

Volume 2

SUICIDE RESEARCH: SELECTED READINGS

J. Sveticic, K. Andersen, D. De Leo

May 2009–October 2009

Australian Institute for Suicide Research and Prevention

SUICIDE RESEARCH: SELECTED READINGS

Volume 2

May 2009–October 2009

J. Sveticic, K. Andersen, D. De Leo

Australian Institute for Suicide Research and Prevention



WHO Collaborating Centre for Research and Training in Suicide Prevention

National Centre of Excellence in Suicide Prevention

First published in 2009
Australian Academic Press
32 Jeays Street
Bowen Hills Qld 4006
Australia
www.australianacademicpress.com.au

Reprinted in 2010

Copyright for the Introduction and Comments sections is held by the Australian Institute for Suicide Research and Prevention, 2009.

Copyright in all abstracts is retained by the current rights holder.

Apart from any use as permitted under the *Copyright Act, 1968*, no part may be reproduced without prior permission from the Australian Institute for Suicide Research and Prevention.

ISBN: 978-1-921513-53-4

Contents

Foreword	vii
Acknowledgments	viii
Introduction	
Context	1
Methodology	2
Key articles	
Alexopoulos et al, 2009. Reducing suicidal ideation and depression in older primary care patients: 24-month outcomes of the PROSPECT study	8
Almasi et al, 2009. Risk factors for suicide in Hungary: a case-control study	10
Bateman, 2009. Limiting paracetamol pack size: has it worked in the UK?	12
Beautrais et al, 2009. Removing bridge barriers stimulates suicides: an unfortunate natural experiment	14
Bell et al, 2009. Suicide in people with epilepsy: how great is the risk?	16
Bell et al, 2009. Suicidality in people taking antiepileptic drugs: what is the evidence?	18
Bethell et al, 2009. Identifying deliberate self-harm in emergency department data	20
Blasco-Fontecilla et al, 2009. Specific features of suicidal behavior in patients with narcissistic personality disorder	22
Brent et al, 2009. The incidence and course of depression in bereaved youth 21 months after the loss of a parent to suicide, accident, or sudden natural death	24
Carlsten et al, 2009. Are sedatives and hypnotics associated with increased suicide risk in the elderly?	26
Erlangsen et al, 2009. Early discontinuation of antidepressant treatment and suicide risk among persons aged 50 and over: a population-based register study	28
Farrelly et al, 2009. Definitions of suicide and self-harm behavior in an Australian Aboriginal community.....	30
Garvey et al, 2009. Contracting for safety with patients: clinical practice and forensic implications	32

Gibbs et al, 2009. When the solution is part of the problem: problem solving in elderly suicide attempters	34
Giegling et al, 2009. Personality and attempted suicide: analysis of anger, aggression and impulsivity.....	36
Goldney et al, 2009. Relationships between body mass index, mental health, and suicidal ideation: population perspective using two methods	38
Gravseth et al, 2009. Suicide in young Norwegians in a life course perspective: population based cohort study	40
Haw et al, 2009. Dementia and suicidal behavior: a review of the literature	42
Johnson et al, 2009. Suicide and alcohol: do outlets play a role?	44
Johnston et al, 2009. Suicidal thoughts and behaviours among Australian adults: findings from the 2007 National Survey of Mental Health and Wellbeing.....	46
Klieve et al, 2009. Who uses firearms as a means of suicide? A population study exploring firearm accessibility and method choice	48
Kolves et al, 2009. Suicidal ideation and behaviour in the aftermath of marital separation: gender differences	50
Kovacsics et al, 2009. Lithium's antisuicidal efficacy: elucidation of neurobiological targets using endophenotype strategies	52
Miller et al, 2009. Suicide prevention programs in the schools: a review and public health perspective	54
Niederkrotenthaler et al, 2009. Copycat effects after media reports on suicide: a population-based ecologic study	56
Nock et al, 2009. Cross-national analysis of the associations among mental disorders and suicidal behavior: findings from the WHO World Mental Health Surveys	58
Noh, 2009. Does unemployment increase suicide rates? The OECD panel evidence	60
Ohgami et al, 2009. Lithium levels in drinking water and risk of suicide.....	62
Pratt et al, 2009. Suicide in recently released prisoners: a case-control study	64
Qin et al, 2009. Hospital admission for non-fatal poisoning with weak analgesics and risk for subsequent suicide: a population study	66
Qin et al, 2009. Frequent change of residence and risk of attempted and completed suicide among children and adolescents	68
Stone et al, 2009. Risk of suicidality in clinical trials of antidepressants in adults: analysis of proprietary data submitted to US Food and Drug Administration.....	70
Yoon et al, 2009. Does deinstitutionalization increase suicide?.....	72
Zhang et al, 2009. Characteristics of young rural Chinese suicides: a psychological autopsy study	74

Recommended readings	77
-----------------------------------	----

Citation list

Fatal suicidal behaviour:

Epidemiology	154
Risk and protective factors	157
Prevention	166
Postvention and bereavement	169

Non-fatal suicidal behaviour:

Epidemiology	171
Risk and protective factors	172
Prevention	185
Care and support	186
Case reports	189
Miscellaneous.....	193

Foreword

This volume contains quotations from internationally peer-reviewed suicide research published during the semester May 2009–October 2009; it is the second of a series produced biannually by our Institute, with the aim of assisting the Commonwealth Department of Health and Ageing in being constantly updated on new evidences from the scientific community.

The initial section of the volume collects a number of publications that could have particular relevance for the Australian people in terms of potential applicability. These researches are accompanied by a short comment from us, and an explanation of the motives that justify why we have considered of interest the implementation of studies' findings in the Australian context. An introductory part provides the rationale and the methodology followed in the identification of papers.

The central part of the volume represents a selection of research articles of particular significance; their abstracts are reported *in extenso*, underlining our invitation to read those papers in full text: they represent a remarkable advancement of suicide research knowledge.

The last section reports all items retrievable from major electronic databases. We have catalogued them on the basis of their prevailing reference to fatal and non-fatal suicidal behaviours, with various subheadings (e.g. epidemiology, risk factors, and so on). The deriving list guarantees a level of completeness superior to any individual system; it can constitute a useful tool for all those interested in a quick update of what is most recently published on the topic.

Our intent is to make suicide research more approachable to non-specialists, and in the meantime provide an opportunity for a *vademecum* of quotations credible also at the professional level. A compilation such as the one that we provide here is not easily obtainable from usual sources and can save a considerable amount of time to readers. We believe that our effort in this direction may be an appropriate interpretation of one of the technical support roles to the Government that the new status of National Centre of Excellence in Suicide Prevention — which has deeply honoured our commitment — entails for us.

The significant growth of our centre, the Australian Institute for Suicide Research and Prevention, and its influential function, both nationally and internationally, in the fight against suicide, could not happen without the constant support of Queensland Health and Griffith University. We hope that our passionate dedication to the cause of suicide prevention may compensate their continuing trust in our work.

Diego De Leo, DSc

Director, Australian Institute for Suicide Research and Prevention

Acknowledgments

This report has been produced by the Australian Institute for Suicide Research and Prevention, WHO Collaborating Centre for Research and Training in Suicide Prevention and National Centre of Excellence in Suicide Prevention. The assistance of the Commonwealth Department of Health and Aging in the funding of this report is gratefully acknowledged.

Introduction

Context

Suicide places a substantial burden on individuals, communities and society in terms of emotional, economic and health care costs. In Australia, about 2000 people die from suicide every year, a death rate well in excess of transport-related mortality. At the time of preparing this volume, the latest available statistics released by the Australian Bureau of Statistics¹ indicated that, in 2007, 1,881 deaths by suicide were registered in Australia, representing an age-standardised rate of 8.9 per 100,000.

Further, a study on mortality in Australia for the years 1997–2001 found that suicide was the leading cause of avoidable mortality in the 25–44 year age group, for both males (29.5%) and females (16.7%), while in the age group 15–24 suicide accounted for almost a third of deaths due to avoidable mortality.² In 2003, self-inflicted injuries were responsible for 27% of the total injury burden in Australia, leading to an estimated 49,379 years of life lost (YLL) due to premature mortality, with the greatest burdens observed in men aged 25–64.³

Despite the estimated mortality, the prevalence of suicide and self-harming behaviour in particular remains difficult to gauge, due to the often secretive nature of these activities. Indeed, the ABS acknowledges the difficulties in obtaining reliable data for suicides in the past few years.^{4,5} Without a clear understanding of the scope of suicidal behaviours and the range of interventions available, the opportunity to implement effective initiatives is reduced. Further, it is important that suicide prevention policies are developed on the foundation of evidence-based empirical research, especially as the quality and validity of the available information may be misleading or inaccurate. Additionally, the social and economic impact of suicide underlines the importance of appropriate research-based prevention strategies, addressing not only significant direct costs on health system and lost productivity, but also the emotional suffering for families and communities.

The Australian Institute for Suicide Research and Prevention (AISRAP) has, through the years, gained an international reputation as one of the leading research institutions in the field of suicide prevention. The most important recognition came via the designation as a World Health Organization (WHO) Collaborating Centre in mid-2005. More recently (Spring 2008), the Commonwealth Department of Health and Ageing (DoHA) appointed AISRAP as the National Centre of Excellence in Suicide Prevention. This latter recognition awards not only many years of high-quality research, but also of fruitful cooperation between the institute and several different governmental agencies. The new

role given to AISRAP will translate into an even deeper commitment to the cause of suicide prevention amongst community members of Australia.

As part of this initiative, AISRAP is committed to the creation of a databank of the recent scientific literature documenting the nature and extent of suicidal and self-harming behavior and recommended practices in preventing and responding to these behaviors. The key output for the project is a critical biannual review of the national and international literature outlining recent advances and promising developments in research in suicide prevention, particularly where this can help to inform national activities. This task is not aimed at providing a critique of new researches, but rather at drawing attention to investigations that may have particular relevance to the Australian context. In doing so, we are committed to a user-friendly language, in order to render research outcomes and their interpretation accessible also to a non-expert audience.

In summary, this particular review serves three primary purposes:

1. to inform future State and Commonwealth suicide prevention policies
2. to assist in the improvement of existing initiatives, and the development of new and innovative Australian projects for the prevention of suicidal and self-harming behaviors within the context of the Living is for Everyone (LIFE) Framework (2008)
3. to provide directions for Australian research priorities in suicidology.

The review is presented in three sections. The first contains a selection of the best articles published in the last 6 months internationally. For each article identified by us (the method of choosing articles is described below), the original abstract is accompanied by a brief comment explaining why we thought the study was providing an important contribution to research and why we considered its possible applicability to Australia. The second section presents the abstracts of the most relevant literature — following our criteria — collected between November 2008 and April 2009; while the final section presents a list of citations of all literature published over this time period.

Methodology

The literature search was conducted in four phases.

Phase 1

Phase 1 consisted of weekly searches of the academic literature performed from May 2009 to October 2009. To ensure thorough coverage of the available published research, the literature was sourced using several scientific electronic databases including: Pubmed, Proquest, Scopus, Safetylit and Web of Science, using the following key words: *suicide, suicidal, self-harm, self-injury and parasuicide*.

Results from the weekly searches were downloaded and combined into one database (deleting duplicates).

A determination of the sources to be selected and included was made according to the following criteria:

- Timeliness: the article was published (either electronically or in hard-copy) between May 2009 and October 2009.

- Relevance: the article explicitly referred to fatal and/or non-fatal suicidal behaviour and related issues and/or interventions directly targeted at preventing/treating these behaviours.
- The article was written in English.
- The article was published in an international, peer-reviewed journal.

Articles regarding euthanasia, assisted suicide, suicide terrorist attacks, and/or book reviews, abstracts and conference presentations were excluded.

Also, articles that have been published in electronic versions (ahead of print) between November 2008 and April 2009 and therefore included in the previous volume (*Suicide Research: Selected Readings, Vol. 1*) were excluded to avoid duplication.

Phase 2

Following an initial reading of the abstracts (retrieved in Phase One), the list of articles was refined down to the most relevant literature.

In Phase 2, articles were excluded when they:

- were not particularly instructive or original
- were of a descriptive nature (e.g., a case-report)
- consisted of historical/philosophical content
- were a description of surgical reconstruction/treatment of self-inflicted injuries
- concerned biological and/or genetic interpretations of suicidal behaviour, the results of which could not be easily adoptable in the context of the LIFE Framework.

In order to minimize the potential for biased evaluations, two researchers working independently read through the full text of all articles selected to create a list of most relevant papers. This process was then duplicated by a third researcher for any articles on which consensus could not be reached.

The strength and quality of the research evidence was evaluated based on the *Critical Appraisal Skills Programme (CASP) Appraisal Tools* published by the Public Health Resource Unit, England (2006). These tools, publically available online, consist of checklists for critically appraising systematic reviews, randomized controlled trials (RCT), qualitative research, economic evaluation studies, cohort studies, diagnostic test studies and case control studies.

Phase 3

One of the aims of this review was to identify research which is both evidence-based and of potential relevance to the Australian context. Thus, the final stage of Phase 2 of the literature search focused on research conducted in countries with populations or health systems sufficiently comparable to Australia. It is important to note that failure of an article to be selected for inclusion in Phase 3 does not entail any negative judgment on its 'objective' quality.

Specific inclusion criteria for Phase 3 included:

- applicability to Australia
- the paper met all criteria for scientificity (i.e., the methodology was considered sound)

- the paper represented a particularly compelling addition to the literature, which would be likely to stimulate suicide prevention initiatives and research
- inevitably, an important aspect was the importance of the journal in which the paper was published (because of the high standards that have to be met in order to obtain publication in that specific journal). For this review, priority was given to papers published in high impact factor journals.
- particular attention has been paid to widen the literature horizon to include sociological and anthropological research that may have particular relevance to the Australian context.

After a thorough reading of these articles ('Recommended readings' for the considered timeframe), a written comment was produced for each article detailing:

- methodological strengths and weaknesses (e.g., sample size, validity of measurement instruments, appropriateness of analysis performed)
- practical implications of the research results to the Australian context
- suggestions for integrating research findings within the domains of the LIFE framework suicide prevention activities.

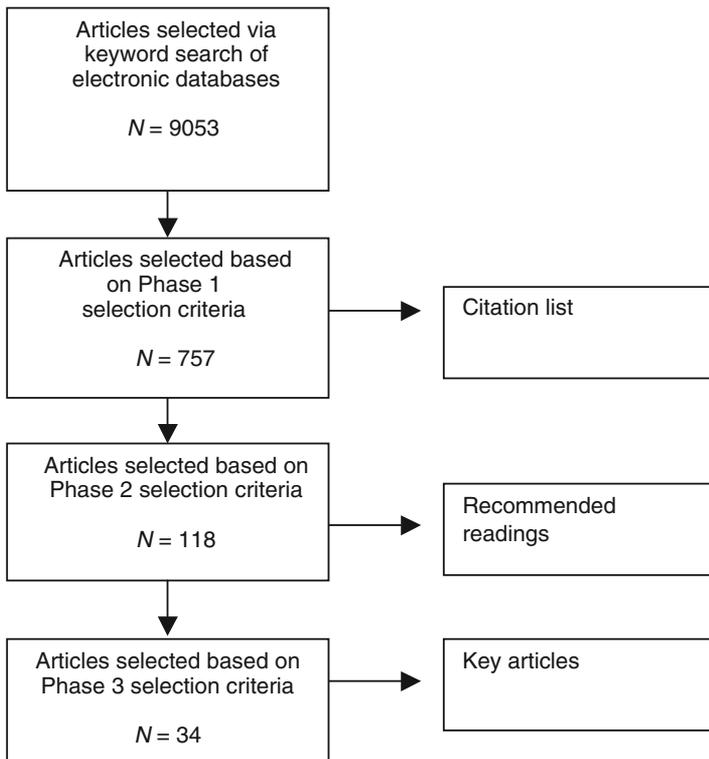


Figure 1 Flowchart of process.

Phase 4

In the final phase of the search procedure all articles were divided into the following classifications:

- *Fatal suicidal behaviour* (epidemiology, risk and protective factors, prevention, post-vention and bereavement)
- *Non-fatal suicidal/self-harming behaviours* (epidemiology, risk and protective factors, prevention, care and support)
- *Case reports* (include reports of fatal and non-fatal suicidal behaviours)
- *Miscellaneous* includes all research articles that could not be classified into any other category.

Allocation to these categories was not always straightforward, and where papers spanned more than one area, consensus of the research team determined which domain the article would be placed in.

Endnotes

- 1 Australian Bureau of Statistics. (2009). *Causes of death, Australia, 2007*, suicides (Cat. No. 3303.0). Canberra, Australia.
- 2 Page A, Tobias M, Glover J, Wright C, Hetzel D, Fisher E (2006). *Australian and New Zealand atlas of avoidable mortality*. Adelaide, Australia: Public Health Information Development Unit, University of Adelaide.
- 3 Begg S, Vos T, Barker B, Stevenson C, Stanley L, Lopez, A (2007). *The burden of disease and injury in Australia 2003*. Canberra, Australia: Australian Institute for Health and Welfare.
- 4 Australian Bureau of Statistics. (2009). *Causes of death, Australia, 2007*, technical note 1 (Cat. No. 3303.0). Canberra, Australia.
- 5 Australian Bureau of Statistics. (2009). *Causes of death, Australia, 2007*, explanatory notes (Cat. No. 3303.0). Canberra, Australia.

Key Articles

Reducing suicidal ideation and depression in older primary care patients: 24-month outcomes of the PROSPECT study

GS Alexopoulos, CF Reynolds, ML Bruce, IR Katz, PJ Raue, BH Mulsant, DW Oslin, T Ten Have and the PROSPECT Group (USA)
American Journal of Psychiatry 166, 882–890, 2009

Objective: The Prevention of Suicide in Primary Care Elderly: Collaborative Trial (PROSPECT) evaluated the impact of a care management intervention on suicidal ideation and depression in older primary care patients. This is the first report of outcomes over a 2-year period.

Method: Study participants were patients 60 years of age or older ($N = 599$) with major or minor depression selected after screening 9,072 randomly identified patients of 20 primary care practices randomly assigned to provide either the PROSPECT intervention or usual care. The intervention consisted of services of 15 trained care managers, who offered algorithm-based recommendations to physicians and helped patients with treatment adherence over 24 months.

Results: Compared with patients receiving usual care, those receiving the intervention had a higher likelihood of receiving antidepressants and/or psychotherapy (84.9%–89% versus 49%–62%) and had a 2.2 times greater decline in suicidal ideation over 24 months. Treatment response occurred earlier on average in the intervention group and increased from months 18 to 24, while no appreciable increase in treatment response occurred in the usual care group during the same period. Among patients with major depression, a greater number achieved remission in the intervention group than in the usual-care group at 4 months (26.6% versus 15.2%), 8 months (36% versus 22.5%), and 24 months (45.4% versus 31.5%). Patients with minor depression had favourable outcomes regardless of treatment assignment.

Conclusions: Sustained collaborative care maintains high utilization of depression treatment, reduces suicidal ideation, and improves the outcomes of major depression over 2 years.

Comment

Main findings: This study demonstrated that sustained collaborative approaches to treating depression in older patients, including (a) management by primary care physicians, (b) additional long-term follow up, and, if needed (c) provision of interpersonal therapy, provides improved outcomes for patients with major depression two years after starting treatment, compared to patients receiving usual care. Specifically, these patients were more likely to adhere to either medication or psychotherapy treatment, and reported greater decline in passive suicidal ideation and lower severity of depressive symptoms. Almost half of patients who presented with major depression showed signs of remission at 24 months (compared to 42% of patients with major depressive disorder who received usual care, a difference not statistically significant).

The current research is the first to present results of a long-term intervention follow-up of depressed elderly patients in primary care settings. Methodological strengths of the study included the large sample size, a sensitive screening approach and a well controlled random sampling design, which allows generalisation of the findings to real-life practices. However, the reliability of the findings are somewhat limited by the large attrition rate and the absence of detailed information on treatments received in the 'usual care' group.

Implications: Affective disorders such as depression are a significant risk factor for suicide. Improvements in recognition and treatment of depressive disorders are one of the fundamental parts of suicide prevention strategies worldwide, and primary care providers represent a vital strategic setting point from which suicidality in the elderly should be targeted. While rates of antidepressant prescriptions have been reported to rise, still several obstacles remain in the way of assuring positive outcomes. Results of this study indicate that inclusion of a care manager in the provision of primary health care and continuous monitoring of treatment over a 24-month period can help reduce the (otherwise high) percentage of elderly patients who prematurely interrupt their treatments, and lead to reduced suicidal ideation. Understandably, in many countries limited resources allocated to mental health and suicide prevention would make these approaches difficult to implement; however, this study also demonstrated that patients presenting with minor depression are equally responsive to standard care, therefore it may be more cost-effective to provide the most intensive care management treatment primarily to patients meeting criteria for major depressive disorder.

Risk factors for suicide in Hungary: a case-control study

K Almasi, N Belso, N Kapur, R Webb, J Cooper, S Hadley, M Kerfoot, G Dunn, P Sotonyi, Z Rihmer, L Appleby (Hungary)

BMC Psychiatry 9, 45, 2009

Background: Hungary previously had one of the highest suicide rates in the world, but experienced major social and economic changes from 1990 onwards. We aimed to investigate the antecedents of suicide in Hungary. We hypothesized that suicide in Hungary would be associated with both risk factors for suicide as identified in Western studies, and experiences related to social and economic restructuring.

Methods: We carried out a controlled psychological autopsy study. Informants for 194 cases (suicide deaths in Budapest and Pest County 2002–2004) and 194 controls were interviewed by clinicians using a detailed schedule.

Results: Many of the demographic and clinical risk factors associated with suicide in other settings were also associated with suicide in Hungary; for example, being unmarried or having no current relationship, lack of other social contacts, low educational attainment, history of self-harm, current diagnosis of affective disorder (including bipolar disorder) or personality disorder, and experiencing a recent major adverse life event. A number of variables reflecting experiences since economic restructuring were also associated with suicide; for example, unemployment, concern over work prospects, changes in living standards, practising religion. Just 20% of cases with evidence of depression at the time of death had received antidepressants.

Conclusions: Suicide rates in Hungary are falling. Our study identified a number of risk factors related to individual-level demographic and clinical characteristics, and possibly recent societal change. Improved management of psychiatric disorder and self-harm may result in further reductions in suicide rates.

Comment

Main findings: A number of demographic, clinical and societal factors associated with risk for suicide have been identified in this psychological autopsy study, the largest to date to be carried out in Eastern Europe. One of the most striking results was the relatively low prevalence of both lifetime history of psychiatric illness (43.5%) and presence of diagnosed mental illness at time of death (69.1%) in the cohort of suicides, contradicting conventional estimations that around 90% of suicide victims are believed to be suffering from some form of mental disorder.¹ Similar results on the (lower than commonly reported) presence of mental disorders in persons with suicidal ideation or attempts, but obtained via community survey, are discussed elsewhere in this volume (see the paper on WHO World Mental Health Surveys by Nock et al., 2009). Further, results of the current study showed that while approximately half of suicide cases had evidence of an affective disorder, only a fifth of sufferers were receiving antidepressant treatment at time of death. While the societal factors, suggested being important determinants of suicide risk in individuals (e.g. employment, religious belief and changes in socio-economic circumstances) offer some insight into the efficiency of society-wide interventions to reduce suicide rates, causality of these links could not be verified due to the methodological constraints of the applied cross-sectional study design.

Implications: Results of this study carry important clinical and research implications and add to the existing knowledge on multiple risk factors for suicide. However, generalisability of results to the Australian context may be limited due to the fact that the study was performed in Eastern Europe which has in the last few decades undergone major political, social and economic changes. Nevertheless, while the societal aspects of results would need to be replicated in Australian milieu, several other of the discussed approaches that might lead to reductions in the suicide rate are rather universal — in particular, improved identification of psychiatric illness; the appropriate (and not just increased) prescribing of antidepressant medications; and more effective follow-up and management of those who self-harm and/or attempt suicide.

Endnote

- 1 Arsenault-Lapierre G, Kim C, Turecki G (2004). Psychiatric diagnoses in 3275 suicides: a meta-analysis. *BMC Psychiatry* 4, 37.

Limiting paracetamol pack size: has it worked in the UK?

DN Bateman (UK)

Clinical Toxicology 47, 536–541, 2009

Introduction: Paracetamol poisoning is a major health problem worldwide. Limitation of pack size is an approach increasingly advocated to reduce rates of suicide and serious self-harm from this agent. The United Kingdom adopted such a policy in 1998, restricting non-pharmacy sales to 8 g and pharmacy to pack sizes of 16 g.

Methods: A literature review was conducted and commentary written on the impact of the change in the United Kingdom on a variety of indices of paracetamol overdose.

Results: Potential markers of effect identified included paracetamol sales, poisons information data, laboratory results, liver unit referrals, and hospital activity and mortality data. Initial reports suggested effects associated with the legislation, but longer term suicide trend analysis has not confirmed these early findings, which were confounded by population trends in self-harm.

Conclusion: Paracetamol pack size limitation as applied in the United Kingdom has not reduced paracetamol-related death. Reasons postulated for this failure include patient avoidance of the legislation's intentions, patient confusion, and ineffectiveness of the regulations as conceived and implemented.

Comment

Main findings: Following an increase in hospital admissions for paracetamol overdose in the 1990s in the United Kingdom, a series of regulations were introduced to reduce access to this commonly available drug. However, to date there have been no conclusive findings on the effectiveness of these legislative interventions on the reduction of accidental and intentional ingestions of these drugs. For example, Hawkins et al. (2007) in their literature review demonstrated that while packing restrictions may have resulted in a reduction of mortality and morbidity due to paracetamol overdose in the United Kingdom; conversely, they may also have led to an increase in hospital admissions due to overdoses from other medications such as ibuprofen.¹

In this literature review, Bateman describes the initial positive impact of the legislation on the reduction of hospital admission and deaths in which paracetamol was involved, but this effect did not last for more than two and half years. This finding emphasizes the need for longitudinal observations of the impact of any interventions restricting access to means of suicide, such as installation of barriers on bridges or introduction of firearms legislations.

Implications: While paracetamol-related mortality rates appear to be higher in countries where unlimited quantities may be purchased,² there is currently a lack of studies examining national-level data. In addition, the available studies

are often based on localized data and thus only represent a small number of hospitals. Additionally, interpretations of mortality statistics need to be made cautiously, due to the complex nature of deaths from acute poisoning, as it is common for more than one substance to be implicated in a poisoning death and there is often no indication on the death certificate as to which substance was principally responsible for the death.

Positive effects of paracetamol sales restrictions on rates of suicidal behaviours could not be ascertained in this paper; however, restrictions of the availability of commonly used methods of suicides remain an important, if somewhat crude, approach of suicide prevention strategies worldwide. One such example was restriction of barbiturate prescribing in Australia in the late 1960s, which has led to declines in its use as a method of suicide and also in overall suicide rates.³

Currently it is not possible to estimate the incidence of paracetamol overdose in the community due to the unwillingness of individuals to present to hospitals after overdose, particularly in minor overdoses (where medical attention is not required). However, it is plausible that paracetamol overdoses are far more common than current estimates allow. For example, a study by Ayanrinde et al (2005),⁴ monitoring the frequency, circumstances and outcomes of paracetamol presentations to one regional Australian general hospital over a 4-year period, reported a steep increase in annual admissions due to paracetamol overdose, most commonly in combination with alcohol, benzodiazepines and antidepressants. Further, in Australia, from 2005 products containing paracetamol are required to carry warnings on the label regarding the dangers of overdose; however, as Bateman argued, in the case of weak analgesics it seems that neither patients nor sellers are sufficiently informed of their toxic effects. In conclusion, current knowledge on this subject is not sufficient to make any definite conclusion on whether restricting availability of a common and safe medicine for a majority of population outweighs the risks presented by the small number of people choosing to self-harm by this method.

Endnotes

- 1 Hawkins JNE, Dargan PI (2007). Impact of restriction paracetamol pack size on paracetamol poisoning in the United Kingdom. *Drug Safety* 30, 465–479.
- 2 Gunnell D, Hawton K, Murray V (2000). Use of paracetamol for suicide and non-fatal poisoning: World-wide patterns of use and misuse. *Suicide and Life-Threatening Behaviour* 30, 313–326.
- 3 Oliver RG, Hetzel BS (1973). An analysis of recent trends in suicide rates in Australia. *International Journal of Epidemiology* 2, 91–101.
- 4 Ayanrinde OT, Phelps GJ, Hurley JC, Ayanrinde OA (2005). Paracetamol overdose and hepatotoxicity at a regional Australian hospital: a 4-year experience. *Internal Medicine Journal* 35, 665–660.

Removing bridge barriers stimulates suicides: an unfortunate natural experiment

AL Beautrais, SJ Gibb, DM Fergusson, LJ Horwood, GL Larkin (New Zealand)

Australian and New Zealand Journal of Psychiatry 43, 495-497, 2009

Objectives: Safety barriers to prevent suicide by jumping were removed from Grafton Bridge in Auckland, New Zealand, in 1996 after having been in place for 60 years. This study compared the number of suicides due to jumping from the bridge after the reinstallation of safety barriers in 2003.

Methods: National mortality data for suicide deaths were compared for three time periods: 1991–1995 (old barrier in place); 1997–2002 (no barriers in place); 2003–2006 (after barriers were reinstated).

Results: Removal of barriers was followed by a fivefold increase in the number and rate of suicides from the bridge. These increases led to a decision to re-install safety barriers. Since the reinstallation of barriers, of an improved design, in 2003, there have been no suicides from the bridge.

Conclusions: This natural experiment, using a powerful a-b-a (reversal) design, shows that safety barriers are effective in preventing suicide: their removal increases suicides; their reinstatement prevents suicides.

Comment

Main findings: There is a growing body of evidence showing that installation of barriers and safety nets efficiently prevents suicide by jumping (mainly from bridges). The results of this ‘unfortunate experiment’, following the removal and reinstatement of safety barriers from a known suicide jumping site in New Zealand, provide further support for this. In the 5 years with no barriers in place, the numbers and rates of suicides from the bridge increased fivefold, but then dropped to zero after reinstalment of improved replacement barriers eight years later.

Implications: The practical implications arising from the results of this study are somewhat straightforward — installation of measures to restrict access at locations recognized to attract people committing suicide by jumping (such as tall buildings, bridges, cliffs) may prove beneficial in lowering the incidence of this method of suicide. This type of restriction should, preferably, be accompanied by similar interventions targeted at reducing access to alternative methods of suicide. Justification for the implementation of such measures should be based on scientific evidence for their efficiency in preventing suicide in order to acquire consensus from local and/or national government agencies, in particular when met with public opposition regarding issues such as cost-effectiveness. In addition, further research is needed to determine which barrier designs are most effective in preventing jumping suicide from different types of structures (e.g. bridges, high-rise residential buildings and institutions housing vulnerable populations such as psychiatric patients).

