectiveness of risk assessment.

- 1 Troquete NAC, van den Brink RHS, Beintema H, Mulder T, van Os TWDP, Schoevers RA, et al. Risk assessment and shared care planning in out-patient forensic psychiatry: cluster randomised controlled trial. *Br J Psychiatry* 2013; **202**: 365–71.
- 2 Wand T. Investigating the evidence for the effectiveness of risk assessment in mental health care. *Issues Ment Health Nurs* 2012; **33**: 2–7.
- 3 Abderhalden C, Needham I, Dassen T, Halfens R, Haug H-J, Fischer JE. Structured risk assessment and violence in acute psychiatric wards: randomised controlled trial. *Br J Psychiatry* 2008; **193**: 44–50.
- 4 van de Sande R, Nijman HLI, Noorthoorn EO, Wierdsma AI, Hellendoorn E, van der Staak C, et al. Aggression and seclusion on acute psychiatric wards: effect of short-term risk assessment. *Br J Psychiatry* 2011; **199**: 473–8.
- 5 Kling RN, Yassi A, Smailes E, Lovato CY, Koehoorn M. Evaluation of a violence risk assessment system (the Alert System) for reducing violence in an acute hospital: a before and after study. *Int J Nurs Stud* 2011; **48**: 543–9.

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Authors’ reply: We agree with Wand & Large that there currently is very limited support for the use of structured risk assessment instruments as a method for violence prevention. So far only a small number of studies, four including our own, examined this issue. It is troubling that most research efforts seem to focus on the development of new risk assessment instruments and establishing their psychometric properties, rather than on testing the effectiveness of existing instruments. Although identification of predictors and development of instruments are crucial steps in the maturation of both risk assessment and forensic psychiatry, the field needs to move beyond these issues.

The most important risk and protective factors associated with recidivism have by now been established and are agreed on by the research community. There is no disputing the existence of correlations between mental illness, substance misuse, client well-being, quality of life and recidivism. That is why all, or a considerable selection of these factors, are commonly included in risk assessment instruments.^{1–3} It seems it is time to move forward and start investigating the benefits of risk assessment instruments and their contribution to more effective treatment interventions in terms of reduction of criminal and violent behaviour. As we ourselves have experienced, introducing randomised trials in clinical practice is difficult, but it can be done, and is an essential step before implementation can be advocated.

A definitive answer about the contribution of structured risk assessment to violence prevention cannot be given at this time. The first signs are not good. The four available studies find either no significant reduction of violent outcome, or the interpretation of their findings is problematic due to differences between study groups at baseline. Differences in clinical setting of the various studies further complicate the integration of findings. Our own data were collected in a community-based forensic mental health setting. In contrast, the other three studies were completed in acute psychiatric (admission) wards. These two settings service different populations, making comparisons less straightforward. It is too early for a proper systematic review on this subject, but the overall picture is not yet convincingly in favour of changing treatment policies by systematically employing structured risk assessment in clinical care.