

Comment

is also consistent with the occurrence of point clusters, particularly those involving young people, because peers are recognised as very powerful role models.¹⁰

Social learning theory asserts that behaviour is shaped by reinforcement. If an observer sees someone with whom they identify being rewarded for a particular action, he or she might seek to copy that action. Again, this theory is in line with conventional wisdom about both mass clusters and point clusters. Guidelines on media reporting consistently discourage inadvertent reinforcement of suicide by glorification of the death, and resources for communities faced with suicide clusters recommend caution with respect to memorials.¹¹

When the persuasiveness of the media and the sway of peers are combined, the effect might be particularly dramatic. If a vulnerable 16-year-old girl reads about another teenage girl on the other side of the country who has died by suicide, she might be able to put herself in the other girl's shoes. If the other girl is in her circle of friends or acquaintances, she almost certainly will be able to. If a boy who is struggling academically and socially at school takes his own life, others at the school will undoubtedly be affected by the death. If they are also finding schoolwork a challenge and being bullied, they might weigh up the pros and cons of taking the same course of action. A series of prominent media accounts that serve as a memorial, despite being well intentioned, might reinforce suicide as a desirable action.

Gould and colleagues' study adds considerably to knowledge in this area, suggesting that incautious newspaper reporting of suicide might compound the risk of an individual suicide becoming part of a cluster, at least in young people. This effect might be exacerbated for newer forms of internet-based media that might be favoured by young people over newspapers. Gould and

colleagues' study focused on the association between newspaper reports and suicide clusters occurring between 1988 and 1996, before the internet became commonplace, so they were not able to test this. It makes intuitive sense, however, that less regulated, more volatile, and more interactive media might have an even greater effect, particularly because young people are not only major consumers of these forms of media, but also the creators of their content. Investigating the role of newer media in suicide clusters—both mass clusters and point clusters—is the next logical step.

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- Gould M, Kleinman M, Lake A, Forman J, Bassett M, Middle J. Newspaper coverage of suicide and initiation of suicide clusters in teenagers in the USA, 1988–96: a retrospective, population-based, case-control study. *Lancet Psychiatry* 2014; published online May 2. [http://dx.doi.org/10.1016/S2215-0366\(14\)70225-1](http://dx.doi.org/10.1016/S2215-0366(14)70225-1).
- Pirkis J, Blood R. Suicide and the news and information media: a critical review. Canberra: Commonwealth of Australia, 2010.
- Joiner T. The clustering and contagion of suicide. *Curr Dir Psychol Sci* 1999; **8**: 89–92.
- Jones P, Gunnell D, Platt S, et al. Identifying probable suicide clusters in Wales using national mortality data. *PLoS One* 2013; **8**: e71713.
- Johansson L, Lindqvist P, Eriksson A. Teenage suicide cluster formation and contagion: implications for primary care. *BMC Fam Pract* 2006; **7**: 32.
- Cox G, Robinson J, Williamson M, Lockley A, Cheung Y-T, Pirkis J. Suicide clusters in young people: evidence for the effectiveness of post-vention strategies. *Crisis* 2012; **33**: 208–14.
- Pirkis J. Suicide and the media. *Psychiatry* 2009; **8**: 269–71.
- Bandura A. Self-efficacy: towards a unifying theory of behavioural change. *Psychol Rev* 1977; **84**: 191–215.
- Fu K, Yip P. Estimating the risk for suicide following the suicide deaths of 3 Asian entertainment celebrities: a meta-analytic approach. *J Clin Psychiatry* 2009; **70**: 869–78.
- Zenere F. Suicide clusters and contagion. *Principal Leadership* 2009; **10**: 12–16.
- Pirkis J, Blood R, Beautrais A, Burgess P, Skehan J. Media guidelines on the reporting of suicide. *Crisis* 2006; **27**: 82–87.



Violence, suicide, and all-cause mortality

See [Articles](#) page 44

In their article in *The Lancet Psychiatry*, Seena Fazel and colleagues¹ argue persuasively that although people with schizophrenia and related disorders are known to be at an increased risk of adverse outcomes (especially violent crime, premature mortality, and death by suicide) compared with the general population, whether this association represents secular trends or is specific

to mental health problems is generally unknown. The authors succeed in advancing understanding about this issue. The simultaneous analysis of suicide, premature mortality, and violent crime offers hope for the streamlining of risk assessment for people with schizophrenia and other psychiatric disorders and encourages assessing clinicians to explore several

behaviours. Fazel and colleagues' finding that at least three prediagnosis risk factors—drug use disorders, history of violent criminality, and self-harm—increased the risk for several adverse outcomes has implications for practical population-based strategies.