Suicide in people with epilepsy: how great is the risk?

GS Bell, A Gaitatzis, CL Bell, AL Johnson, JW Sander (UK)

Epilepsia 50, 1933–1942, 2009

Purpose: Suicide is more common in populations with epilepsy, but estimates vary concerning the magnitude of the risk. We aimed to estimate the risk using meta-analysis.

Methods: A literature search identified 74 articles (76 cohorts of people with epilepsy) in whom the number of deaths by suicide in people with epilepsy and the number of person-years at risk could be estimated. Standardized mortality ratios (SMRs) with 95% confidence intervals (CIs) were calculated for each cohort, for groups of cohorts, and for the total population.

Results: The overall SMR was 3.3 (95% CI 2.8–3.7) based on 190 observed deaths by suicide compared with 58.4 expected. The SMR was significantly increased in people with incident or newly diagnosed epilepsy in the community (SMR 2.1), in populations with mixed prevalence and incidence cases (SMR 3.6), in those with prevalent epilepsy (SMR 4.8), in people in institutions (SMR 4.6), in people seen in tertiary care clinics (SMR 2.28), in people with temporal lobe epilepsy (SMR 6.6), in those following temporal lobe excision (SMR 13.9), and following other forms of epilepsy surgery (SMR 6.4). The SMR was significantly low overall in two community-based studies of people with epilepsy and developmental disability.

Discussion: We confirm that the risk of suicide is increased in most populations of people with epilepsy. Psychiatric comorbidity has been demonstrated to be a risk factor for suicide in the general population and in people with epilepsy, and such comorbidity should thus be identified and treated.

Comment

Main findings: While an increased risk for suicide in populations with epilepsy has long been documented, available literature lacks consensus on the magnitude of that risk. Authors of the presented study responded to the need for synthesis and critical evaluation of prior data by conducting an extensive meta-analysis of all relevant studies that reported information on suicide deaths in cohorts of persons with epilepsy across a variety of settings (e.g., newly diagnosed persons, persons in institutions, and those following epilepsy surgeries). Calculation of standardized mortality rates based on the 74 included papers confirmed a more than 3-times higher risk for suicide in people with epilepsy when compared to the general population. Results are aligned with previous studies reporting the highest risk in cohorts with chronic severe epilepsy and in those following surgery.

Implications: The selection of studies in the presented meta-analysis did not allow for investigation of confounding effects of psychiatric co-morbidity. Yet, prior research has reported an increased prevalence of mental health disorders in persons with epilepsy compared with the general population.¹ Further, people with this disorder continue to be stigmatized by it, which causes adverse impacts on their psychological well-being and quality of life;² therefore, it would be beneficial to control for these confounding factors in future research in this area. Nevertheless, findings of this meta-analysis add to the existing knowledge on the suicide risks in people with epilepsy and carry important implications for development of suicide prevention strategies. For example, it would be of benefit to include suicide risk screening protocols as part of standard care for individuals with epilepsy in order to identify and intervene with those at highest risk of suicide, especially when patients present with comorbid psychiatric disorders

Endnotes

- 1 Jacoby A (2002). Stigma, epilepsy, and quality of life. *Epilepsy & Behavior* 3, 10-20.
- 2 Tellez-Zenteno JF, Patten SB, Jetté N, Williams J, Wiebe S (2007). Psychiatric comorbidity in epilepsy: a population-based analysis. *Epilepsia* 48, 2336-2344.

Suicidality in people taking antiepileptic drugs: what is the evidence?

GS Bell, M Mula, JW Sander (UK/Italy)

CNS Drugs 23, 281–292, 2009

Suicide is an important cause of premature death. In the general population, most people who commit suicide have a psychiatric problem at the time. People with epilepsy are thought to be at increased risk from suicide and suicidality (suicidal ideation or behaviour). Standardized mortality ratios estimated for suicide in people with epilepsy are usually between 3 and 5. Risk factors for suicide in people with epilepsy have been suggested, including early age of onset of seizures, temporal lobe epilepsy, severe seizures and recent control of seizures. Psychiatric co-morbidity also seems to be an important factor in people with epilepsy who commit suicide. In recent years, suicidality has been recognized as a complication of several groups of drugs and, most recently, antiepileptic drugs (AEDs) have been implicated. The US FDA performed a meta-analysis of 199 placebo-controlled studies of 11 AEDs used for seizure control, psychiatric or 'other' indications. There were four completed suicides in those taking AEDs and none in those taking placebo. The odds ratio for suicidal behaviour or ideation was 1.8 (95% CI 1.24, 2.66), suggesting that people taking AEDs are more at risk than those taking placebo. The odds ratio was significantly raised for people taking AEDs for epilepsy, but not for the other indications. AEDs may affect mood by means of several mechanisms. In people with epilepsy, however, the concept of forced normalization (or alternative psychosis) may also play a part. In this situation, control of seizures (by AEDs or epilepsy surgery) may alternate with psychotic features or, less commonly, depression, although this is not fully understood. The risk of suicidal ideation and behaviour as adverse effects of AED treatment, although increased, seems low. As a result of the FDA's alert clinicians are supposed to inform patients and their families of this increased risk but it is important to place it in a proper perspective. Some people with epilepsy are more likely to develop psychiatric adverse effects with any AEDs, and these people should be followed closely whenever a new AED is introduced. Nonetheless, in people with epilepsy the risk of suicidality associated with AEDs needs to be balanced against the risk of not treating the seizures. In fact, the risk of stopping AEDs or refusing to start AEDs for the control of a seizure disorder may be significantly worse and may result in serious harm, including death of the patient.

Comment

Main findings: This effective review of the evidence for a heightened suicide risk in individuals with epilepsy is one of only a few articles to examine the link between treatment with antiepileptic drugs and completed suicide. The authors found that individuals with epilepsy who are treated with antiepileptic drugs are almost twice more likely to complete suicide than individuals taking placebo. The most remarkable finding of this review was that suicide risk may be heightened in certain individuals regardless of the type of antiepileptic drug, and this is thought to be due to a little understood interaction between mental illness and epilepsy symptoms, rather than actual adverse drug reactions. Still, the findings need to be considered with caution due to the low incidence of completed suicide in the study (4 cases) which makes it difficult to determine any definitive causal pathway between antiepileptic drugs and suicide.

Implications: Prior research has suggested that epilepsy is a risk factor for suicide with epileptics up to 5 times more likely to complete suicide compared to the general population.¹ The findings of this review suggest that individuals with epilepsy who are treated with antiepileptic drugs are a particularly vulnerable group requiring special consideration when determining treatment plans and follow-up care. In particular, it is suggested that certain individuals are prone to developing suicidal ideation and/or behaviours regardless of the type of antiepileptic drug administered. These patients would require consistent and regular follow-up, especially in the period immediately after introduction of a new drug. Additionally, the authors recommend that patients and their families be informed of the risk of potential adverse reactions to antiepileptic medications in order for individuals to make an informed choice regarding their own treatment.

A further consideration is the tailoring of medication to the individual patient with some evidence that (as in the general population) symptoms of instability of mood and anxiety may further increase suicide risk, implying that the mood stabilising properties of certain antiepileptic drugs may prove beneficial in these patients. Despite the suggested risks for fatal and non-fatal suicidal behaviour associated with antiepileptic medications, it has been shown that mortality due to untreated epilepsy far exceeds that of completed suicide in this group. Therefore it seems that the benefits of these drugs may outweigh the slight risk of the development of suicidal behaviour.

Endnote

- 1 Christensen J, Vestergaard M, Mortensen P, Sidenius P, Agerbo E (2007). Epilepsy and risk of suicide: a population-based case-control study. *Lancet Neurology* 6, 693-698.

Identifying deliberate self-harm in emergency department data

J Bethell, AE Rhodes (Canada)

Health Reports 20, 35–42, 2009

Background: Emergency department data offer more representative deliberate self-harm (DSH) information than inpatient admission data. However, emergency department data may underestimate DSH if some records coded ‘undetermined’ (UD) represent DSH.

Data and methods: The data are from the National Ambulatory Care Reporting System. A total of 24,437 Ontario emergency department records for 2001/2002, coded DSH or UD, were analyzed. Age- and sex-specific estimates were compared under alternative DSH definitions.

Results: For every two emergency department presentations coded DSH, another was coded UD. Cut/Pierce injuries and poisonings coded UD appeared to represent DSH more often than did UD presentations involving other injuries. Among index episodes coded UD, the rate of subsequent DSH presentation was nearly 10 times higher when cut/pierce injury or poisoning was involved. Including presentations coded UD among those coded DSH increased the 12-month cumulative incidence of DSH by up to 60%.

Interpretation: Some emergency department presentations coded UD likely represent DSH.

Comment

Main findings: Self-harm continues to be an issue of concern in Australia and internationally and it is estimated that rates of self-harm in the community far exceed rates of suicide. Prior research has suggested that hospital coding systems may under-estimate the incidence of self-harm presentations and the main contribution of the current study was use of a large, highly representative study sample based on Canadian emergency department data, considered more accurate than inpatient admission data (especially since many self-harm cases do not require inpatient care).

The most important finding of this study was that a large number of poisoning and self-injury cases treated in emergency departments may not be coded as self-harm, thus further under-reporting incidence of self-harm. Despite several limitations (e.g. data collection was limited to emergency room presentation and thus under-estimates true rates of self-harm in the community), results of this study are highly credible with important implications for the future development of suicide monitoring systems.

Implications: Identifying and monitoring cases of self-harm is an essential component of community suicide prevention strategies, however to date a monitoring system which effectively records cases of deliberate self harm in the community has yet to be developed. As the authors suggest, hospital databases may offer a more convenient, effective and cost-effective method of recording self-harm cases if the accuracy of hospital data collection systems could be improved. The research findings of the current study suggest that there may be justification for including emergency room cases coded as 'undetermined', especially poisonings and cutting/piercing injuries, when conducting research on the incidence of self-harm presentations to hospitals. Further, the inclusion of this additional data may facilitate research into gender differences in self-harm, particularly in the younger age groups.

Specific features of suicidal behavior in patients with narcissistic personality disorder

H Blasco-Fontecilla, E Baca-Garcia, K Dervic, MM Perez-Rodriguez, J Lopez-Castroman, J Saiz-Ruiz, MA Oquendo (Spain)

Journal of Clinical Psychiatry. Published online: 14 July 2009. doi: 10.4088/JCP.08m04899, 2009

Objective: Suicidal behavior is a clinically significant but underestimated cause of mortality in narcissistic personality disorder. Currently, there are no reliable estimates of suicidal behavior for this population. The main objective of this study was to test whether or not suicide attempters diagnosed with narcissistic personality disorder are different in terms of impulsivity and expected lethality from suicide attempters with other cluster B personality disorders.

Method: In a sample of 446 suicide attempters, patients with cluster B personality disorder diagnoses ($n = 254$) as assessed by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), version of the International Personality Disorder Examination-Screening Questionnaire (IPDE-SQ) were compared in terms of expected lethality and impulsivity (measured by the Beck Suicidal Intent Scale and the Barratt Impulsiveness Scale, respectively). The subjects were admitted to the emergency departments of the Ramón y Cajal Hospital and the Fundación Jiménez Díaz University Hospital in Madrid, Spain, between January 1999 and January 2003.

Results: Suicide attempts of subjects diagnosed with narcissistic personality disorder had higher expected lethality than those of subjects without narcissistic personality disorder ($t = -4.24$, $df = 439$, $P < .001$). There were no differences in expected lethality of the attempts when comparing subjects with and without histrionic personality disorder ($t = 0.28$, $df = 439$, $P = .795$), antisocial personality disorder ($t = 0.66$, $df = 439$, $P = .504$), and borderline personality disorder ($t = 1.13$, $df = 439$, $P = .256$), respectively. Suicide attempters diagnosed with narcissistic personality disorder did not significantly differ from suicide attempters without narcissistic personality disorder in terms of impulsivity measures ($t = -0.33$, $df = 442$, $P = .738$), while suicide attempters diagnosed with antisocial personality disorder, histrionic personality disorder, and borderline personality disorder were significantly more impulsive than suicide attempters without these diagnoses ($t = -3.96$, $df = 442$, $P < .001$; $t = -3.88$, $df = 442$, $P < .001$; and $t = -7.44$, $df = 442$, $P < .001$, respectively).

Conclusions: Narcissistic personality disorder seems to be a distinct group among cluster B personality disorders with regard to suicidal behavior. In contrast to suicide attempters with other cluster B personality disorders, suicide attempters diagnosed with narcissistic personality disorder are less impulsive and have suicide attempts characterized by higher lethality. These distinctions may offer a basis for targeted therapies aimed at decreasing suicidal risk in patients with narcissistic personality disorder.

Comment

Main findings: Individuals with narcissistic personality disorder make more impulsive and lethal suicide attempts when compared to other cluster B personality disorders, according to this landmark study by Blasco-Fontecilla and colleagues. The authors used a somewhat modified method of diagnosing personality disorders in a large sample of suicide attempters, applying more stringent criteria to increase specificity, which yielded high percentages of cluster B disorders (57%) in a sample of suicide attempters. Consistent with existing research, borderline personality disorder was the most prevalent personality disorder found in suicide attempters (in over a third of all subjects, while narcissistic personality disorder was identified in less than 4%). The small sample size of this distinctive group, previously recognised to be emotionally fragile and prone to suicidal crises, consequently prevented analysis of the impact of potential confounders, particularly Axis I disorders. A pertinent consideration is raised when interpreting results on levels of lethality of suicidal attempts – namely, that the perceived likelihood of a self-harming act leading to death (i.e. expected lethality) can provide a better measure of the seriousness of an attempt than the seriousness of medical consequences it leads to.

Implications: This study provides evidence that persons with narcissistic personality disorder display some distinct characteristics that should guide development of targeted suicide prevention initiatives. Whilst dialectic behaviour therapy has been demonstrated to work well when addressing suicidal behaviours in borderline personality disorders, its efficiency in treating narcissistic patients is unknown. Nonetheless, since it is estimated that approximately 6–10% of the general population have a personality disorder¹ and the associated elevated risk for self-harming behaviours is well recognised in this patient group,² further research is needed to deepen the understanding of differences between specific cluster B disorders, in order to design appropriate therapy approaches. As suggested by the authors, narcissistic patients might benefit from an educative approach incorporating techniques designed to assist individuals to regulate emotions and strengthen their distress tolerance (particularly relevant in the management of ‘narcissistic rage’).

Endnotes

- 1 Jackson HJ, Burgess PM (2000). Personality disorders in the community: a report from the Australian National Survey on Mental Health and Wellbeing. *Social Psychiatry and Psychiatric Epidemiology* 35, 531–538.
- 2 Krysinska K, Heller T, De Leo D (2006). Suicide and deliberate self-harm in personality disorders. *Current Opinion in Psychiatry* 18, 95–101.

The incidence and course of depression in bereaved youth 21 months after the loss of a parent to suicide, accident, or sudden natural death

D Brent, N Melhem, MB Donohoe, M Walker (USA)

American Journal of Psychiatry 166, 786-794, 2009

Objective: This study examined effects of bereavement 21 months after a parent's death, particularly death by suicide. **Method:** The participants were 176 offspring, ages 7–25, of parents who died by suicide, accident, or sudden natural death. They were assessed 9 and 21 months after the death, along with 168 non-bereaved subjects.

Results: Major depression and alcohol or substance abuse 21 months after the parent's death were more common among bereaved youth than among comparison subjects. Offspring with parental suicide or accidental death had higher rates of depression than comparison subjects; those with parental suicide had higher rates of alcohol or substance abuse. Youth with parental suicide had a higher incidence of depression than those bereaved by sudden natural death. Bereavement and a past history of depression increased depression risk in the 9 months following the death, which increased depression risk between 9 and 21 months. Losing a mother, blaming others, low self-esteem, negative coping, and complicated grief were associated with depression in the second year.

Conclusions: Youth who lose a parent, especially through suicide, are vulnerable to depression and alcohol or substance abuse during the second year after the loss. Depression risk in the second year is mediated by the increased incidence of depression within the first 9 months. The most propitious time to prevent or attenuate depressive episodes in bereaved youth may be shortly after the parent's death. Interventions that target complicated grief and blaming of others may also improve outcomes in symptomatic youth with parental bereavement.

Comment

Main findings: A death due to suicide has long reaching and damaging effects on persons who knew the deceased and it is reasonable to assume that distress is heightened when the survivor is a child. To date, literature exploring whether suicidal death leads to any particularities in grieving processes is sparse and contradictory. The current study therefore is unique, adding to existing knowledge by performing one of the largest longitudinal studies of the impacts of parental bereavement on children yet conducted. Results show enduring negative effects (including depression and substance abuse) following death of a parent nearly two years after the loss, particularly in subjects displaying complicated grief (which was, interestingly, reported in only 13% of youth 21 months after suicidal death of a parent, compared to 16% in a group of bereaved children after an accidental death). Further, youth whose parents died of suicide compared to those who died due to accidents or natural causes demonstrated particularly high rates of depression and substance abuse. The effect of bereavement on depression 21 months after the death of a parent was found to be strongly mediated by the occurrence of depression in the first nine months after the death across all groups.

Implications: While previous studies have identified some critical factors that impact the long-term outcome for parentally bereaved youth (such as self-esteem, coping skills and social support), this is the first study to propose that the optimal time for intervention to prevent the development of depression in bereaved youth was shortly after the experienced loss. As the authors suggest, it is critical to address bereavement and depressive symptoms in youth during the first 9 months after the death of a parent in order to optimise the potential for positive long-term mental health outcomes. Further, it may be of benefit to focus attention on those youth who have lost a mother, who show high levels of complicated grief or who blame others for the death.

Are sedatives and hypnotics associated with increased suicide risk in the elderly?

A Carlsten, M Waern (Sweden)

BMC Geriatrics 9, 20, 2009

Background: While antidepressant-induced suicidality is a concern in younger age groups, there is mounting evidence that these drugs may reduce suicidality in the elderly. Regarding a possible association between other types of psychoactive drugs and suicide, results are inconclusive. Sedatives and hypnotics are widely prescribed to elderly persons with symptoms of depression, anxiety, and sleep disturbance. The aim of this case-control study was to determine whether specific types of psychoactive drugs were associated with suicide risk in late life, after controlling for appropriate indications.

Methods: The study area included the city of Gothenburg and two adjacent counties (total 65+ population 210 703 at the start of the study). A case controlled study of elderly (65+) suicides was performed and close informants for 85 suicide cases (46 men, 39 women mean age 75 years) were interviewed by a psychiatrist. A population based comparison group ($n = 153$) was created and interviewed face-to-face. Primary care and psychiatric records were reviewed for both suicide cases and comparison subjects. All available information was used to determine past-month mental disorders in accordance with DSM-IV.

Results: Antidepressants, antipsychotics, sedatives and hypnotics were associated with increased suicide risk in the crude analysis. After adjustment for affective and anxiety disorders neither antidepressants in general nor SSRIs showed an association with suicide. Antipsychotics had no association with suicide after adjustment for psychotic disorders. Sedative treatment was associated with an almost 14-fold increase of suicide risk in the crude analyses and remained an independent risk factor for suicide even after adjustment for any DSM-IV disorder. Having a current prescription for a hypnotic was associated with a four-fold increase in suicide risk in the adjusted model.

Conclusions: Sedatives and hypnotics were both associated with increased risk for suicide after adjustment for appropriate indications. Given the extremely high prescription rates, a careful evaluation of the suicide risk should always precede prescribing a sedative or hypnotic to an elderly individual.

Comment

Main findings: The main contribution of this study by Carlsten and Waern to the existing literature on usage of psychotropic medications in elderly patients is an estimation of suicide risks specific to different types of drugs. The principal finding of the study was the increased suicide risk in elderly users of sedatives and hypnotics (4-fold suicide risk), even after controlling for DMS-IV Axis I disorders.

The main methodological strength was the inclusion of detailed data on the presence of psychiatric disorders in suicide cases, representative of all suicides in the catchment area, and control participants, randomly selected from a general population. However, the cross-sectional study design prevents any conclusions on the causality of the observed associations.

Implications: This was the first study to monitor for presence of any psychiatric disorder and prescription of a great variety of psychotropic drugs in elderly suicide cases, and carries great practical value for clinicians and policy makers in their attempts to control for the associated risks with medication prescriptions in this population. Antidepressant and antipsychotic use was not found to be associated with increased risk for suicide in this study, yet 40% of suicide cases who were being treated for affective disorders committed suicide, implying a need for greater awareness and monitoring of mental illness in elderly people. Equally, the fact that sedatives and hypnotics remain the most widely prescribed drugs to the elderly, the results of this study support the need for (a) clinician education regarding use of these drugs in the elderly, (b) careful evaluation and close monitoring of suicide risk in elderly sedative/hypnotic users and, (c) consideration of alternative forms of treatment for anxiety and sleep problems.

The authors did not assess any potential gender differences; however, considering past reports of higher rates of use of sedatives and/or hypnotics among women, it would be of interest to compare gender associated suicide risks. An additional interesting area of future research arising from the presented results would be a comparison of selected suicide methods among elderly suicide cases with prescribed psychotropic drugs compared to those without.

Early discontinuation of antidepressant treatment and suicide risk among persons aged 50 and over: a population-based register study

A Erlangsen, E Agerbo, K Hawton, Y Conwell (Denmark)

Journal of Affective Disorders. Published online: 18 April 2009. doi: 10.1016/j.jad.2009.03.011, 2009

Background: As many as 47% of adults over age 50 discontinue treatment with antidepressants after redeeming only one prescription. The study aim was to assess the risk of suicide in adults aged 50+ who discontinue antidepressants at an early stage of treatment.

Method: Case control study of all individuals aged 50+ living in Denmark and who initiated antidepressant treatment between July 1st 1995 and December 31st 2000 ($N = 217,123$). Hazard ratios were calculated using Cox regression analyses, propensity score matching techniques, and marginal structural models. Results: During the study period, 78,594 men and 138,529 women aged 50+ began treatment with an antidepressant medication, of whom 309 men and 229 women died by suicide. Men aged 50+ who discontinued treatment early had a suicide rate of 167 per 100,000 compared with 175 per 100,000 in those who continued refilling prescriptions; hazard ratio = 0.98 [CI-95%: 0.78–1.23]. The suicide rate in women who discontinued treatment was 52 per 100,000 compared with 74 per 100,000 in those who continued refilling; hazard ratio = 0.72 [CI-95%: 0.55–0.94]. Although people with previous psychiatric hospitalizations had greater risk of suicide than those without past hospital admissions, the difference was not significant in the adjusted model. Limitations: Prescriptions redeemed at pharmacies are our only indicator of treatment adherence. Also, information on severity of depression was not available.

Conclusions: We did not find a lower suicide risk among people over age 50 who seemingly follow treatment in comparison with those who discontinued treatment with antidepressants at an early stage.

Comment

Main findings: The association between early discontinuation of antidepressant treatment and increased suicide risk has been well supported in the literature. However, this study, using prospective data collection and longitudinal setting, is the first to examine these links in a population of older adults and the elderly. Linking comprehensive sources of individual-level data (including socio-demographic information and history of somatic or psychiatric hospitalisations) on Danish population who had received antidepressant prescriptions across a 20 year period, meant that this study overcame many of the common limitations of suicide research (i.e. small sample size, low incidence of suicide, missing data, attrition), and yielded highly credible conclusions.

Data from many countries show an unprecedented rise in sales of antidepressants over the last few decades, yet results of this study confirm that prescribing these medications does not automatically imply an adequate treatment of depressive disorder, as it is estimated that almost half of people discontinue treatments after only one prescription. Failing to confirm their hypothesis, the authors found no difference in the risk of suicide between persons who prematurely ceased their antidepressant treatment (failed to redeem a second prescription of an antidepressant) and those who continued after the first filing of a prescription — both groups had 3 to 5-fold higher suicide rates than the general population.

A limitation of the study was the inability to control for treatment adherence in those redeeming their prescriptions and absence of information on severity of depression. However, using a history of inpatient psychiatric care as a proxy indicator of the severity of individual's illnesses, results suggested that discontinuation of antidepressant treatment in this population increases the risk for death by suicide much more than in persons with no history of psychiatric inpatient care.

Implications: This study does not offer any interpretation of the motives for interrupting treatments, but its results nevertheless reinforce the need to address possible reasons for treatment discontinuation (particularly in males and those with a history of psychiatric inpatient care), such as fear of addiction, adverse side effects and lack of improvement¹. Tackling premature discontinuation and noncompliance with medical treatment requires two things: the patient has to be well-informed about all aspects of medical treatment and, he/she has to be regularly followed up. Good therapeutic alliance between patient and treating physician plays a central role in achieving these goals. Additionally, it may be worth considering other treatment options such as follow-up by case-workers, psychotherapy or ECT in patients who are reluctant to comply with anti-depressant treatment.

It remains unclear why there was no difference observed in suicide risk in patients who did and those who did not comply with antidepressant treatment in the presented study. One possibility is that the limitation inherent to this particular study design and mentioned above did indeed alter the results to the extent of diminishing differences between the two groups. It may even perhaps be interpreted as further evidence that the relationship between mental disorders and suicidal behaviours to date remains insufficiently understood, perhaps particularly in elderly populations.

Endnote

- 1 Hunot VM, Horne R, Leese MN, Churchill RC (2007). A cohort study of adherence to antidepressants in primary care: the influence of antidepressant concerns and treatment preferences. *Primary Care Companion to the Journal of Clinical Psychiatry* 9, 91–99.

Definitions of suicide and self-harm behavior in an Australian Aboriginal community

T Farrelly, K Francis (Australia)

Suicide and Life-Threatening Behavior 39, 182–189, 2009

In this small qualitative grounded theory study (21 interviews and focus groups with a total of 26 participants) investigating the understandings of and attitudes toward suicide and self-harm of Aboriginal peoples in a coastal region of New South Wales, Australia, we found that cultural factors particular to these communities influence the way such behavior is defined in an Aboriginal context. A continuation of certain ‘traditional’ cultural forms of self-harm behavior was evident in participant definitions, notably the practice of female hair cutting, also described as a mourning ritual, which appears to serve as a marker both to the individual and others.

Comment

Main findings: Several authors to date have recognised that Indigenous suicidality is a multi-factorial phenomenon, incorporating environmental, historical, cultural and social elements that are unique to their cultural background. The current study by Farrelly and Francis adds to existing knowledge by illuminating an understanding of the phenomena and attitudes towards suicide from the perspective of Aboriginal people themselves. Conducted via one-on-one interviews and focus groups with a total of around 100 participants, this research involved one of the biggest samples of Indigenous Australians to participate in a qualitative study to date. The most significant findings arising from this valuable insight into definitions of self-harm and suicidal behaviours include the recognition of unclear distinctions between fatal and non-fatal suicidal acts, identification of sites of previous suicidal death that can present as invitational to other members of the community, and certain groups in which self-harming behaviours are most common (incarcerated males, females with relationship problems and in youth displaying certain risk behaviours as a form of initiation). Perhaps the most striking aspect of self-harming behaviours in Indigenous communities described in this paper are the traditional rituals involving self-harming behaviours (such as cutting hair in females), leading the authors to conclude that greater acknowledgements of Aboriginal understandings and attitudes towards self-harm should be the cornerstone of mental health services targeting these populations.

Implications: Recognition of the dimension of the suicide phenomenon in Australian Aboriginal and Torres Strait Islander communities has been increasing over the last few decades, with current Indigenous suicide rates exceeding those of non-Indigenous Australians by almost twofold¹. Yet, comprehensive understanding of their self-harming behaviours remains limited by the relative paucity of empirical information on the prevalence of suicidality,

and ambiguous identifications of suicide risk factors and underlying causal pathways. Also, it has been previously argued that community participation and ownership of problems/interventions are necessary precursors to the success of effective suicide prevention interventions in Indigenous communities. The findings of this study only further confirm that in-depth understanding of cultural aspects of such behaviours is a critical component of any future preventative initiatives in Australian Indigenous communities. Furthermore, Aboriginal perspectives on mental health need to be more completely understood, in particular in the light of recent findings of the much lower prevalence of mental disorders in Indigenous suicides compared to other Australians¹. This can be due to different phenomenology of symptoms, sub-syndromal clinical pictures or an inability of western investigations to capture meaningful information with existing 'Western' measures and diagnostic tools. Also, the great diversity of Indigenous communities living in Australia makes it difficult to incorporate one 'unified' suicide prevention model; thus, clinicians should be provided with training sensitive to the particularities of Aboriginal culture in the local area.

Endnote

- 1 De Leo D, Sveticic J, Klieve H, Andersen K, Milner A, McKay K (2009). *Suicide in Indigenous populations of Queensland*. Australian Academic Press: Brisbane (in press).

Contracting for safety with patients: clinical practice and forensic implications

KA Garvey, JV Penn, AL Campbell, C Esposito-Smythers, A Spirito (USA)

Journal of the American Academy of Psychiatry and the Law 37, 363–70, 2009

The contract for safety is a procedure used in the management of suicidal patients and has significant patient care, risk management, and medicolegal implications. We conducted a literature review to assess empirical support for this procedure and reviewed legal cases in which this practice was employed, to examine its effect on outcome. Studies obtained from a PubMed search were reviewed and consisted mainly of opinion-based surveys of clinicians and patients and retrospective reviews. Overall, empirically based evidence to support the use of the contract for safety in any population is very limited, particularly in adolescent populations. A legal review revealed that contracting for safety is never enough to protect against legal liability and may lead to adverse consequences for the clinician and the patient. Contracts should be considered for use only in patients who are deemed capable of giving informed consent and, even in these circumstances, should be used with caution. A contract should never replace a thorough assessment of a patient's suicide risk factors. Further empirical research is needed to determine whether contracting for safety merits consideration as a future component of the suicide risk assessment.

Comment

Main findings: ‘No suicide’ contracts have long been an accepted and common practice of intervention with suicidal individuals over the past three decades and arguably have many advantages in terms of patient management and legal obligations. However, to date, international literature on ‘no suicide’ contracts has been limited with the result that the effectiveness of this tool in the prevention of suicide has remained unclear; consequently there has been a need for synthesis and evaluation of the existing data. The main findings of this review suggest that there is very little evidence for the use of ‘no suicide’ contracts in the prevention of suicide, implying a need for reassessment of whether this tool is the most appropriate method of ensuring patient safety.

Implications: The results of this review suggest that there is little benefit either medically or legally in relying on contracts to assess or manage suicide risk. From a legal point of view, suicidal patients are considered to be incapable of ensuring their own safety, regardless of whether or not a ‘no suicide’ contract was in use (and thus use of a contract will not act as protection against possible litigation). The authors conclude that clinicians should not depend on contracts to ensure patient safety but should instead focus on other aspects of care such as regular suicide assessments, the therapeutic alliance and the clinician’s own judgment regarding risk. Furthermore, although the authors concede that there may be some as yet unidentified benefit regarding use of the tool for long term management of suicidal behavior, more research is necessary to indicate whether suicide risk can possibly be reduced through use of contracts.

When the solution is part of the problem: problem solving in elderly suicide attempters

LM Gibbs, AY Dombrovski, J Morse, GJ Siegle, PR Houck, K Szanto (USA)

International Journal of Geriatric Psychiatry. Published online: 29 April 2009. doi: 10.1002/gps.2276, 2009

Objectives: Depression, loss, and physical illness are associated with suicide in the elderly. However, the nature of individual vulnerability remains poorly understood. Poor problem solving has been suggested as a risk factor for suicide in younger adults. Unresolved problems may create an accumulation of stressors. Thus, those with perceived deficits in problem-solving ability may be predisposed to suicidal behavior. To test this hypothesis, we investigated whether elderly suicide attempters perceived their problem solving as deficient.

Methods: Sixty-four individuals aged 60 and older participated in the study including depressed suicide attempters, depressed non-attempters, and non-depressed controls. The social problem solving inventory-revised: short-version was used to measure participants' perceived social problem solving, assessing both adaptive problem-solving dimensions (positive problem orientation and rational problem solving) and dysfunctional dimensions (negative problem orientation, impulsivity/carelessness, and avoidance).

Results: Depressed elderly who had attempted suicide perceived their overall problem solving as deficient, compared to non-suicidal depressed and non-depressed elderly. Suicide attempters perceived their problems more negatively and approached them in a more impulsive manner. On rational problem solving and avoidant style sub-scales, suicide attempters did not differ from nonsuicidal depressed. However, both depressed groups reported lower rational problem solving and higher avoidance compared to non-depressed controls.

Conclusions: A perception of life problems as threatening and unsolvable and an impulsive approach to problem solving appear to predispose vulnerable elderly to suicide attempts

Comment

Main findings: Gibbs and colleagues present results of a study into a long neglected topic, exploring links between suicidal behaviour and self-perceived, rather than actual, aspects of problem solving in old age. The most noteworthy finding of the study is that depressed elderly with a history of suicide attempts are likely to perceive their problems more negatively and judge their problem-solving skills to be more dysfunctional than depressed non-attempters or non-depressed controls. This association was found to be independent of the effects of co-morbid substance use and anxiety disorders. Further, the conclusion that elderly suicide attempters approach their problems more impulsively than the comparison groups, challenges an established belief that suicides in old age result from greater planning and intent, as it could be supposed on the basis of the much lower ratio between fatal and non-fatal suicidal acts, when compared to younger age groups. Despite some methodological issues arising from limitations inherent to cross-sectional study designs (e.g., small sample size, self-report nature of the questionnaires, unclear causal inferences, and the need for prospective examinations of suggested pathways), this article represents an important contribution to the understanding of individual vulnerability to suicide in the elderly.

Implications: In Australia, the elderly are a population recognised to be at high risk of suicide. As such, this study is a timely exploration of the mechanisms by which accumulated stress may lead to suicidal behaviour, with several useful implications for suicide prevention in elderly populations discussed. For example, assessment of the ability of elderly individuals in resolving problems typical of old age (such as losses, illnesses and increasing dependency from others) may help in identifying individuals at increased risk for suicide, and guide designing interventions for potentially modifiable risk factors. In particular, problem-solving and cognitive behavioural therapies have been previously demonstrated to strengthen constructive/adaptive problem-solving skills. However, as the authors caution, both treatments would require modifications to address suicide risk, in particular when cognitive impairments are present. As the authors suggest, interventions should include a focus on addressing impulsivity and negativity, rather than simply teach problem solving skills. Further, evaluation of individual's impulsivity, negativity and problem solving abilities may prove useful in preventing suicidal behaviour in health care facilities, especially in settings where elderly people are facing debilitating circumstances which threaten self-confidence (e.g., after a loss of a spouse, diagnosis of physical or mental illness, placement in nursing home, etc.).

Personality and attempted suicide: analysis of anger, aggression and impulsivity

I Giegling, P Olgiati, AM Hartmann, R Calati, HJ Moller, D Rujescu, A Serretti (Germany)

Journal of Psychiatric Research. Published online: 28 May 2009. doi: 10.1016/j.jpsychires.2009.04.013, 2009

Suicide is one of the leading causes of death worldwide, mortality from suicide being approximately 2%. Attempted suicide appears to be a major risk factor for suicide completion. Anger, aggression and impulsivity are personality traits associated with suicide attempt. In this study we analysed a part of a previously reported sample in order to test anger, impulsivity and temperament/character scales as predictors of aggression and self-aggression in suicide attempters and to compare anger- and aggression-related traits between impulsive and premeditated suicide attempts as well as between violent and non-violent suicide methods. One hundred and eleven consecutively admitted inpatients with a lifetime history of attempted suicide were assessed for anger (State-Trait Anger Expression Inventory, STAXI), aggression (Questionnaire for Measuring Factors of Aggression, FAF) and temperament/character (Temperament and Character Inventory, TCI). Higher aggression scores, as measured by FAF, were predicted by being male, meeting criteria for borderline personality disorder and having higher angry temperament scores as assessed by STAXI; low cooperativeness was also associated with aggression but not after controlling for STAXI scales. TCI dimensions associated with self-aggression were high harm avoidance, high impulsivity and low self-directedness; state anger, inwardly directed anger and inhibition of aggression were also predictors of self-aggression. In conclusion, impulsivity and harm avoidance have emerged as temperament dimensions independently associated with self-aggressive tendencies in personality. Such interactions could explain the correlation between temperament and suicidality but further research is needed. Anger and self-directedness appear to have some effects on suicide attempt.

Comment

Main findings: A large volume of work exists which suggests an association between suicidal behaviour and certain personality traits such as aggression and impulsivity; yet literature on personality traits related to self-aggressive behaviours in suicide attempters has been scarce. Part of a larger study of genetics, this research presents important findings on how psychological correlates of suicidal behaviour, such as impulsivity and anger, impact on the choice of suicide method and level of premeditation. Impulsivity and harm avoidance were found to be associated with self-aggressive behaviour in suicide attempters. Results of this study should be interpreted with care, as the study sample consisted of psychiatric inpatients, who suffer from more severe mental illness than members of the general population.

Implications: Giegling and colleagues suggest that certain personality characteristics such as impulsivity and harm avoidance may predispose individuals to self-aggressive behaviours. Although suicide is an impossible behaviour to individually predict, this finding may be important in identifying which individuals are more likely to engage in impulsive suicide attempts or self-harming behaviour. As such it seems advantageous to place greater emphasis on the identification and treatment of personality traits when implementing suicide prevention screening and interventions, particularly in psychiatric patient populations.

Relationships between body mass index, mental health, and suicidal ideation: population perspective using two methods

RD Goldney, KI Dunn, TM Air, E Dal Grande, TW Taylor (Australia)

Australian and New Zealand Journal of Psychiatry 43, 652–658, 2009

Objective: The aim of the present study was to examine the relationship between body mass index (BMI), mental health, and suicidal ideation in a general population.

Method: Two random and representative samples were drawn from the South Australian population. The interview techniques differed, as did the measures of depression and suicidality. One involved 3034 people in face-to-face interviews, and the other involved 30,214 persons providing information via a computer-assisted telephone interviewing (CATI) system. BMI was classified according to World Health Organization criteria. In face-to-face interviews, major depression was defined by the Primary Care Evaluation of Mental Disorders (PRIME-MD) and suicidal ideation by direct enquiry. In the CATI data, psychological distress was assessed on the Kessler 10 instrument and suicidal ideation by four items on the General Health Questionnaire (GHQ). Data analysis controlled for demographic and physical health variables.

Results: In the face-to-face interviews, the combined obese and morbidly obese men were significantly less likely to have major depression or suicidal ideation than those of a healthy weight. For the telephone interview-derived data, the only significant finding was for overweight women to report less psychological distress than those of a healthy weight.

Conclusions: It is no longer tenable to assume that increased BMI is necessarily associated with major depression, psychological distress, or suicidal ideation. Indeed, it appears protective for some people.

Comment

Main findings: Associations between body mass index (BMI) and mental health have been the focus of several prior studies which have to date yielded contradictory findings — while some research has found that increased BMI elevates the risk for depression and suicidality, other studies have reported that being overweight in fact provides some protection against adverse mental health conditions. Performed on a representative sample of South Australians, the current study explores this association by comparing two independent data collections with different sets of questionnaires, while controlling for the confounding effect of demographic variables and physical illness. The most striking finding of the study is that being overweight was not significantly associated with increased depression, psychological distress or suicidal ideation in either of the two datasets. Shortcomings of the applied methodology included the potential underestimation of weight when assessed via self-report measures, and the lack of information regarding weight perception, an aspect previously suggested as more important than the actual weight of an individual.

Implications: Over the last few decades, the rapid rise in percentages of overweight people in Australia (i.e., the reported ‘obesity epidemic’) has been documented in several national surveys, and is becoming one of the leading national health problems. In 2009, the Australian Bureau of Statistics reported that 25% of Australians aged 18 years and over is obese and a further 37% is overweight (more commonly men than women¹). While Goldney et al’s study does not confirm any increased risk for suicide in obesity, the authors warn about the danger of misinterpreting their results as a recommendation for obesity, concluding instead that the possible protective nature of being overweight warrants further research. It would be beneficial to include measures of social acceptability of overweight people into prospective research designs, particularly in countries with increasing rates of obesity. In fact, it could be hypothesised that this growing ‘epidemic’ has led to a corresponding shift in public perceptions of obesity, lowering feelings of stigmatization associated with obesity and perhaps even diminishing the risk for depression and suicidality.

Endnote

- 1 Australian Bureau of Statistics (2009). *National Health Survey: Summary of results, 2007–2008*. Cat. No. 4364.0. ABS: Canberra.

Suicide in young Norwegians in a life course perspective: population based cohort study

HM Gravseth, L Mehlum, T Bjerkedal, P Kristensen (Norway)

Journal of Epidemiology and Community Health. Published online: 13 August 2009. doi: 10.1136/jech.2008.083485, 2009

Background: Suicide is a leading cause of death in young adults. Several risk factors are well known, especially those related to adult mental health. However, some risk factors may have their origin in the very beginning of life. This study examines suicide in the general Norwegian population in a life course perspective, with a main focus on early life factors.

Methods: We linked several national registers, supplying personal data on biological and social variables from childhood to young adult age. Participants were all Norwegians live born during the period 1967–1976, followed up through 2004. Persons who died or emigrated before the year of their 19th birthday, at which age follow-up started, were excluded. Thus, the study population comprised 610,359 persons, and the study outcome was completed suicide.

Results: 1406 suicides (0.23%) were recorded, the risk being four times higher in males than in females. Suicide risk factors included: not being first born (adjusted HR in males and females (95% confidence intervals): 1.19 (1.05 to 1.36) and 1.42 (1.08 to 1.88)), instability of maternal marital status during childhood, parental suicide (mainly in females), low BMI (only investigated in males), low education, and indications of severe mental illness.

Conclusions: Suicide in young adults may be rooted in early childhood, and the effect is likely to act through several mechanisms, some of which may be linked to the composition and stability of the parental home. A life course perspective may add to our understanding of suicide.

Comment

Main findings: The distinctive prospective methodological design of this study, linking biological and social information from several national registers, allowed authors to follow up a sample of over 600,000 participants for several decades, revealing several new risk factors for suicide. The main findings of the article concern the composition of the family of origin, in particular the birth order (not being first born was found to increase the risk of suicide) and stability of maternal marital status (the actual marital status was less relevant). Further results, aligned with some previous research, highlighted the significant risk associated with mental illness, low education level, parental suicide (in females), and low body mass index (in males). An additional strength of the study was the large number of suicides recorded (more than 1400) and the low attrition rate (less than 3%) which enabled investigators access to an almost complete dataset, which is rarely found in research. Whilst a number of limitations are recognised by the authors, such as lack of information on minor mental health problems and inclusion of only a few adverse life events, this study adds to current knowledge on the association between early life factors and subsequent suicide risk.

Implications: This paper serves as a reminder of the complexities of suicidal behaviour, acknowledging that there are many differing pathways to eventual suicide at various life stages. In addition, it has been suggested that risk factors affecting individuals at different stages in life may be subject to a 'cumulative effect' over time, which can increase an individual's vulnerability to suicide. The present study represents an important contribution to the understanding and identification of early life circumstances and their possible additive affect on the health of adults. However, since the factors identified by the authors are not easily modifiable, the main lesson to be learned from this study is that in many cases the best prevention strategies should focus on reinforcing the role of protective factors in order to counterbalance the influence of suicide risk factors, with increased attention on enhancing protective factors in young children (e.g., interventions to increase self-esteem). Further studies, preferably employing a similar 'life-course perspective' are needed to shed more light on the mechanisms behind the cumulative impact of different life events on suicidal behaviours, which to date are poorly understood.

Dementia and suicidal behavior: a review of the literature

C Haw, D Harwood, K Hawton (UK)

International Psychogeriatrics 21, 440–453, 2009

Background: While dementia is more common in older people and suicide rates in many countries are higher among the elderly, there is some doubt about the association between these two phenomena.

Methods: A search of the major relevant databases was carried out to examine the evidence for this possible association.

Results: The association between dementia and suicide and also non-fatal self-harm did not appear strong but many studies have significant methodological limitations and there are few studies of suicide or self-harm in vascular, frontotemporal, Lewy body and HIV dementia where such behavior might be expected to be more common. Rates of self-harm may be increased in mild dementia and are higher before than after predictive testing for Huntington's disease. Overall, the risk of suicide in dementia appears to be the same or less than that of the age-matched general population but is increased soon after diagnosis, in patients diagnosed with dementia during hospitalization and in Huntington's disease. Putative risk factors for suicide in dementia include depression, hopelessness, mild cognitive impairment, preserved insight, younger age and failure to respond to anti-dementia drugs. Large, good quality prospective studies are needed to confirm these findings.

Conclusions: Further research should be undertaken to examine how rates of suicide and self-harm change during the course of the illness and vary according to the specific subtype of dementia.

Comment

Main findings: International literature on risk of suicide in people diagnosed with dementia has so far yielded some contradictory results. This thorough systematic review performed by Haw and colleagues, considering a total of 128 papers, aimed to describe current knowledge about epidemiology and risk factors for self-harm, suicidal ideation and suicide in people with dementia. Overall, the conclusion suggests that the rate of suicide in the dementia population is lower than that found in the general population, with the exception of Huntington's disease in which a 3-fold higher risk for suicide was found. However, several putative risk factors contributing to suicidal behaviours in this population have been identified, such as diagnosis of mild dementia, good insight into one's own illness, and presence of mental disorders, in particular depression. Further, evidence suggests that the likelihood of nonfatal suicidal behaviours — suicidal ideation and suicide attempts — are also associated with mild cognitive impairment. Due to a general lack of research in the area and methodological limitations inherent in particular to systematic reviews (e.g., inconsistency in used definitions and applied diagnostic measures, small sample sizes), it is difficult to draw any firm conclusions about the association between dementia and suicidal behaviours from this study. The suggestion of the authors, that more high-quality prospective and longitudinal studies are needed to enhance knowledge in this area, is certainly justified.

Implications: Although findings of the presented systematic review are inconclusive, it appears that there may be some worth in close monitoring of patients with dementia, particularly those presenting with mild cognitive impairments. Specifically, it is suggested that regular assessment of cognitive impairment, depressive symptoms, insight into their illness and suicidality should be conducted at regular intervals with dementia sufferers. As suicide appears to be most common early in the illness or in hospitalised patients, particular care should be taken to screen for the aforementioned risk factors in order to facilitate early identification and intervention of at-risk individuals. It may also be of benefit to direct increased attention to the development of comprehensive assessments of suicide risk specifically for use in dementia populations.

Suicide and alcohol: do outlets play a role?

FW Johnson, PJ Gruenewald, LG Remer (USA)

Alcoholism: Clinical and Experimental Research 33, 1–10, 2009

Background: The purpose of this study was to determine whether the number of alcohol outlets in local and adjacent areas, in particular bars, was related over time to completed suicide and suicide attempts. There is evidence both from studies of individuals and time series aggregate studies, mostly at the national level, of substantial alcohol involvement in suicide, but no small-area, longitudinal studies have been carried out. The present study is the first that is both longitudinal and based on a large number of small spatial units, California zip codes, a level of resolution permitting analysis of the relationship between local alcohol access and suicide rates over time.

Method: Longitudinal data were obtained from 581 consistently defined zip code areas over 6 years (1995–2000) using data from the California Index Locations Database, a geographic information system that contains both population and place information with spatial attributes for the entire state. Measures obtained from each zip code included population characteristics (e.g., median age) and place characteristics (e.g., numbers of retail and alcohol outlets) which were related in separate analyses to (i) suicide mortality and (ii) the number of hospitalizations for injuries caused by suicide attempts. The effect of place characteristics in zip code areas adjacent to each of the 581 local zip codes (spatial lags) was also assessed. Analysis methods were random effects models corrected for spatial autocorrelation.

Results: Completed suicide rates were higher in zip code areas with greater local and lagged bar densities; and higher in areas with greater local but not lagged off-premise outlet densities. Whereas completed suicide rates were lower among blacks and Hispanics, completed suicide rates were higher among low income, older whites living in less densely populated areas, that is, rural areas. Rates of suicide attempts were higher in zip code areas with greater local but not lagged bar densities, and higher among low income younger whites living in smaller households and in rural areas. Rates of attempted suicide were also higher among blacks. Completed suicide and suicide attempt rates were lower in zip code areas with greater local restaurant densities; there were no lagged effects for restaurants.

Conclusions: Bar densities in particular appear related to suicide, meaning, because this is an aggregate-level spatial analysis, that suicides, both attempted and completed, occur at greater rates in rural community areas with greater bar densities. Because the suicide rate is highest in rural areas, this study suggests that although the number of completed and attempted suicides is no doubt greater in absolute numbers in urban areas, the suicide rate, both completed and attempted, is greater in rural areas, which draws attention, perhaps much needed, to the problems of rural America.

Comment

Main findings: The incidence of alcohol related suicides may be reduced with a reduction in the number of local bars according to this study which used longitudinal data obtained from multiple areas across California. This study, which used a population-based ecological approach, attempted to determine whether availability of alcohol outlets was associated with higher rates of completed suicide. Results indicated that completed suicide is more frequent in rural areas with large numbers of bars. Some caution must be exercised in the interpretation of these results however as it has been previously demonstrated that suicide rates are highest in rural areas, regardless of access to alcohol outlets.

Implications: Alcohol use is a well known risk factor for suicidal behavior and the results of this study add further evidence for the role of access to alcohol in suicide. Also consistent with the literature, the study findings confirm higher suicide rates in rural areas and suggest several possible mechanisms for this association (such as lack of social contact). Although this study focused on access to alcohol it may be reasonable to assume, as suggested by the authors, that other factors related to living in rural areas may also be influential in the higher suicide rates seen in the country. However, this necessitates further research. What seems clear from this research is the potential benefit of addressing multiple risk factors for suicide in rural communities. For example, one method of achieving this would be to reduce access to means such as placing further restrictions on firearms. Equally, strategies such as reducing the availability of bars in rural areas and increasing access to community mental health services and employment services may prove of benefit in reducing suicidal behavior in the country.

Suicidal thoughts and behaviours among Australian adults: findings from the 2007 National Survey of Mental Health and Wellbeing

AK Johnston, JE Pirkis, PM Burgess (Australia)

Australian and New Zealand Journal of Psychiatry 43, 635–643, 2009

Objectives: To provide an overview of the lifetime and 12 month prevalence of suicidal ideation, suicide plans and suicide attempts for Australian adults as a whole and for particular sociodemographic and clinical population subgroups, and to explore the health service use of people with suicidality.

Method: Data came from the 2007 National Survey of Mental Health and Wellbeing (2007 NSMHWB), a nationally, representative household survey of 8841 individuals aged 16–85 years.

Results: A total of 13.3% of respondents had suicidal ideation during their lifetime, 4.0% had made a suicide plan and 3.2% had made a suicide attempt. The equivalent 12 month prevalence rates were 2.3%, 0.6% and 0.4%, for ideation, plans and attempts, respectively. In general, suicidality in the previous 12 months tended to be relatively more common in women, younger people, those outside the labour force, and those with mental disorders; and less common in those who were married or in de facto relationships, and those with moderate levels of education. A number of the differences in prevalence rates between sociodemographic and clinical subgroups did not reach statistical significance due to data availability constraints and the conservative tests of significance that were used by necessity. These patterns warrant further exploration. Service use for mental health problems was higher among people with suicidality than it was among the general population, but significant numbers of those experiencing suicidality did not receive treatment.

Comment

Main findings: Prior research has suggested that the incidence of suicidal ideation and attempts in the community far exceeds the rates of completed suicide; however, investigating this issue is fraught with difficulties due to the reluctance of individuals to report suicidal behaviour or to access medical care after an attempt. This study explores not only the prevalence of suicidality but also potential risk factors (e.g., mental illness) and associated health service use. Additionally, comparisons were made between the study results and a) the 1997 Australian National Survey of Mental Health and Wellbeing, and b) comparable survey data from the US and New Zealand to determine differences over time and between countries.

Despite several methodological limitations (including the use of retrospective self-report measurement instruments, failure to consider impulsive suicide attempters, and use of extract data) the findings are highly credible, with several implications for future suicide prevention policy development in Australia.

Implications: The research findings suggest that while rates of suicide have been reported as declining in Australia, the prevalence of suicide ideation and attempts has remained stable over the last decade. This indicates that increased detection and treatment of suicide attempts may be an important issue to consider in future policy development and suicide prevention initiatives. Such initiatives may include an emphasis on the training of clinicians to identify and assess suicidal ideation/behaviour, information on appropriate treatment and referral options, streamlining of services and the development of treatment guidelines for mental illness and suicidality.

Additionally, it seems important to address the issue of suicidal behaviour at a primary (population wide) level, with an emphasis on groups known to be at high risk of suicide (e.g. those with mental illness). Attention to the detection and treatment of risk factors, such as substance use and mental illness, in the population may provide additional opportunities for suicide prevention.

The finding that approximately one quarter of Australian individuals who make a suicide attempt do not access health services is a difficult issue to address due to the reluctance of individuals to disclose suicidal behaviour. The authors suggest that it may be advantageous to consider approaches that encourage suicidal individuals in the community to seek treatment, in particular reducing the stigma associated with suicide and increasing access to relevant services.

Who uses firearms as a means of suicide? A population study exploring firearm accessibility and method choice

H Klieve, J Sveticic, D De Leo (Australia)

BMC Medicine. Published online: 24 September 2009. doi: 10.1186/1741-7015-7-52, 2009

Background: The 1996 Australian National Firearms Agreement introduced strict access limitations. However, reports on the effectiveness of the new legislation are conflicting. This study, accessing all cases of suicide 1997–2004, explores factors which may impact on the choice of firearms as a suicide method, including current licence possession and previous history of legal access.

Methods: Detailed information on all Queensland suicides (1997–2004) was obtained from the Queensland Suicide Register, with additional details of firearm licence history accessed from the Firearm Registry (Queensland Police Service). Cases were compared against licence history and method choice (firearms or other method). Odds ratios (OR) assessed the risk of firearms suicide and suicide by any method against licence history. A logistic regression was undertaken identifying factors significant in those most likely to use firearms in suicide.

Results: The rate of suicide using firearms in those with a current license (10.92 per 100,000) far exceeded the rate in those with no license history (1.03 per 100,000). Those with a license history had a far higher rate of suicide (30.41 per 100,000) compared to that of all suicides (15.39 per 100,000). Additionally, a history of firearms licence (current or present) was found to more than double the risk of suicide by any means (OR = 2.09, $P < .001$). The group with the highest risk of selecting firearms to suicide were older males from rural locations.

Conclusions: Accessibility and familiarity with firearms represent critical elements in determining the choice of method. Further licensing restrictions and the implementation of more stringent secure storage requirements are likely to reduce the overall familiarity with firearms in the community and contribute to reductions in rates of suicide.

Comment

Main findings: Significant decreases in use of firearms as a suicide method have been observed in several countries worldwide in the last few decades;¹ a phenomenon which has been linked to introduction of legislation restricting access to firearms, encouraging safer storage of weapons in households and initiating stricter processes for obtaining firearm licences. In Australia, there has been much debate around the efficiency of the National Firearms Agreement, introduced in the late 1990s. In their previous paper, Klieve et al.² argued that rather than firearms laws, more complex factors behind changes in the choice of methods (e.g., social acceptability and attitudes) should be considered as reasons behind the reduction of firearm suicides. This study, linking individual-level data on a large sample of QLD suicide cases and firearm licence history over an 8-year period, is therefore timely in its exploration of the interrelationship between accessibility to means and risk for suicide.

Perhaps the most striking result is that holding a current firearms licence or having had one in the past not only increases the risk for committing suicide by this particular method (more than tenfold, compared to persons who never owned a licence), but also increases the risk for suicide by any method. Also, identification of a ‘profile’ of a victim of suicide by firearms, which is recognised to be the most lethal mean of suicide, carries important implications for targeted suicide prevention strategies.

Implications: Despite the fact that the use of firearms has dropped considerably in Australia (for example, in 1990 36% of suicide were committed by this method, while in 2006 only 10.2%), this study carries important practical implications not only for Queensland but also other milieus, particularly those with a high prevalence of firearm-related suicide deaths.

The findings that more than half of the study sample who committed suicide with a firearm had never owned a licence indicates that access to firearms is possible for a vast number of persons, either through their social network, or, more commonly, from their own household. More attention should therefore be placed in assuring safer storage of firearms in houses or on farming properties. Further, licensing restrictions are likely to contribute to reductions in firearms suicides, not only because it would prevent rapid access to such lethal means, but also, equally important, because this measure would play a role in reducing familiarity with firearms in younger generations — a factor found to play a vital role in choosing a suicide method.

Endnotes

- 1 Ajdacic-Gross V, Killias M, Hepp U, Gadola E, Bopp M, Lauber C, Schnyder U, Gutzwiller E, Rössler W (2006). Changing times: a longitudinal analysis of international firearm suicide data. *American Journal of Public Health* 96, 1752–1755.
- 2 Klieve H, Barnes M, De Leo D (2009). Controlling firearms use in Australia: has the 1996 gun law reform produced the decrease in rates of suicide with this method? *Social Psychiatry and Psychiatric Epidemiology* 44, 285–292.

Suicidal ideation and behaviour in the aftermath of marital separation: gender differences

K Kolves, N Ide, D De Leo (Australia)

Journal of Affective Disorders. Published online: 9 May 2009. doi: 10.1016/j.jad.2009.04.019, 2009

Background: The limited studies on the consequences of the separation process on suicidal behaviour seem to indicate that separated people are at increased risk of suicide.

Aims: The current study aims to compare suicidality immediately after the separation among males and females, and to analyse possible differences in predictors of serious suicidal ideation.

Method: Separated males and females who had contacted relationship counselling services, help-line services, and a variety of support and self-help groups were asked to participate in the study. Participants were required to be 18 years old or older, and have separated from their married/de facto partner within the previous 18 months but not yet divorced. For categorical variables odds ratios with 95% CI and for continuing variables *t* tests were calculated. Multinomial logistic regression was applied to estimate the independent contribution of significant predictors.

Results: Separated males ($n = 228$) were at an increased risk of developing suicidality during the separation process compared to separated females ($n = 142$), even after adjusting for age, education, employment and children with the separated partner. The psycho-social risk factors identified in the development of serious suicidal ideation were mental health problems (during the previous year), history of suicide attempts and internalised shame. For separated males, significant predictors also included lower education, separation-related shame and stress from legal negotiations, especially about property/financial issues.

Conclusions: The findings provide a better understanding of suicidal behaviours in the aftermath of marital or de facto separation. This knowledge could be used in the implementation of future suicide prevention strategies in people who are going through the process of a marital/de facto separation.

Comment

Main findings: Males in the process of marital or de facto separation are at high risk of suicidal ideation or attempts according to this Australian study. Another remarkable finding was that shame appeared to be a strong predictor of serious suicidal ideation in both males and females. Also of interest was the fact that the study identified several risk factors in the development of suicidal ideation and behaviour in separated individuals, including a history of previous suicidality, psychiatric history, shame, low level of education and stress relating to the separation process (in particular legal negotiations).

The main innovation of this study concerned the focus on a topic which to date has been largely neglected in the suicide literature. Despite a few methodological limitations (e.g., selection bias, use of a convenience sample, self-report format), the findings are highly credible and provide practical implications for prevention of suicide in separated individuals, especially males.

Implications: The research findings are important in providing further evidence for separation as a risk factor in the development of suicidality, especially in males. Males are often reluctant to seek help for mental health issues and the shame and stigma associated with relationship breakdown may act as an additional barrier to help-seeking behaviours. For these reasons, it may be important to incorporate suicide screening practices into relationship counselling and help-line services in order to identify those individuals most at risk. Additionally, it could be of benefit to provide community education on the potential negative effect of separation and additional psychological support to separating individuals, with priority given to males. The study findings linking shame and suicidality are interesting, and point to a need for clinicians working with separating individuals to specifically address issues of stigma and shame relating to relationship breakdown and subsequent help-seeking behaviours.

Lithium's antisuicidal efficacy: elucidation of neurobiological targets using endophenotype strategies

CE Kovacsics, II Gottesman, TD Gould (USA)

Annual Review of Pharmacology and Toxicology 49, 175–198, 2009

Lithium used as a drug treatment for major mental disorders such as bipolar disorder and depression is effective in reducing the risk of both attempted and completed suicide. However, the mechanisms underlying lithium's antisuicidal actions are not yet known, limiting the development of novel lithium-mimetic compounds that may help reduce suicide risk with fewer undesirable side effects. Suicide is a complex behavior, complicated to study in humans, and impossible to fully reproduce in animal models. The endophenotype approach, by which quantitative measures of neurobiological function are used to assess and subclassify psychiatric illness, may present a path to new discoveries. Aggression and impulsivity are candidate endophenotypes strongly associated with suicide; we review the evidence supporting aggression and impulsivity as suicide endophenotypes, as well as the effects of lithium on these constructs in both humans and rodents. Examining the mechanisms that contribute to lithium's antiaggressive and antiimpulsive effects may assist in understanding how lithium acts to reduce the risk of suicide and in elucidating the neurobiological underpinnings of suicidal behavior.

Comment

Main findings: A wealth of evidence exists linking the use of lithium to reductions in both fatal and non-fatal suicidal behaviour; however, to date research has failed to identify the exact mechanism by which this effect occurs. This comprehensive review is therefore unique in attempting to provide an answer to the question of how lithium acts on the brain to reduce suicide risk. Authors suggest that there may be a multi-modal pathway between lithium and reduction in suicidality, with strong evidence for a positive effect of the drug on aggression, and weaker evidence for a reduction in impulsivity (both being known risk factors for suicidal behaviour).