Several questions still remain. To what extent the findings are generalisable to other countries remains unclear. Although the authors state that many similarities exist between Sweden and other high-income countries, it is important to note that research indicates a lower than 10% level of unmet treatment needs in Nordic countries in people who have schizophrenia² and that the authors report absence of differences when inpatients and outpatients were compared. People with schizophrenia in other countries have varying access to treatment, as discussed by Mojtabai and colleagues,³ who noted in a review that roughly 40% of patients with schizophrenia reported they had not received any mental health treatment in the preceding 6–12 months.

Fazel and colleagues provide an adjusted analysis for substance misuse. Although this analysis is helpful, it raises the question as to what other covariates could ideally be controlled for. Intelligence quotient and the demographic variables are crucial; however, several other mediating factors might be important. For example, the side-effects of antipsychotic drugs could contribute to increased mortality.⁴ Co-occurring depressive symptoms could affect suicide rates.⁵ Victimization, which is recognised to be higher in people with schizophrenia than in those without the disorder, could also contribute to increases in all of the major outcomes.^{6,7}

Although much information is available for the variables analysed, they are nonetheless still a small set of variables. Several other reasons for outcomes, which were not measured, could explain the higher rates of violence, suicide, and premature mortality in people with psychotic disorders and are not necessarily representative of the disorders themselves. The question remains as to whether schizophrenia could be serving as a proxy for other unmeasured variables such as depression, unemployment, absence of social support, and financial strain, which could mediate the relation between diagnosis and the adverse outcomes studied.

The study enabled valuable assessment of how a parent's behaviour might relate to their children's future risks. As might be expected, the authors showed that parental violent crime was positively associated with an individual's risk of violence in men. However, a more novel result was that parent violence was inversely related to an individual's odds of suicide, meaning that people whose parents had committed violence offences were less likely to die by suicide—an intriguing finding that merits further study. This analysis emphasises an important need for a closer investigation of family upbringing, genetic factors, and sex that are potentially related to an individual's risk of engaging in both internalising and externalising behaviours.

One of the unique aspects of this study—that violence and suicide were analysed simultaneously—has an important implication for how we as a society perceive people with mental illness. News coverage of schizophrenia and other psychiatric disorders often focuses on violence and crime.⁸ Much less attention is paid to suicide and self-harm in people with severe mental illnesses.⁹ Notably, multivariate analyses in this article showed a substantially stronger link between schizophrenia and suicide than between schizophrenia and violence. For example, in a comparison of incidence of outcomes in patients with schizophrenia and related disorders versus the general population, the adjusted odds ratio for violent offence was 7.4 (95% CI 7.1–7.18) whereas that for suicide was 20.7 (18.8–22.9). This study is perhaps the first to directly report data showing that in people with schizophrenia and related disorders, self-directed violence is a greater problem than is violence directed towards others. This message needs to be emphasised and promoted to the wider general public as a whole.

Finally, and importantly, we should remember that, when reporting about the intricate links between schizophrenia and these adverse outcomes, most people with schizophrenia and related disorders are neither violent nor suicidal.^{10–12} Despite the need to ensure people with schizophrenia are provided help to reduce their risks of suicide, violence, or premature death, researchers reporting findings also bear the burden of ensuring that most people with schizophrenia and related disorders, who are not violent, are not left to contend with stigma and discrimination. Policy makers, researchers, and clinicians need to remember



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the importance of appropriately weighing up the issue of schizophrenia relative to the myriad of other factors that contribute to increased risk of violence and suicide. A focus on the separation of people with schizophrenia from those without the disorder with respect to risk management can contribute to perpetuating a negative public image for people with mental health problems.

This observation relates to what is refreshing about Fazel and colleagues' article: by showing that risk factors predicting adverse outcomes in the clinical sample also predicted risk in the general population (and to an even greater degree), the authors suggest that to best manage violence and suicide risk, we should perhaps now turn our attention to those factors evident across populations. In this way, we might not only reduce actual risk in people with schizophrenia, but appropriately place this in the context of violence reduction for society as a whole. The potential to achieve practical, evidence-based, and potentially less stigmatising interventions is one of the most exciting implications of this study. We commend the authors for presenting data in support of this goal.