Implications: Understanding how lithium reduces suicidal behaviour is an important step in the development of improved medications for suicidal individuals with the potential to lead to further reductions in suicide rates. The results of this review provide further convincing evidence of the benefit of lithium in the treatment of suicidal patients, in particular individuals presenting with aggression and impulsivity, which are often difficult to treat due to the potential for unplanned suicide attempts.

This paper serves as a reminder of the complexities of treatment approaches to suicidal behaviour, highlighting the complex and varied anti-suicidal properties of lithium. Further exploration of key biological factors (such as enzymes) is still needed to identify and isolate the exact components of the drug which contribute to reduced suicidality.

Suicide prevention programs in the schools: a review and public health perspective

DN Miller, TL Eckert, JJ Mazza (USA)

School Psychology Review 38, 168–188, 2009

The purpose of this article is to provide a comprehensive review of school-based suicide prevention programs from a public health perspective. A literature review of empirical studies examining school-based suicide prevention programs was conducted. Studies were required to contain information pertaining to the implementation and outcomes of a school-based program designed to address suicidal behaviors among children and youth. A total of 13 studies was identified. Most of the studies (77%) were classified as universal suicide prevention programs ($n = 10$), with the remaining studies classified as selected suicide prevention programs ($n = 3$). Studies were coded based on key methodological features of the Task Force on Evidence-Based Interventions in School Psychology Procedural and Coding Manual (Kratochwill & Stoiber, 2002). The highest methodology ratings were obtained by two universal suicide prevention programs (Klingman & Hochdorf, 1993; LaFromboise & Howard-Pitney, 1995) and one selected prevention program (Randell, Eggert, & Pike, 2001), although the selected suicide prevention programs demonstrated proportionally more key methodological features than the universal suicide prevention programs. However, only 2 of the 13 studies reviewed demonstrated strong evidence for statistically significant effects on primary outcome measures. Very few studies provided promising evidence of educational/clinical significance (7.6%), identifiable components linked to statistically significant primary outcomes (23.1%), and program implementation integrity (23.1%). Furthermore, no studies provided evidence supporting the replication of program effects. The implications of these results for practice are discussed as well as needs for future research.

Comment

Main findings: Suicide remains high in young people and it is reasonable to assume that school suicide prevention programs may offer an effective method of screening and intervening with large groups of young people. International literature on the effectiveness of school suicide prevention programs in reducing suicidal behaviour has so far yielded contradictory results, and consequently there is a need to determine which (if any) programs are beneficial in preventing suicide in children and adolescents. This comprehensive review uses a public health approach to provide a systemic synthesis of the available evidence for the effectiveness of 13 US school suicide prevention programs.

Despite noting considerable methodological limitations of the studied programs and the difficulty in drawing conclusions based on the available data, the authors provide some useful implications for facilitating school-based suicide prevention programs.

Implications: According to the findings, the inclusion of accurate information regarding suicidal behaviour and an emphasis on teaching students problem solving techniques appear to be key features of effective school based prevention programs. Additionally, as the authors suggest, it may be beneficial to address suicide as just one issue in a broader multi-layered preventative approach which would target known risk factors such as mental illness and drug use, rather than deliver programs specific to the prevention of suicide. Finally, it seems clear there is a need for further research in (a) evaluating the effectiveness of school programs in the reduction of suicide, in particular programs for which evidence of efficacy is currently limited such as screening programs, (b) methods to increase the acceptability of prevention programs in schools and, (c) the most cost-effective methods of delivering prevention programs to large and diverse groups of students.

Copycat effects after media reports on suicide: a population-based ecologic study

T Niederkrotenthaler, B Till, ND Kapusta, M Voracek, K Dervic, G Sonneck (Austria)

Social Science & Medicine. Published online: 12 August, 2009. doi: 0.1016/j.socscimed.2009.07.041, 2009

This study aimed to investigate whether the risk of increased suicide occurrence after reports on suicide is associated with the social characteristics of the reported suicides and whether this varies with similarity between the reported suicides and suicides in the population. We collected reports on all 179 individual suicides named in the 13 largest Austrian nationwide newspapers from 1996 to 2006. Information on social status and sociodemographic characteristics of the reported suicides, on certainty of labelling the death as a suicide, and on the suicide methods applied were extracted from the articles. We conducted logistic regression analyses, with the increase of post-report suicides within 28 days after the reports as dependent variable. In model 1, the increase of suicides that matched the reported individual suicide with regard to age group, sex and suicide method was used as outcome variable. In model 2, the increase of suicides that were different from the reported suicide with regard to these characteristics was the outcome. In model 3, the post-report increase of total suicides was the dependent variable. Celebrity status of the reported suicide, age of the reported suicide between 30 and 64 years, and definitive labelling as a suicide were associated with an increased risk of a post-report increase of similar suicides; criminality (i.e., the individual was reported as suspected or convicted of crime) of the reported suicide was associated with a lower risk of a post-report increase. In dissimilar suicides, none of the variables was associated with a post-report increase of suicides. Celebrity status of the reported suicide was the only predictor of a post-report increase of total suicides. The findings support the hypothesis that social variables of reported suicides impact the risk of post-report copycat behaviour. Evidence of copycat effects seemed to be strongest in suicides that were similar to the respective model with regard to age group, sex, and suicide method.

Comment

Main findings: To date, numerous studies have demonstrated that media reports/portrayals of suicide are strongly linked to imitative suicidal behaviours, in particular when deaths are romanticized or dramatized, and when they report of celebrity suicides. The presented study by an Austrian team of researchers contributes to the existing knowledge by being the first to examine the possible associations between social status of a suicide victim and subsequent probability of an increase in suicide in the population. Results showed celebrity status to be the only predictor of an increase in suicides in the post-suicide period (up to 28 days after the report appeared in the media), whereas criminal status of the victim predicted a decrease. An additional finding which

carries important preventative implications is the fact that the 'copycat effect' seems to be most pronounced in subpopulations similar to the reported suicide in terms of age, gender and suicide method.

Methodological strengths of this ecological study included a time frame spanning 10 years, and subsequently inclusion of a considerable number of suicide reports that appeared in the main Austrian printed media. Also, Austria has one of the lowest rates of undetermined deaths in Europe, rendering the collection of suicide data and research findings presented here even more reliable. However, it should be noted that the methodological design of the study prevented the authors from controlling for factors other than media reporting that may also have influenced increases in suicide

Implications: Clearly, there is a need for additional well-designed studies identifying the impacts of media reporting on consequent changing suicidal behaviours in order to develop new and improve existing media guidelines for the responsible reporting of suicide. In Australia, such concerns led the Australian government to introduce the Mindframe National Media Initiative in an effort to encourage responsible, accurate, and sensitive media portrayal of suicide. This resulted in the release of a resource entitled *Reporting Suicide and Mental Illness* (Commonwealth of Australia, 2002)¹, which carries a unique value in that media representatives were closely involved in development of the document. Some of the recommended principles include: avoidance of sensationalizing or glamorizing suicide or giving it undue prominence, avoidance of providing specific details about suicide, public education, and, where possible, the provision of help/support to vulnerable readers/viewers.

Pirkis² presented important findings on media reporting of suicide in Australia, comparing newspaper reports between 2000/01 and 2006/07, which demonstrated that while there has been an almost twofold increase in reporting over the seven year period, the quality of reporting has improved in that it has become more sensitive and appropriate to the issue. Despite these encouraging findings from Australia, the authors of the current study conclude that there is still a great need for improvements in media reporting. Specifically, one area that warrants further research is the findings that reports about middle-aged individuals appear to have been followed by a greater number of suicides than in any other demographic group; future research is needed to test this link on younger age groups. This is of particular significance as children and adolescents are known to be more prone to identify with celebrities, and it is plausible to assume may be at greater risk for imitative behaviours after their idol dies of suicide.

Endnotes

- 1 Commonwealth of Australia (2002). *Reporting suicide and mental illness: A resource for media professionals*. Canberra: Commonwealth of Australia.
- 2 Pirkis J, Dare A, Blood RW, Rankin B, Williamson M, Burgess P, Jolley D (2009). Changes in media reporting of suicide in Australia between 2000/01 and 2006/07. *Crisis* 30, 25–33.

Cross-national analysis of the associations among mental disorders and suicidal behavior: findings from the WHO World Mental Health Surveys

MK Nock, I Hwang, N Sampson, RC Kessler, M Angermeyer, A Beautrais, G Borges, E Bromet, R Bruffaerts, G de Girolamo, R de Graaf, S Florescu, O Gureje, JM Haro, C Hu, Y Huang, EG Karam, N Kawakami, V Kovess, D Levinson, J Posada-Villa, R Sagar, T Tomov, MC Viana, DR Williams

PLoS Medicine. Published online: 11 August 2009. doi: 10.1371/journal.pmed.1000123, 2009

Background: Suicide is a leading cause of death worldwide. Mental disorders are among the strongest predictors of suicide; however, little is known about which disorders are uniquely predictive of suicidal behavior, the extent to which disorders predict suicide attempts beyond their association with suicidal thoughts, and whether these associations are similar across developed and developing countries. This study was designed to test each of these questions with a focus on nonfatal suicide attempts.

Methods and findings: Data on the lifetime presence and age-of-onset of Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) mental disorders and nonfatal suicidal behaviors were collected via structured face-to-face interviews with 108,664 respondents from 21 countries participating in the WHO World Mental Health Surveys. The results show that each lifetime disorder examined significantly predicts the subsequent first onset of suicide attempt (odds ratios [ORs] = 2.9–8.9). After controlling for comorbidity, these associations decreased substantially (ORs = 1.5–5.6) but remained significant in most cases. Overall, mental disorders were equally predictive in developed and developing countries, with a key difference being that the strongest predictors of suicide attempts in developed countries were mood disorders, whereas in developing countries impulse-control, substance use, and post-traumatic stress disorders were most predictive. Disaggregation of the associations between mental disorders and nonfatal suicide attempts showed that these associations are largely due to disorders predicting the onset of suicidal thoughts rather than predicting progression from thoughts to attempts. In the few instances where mental disorders predicted the transition from suicidal thoughts to attempts, the significant disorders are characterized by anxiety and poor impulse-control. The limitations of this study include the use of retrospective self-reports of lifetime occurrence and age-of-onset of mental disorders and suicidal behaviors, as well as the narrow focus on mental disorders as predictors of nonfatal suicidal behaviors, each of which must be addressed in future studies.

Conclusions: This study found that a wide range of mental disorders increased the odds of experiencing suicide ideation. However, after controlling for psychiatric comorbidity, only disorders characterized by anxiety and poor impulse-control predict which people with suicide ideation act on such thoughts. These findings provide a more fine-grained understanding of the associations between mental disorders and subsequent suicidal behavior than previously available and indicate

that mental disorders predict suicidal behaviors similarly in both developed and developing countries. Future research is needed to delineate the mechanisms through which people come to think about suicide and subsequently progress from ideation to attempts

Comment

Main findings: While it is well known that mental illness is associated with the majority of completed suicides,¹ this is the first study to investigate specifically which psychiatric illnesses uniquely predict suicide attempts and thus represents a significant contribution to the literature about suicide risk factors. Several strengths of the study worth noting include the assessment of lifetime non-fatal suicidal behaviour rather than current suicidality, the examination of multiple different psychiatric diagnoses, the large study sample, and the ability of the researchers to control for possible confounding factors (such as comorbidity). Although Australia was not one of the countries under investigation, the cross-national nature of the study produces results which are highly generalisable to the multinational Australian context.

Implications: The study results have important implications for future suicide prevention initiatives. Results indicate that, after controlling for psychiatric comorbidity, impulse-control disorders (including conduct disorder, bipolar disorder and substance use disorders) and anxiety disorders (in particular PTSD), but not depression, were found to be independent predictors of both planned and unplanned suicide attempts. An obvious benefit of predicting unplanned suicide attempts is the ability to more effectively target preventative efforts to a subgroup of individuals who are traditionally difficult to treat due to the greater unpredictability of suicide in this population.

Interestingly, PTSD was found to be a significant predictor of suicide attempts in both developing and developed countries, implying that identification and treatment of this high-risk group has the potential to reduce rates of nonfatal suicidal behaviour.

Consistent with existing research, study findings indicated that co-morbidity of psychiatric illnesses should be considered a warning sign of future suicide attempt, with the likelihood of a future suicide attempt increasing with the number of psychiatric diagnoses. As such, it seems advantageous to (a) conduct regular suicide risk assessments in individuals with co-morbid disorders, and (b) adopt a multi-modal treatment approach which addresses each of the comorbid disorders rather than just one disorder. Furthermore, confirmation from this study that mental illness is strongly associated with suicidal behaviour indicates that there may be a benefit in increasing expenditure on population wide prevention initiatives, focusing on the identification and treatment of mental illness.

Endnote

- 1 Mortensen P, Agerbo E, Erikson T, Qin P, Westergaard-Nielsen N (2000). Psychiatric illness and risk factors for suicide in Denmark. *Lancet* 355, 9-12.

Does unemployment increase suicide rates? The OECD panel evidence

Y-H Noh (Korea)

Journal of Economic Psychology 30. 575–582, 2009

Previous studies of whether unemployment increases suicide rates gave mixed results, none of them controlled for the interaction between unemployment and income. This paper tests the hypothesis whether the relationship between unemployment and suicide rates vary according to the level of real per capita GDP. We use the cross-country panel fixed effects approach to exclude cross-sectional variations but exploit time-series ones. We support that higher income is associated with higher suicide rates. In particular, the evidence shows that the implied effect of unemployment on suicide rates is positive for countries with higher income. Actually, for countries with lower-income levels, there is a negative impact of unemployment on suicides.

Comment

Main findings: Unemployment has long been considered a risk factor for suicidal behaviour; however, evidence for this association has not been conclusive. This study is the first to examine the relationship between suicide rates and unemployment while controlling for the influence of income, and represents a valuable addition to the literature at a time of international economic uncertainty. A further advantage of the study was the longitudinal design and inclusion of multiple high and low income countries, allowing exploration of between country differences and also variations in suicide rates over time. Study results confirm that unemployment does influence suicide rates; however, this association appears to be dependent on the level of income in the country in question. In high income countries, such as Australia, unemployment increases suicide rates, while the opposite effect is observed in low income countries.

Implications: In April 2009, the Reserve Bank declared that the Australian economy has entered a recession for the first time in almost twenty years, with a contraction of 0.5 per cent in December 2008¹. This study is therefore timely and the findings suggest that economic downturn is not necessarily associated with increases in the suicide rate in certain countries. In Australia, a country with a robust income, results of this study suggest that a higher suicide rate would be expected to commensurate with the higher unemployment currently noted across the country. It would be therefore reasonable to assume that providing suicide and mental health assessment and treatment to individuals who are recently unemployed may have the potential to minimise the expected elevation in the national suicide rate, associated with the current economic downturn.

Endnote

- 1 Curren E (2009). RBA governor declares Australia in recession. *Australian Business with the Wall Street Journal*. Retrieved 01/10/2009 from: <http://www.theaustralian.news.com.au/business/story/0,28124,25364776-5018001,00.html>

Lithium levels in drinking water and risk of suicide

H Ohgami, T Terao, I Shiotsuki, N Ishii, N Iwata (Japan)

British Journal of Psychiatry 194, 464–465, 2009

Although lithium is known to prevent suicide in people with mood disorders, it is uncertain whether lithium in drinking water could also help lower the risk in the general population. To investigate this, we examined lithium levels in tap water in the 18 municipalities of Oita prefecture in Japan in relation to the suicide standardised mortality ratio (SMR) in each municipality. We found that lithium levels were significantly and negatively associated with SMR averages for 2002–2006. These findings suggest that even very low levels of lithium in drinking water may play a role in reducing suicide risk within the general population.

Comment

Main findings: While lithium represents a well-established treatment in psychiatry and its anti-suicidal effects in patients with mood disorders have been confirmed in several meta-analyses, recently new research has suggested that lithium may work at levels lower than the prescribed therapeutic ranges, implying that there may be some benefit of this drug in general populations rather than restricting use to psychiatric patients.¹ In this short report, Ohgami and colleagues present negative associations between lithium levels in drinking water and standardised mortality ratios in municipalities of one Japanese prefecture, noting a dose-response relationship within even very low lithium levels.

Implications: It could be supposed that one of the implications of these intriguing results may in the future justify administration of an adequate dose of lithium to tap water. However, first the study would have to be replicated in other environments and the observed associations confirmed by adjusting for confounding factors, such as psychosocial and economical factors. The suggested low levels of lithium in this study are far below levels required to produce lithium intoxication or other side effects, and therefore potentially offer an easy, cost-effective and substantial strategy for future world-wide suicide prevention.

Endnote

- 1 Müller-Oerlinghausen B, Felber W, Berghöfer A, Lauterbach E, Ahrens B (2005). The impact of lithium long-term medication on suicidal behavior and mortality of bipolar patients. *Archives of Suicide Research* 9, 307–319.

Suicide in recently released prisoners: a case-control study

D Pratt, L Appleby, M Piper, R Webb, J Shaw (UK)

Psychological Medicine. Published online: 1 September 2009. doi:10.1017/S0033291709991048, 2009.

Background: Recently released prisoners are at markedly higher risk of suicide than the general population. The aim of this study was to identify key risk factors for suicide by offenders released from prisons in England and Wales.

Method: All suicides committed by offenders within 12 months of their release from prison in England and Wales, between 2000 and 2002, were identified. One control matched on gender and date of release from prison was recruited for each case. Univariate and multivariate logistic regression modelling identified key independent risk factors for suicide.

Results: Of 256,920 released prisoners, 384 suicides occurred within a year of release. Factors significantly associated with post-release suicide were increasing age over 25 years, released from a local prison, a history of alcohol misuse or self-harm, a psychiatric diagnosis, and requiring Community Mental Health Services (CMHS) follow-up after release from prison. Non-white ethnicity and a history of previous imprisonment were protective factors.

Conclusions: There is a need to improve the continuity of care for people who are released from prison and for community health, offender and social care agencies to coordinate care for these vulnerable individuals.

Comment

Main findings: Prisoners are traditionally a high risk group for suicide although to date little is known regarding specific risk factors for suicidal behavior in prisoners after release from prison. This UK study confirms that prisoners are at high risk of suicide in the first year post release. Additionally, several risk and protective factors for suicide in this group were identified. Consistent with prior research specific risk factors included older age, release from a local prison, history of substance abuse, mental illness or suicidal behavior and requiring follow-up mental health service care. Interestingly, and in contrast to Australia, non-white ethnicity was found to be a protective factor against suicide. The large, nationally representative sample, longitudinal case-control design and number of variables studied (e.g. history of substance use and self-harm) increases the reliability of the research results.

Implications: These research results may have important implications for future suicide prevention initiatives in Australian prison populations and for those recently released from prison. The identified risk factors are markers for those most at risk of engaging in suicidal behavior (both while in prison and post release) and should be used to identify those individuals who will require more intensive follow-up care in the period following release. Some suggested strategies for ensuring appropriate levels of transitional care may include allocation of case managers to recently released prisoners, a strategy which has met with some success in recently released hospital inpatients (another group recognized to be at high risk of suicide) in Australia¹. Additionally, development of release plans tailored to the needs of individual prisoners which specify areas in which intensive care is needed (e.g. mental health services), and integration and improved communication between community services (such as substance abuse services, Centrelink, Community mental health) may ensure the delivery of relevant and optimal care during the post release period.

Endnote

- 1 De Leo D, Heller T (2007). Intensive case management in suicide attempters following discharge from inpatient psychiatric care. *Australian Journal of Primary Health* 13, 49–59.

Hospital admission for non-fatal poisoning with weak analgesics and risk for subsequent suicide: a population study

P Qin, P Jepsen, B Nørgård, E Agerbo, PB Mortensen, H Vilstrup, HT Sørensen (Denmark)
Psychological Medicine 39. 1867–1873, 2009

Background: Poisoning with weak analgesics is a major public health problem because of easy accessibility of the compounds; however, few studies have investigated their influence on subsequent suicide in the context of subjects' psychiatric status and other factors.

Method: This nested case-control study was based on the entire Danish population including all 21 169 suicide cases and 423 128 matched population controls. Data on hospital admissions for poisoning and confounding factors were retrieved from national medical and administrative registries. Conditional logistic regression was used to compute relative risk.

Results: A prior hospital admission for poisoning with weak non-opioid analgesics significantly increased the risk of subsequent suicide [crude incidence rate ratio (IRR) 24.7, 95% confidence interval (CI) 22.1–27.6], and the effect of paracetamol poisoning was substantially stronger than that of poisoning with salicylates or non-steroidal anti-inflammatory drugs (NSAIDs). This association could not be explained by confounding from socio-economic or psychiatric factors. The elevated risk was extremely high during the first week following the overdose (adjusted IRR 738.9, 95% CI 173.9–3139.1), then declined over time but still remained significantly high 3 years later (adjusted IRR 4.2, 95% CI 3.5–5.0). Moreover, a history of weak analgesic poisoning significantly interacted with a person's psychiatric history, increasing the risk for subsequent suicide substantially more for persons with no history of psychiatric hospitalization than did it for those with such a history.

Conclusions: A history of nonfatal poisoning with weak analgesics is a strong predictor for subsequent suicide. These results emphasize the importance of intensive psychiatric care of patients following overdose.

Comment

Main findings: Paracetamol is a cheap and easily accessible medication and is the most common drug in overdoses which lead to hospitalisation.¹ In Australia the precise incidence of paracetamol overdose in the community is unknown due to the reluctance of individuals to present to hospital following overdose. Death directly due to paracetamol overdose is rare; however, to date no research has investigated the subsequent risk of completed suicide in this subgroup. This study is therefore noteworthy in its investigation of this neglected topic.

Access to a unique and comprehensive data set comprising the entire Danish population (retrieved from national registries) was a methodological strength of this study, resulting in conclusions which were highly credible. Still, results should be interpreted with care as no information could be obtained regarding overdose cases which did not present to hospital, and there was a failure to control for physical illnesses which require large dosages of analgesic medications.

Implications: One of the most remarkable findings was that individuals who overdose on weak analgesics remain at substantially higher risk for completed suicide up to 3 years after the nonfatal overdose. It is suggested that the risk for suicide may be reduced in this subgroup by strategies such as timely and regular post-discharge follow-up of suicide attempters, implementation of suicide assessments at intervals during the first few years after an overdose, and extension of the period of follow-up care following treatment of an overdose, for example via intensive psychiatric care over several years. Furthermore, it is reasonable to assume that easy access to analgesics increases the likelihood of these medications being used in a suicide attempt. In Australia, paracetamol is readily available at supermarkets, chemists and service stations; the study results indicate that consequently there may be some potential benefit in restricting availability of this drug as part of a national suicide prevention strategy. Specifically it was recommended that drug availability be minimised through further reduction of pack sizes and restriction of places of sale.

Endnote

- 1 Buckley N, Eddleston M (2005). Paracetamol (acetaminophen) poisoning. *Clinical Evidence* 14, 1738–1744.

Frequent change of residence and risk of attempted and completed suicide among children and adolescents

P Qin, PB Mortensen, CB Pedersen (Denmark)

Archives of General Psychiatry 66, 628–632, 2009

Context: In contemporary society, people change their place of residence frequently. However, large-scale population studies documenting the influence of frequent moves on mental health among children and adolescents are limited.

Objective: To evaluate the influence of frequent change of residence on risk of attempted and completed suicide among children and adolescents.

Design, setting, and participants: We used data from Danish longitudinal population registries to identify all children born from 1978 to 1995 in Denmark; 4160 of these children attempted suicide, and 79 completed suicide at ages 11 to 17 years. We adopted a nested case-control design and recruited 30 controls per case, matched individually on sex, age, and calendar time.

Main outcome measure: We used conditional logistic regression to compute the incidence rate ratio for attempted and/or completed suicide associated with the number of previous changes of residence.

Results: We observed a significantly increased risk of attempted suicide associated with changes of living address, and there was an apparent dose-response trend for this association — the more frequent incidence of moving, the higher the risk for attempted suicide. This trend remained the same after controlling for possible confounding factors at birth, ie, birth order, birthplace, link to a father, and parental age at birth. However, it was somewhat attenuated, but still significant, after controlling for the child's own psychiatric morbidity and loss of a mother or father, as well as parental psychiatric history. The observed association was neither modified by sex nor age at the time of moving. Further analyses of suicide completers demonstrated a similar association between change of residence and completed suicide.

Conclusions: Frequent change of residence may induce distress among children and, therefore, increase their risk of suicidal behavior. More research is needed to explore this association.

Comment

Main findings: Children and adolescents who frequently move home are more likely to subsequently attempt or complete suicide, according to this Danish study. Furthermore, it was found that suicide risk increased with the number of house moves, even after taking into account the impact of psychopathology (both parental and in the study subjects), loss of a parent and birth order. This landmark study is the first to use longitudinal population data to examine the influence of frequent moves on later suicidal behaviour of young people. Furthermore, the large sample, recruited from Danish national registers, enabled the researchers to utilise a comprehensive and reliable dataset of information and allowed for control of several possibly influential variables (such as birth order).

Implications: This study presents evidence for the existence of a little known risk factor for suicide attempts and completions. As suggested by the authors, there may be some benefit in assessing children for distress after a house move in order to identify individuals who may require additional support during the settling-in period. It may also be worth considering encouraging parents to involve children in all aspects of relocation, in particular (where developmentally appropriate) in decision-making, packing and planning the move. Additionally, according to the authors, it appears that the best approach to assisting children to adapt after a house move involves teamwork with schools, parents and child care centres, each playing a role in identifying children in distress, offering induction activities (such as group work) and providing additional support to children who have moved multiple times.

Obviously, the pathways between moving house and later distress in young people are many and varied, and as such the call of the authors for further research in the area is certainly justified.

Risk of suicidality in clinical trials of antidepressants in adults: analysis of proprietary data submitted to US Food and Drug Administration

M Stone, T Laughren, ML Jones, M Levenson, PC Holland, A Hughes, TA Hammad, R Temple, G Rochester (USA)

British Medical Journal 339, b2880, 2009

Objective: To examine the risk of suicidal behaviour within clinical trials of antidepressants in adults.

Design: Meta-analysis of 372 double blind randomised placebo controlled trials.

Setting: Drug development programmes for any indication in adults.

Participants: 99,231 adults assigned to antidepressants or placebo. Median age was 42 and 63.1% were women. Indications for treatment were major depression (45.6%), other depression (4.6%), other psychiatric disorders (27.6%), and non-psychiatric disorders (22.2%).

Main outcome measures: Suicidal behaviour (completed suicide, attempted suicide, or preparatory acts) and ideation.

Results: For participants with non-psychiatric indications, suicidal behaviour and ideation were extremely rare. For those with psychiatric indications, risk was associated with age. For suicidal behaviour or ideation and for suicidal behaviour only, the respective odds ratios were 1.62 (95% confidence interval 0.97 to 2.71) and 2.30 (1.04 to 5.09) for participants aged < 25, 0.79 (0.64 to 0.98) and 0.87 (0.58 to 1.29) for those aged 25–64, and 0.37 (0.18 to 0.76) and 0.06 (0.01 to 0.58) for those aged ≥ 65. When age was modelled as a continuous variable, the odds ratio for suicidal behaviour or ideation declined at a rate of 2.6% per year of age (–3.9% to –1.3%, $P = .0001$) and the odds ratio for suicidal behaviour declined at a rate of 4.6% per year of age (–7.4% to –1.8%, $P = .001$).

Conclusions: Risk of suicidality associated with use of antidepressants is strongly age dependent. Compared with placebo, the increased risk for suicidality and suicidal behaviour among adults under 25 approaches that seen in children and adolescents. The net effect seems to be neutral on suicidal behaviour but possibly protective for suicidal ideation in adults aged 25–64 and to reduce the risk of both suicidality and suicidal behaviour in those aged ≥ 65.

Comment

Main finding: Antidepressant medication is a crucial part of treatment for many mental disorders, but a large volume of research has been published linking use of these medications with increased likelihood of suicidal behaviour in certain groups, in particular children and adolescents. As such, this is an important meta-analysis, utilising data from 372 double-blind randomised controlled trials which attempted to ascertain whether use of antidepressant medication is associated with risk of suicidal behaviour. Results of the meta-analysis suggest that suicide risk in antidepressant users declines in parallel with age, with elevated risk found in younger users (< 25 years) and the lowest suicide risk in older age groups (65+).

A strength of this article was the ability to apply a uniform approach across a large number of studies (including unpublished primary clinical trial data which are rarely used in meta-analyses), providing results which seem rather convincing. It should be noted, however, that there were several limitations to the meta-analysis. For example, the patients at highest risk of suicide are generally not included in clinical trials; most of the trials analyses were conducted over short periods of time, and due to the low incidence of completed suicide in the studies it was not possible to determine causality between antidepressant use and suicide. Further exploration of suicide risk in long-term antidepressant users is therefore needed. Additionally, more research is necessary on the suicide risk specific to different types of anti-depressant medications, in order to further minimise the potential for adverse treatment outcomes.

Implications: The study results have important implications for the treatment of individuals with mental disorders, and point to the importance of tailoring psychotropic medications to the age of the patient. For example, use of antidepressants in older patients may prove a patient tolerable and cost-effective method of preventing suicidal behaviour, whilst in the younger age groups other forms of treatment should be considered. Moreover, as the authors suggest, it may be advantageous to expand the current information available to consumers regarding antidepressants to include the potential risks involved with antidepressant use in the younger age groups. Additionally, efforts could be made to educate the community and clinicians on the interrelationships between mental illness and suicide with strategies such as providing clinicians with guidelines for appropriate dosages of antidepressant medications and referral and treatment options.

Does deinstitutionalization increase suicide?

J Yoon, TA Bruckner (USA)

Health Services Research 44. 1385–1405, 2009

Objectives: (1) To test whether public psychiatric bed reduction may increase suicide rates; (2) to investigate whether the supply of private hospital psychiatric beds—separately for not-for-profit and for-profit—can substitute for public bed reduction without increasing suicides; and (3) to examine whether the level of community mental health resources moderates the relationship between public bed reduction and suicide rates.

Methods: We examined state-level variation in suicide rates in relation to psychiatric beds and community mental health spending in the United States for the years 1982–1998. We categorize psychiatric beds separately for public, not-for-profit, and for-profit hospitals.

Principal findings: Reduced public psychiatric bed supply was found to increase suicide rates. We found no evidence that not-for-profit or for-profit bed supply compensates for public bed reductions. However, greater community mental health spending buffers the adverse effect of public bed reductions on suicide. We estimate that in 2008, an additional decline in public psychiatric hospital beds would raise suicide rates for almost all states.

Conclusions: Downsizing of public inpatient mental health services may increase suicide rates. Nevertheless, an increase in community mental health funding may be promising.

Comment

Main findings: Increased suicide rates associated with a reduction in psychiatric beds is mitigated by increased community mental health funding, according to this research by Yoon and Bruckner. Most prior studies on the effects of deinstitutionalization have focused on severely mentally ill patients, and scant literature exists on public health risks associated with downsizing of psychiatric inpatient care. This research fills a gap in the literature by considering the influence of increased community mental health services and private psychiatric beds on suicide rates in the period after deinstitutionalization in the US. Results indicated that for each public psychiatric bed lost there would be expected an increase of 45 suicides per 100,000 in the population; however, this effect was reduced in states with greater community mental health services.

Implications: The research findings suggest that compensation of reductions in inpatient psychiatric beds with increased availability to community mental health services may minimize increases in the suicide rate associated with changes in health services. Although this study found inconclusive evidence that substitution of private inpatient psychiatric beds had no influence on suicide rates, this necessitates further research. Equally, further research is needed on which community services, or features of services prove optimal to the reduction of suicidal behavior in communities with reduced availability of inpatient care. A limitation of this study was the inability to determine an optimal level of community mental health funding to fully compensate for reduced inpatient care. Therefore, it is possible that it may be more cost-effective to tailor services and funding to areas known to have populations with high rates of mental illness and reduced access to services (such as low-socioeconomic and/or rural areas) and to increase access to psychiatric care, perhaps through reducing costs to the patient.

Characteristics of young rural Chinese suicides: a psychological autopsy study

J Zhang, W Wiczorek, Y Conwell, XM Tu, BY Wu, S Xiao, C Jia (China)

Psychological Medicine. Published online: 6 August 2009. doi: 10.1017/S0033291709990808, 2009

Background: Patterns of suicide rates in China differ in many ways from those in the West. This study aimed to identify the risk factors characteristic for young rural Chinese suicides.

Method: This was a case-control psychological autopsy (PA) study. The samples were suicides and living controls (both aged 15–34 years) from 16 rural counties of China. We interviewed two informants for each suicide and each control with pretested and validated instruments to estimate psychosocial, psychiatric and other risk factors for suicides.

Results: The prevalence of mental disorders was higher among the young Chinese who died by suicide than among the living controls, but was lower than among suicides in the West. Marriage was not a protecting factor for suicide among young rural Chinese women, and never-married women who were involved in relationships were about three times more likely to commit suicide than single women who were unattached. Religion/religiosity was not a protecting factor in Chinese suicide, as it tended to be stronger for suicides than for controls. Impulsivity was significantly higher for suicides than for controls. Psychological strain, resulting from conflicting social values between communist gender equalitarianism and Confucian gender discrimination, was associated significantly with suicide in young rural Chinese women, even after accounting for the role of psychiatric illness.

Conclusions: Risk factors for suicide in rural China are different from those in the West. Psychological strain plays a role in suicide. Suicide prevention programs in China should incorporate culture-specific considerations.

Comment

Main findings: One of the largest and most comprehensive psychological autopsy studies ever conducted in China, the present study offers a unique insight into the profile of suicide cases in rural areas, with a particular focus on less studied risk factors (such as culture). Consistent with prior research, principal findings of the study indicate that rates of mental illness were lower in rural Chinese compared to comparable populations in the West. Additionally, in contrast to suicides in Western nations, marriage was not observed to exert a protective influence in female Chinese, with individuals who remain single less likely to engage in suicidal behaviour. Religious adherence, impulsivity, relationship conflict and female cultural gender role assignment were also found to be risk factors for suicide.

Implications: The focus of the study on rural Chinese and the fact that the suicide risk factor profile of Chinese is very different to that observed in Western culture, means that the generalisability of this study to the Australian context is limited. However, as the authors suggest some general conclusions may be drawn regarding international suicide prevention strategies. Study results indicate that a focus on restricting access to means of suicide, identifying and treating mental illness and enhancing social support are valuable tools in the prevention of suicide in any nation. Additionally, study results support the use of the Chinese version of the SKID in diagnosing mental illness, implying that this instrument may be of use in identifying individuals at risk of adverse mental health outcomes, including suicide, in Chinese populations anywhere in the world.

Recommended Readings

The relationship between child abuse, parental divorce, and lifetime mental disorders and suicidality in a nationally representative adult sample

TO Afifi, J Boman, W Fleisher, J Sareen (Canada)

Child Abuse and Neglect 33, 139–147, 2009

Objectives: To determine how the experiences of child abuse and parental divorce are related to long-term mental health outcomes using a nationally representative adult sample after adjusting for sociodemographic variables and parental psychopathology.

Methods: Data were drawn from the National Comorbidity Survey (NCS, $n = 5,877$; age 15–54 years; response rate 82.4%). Logistic regression models were used to determine the odds of experiencing lifetime psychiatric disorders and suicidal ideation and attempts.

Results: Parental divorce alone was associated with some psychiatric disorders after adjusting for sociodemographic variables (AOR ranging from 1.30 to 2.37), while child abuse alone was associated with psychiatric disorders (AOR ranging from 1.39 to 6.07) and suicidal ideation (AOR = 2.08; 95% CI = 1.57–2.77) and attempts (AOR = 1.54; 95% CI = 1.02–2.31) after adjusting for sociodemographic variables. However, having experienced both parental divorce and child abuse together resulted in significantly increased odds for lifetime PTSD (AOR = 9.87; 95% CI = 6.69–14.55), conduct disorder (AOR = 4.01; 95% CI = 2.92–5.51) and suicide attempts (AOR = 2.74; 95% CI = 1.84–4.08) compared to having experienced either parental divorce or child abuse alone. These results were attenuated when further adjusting for parental psychopathology.

Conclusions: When the experience of parental divorce is accompanied with child abuse, the associations with some poor mental health outcomes are significantly greater compared to the impact of either parental divorce or child abuse on its own. Therefore, parental divorce is an additional childhood adversity that significantly contributes to poor mental health outcomes especially when in combination with child abuse. Parental psychopathology attenuated these relationships suggesting that it may be one possible mechanism to explain the relationships between child abuse, parental divorce, and psychiatric disorders and suicide attempts.

Gender differences in factors associated with suicidal ideation in major depression among cancer patients

T Akechi, H Okamura, T Nakano, N Akizuki, M Okamura, K Shimizu, T Okuyama, TA Furukawa, Y Uchitomi (Japan)

Psychooncology. Published online: 26 May 2009. doi: 10.1002/pon.1587, 2009

Objective: Major depression is a well-documented risk factor for suicide, and several gender differences in risk factors for suicide exist in cancer patients as

well as in the general population. However, no data is available regarding gender differences in risk factors for suicide among cancer patients with major depression.

Methods: We investigated the background differences between cancer patients suffering from major depression with or without suicidal ideation according to gender by analyzing the consultation data obtained for patients referred to the Psychiatry Division.

Results: Among the 5431 referred patients, 329 males and 399 females were diagnosed as having major depression; among these patients with major depression, 136 (41%) males and 157 (39%) females also had suicidal ideation. A preliminary analysis showed that physical functioning and an advanced stage were potential factors that interacted significantly with gender differences regarding suicidal ideation. A final logistic regression analysis indicated that poor physical functioning and an advanced stage were significant risk factors among male patients.

Conclusions: These preliminary findings suggest that gender differences in important indicators of suicidal ideation exist among cancer patients with major depression; these findings may be useful for developing strategies to prevent suicide among cancer patients.

Coping with thoughts of suicide: techniques used by consumers of mental health services

MJ Alexander, G Haugland, P Ashenden, E Knight, I Brown I (USA)

Psychiatric Services 60, 1214–1221, 2009

Objective: Suicide is a devastating public health problem, and research indicates that people with prior attempts are at the greatest risk of completing suicide, followed by persons with depression and other major mental and substance use conditions. Because there has been little direct input from individuals with serious mental illness and a history of suicidal behavior concerning suicide prevention efforts, this study examined how this population copes with suicidal thoughts.

Methods: Participants in 14 regional consumer-run Hope Dialogues in New York State ($N = 198$) wrote up to five strategies they use to deal with suicidal thoughts. Strategies were classified according to grounded theory.

Results: First responses included spirituality, talking to someone, positive thinking, using the mental health system, considering consequences of suicide to family and friends, using peer supports, and doing something pleasurable. Although a majority reported that more formal therapeutic supports were available, only 12% indicated that they considered the mental health system a frontline strategy. Instead, respondents more frequently relied on family, friends, peers, and faith as sources of hope and support.

Conclusions: Consumers' reliance on formal therapeutic supports and support from peers and family suggests that education and support for dealing with individuals in despair and crisis should be targeted to the social networks of this high-risk population. The disparity between availability of formal mental health services and reliance on them when consumers are suicidal suggests that suicide prevention efforts should evaluate whether they are effectively engaging high-risk populations as they struggle to cope with despair.

Risk factors for suicide in Hungary: a case-control study

K Almasi, N Belso, N Kapur, R Webb, J Cooper, S Hadley, M Kerfoot, G Dunn, P Sotonyi, Z Rihmer, L Appleby (Hungary)
BMC Psychiatry 9, 45, 2009

Background: Hungary previously had one of the highest suicide rates in the world, but experienced major social and economic changes from 1990 onwards. We aimed to investigate the antecedents of suicide in Hungary. We hypothesised that suicide in Hungary would be associated with both risk factors for suicide as identified in Western studies, and experiences related to social and economic restructuring.

Methods: We carried out a controlled psychological autopsy study. Informants for 194 cases (suicide deaths in Budapest and Pest County 2002-2004) and 194 controls were interviewed by clinicians using a detailed schedule.

Results: Many of the demographic and clinical risk factors associated with suicide in other settings were also associated with suicide in Hungary; for example, being unmarried or having no current relationship, lack of other social contacts, low educational attainment, history of self-harm, current diagnosis of affective disorder (including bipolar disorder) or personality disorder, and experiencing a recent major adverse life event. A number of variables reflecting experiences since economic restructuring were also associated with suicide; for example, unemployment, concern over work prospects, changes in living standards, practising religion. Just 20% of cases with evidence of depression at the time of death had received antidepressants.

Conclusions: Suicide rates in Hungary are falling. Our study identified a number of risk factors related to individual-level demographic and clinical characteristics, and possibly recent societal change. Improved management of psychiatric disorder and self-harm may result in further reductions in suicide rates.

Can sports events affect suicidal behavior?

K Andriessen, K Krysinska (Belgium)
Crisis 30, 144-152, 2009

Background: Engagement in sports and physical activity, either actively as an athlete or in a passive way as a spectator, impacts interpersonal behavior and physical and mental health.

Aims: The study reviews literature on the relationship between sports spectatorship and suicidal behavior to ascertain whether sports spectatorship has an impact on suicidal behavior, either increasing the risk or being a protective factor.

Methods: The literature was searched via PubMed/MEDLINE and PsycINFO. Nine studies published between 1986 and 2006 were identified. Results: The reviewed studies focused on the impact of sports events on the societal level, and analyzed data regarding national or local suicide rates. Their results indicate that sports events can have an impact on suicide mortality and morbidity, but this relationship seems to be mediated by age, gender, marital status, and alcohol consumption, as well as the process and outcome of the game (e.g., victory vs. defeat of the favored team).

Conclusions: There is some evidence that sports events can reduce the rates of suicide on the societal level; however, there is a lack of studies exploring how sports spectatorship might influence levels of suicide risk in individuals and how mediating variables might operate on the individual level.

What cognitive functions are associated with passive suicidal ideation? Findings from a national sample of community-dwelling Israelis

L Ayalon, H Litwin (Israel)

International Journal of Geriatric Psychiatry 24, 472-478, 2009

To identify the specific cognitive domains associated with passive suicidal ideation (e.g. thoughts of being better off dead). A cross sectional, national based study of 1,712 individuals over the age of 50. Outcome measure, passive suicidal ideation, was evaluated by the question, 'in the past month, have you felt that you would rather be dead?' taken from the Euro-D. Cognitive domains assessed were time orientation, verbal learning, verbal recall, word fluency, and arithmetic. After adjusting for demographic and clinical information, those reporting passive suicidal ideation were significantly more likely to have impaired performance on the time orientation task. None of the other cognitive domains were associated with passive suicidal ideation. Clinicians working with older adults need to be aware not only of demographic and clinical information, but also of cognitive functioning and more specifically, time orientation, as a potential determinant of passive suicidal ideation. Possibly, cognitive domains that are less affected by education and prior learning (e.g. time orientation) have a unique association with passive suicidal ideation.

Sports participation as a protective factor against depression and suicidal ideation in adolescents as mediated by self-esteem and social support

LA Babiss, JE Gangwisch (USA)

Journal of Developmental and Behavioral Pediatrics. Published online: 18 August. doi: 10.1097/DBP.0b013e3181b33659, 2009

Objective: Participation in sports has been shown to be protective against depression and suicidal ideation, but little is known about what factors mediate these relationships. No previous studies examined potential mediators between sports participation and suicidal ideation and only one study explored possible mediators between sports participation and depression. Increased sports participation could protect against depression and suicidal ideation by increasing endogenous endorphin levels, boosting self-esteem, improving body image, increasing social support, and affecting substance abuse.

Method: Multivariate hierarchical logistic regression analyses of Add Health data to explore whether increased participation in sports (none, 1–2, 3–4, or 5 or more times per week) is associated with depression and suicidal ideation and whether exercise, self-esteem, body weight, social support, and substance abuse mediate these relationships.

Results: As sports participation increases, the odds of suffering from depression decreases by 25% (OR: 0.75; 95% CI: 0.70–0.82) and the odds of having suicidal ideation decreases by 12% (OR: 0.88; 95% CI: 0.83–0.93) after controlling for sex, age, race/ethnicity, public assistance, and physical limitations. Substance abuse, body weight, and exercise did not mediate these associations. Consistent with self-esteem and social support acting as mediators of these relationships, the inclusion of these variables in the multivariate models attenuated the associations for depression (OR: 0.83; 95% CI: 0.75–0.91) and suicidal ideation (OR: 0.93; 95% CI: 0.88–0.99).

Conclusion: Adolescents should be offered ample opportunity and encouragement to participate in sports, which can protect against depression and suicidal ideation by boosting self-esteem and increasing social support.

Suicide attempts, gender, and sexual abuse: data from the 2000 British Psychiatric Morbidity Survey

PE Bebbington, C Cooper, S Minot, TS Brugha, R Jenkins, H Meltzer, M Dennis (UK)
American Journal of Psychiatry 166, 1135–1140, 2009

Objective: National Survey of Psychiatric Morbidity, a randomized cross-sectional survey of the British population that included questions relating to the phenomena of suicidality and sexual abuse, to test the hypothesis that suicide attempts in women are significantly associated with a history of sexual abuse.

Method: Participants were male and female volunteers, ages 16 to 74 years old (N = 8,580), interviewed in the 2000 British National Survey of Psychiatric Morbidity.

Results: Sexual abuse was strongly associated with a history of suicide attempts as well as of suicidal intent and was more common in women. The population attributable risk fraction was considerably greater in female respondents (28%) than in male respondents (7%), which is consistent with more prevalent exposure to sexual abuse among women. The effect of sexual abuse on suicidal attempts and suicidal intent was reduced by controlling for affective symptoms, suggesting that the effect of the former was likely to be mediated by affective changes.

Conclusions: Sexual abuse is a significant antecedent of suicidal behavior, particularly among women. In identifying suicidal behavior, it is important to consider the possibility of sexual abuse, since it implies a need for focused treatment.

Suicide and epilepsy

GS Bell, JW Sander (UK)

Current Opinion in Neurology 22, 174–178, 2009

Purpose of review: For many years, it has been accepted that suicide may be more common in people with epilepsy. Recent studies have investigated risk factors.

Recent findings: Studies have shown that a history of psychiatric disease increases the risk of suicide in a person with epilepsy but have also shown that the risk of suicide in people with epilepsy is increased in the absence of a psychiatric history. People with epilepsy may have undiagnosed and untreated psychiatric illness and depression (both reactive and endogenous) may occur. Studies have suggested that the relationship between seizures and depression or suicidal behaviour may be bidirectional, and both major depression and attempted suicide increase the risk of developing seizures. Forced normalization and postictal psychosis may also contribute to suicidal behaviour. Antiepileptic drugs have been implicated in causing psychiatric adverse effects and suicidal behaviour.

Summary: It is important to take an holistic approach when evaluating and monitoring people with epilepsy. Clinicians should screen for depression and treat appropriately. The choice of which antiepileptic drug to use may also be influenced by the presence of depression or suicidal ideation.

The perspectives of young adults on recovery from repeated suicide-related behavior

Y Bergmans, J Langley, P Links, JV Lavery (Canada)

Crisis 30, 120–127, 2009

Background: This qualitative study sought to develop an understanding of how young adults between the ages of 18–25 years, who have a history of two or more suicide attempts, transition away from high-risk suicide-related behaviors.

Aims: To understand the transition to safer behaviors and to provide clinical suggestions for those who provide care to this population.

Methods: Sixteen young adults under the age of 25 years, who had completed at least one cycle of intervention for people with repeated suicide attempts, participated in this qualitative, grounded theory study.

Results: The young adults described a pathway that included three major elements: (a) ‘living to die’, (b) ambivalence and tipping/turning points, and (c) a process of recovery that included small steps or phases (pockets of recovery) toward life. The journey was not always experienced as steady movement forward, and the potential for relapse either in the young people’s behavior or their wish to engage in their relationship with death could ebb and flow.

Conclusions: Clinicians need to be aware that the struggle to live is a process involving a fluid pathway moving between three key elements.

Is impulsivity a link between childhood abuse and suicide?

MD Braquehais, MA Oquendo, E Baca-Garcia, L Sher (USA)

Comprehensive Psychiatry. Published online: 31 August 2009. doi: 10.1016/j.comppsy.2009.05.003, 2009

Childhood abuse and neglect are known to affect psychological states through behavioral, emotional, and cognitive pathways. They increase the risk of having psychiatric diseases in adulthood and have been considered risk factors for suicidal behavior in all diagnostic categories. Early, prolonged, and severe trauma is also known to increase impulsivity, diminishing the capacity of the brain to inhibit negative actions and to control and modulate emotions. Many neurobiological studies hold that childhood maltreatment may lead to a persistent failure of the inhibitory processes ruled mainly by the frontal cortex over a fear-motivated hyperresponsive limbic system. Multiple neurotransmitters and hormones are involved in the stress response, but, to our knowledge, the two major biological consequences of the chronic exposure to trauma are the hypofunction of the serotonergic system and changes in the hypothalamic-pituitary-adrenal axis function. Some of these findings overlap with the neurobiological features of impulsivity and of suicidal behavior. Impulsivity has also been said to be both a consequence of trauma and a risk factor for the development of a pathological response to trauma. Thus, we suggest that

impulsivity could be one of the links between childhood trauma and suicidal behavior. Prevention of childhood abuse could significantly reduce suicidal behavior in adolescents and adults, in part, through a decrease in the frequency of impulsive behaviors in the future.

Lifetime and current costs of supporting young adults who deliberately poisoned themselves in childhood and adolescence

S Byford, B Barrett, A Aglan, V Harrington, H Burroughs, M Kerfoot, RC Harrington (UK)
Journal of Pain 9, 1106–1115, 2008

Background: Little is known about the long-term economic consequences of child and adolescent mental health problems, despite concerns that costs in later life may be significant.

Aims: To evaluate current and lifetime costs of young adults who deliberately poisoned themselves in childhood.

Method: Prospective cohort study of 129 young adults (mean age 21) who as teenagers had taken part in a randomized trial following deliberate self-poisoning. Lifetime and current costs of public sector services were calculated and compared to those of a matched general population control group.

Results: The self-poisoning group incurred significantly greater lifetime costs than the controls. They used more service-provided accommodation, special education and hospital services, incurred greater criminal Justice costs and received more social security benefits. Higher costs in the self-poisoning group were significantly associated with conduct disorder, hopelessness, previous suicide attempts, being male and being in care prior to the self-poisoning event.

Conclusions: Child and adolescent mental health problems predict significant costs compared to general population controls. This study provides indications of those groups of young people who incur high costs and for whom early intervention should be considered.

A call for research: the need to better understand the impact of support groups for suicide survivors

J Cerel, JH Padgett, Y Conwell, GA Reed (USA)
Suicide and Life-Threatening Behavior 39, 269–281, 2009

Support groups for suicide survivors (those individuals bereaved following a suicide) are widely used, but little research evidence is available to determine their efficacy. This paper outlines the pressing public health need to conduct research and determine effective ways to identify and meet the needs of suicide survivors, particularly through survivor support groups. After describing the various approaches to survivor support groups, we explain the need for further research, despite the inherent challenges. Finally, we pose several questions for

researchers to consider as they work with survivors to develop a research agenda that sheds more light on the experiences of survivors and the help provided by survivor support groups.

Suicidality in Chinese adolescents in Hong Kong: the role of family and cultural influences

WSC Chan, CK Law, KY Liu, PWC Wong, YW Law, PSF Yip (Hong Kong)
Social Psychiatry and Psychiatric Epidemiology 44, 278–284, 2009

Background: Adolescent suicidal ideation has found to predict suicidal behaviors and psychopathology in adulthood. Previous studies focused solely on the medical and environmental risk factors, which were insufficient to give a holistic picture of adolescent suicidality.

Objectives: To assess the role of affective and cognitive attributes in the identification and prevention of adolescent suicidal ideation.

Method: A community sample of 511 participants (age 15–19 years) were asked to indicate their suicidality in the 12 months and in their lifetime. Generalized estimating equation regression models were used to examine the effect of psychosocial and socio-environmental correlates in relation to adolescent suicidal ideation.

Results: The data show that perceived responsibilities for family was the only protective factor, while a coping mechanism by behavioral disengagement, severity of depressive symptoms, a history of deliberate self-harm, chronic physical illness or pain, media reporting of suicide news, and low household income were the risk factors for adolescent suicidal ideation.

Conclusions: The results suggest that a multilayer effort for preventing adolescent suicide is needed by providing support for children in deprived families; enhancing life skills in the teens; strengthening family relationship; improving mental and health services; and promoting responsible media reporting on suicide.

'Hidden' suicides among deaths certified as undetermined intent, accident by pesticide poisoning and accident by suffocation in Taiwan

SS Chang, JAC Sterne, TH Lu, D Gunnell (Taiwan)
Social Psychiatry and Psychiatric Epidemiology. Published online: 11 April 2009. doi: 10.1007/s00127-009-0049-x, 2009

Objective: To identify cause-of-death categories in which suicides might be misclassified in Taiwan.

Methods: We plotted secular trends (1971-2007) in sex- and method-specific rates of deaths classified as suicide, undetermined intent and accident for the Taiwanese population aged 15+ and compared the sex, age and marital status profiles of deaths in these three categories by method of death.

Results: The demographic profiles of registered suicides generally resembled those for deaths of undetermined intent and accidents by pesticide poisoning/suffocation but differed from those for accidents from non-pesticide poisoning/ drowning/ falling/ poisoning by non-domestic gas. For the period 1990-2007, suicide rates based on suicides alone (14.8 per 100,000) would increase by 23, 7 and 1%, respectively, when including deaths of undetermined intent, accidental pesticide poisonings and accidental suffocations.

Conclusions: Suicide rates may be underestimated by more than 30% in Taiwan because some suicides are 'hidden' amongst deaths certified as due to other causes.

Effect of media reporting of the suicide of a singer in Taiwan: the case of Ivy Li

YY Chen, PC Tsai, PH Chen, CC Fan, GC Hung, AT Cheng (Taiwan)

Social Psychiatry and Psychiatric Epidemiology. Published online: 26 May 2009. doi: 10.1007/s00127-009-0075-8, 2009

Background: Suicide attempters are known to be vulnerable to the influence of media reporting of suicide events. This study investigates possible influences of media reporting of a celebrity suicide on subsequent suicide attempts and associated risk factors among suicide attempters.

Methods: Sixty-three suicide attempters registered in a surveillance system of Taipei City Suicide Prevention Center were assessed using a structured interview soon after media reporting of the suicide of a young female singing star.

Results: Forty-three (68%) respondents had encountered with the suicide news. Among them, 37% reported being influenced by the media reporting on their subsequent suicide attempts. Men (adjusted OR 6.36, 95% CI 1.29–31.44) and younger age groups (adjusted OR 4.93, 95% CI 1.04–23.45) were more susceptible to the media reporting. There was a positive modeling effect in method of suicide (charcoal burning) (adjusted OR 7.27, 95% CI 6.31–168.66).

Conclusions: This study has provided further evidence for suicide imitation among vulnerable people encountered with media reporting of celebrity suicide, and for the need to actively restrain reporting of suicides to decrease the imitation effect.

Predicting adolescent suicidality: comparing multiple informants and assessment techniques

J Connor, M Rueter (USA)

Journal of Adolescence 32, 619–631, 2009

Adolescent suicidality is a serious problem among American youth. Common risk factors for adolescent suicidality include depression and conduct problems but there is little agreement on the best means to assess these factors. We compared multiple

informants (mothers, fathers, the adolescent and a sibling) and multiple assessment techniques using a sample of more than 460 families. Assessment techniques included paper–pencil instruments, observer ratings, and diagnostic interviews. Suicidality was assessed concurrently and 2 years after the risk assessment. Adolescent-reported paper–pencil instruments and diagnostic interviews were strongly associated with concurrent and future suicidality. Parents' report of adolescent feelings and behaviors were also useful. Observed behaviors were not useful in assessing suicidality risk factors. Clinical recommendations include utilizing paper–pencil and diagnostic adolescent risk factor assessment and focusing on emotions.

Health status and suicide in the second half of life

Y Conwell, PR Duberstein, JK Hirsch, KR Conner, S Eberly, ED Caine (USA)

International Journal of Geriatric Psychiatry. Published online: 6 July 2009. doi: 10.1002/gps.2348, 2009

Objective: To examine the associations of suicide in the second half of life with medical and psychiatric illness, functional limitations, and reported use of inpatient, ambulatory, and home health care services.

Method: A retrospective case-control design was used to compare 86 people over age 50 years who died by suicide with a comparison group of 86 living community participants that were individually matched on age, gender, race, and county of residence.

Results: Suicide decedents had more Axis I diagnoses, including current mood and anxiety disorders, worse physical health status, and greater impairment in functional capacity. They were more likely to have required psychiatric treatment, medical, or surgical hospitalization in the last year, and visiting nurse or home health aide services. In a multivariate model, the presence of any active Axis I disorder and any impairment in instrumental activities of daily living (IADL) made independent contributions to suicide risk.

Conclusions: Mental illness, physical illness, and associated functional impairments represent domains of risk for suicide in this age group. In addition to individuals with psychiatric illness, those with severe or comorbid physical illness and functional disability who require inpatient and home care services should be targeted for screening and preventive interventions.

Suicide and marital status in Northern Ireland

P Corcoran, A Nagar (Ireland)

Social Psychiatry and Psychiatric Epidemiology. Published online: 18 September 2009.

doi: 10.1007/s00127-009-0120-7, 2009

Introduction: Studies show marriage to be protective against suicide though with variation in the extent to which suicide rates are higher among the never married, separated or divorced and widowed. We examined suicide in Northern Ireland by marital status and examined whether the observed variation differed by sex and age.

Methods: Data relating to all 1,398 suicide deaths (ICD-9 E950-959 and ICD-10 X60-84) registered in 1996–2005 were analysed using Poisson regression.

Results: The total, male and female age-standardised suicide rates were 8.4, 13.6 and 3.3 per 100,000, respectively. Never marrying increased male suicide risk and its effect increased with age (incidence rate ratio (IRR) among 20- to 34-year-olds = 1.47, 95% confidence interval (CI) = 1.19–1.84; IRR among over 55-year-olds = 2.33, 95% CI = 1.55–3.50). Never marrying was a risk factor for women only if aged 20–34 years (IRR = 3.05, 95% CI = 1.70–5.47). Among over 55 year-olds, widowhood increased risk of male suicide only (IRR = 2.47, 95% CI = 1.64–3.70) whereas divorce was associated with an almost threefold increase in male (IRR = 2.61, 95% CI = 1.39–4.88) and female (IRR = 2.57, 95% CI = 0.89–7.42) suicide relative to married persons. The effect of divorce was far more pronounced in 20- to 34-year-old men (IRR = 5.59, 95% CI = 3.58–8.67) and women (IRR = 9.46, 95% CI = 3.81–23.37).

Conclusions: In Northern Ireland, marriage protects both sexes against suicide though men more so than women. Divorced young men, in particular, are a population at high risk of suicide.

Anxiety disorders and suicidality in the National Comorbidity Survey-Replication

JR Cogle, ME Keough, CJ Riccardi, N Sachs-Ericsson (USA)

Journal of Psychiatric Research 43, 825–829, 2009

Objective: The current study sought to examine the unique associations between anxiety disorders and suicidality using a large nationally representative sample and controlling for a number of established risk factors for suicide.

Method: Data from the National Comorbidity Survey-Replication were used for analyses. Lifetime diagnostic history and demographics were obtained in this survey through a structured interview. Lifetime suicidal ideation and attempts were also assessed.

Results: Multivariate analyses covarying for psychiatric comorbidity and demographic variables found social anxiety disorder (SAD), posttraumatic stress disorder (PTSD), generalized anxiety disorder (GAD), and panic disorder (PD) to be unique predictors of suicidal ideation, while only SAD, PTSD, and GAD were predictive of suicide attempts. Analyses by gender indicated that each of these four disorders were predictive of suicidal ideation or suicide attempts among women, while only PTSD and PD acted as risk factors among men.

Conclusions: Findings provide further evidence of the negative impact of anxiety disorders, suggest efforts should be made towards their early detection and treatment, and emphasize the importance of suicide risk assessment in treating individuals with anxiety disorders.

Interventions for suicidal youth: a review of the literature and developmental considerations

SS Daniel, DB Goldston (USA)

Suicide and Life-Threatening Behavior 39, 252–268, 2009

Suicidal behavior is developmentally mediated, but the degree to which interventions for suicidal behaviors have been developmentally tailored has varied widely. Published controlled studies of psychosocial treatment interventions for reducing adolescent suicidal behavior are reviewed, with a particular emphasis on the developmental nuances of these interventions. In addition, developmental considerations important in the treatment of suicidal adolescents are discussed. There are insufficient data available from controlled trials to recommend one intervention over another for the treatment of suicidal youth, but interventions that are sensitive to the multiple developmental contexts have potential for greater effectiveness in reducing adolescent suicidal behavior.

Factors associated with repeated suicide attempts: preliminary results of the WHO Multisite Intervention Study on Suicidal Behavior (SUPRE-MISS) from Campinas, Brazil

CF Da Silva Cais, S Stefanello, ML Fabrício Mauro, G Vaz Scavacini de Freitas, NJ Botega (Brazil)

Crisis 30, 73–78, 2009

Background: This study compares sociodemographic and clinical characteristics of 102 first-time hospital-treated suicide attempters (first-ers) with a group of 101 repeat suicide attempters (repeaters) consecutively admitted to a general hospital in Brazil, during the intake phase of the WHO Multisite Intervention Study on Suicidal Behaviors (SUPRE-MISS).