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- 1 Fazel S, Wolf A, Palm C, Lichtenstein P. Violent crime, suicide, and premature mortality in patients with schizophrenia and related disorders: a 38-year total population study in Sweden. *Lancet Psychiatry* 2014; **1**: 44–54.
- 2 Hansson L, Vinding HR, Mackeprang T, et al. Comparison of key worker and patient assessment of needs in schizophrenic patients living in the community: a Nordic multicentre study. *Acta Psychiatr Scand* 2001; **103**: 45–51.
- 3 Mojtabai R, Fochtmann L, Chang SW, Kotov R, Craig TJ, Bromet E. Unmet need for mental health care in schizophrenia: an overview of literature and new data from a first-admission study. *Schizophr Bull* 2009; **35**: 679–95.
- 4 Casey DE, Haupt DW, Newcomer JW, et al. Antipsychotic-Induced weight gain and metabolic abnormalities: implications for increased mortality in patients with schizophrenia. *J Clin Psychiatry* 2004; **65** (suppl 7): 4–18.
- 5 Hawton K, Sutton L, Haw C, Sinclair J, Deeks JJ. Schizophrenia and suicide: systematic review of risk factors. *Br J Psychiatry* 2005; **187**: 9–20.
- 6 Silver E, Arseneault L, Langley J, Caspi A, Moffitt TE. Mental disorder and violent victimization in a total birth cohort. *Am J Public Health* 2005; **95**: 2015–21.
- 7 Honkonen T, Henriksson MM, Koivisto AM, Stengard E, Salokangas RKR. Violent victimization in schizophrenia. *Soc Psychiatry Psychiatr Epidemiol* 2004; **39**: 606–12.
- 8 Corrigan PW, Watson AC, Gracia G, Slopen N, Rasinski K, Hall LL. Newspaper stories as measures of structural stigma. *Psychiatr Serv* 2005; **56**: 551–56.
- 9 Carpiello B, Girau R, Orrù MG. Mass-media, violence and mental illness. Evidence from some Italian newspapers. *Epidemiol Psychiatr Soc* 2007; **16**: 251–55.
- 10 Palmer BA, Pankratz VS, Bostwick JM. The lifetime risk of suicide in schizophrenia: a reexamination. *Arch Gen Psychiatry* 2005; **62**: 247–53.
- 11 Appelbaum PS. Public safety, mental disorders, and guns. *JAMA Psychiatry* 2013; **70**: 565–66.
- 12 Nielssen O, Bourget D, Laajasalo T, et al. Homicide of strangers by people with a psychotic illness. *Schizophr Bull* 2011; **37**: 572–79.

Clozapine and patient safety



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Schizophrenia is a major cause of disability, affecting roughly 26 million people worldwide,¹ and accounting for between 1.5% and 3% of national health-care expenditures.² Antipsychotic drugs are the mainstay of schizophrenia treatment,³ with clozapine being one of the most effective antipsychotics in treatment-resistant schizophrenia.⁴ Clozapine is usually prescribed as a third-line treatment and carries a risk of blood disorders (eg, neutropenia and potentially fatal agranulocytosis), which has led to compulsory routine blood monitoring.⁵

In *The Lancet Psychiatry*, François Girardin and colleagues⁶ compare the cost-effectiveness of different strategies for monitoring white blood cell count in patients taking clozapine. The cost-effectiveness of such strategies is essential information. Monitoring white blood cell count is a health-care intervention, so it comes with an opportunity cost in that the resources used could

be put to alternative purposes. Providing monitoring means that other forms of care (for people with schizophrenia or others) do not take place. This situation could be entirely appropriate if the outcomes from monitoring are achieved at an acceptable cost. Although the definition of an acceptable cost is open to debate, some countries (such as England) have set thresholds to define interventions as acceptably cost effective.

Girardin and colleagues constructed a model of the 3-year cost-effectiveness of monitoring white blood cell count, populated with data from established databases and individual patient data, and used sophisticated techniques to assess existing strategies (UK, USA, and Europe) and a hypothetical short-term (8-week) strategy compared with no monitoring, and to address the uncertainty around the model parameters. Their results show that none of the active monitoring strategies were

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See [Articles](#) page 55