Aims: To compare sociodemographic and clinical characteristics of first-time hospital-treated suicide attempters (first-ers) with a group of repeat suicide attempters (repeaters).

Methods: A standardized interview and psychometric scales were administered to all patients.

Results: Repetition was associated with being of female sex (OR = 2.7; 95% confidence interval (CI) = 1.2–6.2), a housewife (OR = 3.8; 95% CI = 1.2–11.8), and having a score above median on the Beck Depression Inventory (OR = 5.2; 95% CI = 1.7–15.6).

Conclusions: The findings suggest that repeaters, namely, depressed housewives who have attempted suicide previously, need specific treatment strategies in order to avoid future suicide attempts.

Epidemiological trends in attempted suicide in adolescents and young adults between 1996 and 2004

S De Munck, G Portzky, K van Heeringen (Belgium)

Crisis 30, 115–119, 2009

Background: Notwithstanding the epidemiological studies indicating an increased risk of attempted suicide among adolescents and young adults, there is a scarcity of international studies that examine long-term epidemiological trends in rates and characteristics of this vulnerable group.

Aims: This article describes the results of a 9-year monitoring study of suicide attempts in adolescents and young adults referred to the Accident and Emergency Department of the Gent University Hospital (Belgium).

Methods: Between January 1996 and December 2004, trends, sociodemographic, and method-related characteristics of suicide attempts were assessed by a psychiatrist on data sheets.

Results: Attempted suicide rates declined from 1996 to 2001 and then rose until 2004, but did not exceed previous rates. During the 9 years of monitoring, there was a preponderance of female suicide attempters, except for 1997. Rates of attempts and of fatal suicide were negatively correlated. Significantly more males than females deliberately injured themselves. Younger attempters, especially females, significantly more often poisoned themselves with analgesics. In nearly one in five attempts, alcohol was used in combination with other methods, and alcohol intake was more commonly observed in older suicide attempters. Nearly half of the adolescents were identified as repeaters.

Conclusions: The results of this study warrant further monitoring of trends and characteristics of young suicide attempters.

Obsessive–compulsive personality disorder and suicidal behavior: evidence for a positive association in a sample of depressed patients

G Diaconu, G Turecki G (Canada)

Journal of Clinical Psychiatry. Published online: 14 July 2009. doi: 10.4088/JCP.08m04636, 2009

Objective: To explore the association between obsessive-compulsive personality disorder (OCPD) and suicidal behavior.

Method: Subjects referred for a psychiatric consultation were evaluated with structured interviews for mood and personality disorders (the Structured Clinical Interview for DSM-III-R and the Structured Clinical Interview for DSM-III-R Axis II Disorders), a history of suicidal behavior, and levels of coping. A total of 311 subjects were investigated using a 3-group design to test the association between OCPD and suicidal behavior, controlling for the presence of depression. Subjects with OCPD and a history of depression were compared to depressed subjects without any Axis II diagnosis and to subjects without depression or per-

sonality disorders. The study was conducted at Verdun Community Psychiatric Clinic, Douglas Hospital, McGill University, in Montreal, Quebec, Canada, and subjects were recruited from 2003 until 2005.

Results: Subjects in the comorbid OCPD-depression group presented increased current and lifetime suicide ideation compared to the groups with depression alone or without depression or personality disorders ($P = .004$); they also had increased history of suicide attempts ($P = .04$), which were often multiple attempts ($P = .01$). They also scored lower on the Reasons for Living Inventory (RFL) and the Death Anxiety Questionnaire. Interestingly, comorbid OCPD-depression patients differed from patients with depression alone on the Moral Objections items of the RFL, on which individuals with OCPD-depression scored lowest. Limitations of this study were its cross-sectional design, retrospective sample, and limited generalizability to the population at large.

Conclusions: Obsessive-compulsive personality disorder is a factor increasing risk for nonfatal suicidal behavior independently of risk conferred by depressive disorders.

Neighbourhood poverty and suicidal thoughts and attempts in late adolescence

V Dupéré, T Leventhal, E Lacourse (Canada)

Psychological Medicine 39, 1295–1306, 2009

Background: Suicide tends to concentrate in disadvantaged neighborhoods, and neighborhood disadvantage is associated with many important risk factors for youth suicide. However, no study has directly investigated the link between neighborhood poverty and youth suicidal behaviors, while controlling for pre-existing vulnerabilities. The objective of this study was to determine whether living in a poor neighborhood is associated with suicidal thoughts and attempts in late adolescence over and above background vulnerabilities, and whether this association can be explained by late-adolescence psychosocial risks: depression, social support, negative life events (NLEs), delinquent activities, substance abuse and exposure to suicide. The potential moderating role of neighborhood poverty was also examined.

Method: A subset of 2776 participants was selected from the Canadian National Longitudinal Survey of Children and Youth (NLSCY). Late-adolescence suicidal behaviors and risk factors were self-reported. The 2001 Canadian Census was used to characterize neighborhoods during early and middle adolescence. Late-childhood family and individual controls were assessed through parent-report.

Results: At the bivariate level, the odds of reporting suicidal thoughts were about twice as high in poor than non-poor neighborhoods, and the odds of attempting suicide were about four times higher. After controlling for background vulnerabilities, neighborhood poverty remained significantly associated with both suicidal thoughts and attempts. However, these associations were not explained by

late-adolescence psychosocial risks. Rather, youth living in poor neighborhoods may be at greater risk through the amplification of other risk factors in disadvantaged neighborhoods.

Conclusions: Potential explanations for the increased vulnerability of youth living in poor neighborhoods are discussed.

Murder-suicide: a review of the recent literature

S Eliason (USA)

Journal of the American Academy of Psychiatry and the Law 37, 371–376, 2009

There has been recent widespread media coverage of events that involve murder-suicide. In this paper, the author does an extensive literature review of studies about murder-suicide. The purpose is to determine whether the incidence of murder-suicide is increasing and what its risk factors are. The results of this review show that the incidence of murder-suicide remains at under 0.001%. Risk factors for murder-suicide are based on relationship between perpetrator and victims, history of domestic violence, sex of perpetrator and victim, age of perpetrator, presence of divorce/separation, use of weapon, and history of mental illness. This paper shows that the incidence of murder-suicide is low, stable, and similar to what has been reported in the past. There are, however, some distinct risk factors for murder-suicide including: substance abuse (not as common), mostly male perpetrators, depression (more common), and older male caregivers are at risk.

Do risk factors for suicidal behavior differ by affective disorder polarity?

JG Fiedorowicz, AC Leon, MB Keller, DA Solomon, JP Rice, WH Coryell (USA)

Psychological Medicine 39, 763–771, 2009

Background: Suicide is a leading cause of death and has been strongly associated with affective disorders. The influence of affective disorder polarity on subsequent suicide attempts or completions and any differential effect of suicide risk factors by polarity were assessed in a prospective cohort.

Method: Participants with major affective disorders in the National Institute of Mental Health (NIMH) Collaborative Depression Study (CDS) were followed prospectively for up to 25 years. A total of 909 participants meeting prospective diagnostic criteria for major depressive and bipolar disorders were followed through 4204 mood cycles. Suicidal behavior was defined as suicide attempts or completions. Mixed-effects, grouped-time survival analysis assessed risk of suicidal behavior and differential effects of risk factors for suicidal behavior by polarity. In addition to polarity, the main effects of age, gender, hopelessness, married status, prior suicide attempts and active substance abuse were modeled, with mood cycle as the unit of analysis.

Results: After controlling for age of onset, there were no differences in prior suicide attempts by polarity although bipolar participants had more prior severe attempts. During follow-up, 40 cycles ended in suicide and 384 cycles contained at least one suicide attempt. Age, hopelessness and active substance abuse but not polarity predicted suicidal behavior. The effects of risk factors did not differ by polarity.

Conclusions: Bipolarity does not independently influence risk of suicidal behavior or alter the influence of well-established suicide risk factors within affective disorders. Suicide risk assessment strategies may continue to appraise these common risk factors without regard to mood polarity.

Alcohol use disorders increase the risk of completed suicide — irrespective of other psychiatric disorders. A longitudinal cohort study

T Flensburg-Madsen, J Knop, EL Mortensen, U Becker, L Sher, M Grønbaek (Denmark)

Psychiatry Research 167, 123–130, 2009

Knowledge of the epidemiology of suicide is a necessary prerequisite for developing prevention programs. The aim of this study was to analyze the risk of completed suicide among individuals with alcohol use disorders (AUD), and to assess the role of other psychiatric disorders in this association. A prospective cohort study was used, containing three updated sets of lifestyle covariates and 26 years follow-up of 18,146 individuals between 20 and 93 years of age from the Copenhagen City Heart Study in Denmark. The study population was linked to four different registers in order to detect: completed suicide, AUD, psychotic disorders, anxiety disorders, mood disorders, personality disorders, drug abuse, and other psychiatric disorders. Individuals registered with AUD were at significantly increased risk of committing suicide, with a crude hazard ratio (HR) of 7.98 [Confidence interval (CI): 5.27–12.07] compared to individuals without AUD. Adjusting for all psychiatric disorders the risk fell to 3.23 (CI: 1.96–5.33). In the stratified subsample of individuals without psychiatric disorders, the risk of completed suicide was 9.69 (CI: 4.88–19.25) among individuals with AUD. The results indicate that individuals registered with AUD are at highly increased risk of completed suicide, and that registered co-morbid psychiatric disorders are neither sufficient nor necessary causes in this association

Homicide followed by suicide: a cross-sectional study

S Flynn, N Swinson, D While, IM Hunt, A Roscoe, C Rodway, K Windfuhr, N Kapur, L Appleby, J Shaw (UK)

Journal of Forensic Psychiatry and Psychology 20, 306–321, 2009

Background: Approximately 30 incidents of homicide followed by suicide occur in England and Wales each year. Previous studies have not examined mental health characteristics in any detail.

Aims: This study aims to identify the social, clinical, and criminological characteristics of a national sample of perpetrators, to identify any previous contact with mental health services and to establish risk of suicide after homicide.

Method: A national cross-sectional study of perpetrators in England and Wales 1996–2005.

Results: 203 incidents were recorded over 9 years. The median age of perpetrators was 41 years (range 18–88 years); most were male. Men more often killed a spouse/partner, whilst women more commonly killed their children. Eighty-four (42%) perpetrators died by suicide on the day of the homicide. The most common method of homicide was sharp instrument (44, 23%). Fifty-nine (29%) used hanging as a method of suicide. Twenty (10%) had previous contact with mental health services, 14 were seen within a year of the offence. The most common diagnoses were personality disorder and affective disorder. The risk of suicide increased the closer the relationship between the perpetrator and the victim.

Conclusions: Significantly fewer perpetrators of homicide-suicide compared with homicide or suicide only were in contact with mental health services. Prevention is discussed and suggestions made for the use of psychological autopsy methodology to study rates of mental disorder.

Estimating the risk for suicide following the suicide deaths of three Asian entertainment celebrities: a meta-analytic approach

K-W Fu, PSF Yip (Hong Kong)

Journal of Clinical Psychiatry 70, 869–878, 2009

Objective: Evidence suggests that there is an increase in the suicide rate following incidents of celebrity suicide in different countries, but there are no data on the overall suicide risk across countries. The duration of increased suicide rates is usually assumed to be on a monthly basis, but the weekly increase remains uncertain. This study aims at estimating the risk for suicide after the suicide deaths of entertainment celebrities in Asia during the first 4 weeks after the celebrity suicides and on a weekly basis.

Method: An ecological, retrospective time-series analysis and a meta-analysis of the suicide deaths in 3 Asian regions: Hong Kong (from 2001 to 2003), Taiwan, and South Korea (both from 2003 to 2005).

Results: The combined risks for suicide were found to be 1.43 (95% CI = 1.23 to 1.66), 1.29 (95% CI = 1.12 to 1.50), and 1.25 (95% CI = 1.08 to 1.45) in the first, second, and third week, respectively, after suicides of entertainment celebrities, while adjusting for secular trends, seasonality, economic situation, and temporal autocorrelation. The same-gender and same-method specific increases suggest that as people identify more with the celebrity, their risk for suicide rises. A medium-term rise in suicides up to 24 weeks after the incidents of celebrity suicide is also evident.

Conclusion: This study is the first to estimate risk for suicides following celebrity suicides across 3 Asian regions. The results provide important information for public health policy makers in assessing the elevated risk associated with excessive media coverage of celebrity suicide and developing timely evidence-based interventions.

Clinical and genetic risk factors for suicide under the influence of alcohol in a Polish sample

S Fudalej, M Ilgen, M Fudalej, M Wojnar, H Matsumoto, KL Barry, R Ploski, FC Blow, C Frederic (Poland)

Alcohol and Alcoholism 44, 437–442, 2009

Aims: Despite the large number of suicides that occur with intoxication, little is known about the unique predictors of suicide after alcohol consumption. The goal of this study was to examine clinical and genetic risk factors for alcohol-related suicide.

Methods: Data on 162 suicide victims were obtained from post-mortem examinations, police and prosecution inquiries, autopsy protocols and available medical records. Four single nucleotide polymorphisms in the central serotonin system and the renin-angiotensin system related genes previously found to be associated with suicide, alcohol dependence or depression were genotyped.

Results: The strongest predictor of suicide under the influence of alcohol was alcohol dependence (OR = 4.63). Those who did not drink alcohol before suicide were more likely to have a diagnosis of major depressive disorder in their medical record and more often had the TT genotype of the tryptophan hydroxylase 2 gene.

Conclusions: Suicide under the influence of alcohol is strongly connected with alcohol dependence. The TPH2 gene may play an important role in suicide vulnerability especially in individuals who did not drink alcohol before suicide.

Vulnerabilities to deliberate self-harm among adolescents: the role of alexithymia and victimization

JA Garisch, MS Wilson (NZ)

British Journal of Clinical Psychology. Published online: 18 May 2009. doi: 10.1348/014466509X441709, 2009

Objectives: This study investigates vulnerabilities to deliberate self-harm (DSH) among adolescents, specifically focusing on peer victimisation and alexithymia.

Design: Correlational survey design.

Methods: 325 secondary school students completed self-report questionnaires asking their history of DSH and bullying, and scales assessing alexithymia and depression.

Results: Self-harming adolescents reported more victimization and alexithymic symptomology than participants who had never engaged in DSH. Alexithymia moderated, and partially mediated, the relationship between bullying and DSH. Bullying and DSH significantly co-varied when participants' alexithymia was moderate or high, but not when participants' alexithymia was low. The relationship between alexithymia and DSH was fully mediated by depression. The relationship between bullying and DSH was also moderated by depression. Depression moderated the relationship between alexithymia and DSH.

Conclusions: The findings suggest stressors in the social environment (e.g., bullying) are more likely to facilitate DSH when an adolescent has poor emotion regulation and communication skills and when an individual is experiencing mood difficulties.

Ten-year follow-up study of 65 suicidal adolescents

A Géhin, B Kabuth, C Pichené, C Vidailhet (France)

Journal of the Canadian Academy of Child and Adolescent Psychiatry 18, 117–125, 2009

Introduction: This survey studies the 10 year psychosocial outcome of 65 adolescents admitted to the Nancy Children's Hospital in 1994 after a suicide attempt.

Method: survey conducted using a self-assessment questionnaire sent to adolescents and their parents.

Results: The response rate was 55.4%. About seventy per cent (70.5%) of respondents stated they were happy in their affective lives 10 years after the reference attempt, almost 70% (67.6%) had a job, nearly three quarters (72.5%) considered that they were in good health and 59% felt happy. More than half (55%) had made a subsequent suicide attempt. Two patients committed suicide. The originality of this study lies in its methodology since it allows, through comparison of suicide attempters' responses with medical data, a high

level of under-declaration of repeated attempts to be detected (41.2%). Statistical study of the associations between the total number of repeated suicide attempts and demographic characteristics of the initial population nonetheless evidenced that patients with a history of suicide attempts and those with a history of early repeated attempts (within three months and/or the year) 10 years.

Conclusion: Most of the 34 patients traced seemed to have satisfactory personal and professional lives, in contrast to the high level of repeated suicide attempts. Repeated suicide attempts during adolescence appear to be one of the major risk factors in attempting suicide again within 10 years. This confirms the importance of preventive measures after a first suicide attempt.

Respiratory function and other biological risk factors for completed suicide: 40 years of follow-up of European cohorts of the Seven Countries Study

EJ Giltay, FG Zitman, A Menotti, A Nissinen, DR Jacobs, H Adachi, A Kafatos, D Kromhout (Finland, Serbia, Italy, Greece)

Journal of Affective Disorders. Published online: 30 April 2009. doi: 10.1016/j.jad.2009.03.022, 2009

Background: Prospective cohort studies on biological risk factors of completed suicide are scarce. We aimed to test which biological risk factors independently identify subjects at increased risk of suicidal death.

Methods: In the prospective cohort of the Seven Countries Study, 5,321 middle-aged men from Finland, Serbia, Italy, and Greece were included. Completed suicide (ICD-8 codes E950-959) was assessed during 40 years of follow-up. Biological cardiovascular risk factors (including forced vital capacity [FVC] and height) were tested for their role as predictors in multivariable Cox models stratified by country.

Results: There were 4518 deaths during follow-up, with 64 from suicide (1.4%). In univariable models, only FVC and height were strongly inversely related with suicide. Socio-economic status and being unmarried were potential confounders. In multivariable models taking these confounders into account, both a low FVC (0.30 for top vs. lowest quartile; 95% CI: 0.12-0.76; $P=0.006$ for trend) and a low FVC/height ratio (0.37 for top vs. lowest quartile; 95% CI: 0.17-0.82; $P=0.004$ for trend) were strongly inversely related with completed suicide.

Limitations: Information on proximal causes, such as prior suicidal ideation, emotional distress and depression, was lacking at baseline.

Conclusions: Poor respiratory function in middle-aged men was an independent risk factor for completed suicide.

Do automatic self-associations relate to suicidal ideation?

KA Glashouwer, PJ de Jong, BWJH Penninx, AJFM Kerkhof, R van Dyck, J Ormel
(The Netherlands)

Journal of Psychopathology and Behavioral Assessment. Published online: 20 August 2009.

doi: 10.1007/s10862-009-9156-y, 2009

Dysfunctional self-schemas are assumed to play an important role in suicidal ideation. According to recent information-processing models, it is important to differentiate between 'explicit' beliefs and automatic associations. Explicit beliefs stem from the weighting of propositions and their corresponding 'truth' values, while automatic associations reflect more simple associations in memory. Both types of associations are assumed to have different functional properties and both may be involved in suicidal ideation. Thus far, studies into self-schemas and suicidal ideation focused on the more explicit, consciously accessible traces of self-schemas and predominantly relied on self-report questionnaires or interviews. To complement these 'explicit' findings and more directly tap into self-schemas, this study investigated automatic self-associations in a large scale community sample that was part of the Netherlands Study of Depression and Anxiety (NESDA). The results showed that automatic self-associations of depression and anxiety were indeed significantly related to suicidal ideation and past suicide attempt. Moreover, the interactions between automatic self-depressive (anxious) associations and explicit self-depressive (anxious) beliefs explained additional variance over and above explicit self-beliefs. Together these results provide an initial insight into one explanation of why suicidal patients might report difficulties in preventing and managing suicidal thoughts.

Suicide attempt characteristics may orientate toward a bipolar disorder in attempters with recurrent depression

S Guillaume, I Jaussent, F Jollant, Z Rihmer, A Malafosse, P Courtet (France)

Journal of Affective Disorders. Published online: 15 July 2009. doi: 10.1016/j.jad.2009.06.006, 2009

Background: Identification of patients with a bipolar disorder (BPD) among those presenting a major depressive episode is often difficult, resulting in common misdiagnosis and mistreatment. Our aim was to identify clinical variables unrelated to current depressive episode and relevant to suicidal behavior that may help to improve the detection of BPD in suicide attempters presenting with recurrent major depressive disorder.

Method: 211 patients suffering from recurrent major depressive disorder or BPD, hospitalized after a suicide attempt (SA), were interviewed by semi-structured interview and validated questionnaires about DSM-IV axis I disorders, SA characteristics and a wide range of personality traits relevant to suicidal vulnerability. Multivariate logistic regression analysis was performed to determine differences between RMDD and BPD attempters.

Results: Logistic regression analysis showed that serious SA and family history of suicide are closely associated with a diagnosis of BPD [respectively OR = 2.28, $p = .0195$; OR = 2.98, $p = .0081$]. The presence of both characteristics increase the association with BPD [OR = 4.78, $p = .005$]. Conversely, when looking for the features associated with a serious SA, BPD was the only associated diagnosis [OR = 2.03, $p = .004$]. Lastly, affect intensity was higher in BPD samples [OR = 2.08, $p = .041$].

Limitations: Retrospective nature of the study, lack of the separate analysis of bipolar subtypes.

Conclusion: Serious suicide attempt and a familial history of completed suicide in patients with major depression seem to be a clinical marker of bipolarity. Facing suicide attempters with recurrent depression, clinician should be awareness to these characteristics to detect BPD.

Analysis of accident and emergency doctors' responses to treating people who self-harm

J Hadfield, D Brown, L Pembroke, M Hayward (UK)

Qualitative Health Research 19, 755–765, 2009

Self-harm is a prevalent phenomenon regularly faced by doctors and nurses working in accident and emergency (A&E) departments. We argue that the treatment decisions A&E doctors make are fundamental to decreasing the high risk of suicide among this group. In this article we present a qualitative study exploring how doctors working in A&E respond to treating people who self-harm. In total, five A&E doctors were interviewed and the data were analyzed using interpretative phenomenological analysis. Three main themes were extracted: treating the body, silencing the self, and mirroring cultural and societal responses to self-harm. Within these themes, we identified both facilitative and unhelpful aspects of the relationships between people who self-harm and A&E doctors. We consider the clinical implications of these findings within the context of A&E doctors having limited opportunities to address the relational nature of the care they offer to this group.

Impact of a specialized early psychosis treatment programme on suicide: retrospective cohort study

MG Harris, PM Burgess, DC Chant, JE Pirkis, PD McGorry (Australia)

Early Intervention in Psychiatry 2, 11–21, 2009

Background: Younger people, early in the course of psychotic illness, are at high risk of suicide. **Aim:** To investigate the impact of a specialized early psychosis (EP) treatment programme on risk of suicide up to 8.5 years following first contact with mental health services.

Methods: A population-based, retrospective cohort study of 7760 individuals with a psychotic disorder, aged 15–29 years at first contact, ascertained from a statewide psychiatric case register. Suicides were identified by linking the psychiatric register to a coronial register of unnatural deaths. Cox proportional hazards models were used to investigate potential risk factors, including specialized EP treatment, for suicide.

Results: Our principal hypothesis, that suicide risk over the entire follow-up period would be significantly lower for those who received specialized EP treatment compared with those who did not, was not supported. However, a secondary analysis found that, after adjusting for other socio-demographic, clinical and treatment factors, suicide risk was 50% lower in the first 3 years following first contact with mental health services among those exposed to specialized EP treatment compared with those who were not. History of inpatient treatment, more treatment days per annum, and shorter time to establish a psychotic diagnosis were associated with increased risk. Non-participation in the labour force or in study, compared with being unemployed, exerted a protective effect.

Conclusions: The EP treatment model may afford protection from suicide whilst the EP intervention is delivered and for a limited period afterwards.

Increased long-term mortality among survivors of acute carbon monoxide poisoning

NB Hampson, RA Rudd, NM Hauff (USA)

Critical Care Medicine 37, 1941–1947, 2009

Objective: Recent data suggest that patients surviving acute carbon monoxide (CO) poisoning (COP) may have increased risk for long-term mortality. The objective of this study was to analyze long-term mortality of a large population of CO-poisoned patients treated at one medical center over three decades.

Design: Retrospective cohort study of patients treated with hyperbaric oxygen and surviving the acute poisoning episode. Long-term mortality was compared to a standard population. Comparison of mortality within the cohort by clinical indicators of poisoning severity was assessed using Cox proportional hazards regression analysis.

Setting: Regional referral center for hyperbaric treatment of COP.

Patients: 1,073 patients aged ≥ 18 years treated from 1978 to 2005.

Interventions: All patients received hyperbaric oxygen treatment.

Measurements and main results: During 11,741 person-years of follow-up, 162 subjects died. The expected number of deaths was 87 (standardized mortality ratio [SMR]), 1.9; 95% confidence interval [CI], 1.6–2.2). Most of the excess mortality was in the group treated initially for intentional COP (58 excess deaths; SMR, 3.7; 95% CI, 2.9–4.6) vs. those treated for accidental COP (17

excess deaths; SMR, 1.3; 95% CI, 1.01–1.6). For the entire cohort, the major causes of death with significantly raised mortality were mental and psychiatric disorders, injuries, and violence. More specific causes of death with significantly raised mortality were alcoholism, motor vehicle accidents with pedestrians, motor vehicle accidents of unspecified type, accidental poisonings, and intentional self-harm. Within cohort comparisons showed that no difference in survival was observed by measure of CO poisoning severity, after controlling for age at poisoning, sex, race, and intent of CO poisoning.

Conclusions: Adult survivors of acute CO poisoning treated with hyperbaric oxygen were at increased risk for long-term mortality. Such patients should be followed closely after discharge with consideration given to psychiatric and/or neurocognitive evaluation, as appropriate.

Beyond randomized controlled trials in attempted suicide research

S Hatcher, C Sharon, C Coggan

Suicide and Life-Threatening Behavior 39, 396–407, 2009

There is a lack of evidence about what is the best treatment for people who present to hospital after self harm. Most treatment trials have been small and involved unrepresentative groups of patients which result in inconclusive findings. Here we note some of the characteristics of attempted suicide which make it a difficult subject to study. We describe the problems of doing randomized controlled trials in attempted suicide and outline the advantages and difficulties of randomized controlled trials, Zelen designs, patient preference designs, and cluster randomized trials in attempted suicide intervention trials. Researchers and consumers should consider other research designs when asking what is effective after self harm.

Epidemiology of intentional self-harm presenting to four district health boards in New Zealand over 12 months, and comparison with official data

S Hatcher, C Sharon, N Collins (New Zealand)

Australian and New Zealand Journal of Psychiatry 43, 659–665, 2009

Objective: The aim of the present study was to describe the number and characteristics of people presenting with intentional self-harm to four district health boards in New Zealand and to compare this with official data.

Methods: People presenting with self-harm were identified by searching a mixture of electronic and written databases in each DHB.

Results: Over 12 months 1633 people presented a total of 2087 times to these four DHBs. The highest rates were in Northland, young women and Maori.

Official figures significantly underestimate the number of people who present to hospital with intentional self-harm.

Conclusion: Considerably more people present to hospital with intentional self-harm in New Zealand than are recorded by official figures. This is important because reducing self-harm is a key part of the New Zealand health strategy. To achieve this, accurate measurement of self-harm rates is required. Encouraging improved reporting by DHBs is unlikely to work. It is suggested that dedicated monitoring sites be set up in representative DHBs to solve the problem of flawed official data collection.

Antidepressant use and mortality in Finland: a register-linkage study from a nationwide cohort

J Haukka, M Arffman, T Partonen, S Sihvo, M Elovainio, J Tiihonen, J Lonnqvist, I Keskimaki (Finland)

European Journal of Clinical Pharmacology 65, 715–720, 2009

Background: It is generally acknowledged that depressed patients need specific attention during the first weeks after initiation of antidepressant (AD) treatment because of the increased risk of suicide.

Methods: The study population consisted of all individuals residing in Finland from 1999 to 2003 who had purchased a prescribed antidepressant at least once but had no preceding antidepressant prescription. Data sources were the National Prescription Register, the Causes of Death Register, Census Data of Statistics Finland, and the National Care Register. Follow-up started at the first purchase and ended at the end of 2003 or death. Data on prescriptions were used to construct contiguous treatment periods of follow-up time. Life-table analysis with Poisson regression was used to estimate risk ratios (RR) of antidepressant use with respect to all-cause mortality and to deaths from suicide.

Findings: Current AD use was associated with a lowered all-cause mortality (RR = 0.18, 95% CI = 0.18–0.19) compared with those who filled one previous prescription only. There was no difference in suicide mortality when any current antidepressant usage was compared to the one-prescription group. Current SSRI usage was associated with lower risk of suicide compared to the one-prescription or other antidepressant groups (RR 0.47, 0.38–0.59).

Interpretation: Current AD treatment is associated with decreased all-cause mortality rates in patients who have ever had AD treatment.

Effect of withdrawal of co-proxamol on prescribing and deaths from drug poisoning in England and Wales: time series analysis

K Hawton, H Bergen, S Simkin, A Brock, C Griffiths, E Romeri, KL Smith, N Kapur, D Gunnell (UK)

British Medical Journal 338, b2270, 2009

Objective: To assess the effect of the UK Committee on Safety of Medicines' announcement in January 2005 of withdrawal of co-proxamol on analgesic prescribing and poisoning mortality.

Design: Interrupted time series analysis for 1998–2007.

Setting: England and Wales. Data Sources: Prescribing data from the prescription statistics department of the Information Centre for Health and Social Care (England) and the Prescribing Services Unit, Health Solutions Wales (Wales). Mortality data from the Office for National Statistics.

Main Outcome Measures: Prescriptions. Deaths from drug poisoning (suicides, open verdicts, accidental poisonings) involving single analgesics.

Results: A steep reduction in prescribing of co-proxamol occurred in the post-intervention period 2005–7, such that number of prescriptions fell by an average of 859 (95% confidence interval 653 to 1065) thousand per quarter, equating to an overall decrease of about 59%. Prescribing of some other analgesics (co-codamol, paracetamol, co-dydramol, and codeine) increased significantly during this time. These changes were associated with a major reduction in deaths involving co-proxamol compared with the expected number of deaths (an estimated 295 fewer suicides and 349 fewer deaths including accidental poisonings), but no statistical evidence for an increase in deaths involving either other analgesics or other drugs.

Conclusions: Major changes in prescribing after the announcement of the withdrawal of co-proxamol have had a marked beneficial effect on poisoning mortality involving this drug, with little evidence of substitution of suicide method related to increased prescribing of other analgesics.

Suicide

K Hawton, K van Heeringen (UK)

Lancet 373, 1372–1381, 2009

Suicide receives increasing attention worldwide, with many countries developing national strategies for prevention. Rates of suicide vary greatly between countries, with the greatest burdens in developing countries. Many more men than women die by suicide. Although suicide rates in elderly people have fallen in many countries, those in young people have risen. Rates also vary with ethnic origin, employment status, and occupation. Most people who die by suicide have psychiatric disorders, notably mood, substance-related, anxiety,

psychotic, and personality disorders, with comorbidity being common. Previous self-harm is a major risk factor. Suicide is also associated with physical characteristics and disorders and smoking. Family history of suicidal behaviour is important, as are upbringing, exposure to suicidal behaviour by others and in the media, and availability of means. Approaches to suicide prevention include those targeting high-risk groups and population strategies. There are, however, many challenges to large-scale prevention, especially in developing countries.

Group therapy for repeated deliberate self-harm in adolescents: failure of replication of a randomized trial

PL Hazell, G Martin, K McGill, T Kay, A Wood, G Trainor, R Harrington (Australia)
Journal of the American Academy of Child and Adolescent Psychiatry 48, 662–670, 2009

Objective: To replicate a study, which found group therapy superior to routine care in preventing the recurrence of self-harming behavior in adolescents who had deliberately harmed themselves on at least two occasions.

Method: Single blind study with parallel randomized groups undertaken in three sites in Australia. The primary outcome measure was repetition of self-harm, assessed on average after 6 and 12 months. Secondary outcome measures included suicidal ideation, psychiatric disorder, and service use.

Results: Seventy-two adolescents aged 12 to 16 years (91% female subjects) were randomized to group therapy or routine care. Primary outcome data were available for 68 of the 72 randomized participants. More adolescents randomized to group therapy than those randomized to routine care had self-harmed by 6 months (30/34 versus 23/34, $\chi^2 = 4.19$, $p = .04$), and there was a statistically nonsignificant trend for this pattern to be repeated in the interval of 6 to 12 months (30/34 versus 24/34, $\chi^2 = 3.24$, $p = .07$). There were few differences between the treatment groups on secondary outcome measures, other than a trend for greater improvement over time on global symptom ratings among the experimental group compared with the control group.

Conclusions: Our findings contradict those of the original study. Some differences in participant characteristics between the studies, along with less experience at the Australian sites in delivering the intervention, may have accounted for the different outcome. The benefit of group therapy for deliberate self-harm is unproven outside the environment in which it was originally developed.

Mindfulness-based cognitive therapy may reduce thought suppression in previously suicidal participants: findings from a preliminary study

SR Hepburn, C Crane, T Barnhofer, DS Duggan, MJ Fennell, JM Williams (UK)

British Journal of Clinical Psychology 48, 209–215, 2009

Objectives: Thought suppression is a strategy aimed at mental control that may paradoxically increase the frequency of unwanted thoughts. This preliminary study examined effects of mindfulness-based cognitive therapy (MBCT) on thought suppression and depression in individuals with past depression and suicidality.

Methods: In a randomized controlled trial design, 68 participants were allocated to an MBCT group or a treatment-as-usual waitlist control. Measures of thought suppression and depression were taken pre- and post-treatment.

Results: MBCT did not reduce thought suppression as measured by the White Bear Suppression Inventory, but significantly reduced self-reported attempts to suppress in the previous week.

Conclusions: Preliminary evidence suggests that MBCT for suicidality may reduce thought suppression, but differential effects on thought suppression measures warrant further studies.

Suicide trends diverge by method: Swiss suicide rates 1969–2005

U Hepp, M Ring, A Frei, W Rössler, U Schnyder, V Ajdacic-Gross (Switzerland)

European Psychiatry. Published online: 18 August 2009. doi: 10.1016/j.eurpsy.2009.05.005, 2009

We examined the change in Swiss suicide rates since 1969, breaking down the rates according to the method used. The descriptive analyses of the main suicide methods are presented. The suicide rates reached a peak in the late 1970s/early 1980s and declined in more recent years. Firearm suicides and suicides by falls were the exception and sustained their upwards trend until the 1990s. Suicide by vehicle exhaust asphyxiation showed a rapid decline following the introduction of catalytic converters in motor vehicles. No substantial method substitution was observed. Suicide by poisoning declined in the 1990s but rose again following an increase in assisted suicide in somatically incurable patients. Suicide is too often regarded as a homogeneous phenomenon. With regard to the method they choose, suicide victims are a heterogeneous population and it is evident that different suicide methods are chosen by different people. A better understanding of the varying patterns of change over time in the different suicide methods used may lead to differentiated preventive strategies.

Externalizing psychopathology and risk for suicide attempt: cross-sectional and longitudinal findings from the Baltimore epidemiologic catchment area study

AL Hills, TO Afifi, BJ Cox, OJ Bienvenu, J Sareen (USA)

Journal of Nervous and Mental Disease 197, 293–297, 2009

The unique association between externalizing psychopathology (i.e., diagnoses of alcohol dependence, drug dependence, and antisocial personality disorder) and suicide attempts has been understudied. We sought to examine whether externalizing disorders were risk factors for later development of new onset suicide attempts. This study examined cross-sectional and longitudinal data gathered from 1920 to 4034 adult respondents from the Baltimore site of the Epidemiologic Catchment Area Survey. In cross-sectional analyses, externalizing psychopathology was significantly associated with suicide attempts, even after adjusting for sociodemographics and internalizing disorders. After controlling for demographics and internalizing disorders, at 1-year follow-up ($n = 3163$) baseline externalizing psychopathology was associated with new onset suicides; at 13-year follow-up ($n = 1920$) baseline externalizing psychopathology was not associated with new onset suicide attempts. Externalizing psychopathology appears to be an independent short-term risk factor for suicidal behavior (odds ratio [OR] = 3.00; 95% confidence interval [CI] = 1.07–8.43), but appears less powerful in predicting long-term suicide risk (OR = 0.90; 95% CI = 0.25–3.18). These findings underline the importance of assessment of suicidality among individuals presenting with externalizing disorders.

Suicide screening in schools, primary care and emergency departments

LM Horowitz, ED Ballard, M Pao (USA)

Current Opinion in Pediatrics 21, 620–627, 2009

Purpose of review: Every year, suicide claims the lives of tens of thousands of young people worldwide. Despite its high prevalence and known risk factors, suicidality is often undetected. Early identification of suicide risk may be an important method of mitigating this public health crisis. Screening youth for suicide may be a critical step in suicide prevention. This paper reviews suicide screening in three different settings: schools, primary care clinics and emergency departments (EDs).

Recent findings: Unrecognized and thus untreated suicidality leads to substantial morbidity and mortality. With the onus of detection falling on nonmental health professionals, brief screening tools can be used to initiate more in-depth evaluations. Nonetheless, there are serious complexities and implications of screening all children and adolescents for suicide. Recent studies show that managing positive screens is a monumental challenge, including the problem of false

positives and the burden subsequently posed on systems of care. Furthermore, nearly 60% of youth in need of mental health services do not receive the care they need, even after suicide attempt. Schools, primary care clinics and EDs are logical settings where screening that leads to intervention can be initiated.

Summary: Valid, brief and easy-to-administer screening tools can be utilized to detect risk of suicide in children and adolescents. Targeted suicide screening in schools, and universal suicide screening in primary care clinics and EDs may be the most effective way to recognize and prevent self-harm. These settings must be equipped to manage youth who screen positive with effective and timely interventions. Most importantly, the impact of suicide screening in various settings needs to be further assessed.

Risk factors of suicide in inpatients and recently discharged patients with affective disorders: a case control study

EH Hoyer, RW Licht, PB Mortensen (Denmark)

European Psychiatry 24, 317–321, 2009

Objective: Patients with affective disorders are at high risk of suicide, especially during inpatient treatment and during the first year after discharge.

Methods: A blinded case-control design was used. The study included a total national sample of patients with affective disorder admitted during the period from January 1, 1994 to December 31, 1995, who died because of suicide, either during admission or shortly after discharge.

Results: A history of suicide attempt was a significant risk factor (IRR 4.9; 95% CI 2.1e11.6). Loss of job during the year prior to the index admission was associated with an increase in suicide risk (IRR: 2.9; 95% CI 1.2e7.5). Clinical improvement during the index admission (IRR: 0.3; 95% CI 0.1e0.7), and treatment with antidepressant drugs at the censoring date (IRR: 0.3; 95% CI 0.1e0.7) were associated with a decrease in suicide risk.

Conclusion: Improved treatment may be a key factor in suicide prevention in patients during, and shortly after hospitalisation with affective disorders. Also, there is a need to be especially aware of suicide risk in patients with little or no improvement at discharge.

Moderators and mediators among panic, agoraphobia symptoms, and suicidal ideation in patients with panic disorder

M-F Huang, C-F Yen, F-W Lung (Taiwan)

Comprehensive Psychiatry. Published online: 31 August 2009. doi: 10.1016/j.comppsy.2009.07.005, 2009

Objectives: The most important change of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) is the use of dimensional

approach to assess the severity of symptoms across different diagnosis. There are 2 purposes in this study: the first purpose was to identify the proportion of outpatients with panic disorder who have suicidal ideation. The second aim was to examine the relationships among panic, agoraphobic symptoms, and suicidal ideation in patients with panic disorder, adjusting by age, social support, and alcohol use.

Methods: Sixty patients with panic disorder were recruited from outpatient psychiatric clinics in southern Taiwan. Suicidal ideation in the preceding 2 weeks was measured. The Panic and Agoraphobic Symptoms Checklist, Social Support Scale, Questionnaire for Adverse Effects of Medication for Panic Disorder, and Social Status Rating Scale were used to understand the severity of panic and agoraphobia, social support, drug adverse effects, and social status. Significant variables from the univariate analysis were included in a forward regression model. Then, we used structural equation modeling to fit the model.

Results: We found that 31.7% of outpatients with panic disorder had had suicidal ideation in the preceding 2 weeks. Multiple regression analysis showed that younger age, current alcohol use, more severe panic symptoms, and less social support were associated with suicidal ideation. In addition, the structural equation model illustrated the recursive model from panic to agoraphobia and suicidal ideation. Agoraphobia had no association with suicidal ideation. Panic symptom was a mediator to suicidal ideation but not agoraphobic symptoms.

Conclusions: A high proportion of patients with panic disorder had suicidal ideation. We found that panic symptoms, social support, age, and alcohol use affected suicide and could be identified. The 3-level model from panic to agoraphobia revealed that panic was a predictor of agoraphobia and agoraphobia was not a predictor of panic. This verified the evolution of the diagnostic view of the DSM. Panic symptom was a mediator to suicidal ideation. With the dimensional model in DSM-V, panic symptoms can be used as a marker for greater morbidity and severity.

Psychopathology and suicide method in mental health care

A Huisman, CA van Houwelingen, AJ Kerkhof (The Netherlands)

Journal of Affective Disorders. Published online: 17 June 2009. doi: 10.1016/j.jad.2009.05.024, 2009-08-10, 2009

Background: Not all suicide methods are evenly distributed among different psychiatric disorders.

Methods: In a nationwide sample of 505 suicides by persons in mental health care, the relationship between psychiatric diagnosis and suicide method was examined with chi(2) tests, logistic regression analyses and multinomial logistic regression analysis, including interactions with age, gender and treatment status.

Results: Psychotic disorders were associated with jumping from heights, and substance-related disorders were associated with self-poisoning. Depressive disorders were not associated with any particular suicide method. Male patients preferred hanging, female patients self-poisoning. Inpatients preferred jumping before a train, outpatients self-poisoning. Bipolar patients preferred jumping before a train over hanging.

Limitations: Psychological mechanisms for selection of suicide methods are still unknown.

Conclusions: Possible means of suicide prevention suggested by this study include limiting access to tall buildings or structures to patients with psychotic disorders; careful prescription of medication to female patients and particularly to patients with substance-related disorders; and limiting easy access to railways near clinical settings to patients with bipolar and psychotic disorders. Limiting access to means of suicide may be less effective for suicidal patients with depressive disorders who may switch to other available methods.

School performance and hospital admissions due to self-inflicted injury: a Swedish national cohort study

B Jablonska, L Lindberg, F Lindblad, F Rasmussen, V Ostberg, A Hjern (Sweden)

International Journal of Epidemiology 38, 1334-1341, 2009

Background: Self-inflicted injury in youth has increased in many Western countries during recent decades. Education is the most influential societal determinant of living conditions in young people after early childhood. This study tested the hypothesis that school performance predicts self-inflicted injury.

Methods: A national cohort of 447 929 children born during 1973-77 was followed prospectively in the National Patient Discharge Register from the end of their ninth and last year of compulsory school until 2001. Multivariate Cox analyses of proportional hazards were used to test hypotheses regarding grades in ninth grade as predictors of hospital admission due to self-inflicted injury.

Results: The risk of hospital admission because of self-inflicted injury increased steeply in a step-wise manner with decreasing grade point average. Hazard ratios were 6.2 (95% confidence interval 5.5-7.0) in those with the lowest level of grade point average compared with the highest. The risks were similar for women and men. Adjustment for potential socio-economic confounders in a multivariate proportional hazards regression analysis attenuated this strong gradient only marginally.

Conclusion: School performance is a strong factor for predicting future mental ill-health as expressed by self-inflicted injury.

The impact of parental suicide on child and adolescent offspring

KS Janet, DA Brent, HC Wilcox (USA)

Suicide and Life-Threatening Behavior 39, 137–151, 2009

Child and adolescent survivors of parental suicide experience two stressful events simultaneously: (1) the loss of a primary caregiver, and (2) suicidal death of a significant person. These youths are thought to be at increased risk for mental health problems, but a systematic review of studies on these survivors has not yet been conducted. A comprehensive search for published literature identified nine studies. The existent studies provided modest yet inconsistent evidence on the impact of parental suicide on offspring psychiatric and psychosocial outcomes. More methodologically rigorous research is needed to inform and guide postvention efforts for these survivors.

Are self-injurers impulsive? Results from two behavioural laboratory studies

IB Janis, MK Nock (USA)

Psychiatry Research 169, 261–267, 2009

Common clinical wisdom suggests that people who engage in self-injury are impulsive. However, virtually all prior work in this area has relied on individuals' self-report of impulsiveness, despite evidence that people are limited in their ability to accurately report on cognitive processes that occur outside awareness. To address this knowledge gap, we used performance-based measures of several dimensions of impulsiveness to assess whether people engaging in non-suicidal self-injury (NSSI) demonstrate greater impulsiveness than non-injurers. In Study 1, we compared adolescent self-injurers ($n = 64$) to age-, sex-, and race/ethnicity-matched, non-injurious controls ($n = 30$) on self-reported impulsiveness (Schedule for Affective Disorders and Schizophrenia for School Age Children, Present and Lifetime Version) and on performance-based measures of two dimensions of impulsiveness: behavioral disinhibition (Conners' Continuous Performance Test) and risky decision-making (Iowa Gambling Task). In Study 2, we compared adult female self-injurers ($n = 20$) with age- and race/ethnicity-matched, non-injurious controls ($n = 20$) on self-reported impulsiveness (Barratt Impulsiveness Scale-11), and performance-based measures of behavioral disinhibition, risky decision-making, and two measures of delay discounting. In both studies, self-injurers reported greater impulsiveness; however, performance-based measures of impulsiveness failed to detect any between-group differences. We propose several potential explanations for the discrepancies observed between self-report and performance-based measures of impulsiveness and discuss directions for future research on impulsiveness and self-injury.

Victimization by peers and adolescent suicide in three US samples

JW Kaminski, X Fang (USA)

Journal of Pediatrics. Published online: 21 July 2009. doi:10.1016/j.jpeds.2009.04.061, 2009

Objective: To investigate the association between victimization by peers and suicidal ideation and behavior in 3 samples of adolescents in the United States.

Study Design: This study was a secondary analysis of data from 3 cohorts of adolescents: (1) a nationally representative survey of adolescents in grade 7 through 12, Wave I of the National Longitudinal Study of Adolescent Health, conducted by the Carolina Population Center in 1994–1995; (2) a nationally representative survey, the Youth Risk Behavior Surveillance System, conducted by the Centers for Disease Control and Prevention in 2005; and (3) a survey in a high-risk community conducted by the Centers for Disease Control and Prevention in 2004.

Results: Controlling for differences in age, sex, race/ethnicity, and depressive symptomology, adolescents reporting more frequent victimization by peers were more likely to report suicidal ideation and suicidal behavior. Adjusted odds ratios ranged from 1.67 (95% confidence interval [CI] = 1.30–2.15) to 3.83 (95% CI = 2.78–5.27) for the different outcome measures and data sets.

Conclusions: Our results provide further support for the need for effective prevention of peer victimization. Inclusion of questions about victimization experiences might aid formal and informal suicide screening efforts.

Methods of choice in completed suicides: gender differences and review of literature

T Kanchan, A Menon, RG Menezes (India)

Journal of Forensic Science 54, 938–942, 2009

Suicide is an important public health hazard worldwide. A 4-year retrospective study from January 2000 to December 2003 was conducted to identify the favored methods in realized suicides among males and females in the west coastal region of India. During the study period, a total of 539 cases of suicidal deaths were autopsied. Males were predominantly affected (male: female-1.9:1). The age of the victims ranged from 13 to 90 years in males (mean = 40.1 years, median = 37.0 years) and 15 to 85 years in females (mean = 36.6 years, median = 32.0 years). Most favored method of suicide amongst males and females was hanging (36.9%, $n = 199$) followed by poisoning (34.7%, $n = 187$). Male dominance was apparent for each method of suicide except for self-immolation. Males were relatively more likely to use hanging and poisoning while females were more likely to prefer drowning and self-immolation as methods of suicide. Relatively younger females (mean = 33.0 years, median = 32.0 years) preferred hanging as a method of suicide when compared to males

(mean = 42.4 years, median = 40.0 years). Among females, significantly younger females resorted to hanging when compared to older females who preferred drowning. On investigating the various theories proposed for choice of suicide methods in males and females in different regions we conclude that preference of method of suicide in men and women is complexly determined. In this region, availability, accessibility, popularity, and socioacceptability seem to be the major determinants in the choice of methods among males and females rather than violence associated and lethality of the method. Females were as likely to use lethal and violent methods as males in this region.

Firearm suicide among veterans in the general population: findings from the National Violent Death Reporting System

MS Kaplan, BH McFarland, N Huguet (USA)

Journal of Trauma 67, 503–507, 2009

Background: Military veterans are particularly vulnerable to suicide compared with their civilian peers. Scant attention has been devoted to the problem of firearm suicide among veterans, particularly women. The purpose of this study was to examine the rate, prevalence, and relative odds of firearm use among veteran suicide decedents in the general population.

Methods: The analyses are based on data derived from 28,534 suicide decedents from the 2003 to 2006 National Violent Death Reporting System.

Results: Across the age groups, male and female veterans had higher firearm suicide rates than nonveterans. Among males and females, younger veterans (18–34 years) had the highest firearm and total suicide rates. The male and female veteran suicide decedents were, respectively, 1.3 and 1.6 times more likely to use firearms relative to nonveterans after adjusting for age, marital status, race, and region of residence.

Conclusions: Although violent death and the use of firearms are generally associated with men, the results reported here suggest that firearms among female veterans deserve particular attention among health professionals within and outside the veterans affairs system. In addition, the focus should not be exclusively on the Operation Enduring Freedom/Operation Iraqi Freedom military cohort but also on men and women who served in earlier combat theaters, including the Gulf war, Vietnam Era, Korean Conflict, and World War II.

Evaluation of treatment in 35 cases of bipolar suicide

NA Keks, C Hill, S Sundram, A Graham, K Bellingham, B Dean, K Opeskin, A Dorissa, DL Copolov (Australia)

Australian and New Zealand Journal of Psychiatry 43, 503–508, 2009

Objective: The aim of the present study was to evaluate clinical factors relevant to suicide prevention (including treatment) in cases of bipolar suicide with available therapeutic histories.

Method: Victorian Coroner's Office data enabled identification of suicides that occurred between March 1993 and December 2001. Cases involving sufficient clinical notes to enable diagnosis of DSM-IV bipolar disorder and review of treatment were de-identified and assessed by an expert clinical panel.

Results: From 3752 suicides, 35 eligible bipolar subjects (22 men, 13 women) aged 40.3+/-1.8 years were identified. Duration of illness was 11.9+/-1.1 years. A total of 86% had made at least one previous suicide attempt, and 83% were in the depressed phase of illness. A total of 63% manifested psychosis at some time during lifetime illness. Fourteen per cent were inpatients, and 26% suicided within 6 weeks of hospital discharge. The panel's retrospective risk assessment concluded that only 48% of cases could have been assessed as high risk. In the 4 weeks prior to suicide, treatment was rated as not reaching benchmark standards in 60% of cases. Electroconvulsive therapy had been given to 11%, lithium to 43% (but definitely therapeutic in only 11%), 31% had never been treated with lithium, and psychosocial interventions did not reach adequate standards in 57% during the previous year.

Conclusions: In the majority of bipolar suicide cases in the present case series the subjects did not receive treatment at or above a benchmark standard, often due to illness and situational factors, but also possibly due to inadequate clinical interventions. Strategies to improve treatment may reduce suicide in bipolar disorder.

The costs of suicide and sudden death within an organization

A Kinder, CL Cooper (UK)

Death Studies 33, 411–419, 2009

The effect of any death spreads out to many people. Deaths that occur in the workplace need to be handled with particular care given that the bereaved family as well as work colleagues will have been affected. Death by suicide or situations when an employee becomes suicidal can challenge even the most experienced manager. This article aims to raise some of the issues surrounding sudden death and suicide at work and suggests a number of ways that an organization can respond to such challenges.

'Why do they become vulnerable when faced with the challenges of old age?' Elderly people who committed suicide, described by those who knew them

I Kjølsen, O Ekeberg, S Steihaug (Norway)

International Psychogeriatrics 21, 903–912, 2009

Background: Suicidal behavior among the elderly is a research field in which qualitative and quantitative methods can and should supplement each other. The objective of this qualitative study is to investigate whether the descriptions of elderly people who committed suicide, given by those who knew them, can provide common features that create recognizable patterns, and if so whether these patterns can help to shed light on the suicidal process.

Method: This is a psychological autopsy study based on qualitative interviews with 63 informants concerning 23 suicides committed by persons aged over 65 in Norway. The informants were relatives, their family doctors, and home-based care nurses. In general, the analysis of the interviews follows the systematic text condensation method.

Results: The descriptions have three main topics: life histories, personality traits and relationships. 'Life histories' includes the sub-topics ability to survive and action-oriented achievers. They describe people who came through difficult circumstances when growing up and who were action-oriented in life in general and in crises. 'Personality traits' includes the sub-topics obstinacy and controlling others. The informants saw the elderly people as strong-willed, obstinate and possessing a considerable ability to control themselves and those around them. 'Relationships' includes the sub-topics I didn't know him and He showed no ability to meet us halfway, and describes the informants' experience of emotionally closed persons who kept a distance in their relationships.

Conclusions: On the basis of the descriptions of the elderly people given in this study, we argue that these individuals will find difficulty in accepting and adapting to age-related loss of function since their self-esteem is so strongly associated with being productive and in control. Loss of control reveals their vulnerability — and this they cannot tolerate.

Why suicide? Elderly people who committed suicide and their experience of life in the period before their death

I Kjølsen, O Ekeberg, S Steihaug (Norway)

International Psychogeriatrics. Published online: 14 September 2009. doi: 10.1017/S1041610209990949, 2009

Background: The objective of this study is to acquire an understanding of the suicides among a group of elderly people by studying how they experienced their existence towards the end of life.

Methods: This is a psychological autopsy study based on qualitative interviews with 63 informants in relation to 23 suicides committed by persons aged over

65 in Norway. Informants who knew the deceased persons well describe what the elderly person communicated to them about their experience of life in the period before the suicide and how they as informants saw and understood this. The informants comprise relatives, family doctors and home-based care nurses. The analysis of the interviews follows the systematic text condensation method.

Results: The descriptions are divided into three main elements: the elderly persons' experiences of life, their perception of themselves, and their conceptions of death. 'Experience of life' has two sub-topics: this life has been lived and life as a burden. Everything that had given value to their life had been lost and life was increasingly experienced as a burden. Their 'perception of themselves' concerned losing oneself. Functional decline meant that they no longer had freedom of action and self-determination. 'Conceptions of death' involve the following sub-topics: acknowledgment/acceptance and death is better than life. Life had entered into its final phase, and they seemed to accept death. For some time, many of them had expressed the wish to die.

Conclusions: The results lead us to argue that their suicides should be considered as existential choices. The sum total of the different forms of strain had made life a burden they could no longer bear. Age meant that they were in a phase of life that entailed closeness to death, which they could also see as a relief.

Suicide prevention with adolescents

B Klimes-Dougan, C Yuan, S Lee, AK Hourii (USA)

Crisis 30, 128–135, 2009

Background/Aims: Suicide is one of the most serious public health challenges; yet determining optimal methods for preventing suicide in adolescents continues to be an elusive goal. The aim of this study was to investigate possible benefits and untoward effects of suicide-prevention public service announcements (PSAs) for adolescents.

Methods: Adolescent participants ($N = 426$; 56% female) were randomly assigned to one of three conditions: (a) a billboard simulation, (b) a 30-s TV ad simulation, and (c) a no-information condition.

Results: The results of this study suggest some benefits for the information conveyed by the TV ad (e.g., more knowledgeable about depression). Few benefits were noted for adolescents who were exposed to billboard simulation, and the results raised substantial concerns about possible untoward effects, particularly in adolescents who were exhibiting depressive or suicidal symptoms. Billboard viewers were less likely to favor help-seeking attitudes, perceived PSAs as being less useful, and endorsed more maladaptive coping.

Conclusions: More research is urgently needed so that well-intended efforts to prevent suicide can more optimally serve the desired goals.

Clinical features of patients with treatment-emergent suicidal behavior following initiation of paroxetine therapy

JE Kraus, JP Horrigan, DJ Carpenter, R Fong, PS Barrett, JT Davies (USA/UK)

Journal of Affective Disorders. Published online: 12 May 2009. doi: 10.1016/j.jad.2009.04.004, 2009

Background: Understanding suicidal behavior is an important component of assessing suicidality in psychiatric patients. GlaxoSmithKline (GSK) conducted a meta-analysis of randomized, placebo-controlled trials to compare suicidality in adult patients treated with paroxetine vs. placebo. The goal was to identify emergent clinical characteristics of patients with definitive suicidal behavior (DSB: preparatory act, suicide attempt, completed suicide).

Methods: The dataset comprised 14,911 patients from 57 placebo-controlled paroxetine trials. Possible cases of suicidality were identified and were blindly reviewed by an expert panel, which categorized cases as suicidal or non-suicidal. DSB incidences were compared between paroxetine and placebo. Clinical narratives and case report forms for major depressive disorder (MDD) and anxiety disorder patients with DSB were reviewed. For MDD, rating scale items relating to suicidality, insomnia, agitation, and anxiety were examined.

Results: Overall (all indications) there were no differences between paroxetine and placebo for DSB (50/8958 [0.56%] vs. 40/5953 [0.67%], respectively; OR = 1.2 [CI 0.8, 1.9]; $p = .483$). However, in patients with major depressive disorder (MDD), the incidence of DSB was greater for paroxetine (11/3455 [0.32%] vs. 1/1978 [0.05%], OR = 6.7 [CI 1.1, 149.4]; $p = .058$). Review of the 11 paroxetine MDD cases revealed common clinical features: symptomatic improvement; younger age (18–30 years); psychosocial stressors; overdose as method; and absent/mild suicidal ideation at the visit prior to the event. There was no evidence for a consistent adverse event profile or onset of akathisia/agitation or a manic/mixed state. Anxiety disorder patients with DSB had a heterogeneous clinical picture.

Limitations: Limitations to the study include the relatively small number of cases and the retrospective nature of the study.

Per capita alcohol consumption and suicide rates in the US, 1950–2002

J Landberg (USA)

Suicide and Life-Threatening Behavior 39, 452–459, 2009

The aim of this paper was to estimate how suicide rates in the United States are affected by changes in per capita consumption during the postwar period. The analysis included Annual suicide rates and per capita alcohol consumption data (total and beverage specific) for the period 1950–2002. Gender- and age-specific models were estimated using the Box-Jenkins technique for time series analysis. No significant estimate was found for males. For females the total alcohol estimate (0.059) was significant at the 10% level whereas the spirits

estimate was significant with an effect of 0.152. The results imply that a change in U.S. per capita consumption would result in a change in female suicide rates, whereas the male rates would not be affected.

Work expectations, cultural sensitivity, schizophrenia, and suicide risk in male patients

R Lewine, B Shriner (USA)

Journal of Nervous and Mental Disease 197, 239–243, 2009

This study examines the relationship between vocational lost potential and suicide risk in a mixed sample of severely and persistently mentally ill psychiatric patients. We hypothesized that increased lost potential would be associated with increased suicide risk indicator ratings and that this relationship would be moderated by patients' social class of origin. One hundred sixty-seven psychiatric patients rated a range of clinical symptoms and vocational expectations, as well as providing sociodemographic information including their parents' years of education (used as a proxy for social class of origin). Contrary to our prediction, the results suggest that individuals from higher social class who experience minimal lost potential may be at a higher risk for suicide than their counterparts with maximal lost potential; this is especially true when based on fathers' educational level. In discussing the clinical implications of our findings, we suggest that a subgroup of individuals' vocational success may depend on first addressing the cognitive conflict inherent in the phenomenon of lost potential.

Responses to depressed mood and suicide attempt in young adults with a history of childhood-onset mood disorder

XC Liu, AL Gentzler, CJ George, M Kovacs (USA)

Journal of Clinical Psychiatry 70, 644–652, 2009

Objective: Although individuals' responses to their depressed mood are hypothesized to play an important role in the development and maintenance of depression, how these responses might impact the likelihood of suicidal behavior in mood disorders remains largely unexplored. The goal of the current study was to examine whether maladaptive responses to depressed mood are associated with suicide attempts in adults with a history of childhood-onset mood disorder (COMD).

Method: Participants included 223 young adult probands with COMD meeting DSM-III or DSM-IV criteria for major depressive disorder or bipolar disorder and 12 controls without a history of psychiatric disorders. All participants were recruited between 1996 and 2004. Probands were followed for 6 to 99 months (median = 32 months). The Responses Styles Questionnaire was used to assess 2 adaptive (distraction and problem solving) and 2 maladaptive (dangerous activity and rumination) ways of coping with depressed mood.

Results: Compared to controls, COMD probands scored significantly higher on maladaptive response styles and lower on adaptive styles. Compared to their COMD peers, probands with a history of suicide attempt were less likely to report using distracting activities to manage their depressed mood. However, COMD probands who engaged in dangerous activities in response to depressed mood were more likely to attempt suicide during the follow-up period (hazard ratio = 1.8, 95% CI = 1.2 to 2.8).

Conclusion: One of the pathways to suicide attempt in mood disorders may involve maladaptive responses to depressed mood. The assessment of how depressed individuals manage their dysphoric moods, therefore, should be considered an important aspect of treatment and prevention of suicidal behavior.

Exploring potential associations of suicidal ideation and ideas of self-harm in patients with congestive heart failure

N Lossnitzer, T Müller-Tasch, B Löwe, C Zugck, M Nelles, A Remppis, M Haass, B Rauch, J Jünger, W Herzog, B Wild (USA)

Depression and Anxiety 26, 764–768, 2009

Objective: To determine the factors, which are associated with suicidal ideation and ideas of self-harm in patients with congestive heart failure (CHF).

Methods: We examined 294 patients with documented CHF, New York Heart Association (NYHA) functional class II-IV, in a cross sectional study at three cardiac outpatient departments. Measures included self-reports of suicidal ideation and self-harm (PHQ-9), depression (SCID), health-related quality of life (SF-36), multimorbidity (CIRS-G), consumption of alcoholic beverages, as well as comprehensive clinical status. Data were analyzed using logistic regression analyses.

Results: 50 patients (17.1%) reported experiencing suicidal ideation and/or ideas of self-harm on at least several days over the past two weeks. The final regression model revealed significant associations with health-related quality of life, physical component (odds ratio [OR] 0.56; 95% confidence interval [CI]: 0.35–0.91), and mental component (OR 0.50; 95% CI: 0.31–0.82), consumption of alcoholic beverages (OR 1.27; 95% CI: 1.05–1.54), first-episode depression (OR 3.92; 95% CI: 1.16–13.22), and lifetime depression (OR 10.89; 95% CI: 2.49–47.72). Age was only significant in the univariable ($P = .03$) regression analysis. NYHA functional class, left ventricular ejection fraction (LVEF), etiology of CHF, medication, cardiovascular interventions, multimorbidity, gender, and living situation were not significantly associated with suicidal ideation or ideas of self-harm.

Conclusions: Lifetime depression, in particular, increases the risk of suicidal ideation and ideas of self-harm in CHF patients. Furthermore, the findings of our study underline the necessity of differentiating between first-episode and lifetime depression in CHF-patients in future research and clinical practice.

Deliberate self-harm in Oxford University students, 1993–2005: a descriptive and case-control study

S Mahadevan, K Hawton, D Casey (UK)

Social Psychiatry and Psychiatric Epidemiology. Published online: 25 April 2009. doi: 10.1007/s00127-009-0057-x, 2009

Background: Deliberate self-harm (DSH; intentional self-poisoning or self-injury) is a major problem among young people and has been identified as one of the key mental health problems affecting students.

Method: Data on DSH presentations to the general hospital in Oxford by Oxford University students were analysed for the 12-year period from 1993 to 2005. The characteristics of the students with DSH were compared with those of age-matched DSH controls in the Oxford City area.

Results: Problems with academic work, relationships with family, partners and friends were most likely to contribute to DSH episodes in students. Many experienced problems with psychiatric disorders and social isolation. The frequency of eating disorders was very high in students, and contributed to DSH significantly more often than in controls. Fewer students than controls self-poisoned in the DSH episode, fewer had personality disorder and fewer had problems with physical health, finance, housing and violence. Alcohol consumption in association with DSH and alcohol-related problems were common in both students and controls. Male students had significantly higher suicide intent than controls. Many students were referred to the university counselling service for follow-up, a resource not available to non-student controls.

Conclusions: Comparison of university students following DSH with age-matched controls has shown key differences in psychiatric characteristics, problems contributing to DSH and aftercare offered. These findings may help in the design of targeted self-harm prevention and management strategies for students.

The role of socioeconomic indicators on non-alcohol and alcohol-associated suicide mortality among women in Finland: a register-based follow-up study of 12 million person-years

N Mäki, P Martikainen (Finland)

Social Science & Medicine 68, 2161–2169, 2009

This study was to analyse the effects and interrelationships of three socioeconomic indicators — education, occupation-based social class and income - on non-alcohol and alcohol-associated suicide mortality among women in Finland. The register data used comprised the 1990 census records linked to the death register for the years 1991–2001 for women who were 25 to 64 years old in 1990. Adjusted relative mortality rates and the relative index of inequality (RII) were estimated using Poisson regression. The study population experienced 1926 suicides, of which 563 (29%) had alcohol intoxication as a

contributory cause. The age-adjusted effects of education on non-alcohol associated suicide were modest, while social class and income related inversely and strongly. The effect of social class was partly mediated by income, and social class explained income differences to some extent. The associations between these socioeconomic indicators and alcohol-associated suicide were stronger, and following adjustment for each other large effects were left for education, social class and income. Further adjustment for living arrangements had little effect on socioeconomic differences in both types of suicide, but practically all of the effects of income and some of education and social class were mediated by employment status. In conclusion, current material factors are hardly the main underlying drivers of socioeconomic differences in suicide among Finnish women. Low social class proved to be an important determinant of suicide risk, but the strong independent effect of education on alcohol-associated suicide indicates that the roots of these differences are probably established in early adulthood when educational qualifications are obtained and health-behavioural patterns set.

Impulsivity and borderline personality as risk factors for suicide attempts among opioid-dependent individuals

E Maloney, L Degenhardt, S Darke, EC Nelson (Australia)

Psychiatry Research 169, 16–21, 2009

The study aimed to examine the association of impulsivity and screening positively for borderline personality disorder (BPD+) as risk factors for suicide attempts among opioid-dependent individuals. The study used a case-control design with 775 opioid-dependent cases and 306 non-opioid-dependent controls. Cases were more likely than controls to screen BPD+ and to be classed as highly impulsive. Significant risk for lifetime suicide attempt was associated with screening BPD+ and also with high impulsivity. A number of risk factors were identified for suicide attempts among those with either high impulsivity or among those who screened BPD+: being female, a diagnosis of an anxiety disorder and a diagnosis of illicit drug dependence (other than opioid dependence). Opioid dependence was not a unique risk factor for suicide attempts among either the BPD+ group or the high impulsivity group. Although opioid dependence was not a unique risk factor for suicide attempts among those who screened BPD+, cases presented with multiple risk factors at substantially higher rates than controls. This research also highlights the importance of assessing impulsivity, in both clinical settings and research, particularly among those with a history of suicidal behaviour.

Possible association between attention deficit hyperactivity disorder and attempted suicide in adolescents: a pilot study

I Manor, I Gutnik, DH Ben-Dor, A Apter, J Sever, S Tyano, A Weizman, G Zalsman (Israel)
European Psychiatry. Published online: 20 August 2009. doi: 10.1016/j.eurpsy.2009.06.001, 2009

Objective: Both adolescent suicide and attention deficit hyperactivity disorder (ADHD) are troubling phenomena with high comorbidity, including impulsivity, depression and personality disorders (PD). Studies on the association between these two phenomena are relatively rare. This pilot study's aim was to estimate the rate of ADHD in adolescents attempting suicide.

Method: Subjects constituted consecutive admissions to the psychiatric emergency room (ER) who were admitted as a result of attempting suicide. Assessment included the use of the Kiddie-SADS, Strengths and Difficulties Questionnaire (SDQ) and the Conners' Rating Scale (CRS). Those diagnosed as suffering from ADHD were assessed by a standardized Continuous Performance Test (Test of Variables of Attention [TOVA]) that included methylphenidate (MPH) challenge. Twenty-three (23) adolescents completed the study. M:F ratio was 5:18, respectively.

Results: Of the 23 participants who completed the study, 65% were diagnosed with ADHD, 43.5% with depression and 39% with cluster B PD. ADD/ADHD ratio was 66%:34%. Only five of the patients were formerly diagnosed as ADHD, only three had been medicated and 14 out of 15 adolescents responded well to MPH challenge.

Conclusion: These preliminary results suggest a significant association between ADHD and suicidal behavior in adolescents. Further study is needed to establish this association and assess the causality.

Internet monitoring of suicide risk in the population

MJ McCarthy

Journal of Affective Disorders. Published online: 12 September 2009. doi: 10.1016/j.jad.2009.08.015, 2009

Background: Public health statistics are often released too late to affect reversible societal factors affecting suicide. Increasingly, internet search volume is used in epidemiology, but this method has not yet been applied to suicide.

Methods: Google internet search engine activity for suicide-related terms from the years 2004–2009 was measured and correlated to available suicide and intentional self-injury data from the Centers of Disease Control (CDC).

Results: Google search volumes correlated to CDC statistics for both suicide and self-injury, but in patterns that differed by age. Whereas internet search activity was negatively correlated to the suicide rate in the general population,

it was positively correlated to both intentional self-injury and completed suicides among youth.

Conclusions: Monitoring changes in search volumes on the internet may provide an early indicator of suicide risk within the population. Furthermore, youth may utilize the internet in ways that differ from the general population with respect to suicide.

Familial aggregation of suicide explained by cluster B traits: a three-group family study of suicide controlling for major depressive disorder

A McGirr, M Alda, M Seguin, S Cabot, A Lesage, G Turecki (Canada)

American Journal of Psychiatry 116, 1124, 2009

Objective: There is substantial evidence suggesting that suicide aggregates in families. However, the extent of overlap between the liability to suicide and psychiatric disorders, particularly major depressive disorder, remains an important issue. Similarly, factors that account for the familial transmission of suicidal behavior remain unclear. Thus, through direct and blind assessment of first-degree relatives, the authors conducted a family study of suicide by examining three proband groups: probands who committed suicide in the context of major depressive disorder, living depressed probands with no history of suicidal behavior, and psychiatrically normal community comparison probands.

Method: Participants were 718 first-degree relatives from 120 families: 296 relatives of 51 depressed probands who committed suicide, 185 relatives of 34 non-suicidal depressed probands, and 237 relatives of 35 community comparison subjects. Psychopathology, suicidal behavior, and behavioral measures were assessed via interviews.

Results: The relatives of probands who committed suicide had higher levels of suicidal behavior (10.8%) than the relatives of nonsuicidal depressed probands (6.5%) and community comparison probands (3.4%). Testing cluster B traits as intermediate phenotypes of suicide showed that the relatives of depressed probands who committed suicide had elevated levels of cluster B traits; familial predisposition to suicide was associated with increased levels of cluster B traits; cluster B traits demonstrated familial aggregation and were associated with suicide attempts among relatives; and cluster B traits mediated, at least in part, the relationship between familial predisposition and suicide attempts among relatives. Analyses were repeated for severity of attempts, where cluster B traits also met criteria for endophenotypes of suicide.

Conclusions: Familial transmission of suicide and major depression, while partially overlapping, are distinct. Cluster B traits and impulsive-aggressive behavior represent intermediate phenotypes of suicide.

Recent psychopathology, suicidal thoughts and suicide attempts in households with and without firearms: findings from the National Comorbidity Study Replication

M Miller, C Barber, D Azrael, D Hemenway, BE Molnar (USA)

Injury Prevention 15, 183–187, 2009

Objective: To assess the relationship between firearm ownership and possible psychiatric confounders of the firearm-suicide relationship.

Methods: Multivariate logistic regression was used to estimate the association between living in a home with firearms and 12-month occurrence of major Diagnostic and statistical manual of mental disorders (DSM)-IV disorders and suicidal behaviour among respondents to the National Comorbidity Survey Replication, a household survey of 9282 adults aged 18+. Analyses controlled for sociodemographic characteristics including age, sex, race/ethnicity, educational attainment and poverty.

Results: Approximately one in three Americans reported living in a home with firearms. People living in a home with firearms were no more or less likely than people in homes without firearms to have recent (past year) anxiety disorders (OR = 1.0, 95% CI 0.8 to 1.2), mood disorders (OR = 0.9, 95% CI 0.7 to 1.1) or substance dependence and/or abuse (OR = 0.9, 95% CI 0.6 to 1.3). Past year suicidal ideation (OR = 0.8, 95% CI 0.5 to 1.3) and suicide planning (OR = 0.5, 95% CI 0.2 to 1.4) were also not associated with living in households with firearms. Having made a suicide attempt over the previous year was the only outcome more common among participants reporting that they currently lived in a home with firearms.

Conclusions: The previously reported association between household firearm ownership and heightened risk of suicide is not explained by a higher risk of psychopathology among gun-owning families. As there are Americans with suicidal ideation and/or significant and recent psychiatric disorders currently living in homes with firearms, future work should focus on understanding the impediments to effectively communicating the suicide risk associated with household firearms.

Suicide among US veterans: a prospective study of 500,000 middle-aged and elderly men

M Miller, C Barber, D Azrael, EE Calle, E Lawler, KJ Mukamal (USA)

American Journal of Epidemiology 170, 494–500, 2009

Expert opinion is divided about whether US military veterans, the vast majority of whom are middle-aged or older, are at increased risk of suicide. To assess the risk of suicide associated with veteran status, the authors conducted a prospective cohort study of 499,356 male participants in the Cancer Prevention Study II. Participants reported their veteran status and other characteris-

tics in 1982 and were followed for mortality through 2004. The relative risk of mortality from suicide according to veteran status at baseline was estimated by using Cox proportional hazards models. During follow-up, 1,248 veterans and 614 nonveterans died by suicide. In age-adjusted analyses, the risk of suicide did not differ by veteran status. Additional adjustment for several sociodemographic, behavioral, and clinical factors had little effect on hazard ratios. The authors concluded that the risk of death from suicide among middle-aged and older US males is independent of veteran status and suggest that policies to prevent veteran suicide should focus on factors that may heighten suicide risk rather than on veteran status per se.

BMI and rates of suicide in the United States: an ecological analysis

KJ Mukamal, CC Wee, M Miller (USA)

Obesity 17, 1946–1950, 2009

BMI has been inversely associated with risk of completed suicide in several cohort studies, but putative mechanisms for this association and its generalizability throughout the United States are uncertain. We ascertained recent population-based, state-level data on rates of obesity, completed suicide (by method), firearm ownership, smoking, major depression, income, education, white race, and nonmetropolitan residence, compiled from federal agencies and surveys, and determined the adjusted population-weighted correlations of statewide obesity rates with measures of completed and attempted suicide. Statewide prevalence of obesity was strongly inversely correlated with age adjusted suicide rate (multivariable-adjusted $r = -0.66$; $P < 0.001$). The correlation was somewhat stronger for rates of nonfirearm-related ($r = -0.75$; $P < 0.001$) than firearm-related suicides ($r = -0.53$; $P < 0.001$), and was of similar magnitude as the positive correlations of firearm prevalence with suicide rate ($r = 0.75$; $P < 0.001$) or of obesity with prevalence of diabetes ($r = 0.41$; $P = 0.006$). In analyses of fatal and nonfatal suicidal acts, obesity rates were inversely correlated with rates of suicidal acts using firearms ($r = -0.53$; $P = 0.02$) and suffocation ($r = -0.76$; $P < 0.001$) but not other methods. Obesity rates were also inversely correlated with the case-fatality ratios of acts using poisoning ($r = -0.51$; $P = 0.01$). Thus, statewide rates of obesity are strongly inversely correlated with rates of completed suicide in multivariable analyses, a finding that appears to relate to fewer attempts by suffocation and a lower case-fatality ratio for poisonings, although the mechanism for the inverse correlation with firearm-related suicides requires further elucidation.

Why do people hurt themselves? New insights into the nature and functions of self-injury

MK Nock (USA)

Current Directions in Psychological Science 18, 78–83, 2009

Nonsuicidal self-injury (NSSI) is a prevalent but perplexing behavior problem in which people deliberately harm themselves without lethal intent. Research reveals that NSSI typically has its onset during early adolescence; most often involves cutting or carving the skin; and appears equally prevalent across sexes, ethnicities, and socioeconomic statuses. Less is known about why people engage in NSSI. This article presents a theoretical model of the development and maintenance of NSSI. Rather than a symptom of mental disorder, NSSI is conceptualized as a harmful behavior that can serve several intrapersonal (e.g., affect regulation) and interpersonal (e.g., help-seeking) functions. Risk of NSSI is increased by general factors that contribute to problems with affect regulation or interpersonal communication (e.g., childhood abuse) and by specific factors that influence the decision to use NSSI rather than some other behavior to serve these functions (e.g., social modeling). This model synthesizes research from several different areas of the literature and points toward several lines of research needed to further advance the understanding of why people hurt themselves.

Predicting deliberate self-harm in adolescents: a six-month prospective study

RC O'Connor, S Rasmussen, K Hawton (Scotland)

Suicide and Life-Threatening Behavior 39, 364–375, 2009

Few studies have investigated the extent to which psychosocial/psychological factors are associated with the prediction of deliberate self-harm (DSH) among adolescents. In this study, 737 pupils aged 15–16 years completed a lifestyle and coping survey at time one and 500 were followed up six months later. Six point two percent of the respondents ($n = 31$) reported an act of DSH between Time 1 and Time 2. In multivariate analyses, worries about sexual orientation, history of sexual abuse, family DSH, anxiety, and self-esteem were associated with repeat DSH during the course of the study, but history of sexual abuse was the only factor predictive of first-time DSH. The findings suggest that school-based programs focused on how young people cope with psychosocial stressors may offer promise.

Higher psychological pain during a major depressive episode may be a factor of vulnerability to suicidal ideation and act

E Olié, S Guillaume, I Jaussent, P Courtet, F Jollant (France)

Journal of Affective Disorders. Published online: 24 April 2009. doi: 10.1016/j.jad.2009.03.013, 2009

Background: It has been suggested that psychological pain ("psychache") is a key factor in the suicidal process. In addition, suicidal acts may be best understood within a stress-vulnerability model. We hypothesized that more intense psychache during a major depressive episode would be a factor of vulnerability to suicidal behavior.

Methods: Patients hospitalized for a major depressive episode, including 87 individuals with a recent history of suicidal acts, 61 individuals with a past history of suicidal acts, and 62 individuals without any suicidal history, were assessed at admission using several Visual Analog scales to measure levels of psychache, physical pain and suicidal ideation.

Results: Patients with a recent or past history of suicide attempts expressed significantly higher levels of current psychological pain, and a higher intensity and frequency of current suicidal ideation than patients without any history of suicidal acts. The level of current psychache was significantly and positively associated with intensity and frequency of suicidal ideation. There were no between-group differences for physical pain.

Public involvement in suicide prevention: understanding and strengthening lay responses to distress

C Owens, G Owen, H Lambert, J Donovan, J Belam, F Rapport, K Lloyd (UK)

BMC Public Health 9, 308, 2009

Background: The slogan 'Suicide prevention is everyone's business' has been used in a number of campaigns worldwide in recent years, yet most research into suicide prevention has focused on the role of medical professionals in identifying and managing risk. Little consideration has been given to the role that lay people can play in suicide prevention, or to the resources they need in order to do so. The majority of people who take their own lives are not under the care of specialist mental health services, and around half have not had recent contact with their general practitioner. These individuals are not known to be 'at risk' and there is little or no opportunity for clinical intervention. Family members and friends may be the only ones to know that a person is troubled or distressed, and their capacity to recognise, assess and respond to that distress is therefore vitally important. This study aims to discover what the suicidal process looks like from the point of view of relatives and friends and to gain insight into the complex and difficult judgements that people have to make when trying to support a distressed individual.

Methods: The study is using qualitative methods to build up a detailed picture of 15–20 completed suicides, aged 18–34. Data are gathered by means of in-depth interviews with relatives, friends and others who knew the deceased well. In each case, as many informants as possible are sought using a purposive snowballing technique. Interviews focus on the family and social network of the deceased, the ways in which relatives and friends interpreted and responded to his/her distress, the potential for intervention that may have existed within the lay network and the knowledge, skills and other resources that would have helped members to support the distressed individual more effectively.

Discussion: The study will inform interventions to promote public mental health awareness and will provide a basis on which to develop community-focussed suicide prevention strategies.

The clustering of premature deaths in families

N Oyen, HA Boyd, G Poulsen, J Wohlfahrt, M Melbye (Denmark)

Epidemiology 20, 757–765, 2009

Background: Infant deaths cluster in families, but beyond infancy, little is known about familial aggregation of premature deaths. We hypothesized that an individual's risk of premature death would be influenced by prior premature deaths of any age in family members.

Methods: For all Danish residents registered in the Civil Registration System, 1968–2005, information was linked to the Causes of Death Register and the Danish Family Relation Database, yielding a cohort of 4,870,821 persons linked to one or more relatives (93 million person-years and 73,278 deaths). We used log-linear Poisson regression to estimate mortality rate ratios (relative risks) for premature death (before age 40 years) in persons with a family history of premature death, compared with persons without such a history.

Results: Persons with a family history of premature death were 46% more likely themselves to die prematurely than persons without such a family history (relative risk [RR] = 1.46 [95% confidence interval = 1.42–1.50]). Relative risks were higher for concordant age at death, a close kinship relation, and similar causes of death. As expected, certain natural causes clustered among first-degree relatives (RRs ranged from 1.81–618), but unnatural causes of death, such as nonsimultaneous motor vehicle injuries, other injuries, and suicides, also clustered (RRs = 1.80, 3.53, and 4.23, respectively). Previous family history of premature death in a first-degree relative also increased the risk of dying from another cause (overall RR = 2.08 in infancy and 1.33 between ages 1 and 39).

Conclusion: Premature deaths cluster in families, for both similar and dissimilar causes.

Suicide by charcoal burning in Taiwan, 1995-2006

YJ Pan, SC Liao, MB Lee (Taiwan)

Journal of Affective Disorders. Published online: 1 May 2009. doi: 10.1016/j.jad.2009.04.003, 2009

Background: We sought to identify risk factors and trends that might underlie the greatly increased incidence of charcoal-burning suicide in Taiwan and to learn whether the increasing accessibility of a single suicide method can increase overall suicide rates.

Methods: Data from a national mortality register for subjects who committed suicide during 2001 to 2006 and who were 15 years old or older when they died was analyzed. A review of available evidence and comparisons with historical cases were also performed.

Results: From 1995 to 2006, 68% of suicides in Taiwan involved males, and suicide rates for men increased from 9.5 to 26.7 per 100,000 population; suicide rates for women rose from 5.6 to 11.7 per 100,000 population. The sex ratio (M:F) increased from 1.69:1 to 2.28:1. The greatest increase in suicide rates occurred among those 25-44 years of age. The incidence of charcoal-burning suicide was 0.22 per 100,000 in 1999 but reached 6.48 per 100,000 in 2006. Age, gender, marital status, and year of committing suicide were significant predictors for suicide by charcoal burning. This single suicide method accounted for 33.5% of suicide deaths in Taiwan in 2006.

Limitations: The number of suicides by charcoal burning may be under- or overestimated, and life events of the suicide subjects were not analyzed.

Conclusions: Romanticizing suicide by charcoal burning by the media and cultural influences may have contributed to the increased suicides. Prohibiting sale of charcoal in convenience stores, enforcing media guidelines, and setting up carbon monoxide detectors may help prevent suicide by charcoal burning.

Genetic predictors of increase in suicidal ideation during antidepressant treatment in the GENDEP project

N Perroud, KJ Aitchison, R Uher, R Smith, P Huez-Diaz, A Marusic, W Maier, O Mors, A Placentino, N Henigsberg, M Rietschel, H Hauser, D Souery, P Kapelski, C Bonvicini, A Zobel, L Jorgensen, A Petrovic, P Kalember, TG Schulze, B Gupta, J Gray, CM Lewis
Neuropsychopharmacology. Published online: 29 July 2009. doi: 10.1038/npp.2009.81, 2009

The aim of this study was to investigate genetic predictors of an increase in suicidal ideation during treatment with a selective serotonin reuptake inhibitor or a tricyclic antidepressant. A total of 796 adult patients with major depressive disorder who were treated with a flexible dosage of escitalopram or nortriptyline in Genome-based Therapeutic Drugs for Depression (GENDEP) were included in the sample and provided data on suicidal ideation. Nine candidate genes involved in neurotrophic, serotonergic, and noradrenergic pathways were selected based on previous association studies with suicidal ideation or

behavior. Using a logistic regression model, 123 polymorphisms in these genes were compared between subjects with an increase in suicidal ideation and those without any increase in suicidal ideation. Polymorphisms in BDNF, the gene encoding the brain-derived neurotrophic factor, were significantly associated with an increase in suicidal ideation. The strongest association was observed for rs962369 in BDNF ($p=0.0015$). Moreover, a significant interaction was found between variants in BDNF and NTRK2, the gene encoding the BDNF receptor ($p=0.0003$). Among men taking nortriptyline, suicidality was also associated with rs11195419 SNP in the alpha(2A)-adrenergic receptor gene (ADRA2A) ($p=0.007$). The associations observed with polymorphisms in BDNF suggest the involvement of the neurotrophic system in vulnerability to suicidality. Epistasis between BDNF and NTRK2 suggests that genetic variations in the two genes are involved in the same causal mechanisms leading to suicidality during antidepressant treatment. Among men, genetic variation in noradrenergic signaling may interact with norepinephrine reuptake-inhibiting antidepressants, thereby contributing to suicidality.

History of suicide attempts among patients with depression in the GENDEP project

N Perroud, R Uher, J Hauser, M Rietschel, N Henigsberg, A Placentino, D Kozel, W Maier, O Mors, D Souery, M Dmitrzak-Weglaz, L Jorgensen, Z Kovacic, C Giovannini, J Mendlewicz, A Zobel, J Strohmaier, P McGuffin, KJ Aitchison, A Farmer

Journal of Affective Disorder. Published online: 22 September 2009. doi: 10.1016/j.jad.2009.09.001, 2009

Background: It has been proposed that a history of suicide attempts could be a correlate of severe depressive disorder and that suicide attempters (SA) could represent a particular subtype of subjects suffering from major depressive disorder. We investigated clinical and demographic characteristics associated with SA and tested the hypothesis that a history of suicide attempts predicts poor response to antidepressants.

Methods: 141 SA and 670 non-SA subjects with major depressive disorder (MDD) were treated for twelve weeks with escitalopram or nortriptyline in GENDEP, a part-randomized multi-center clinical and pharmacogenetic study. Baseline characteristics were compared using linear and logistic regression. Linear mixed models were used to analyse continuous outcomes during the twelve weeks of follow-up.

Results: At baseline, SA subjects suffered from more severe depression (mean Montgomery-Asberg Depression Rating Scale: 30.29 (7.61) vs 28.43 (6.54), $p=0.0002$), reported higher level of suicidal ideation (1.21 (0.82) vs 0.73 (0.48), $p<0.0001$), had a younger age of onset and experienced more depressive episodes, had higher harm avoidance scores and poorer socio-demographic environment than non-SA individuals. However, during the twelve

weeks of treatment and after adjustment for baseline severity of depression there was no difference in treatment response between SA and non-SA.

Limitations: Due to its retrospective design, it is possible that more severely depressed subjects might report more suicide attempts than less depressed individuals.

Conclusions: While SA differed from non-SA in several clinical and demographic characteristics, the antidepressants were similarly effective in SA as in comparably severely depressed subjects without a history of suicide attempts.

Detecting and predicting self-harm behaviour in prisoners: a prospective psychometric analysis of three instruments

AE Perry, S Gillbody (UK)

Social Psychiatry and Psychiatric Epidemiology 44, 853–861, 2009

Background: Research has revealed high levels of suicide and self-harm within young adult prisoners, but many studies have not considered the applicability and validity of its measurement for both male and female prisoners. Previous studies have focused on retrospective evaluations of instruments which are not useful evidence in informing clinical practice and decision making.

Objectives: To evaluate the validation and prediction of suicide and self-harm risk in young adult prisoners.

Method: The study was divided into two stages. Stage one used a cross-sectional design of 1,166 prisoners across six HM Prisons to validate the use of three questionnaires: the Beck Depression Inventory, the Beck Hopelessness Scale and a newly devised instrument (SCOPE tool). The second stage assessed the predictive validity of the three instruments using a 4-year-follow-up study of female prisoners across two HM Prisons in UK. Self-report and official records were used to measure suicide and self-harm risk. Logistic regression methodology, receiver operator characteristic curves and Youden's index were used to determine the range of thresholds for the three tools.

Results: Self-report measurement of suicide and self-harm behaviour using the three instruments presented a range of sensitivity and specificity values (65.9–72.3% and 64.9–74.0%, respectively). Predictive measurement of suicide and self-harm behaviour in the follow-up study presented a range of sensitivity and specificity values (54.6–80% and 62.2–69.4%, respectively).

Conclusion: Screening for self-harm and suicidal behaviour in young prisoners has generated a range of cut off points for the identification of those at risk. These serve as a bench mark for service planners and practitioners.

Thought suppression and suicidal ideation: Preliminary evidence in support of a robust association

JW Pettit, SR Temple, PJ Norton, I Yaroslavsky, KE Grover, ST Morgan, DJ Schatte (USA)
Depression and Anxiety 26, 758–763, 2009

Background: The suppression of unwanted thoughts appears to contribute to the development and maintenance of emotional disorders. This report tested the thought suppression paradigm in relation to suicidal ideation. Based on the ironic process theory, we hypothesized that the suppression of unwanted thoughts, especially suicidal thoughts, would associate with a higher frequency and a greater intensity of suicidal ideation.

Methods: Study 1 examined cross-sectional associations between self-reported thought suppression and the frequency of suicidal ideation in a nonclinical sample of 166 undergraduate students. Study 2 extended cross-sectional findings in an inpatient sample of 71 suicidal adolescents. Study 3 examined prospective associations between suicidal thought suppression and increases in self-reported suicidal ideation over a 4-week period in a separate nonclinical sample of 118 undergraduate students.

Results: Findings across studies support a robust association between thought suppression and suicidal ideation, even controlling for general depressive symptoms. Participants in Studies 1 and 2 who endorsed greater tendencies toward suppression of thoughts, especially suicidal thoughts (Study 2), displayed higher concurrent levels of suicidal ideation. Participants in Study 3 who endorsed greater baseline tendencies toward suppression of suicidal thoughts displayed an increase in the severity of suicidal ideation over time.

Conclusions: Suppression of suicidal thoughts may represent 1 mechanism contributing to the persistence of suicidal ideation. Clinicians may wish to explore patients' reactions to suicidal ideation and consider acceptance-oriented strategies among patients who attempt to control unwanted suicidal thoughts.

Response to intravenous antidepressant treatment by suicidal vs. nonsuicidal depressed patients

M Pompili, RJ Baldessarini, L Tondo, M Innamorati, R Tatarelli, P Girardi, E De Pisa (Italy)
Journal of Affective Disorders. Published online: 25 August 2009. doi: 10.1016/j.jad.2009.07.018, 2009

Background: As effects of suicidal status on antidepressant responses remain uncertain, we compared responses to treatment in suicidal and nonsuicidal depressed patients.

Methods: We evaluated treatment response and covariates in 82 depressed patients diagnosed with DSM-IV major depressive ($n = 50$) or bipolar disorders ($n = 32$) treated initially in a day-hospital for 2 weeks, followed by 4 weeks of outpatient treatment, using citalopram given intravenously and then orally,

with or without a mood-stabilizer. Suicidal status was based on an intake score of ≥ 3 on item-3 of the 17-item Hamilton Depression Rating Scale, verified by clinical assessment. Morbidity and clinical change were assessed with the remaining 16 items (HDRS(16)).

Results: Suicidal ($n = 31$) and nonsuicidal subjects ($n = 51$) were similar in baseline ratings of depressive symptom-severity but were depressed longer and more likely to abuse substances. Suicidal ratings improved by 36% during 6 weeks of treatment among initially suicidal patients, but other depressive symptoms (HDRS(16)) improved half as much as in nonsuicidal subjects (13.4 vs. 25.1 points), independent of diagnosis, initial illness-severity, and treatment, and half as many patients improved by $\geq 20\%$. In multivariate modeling, only being suicidal predicted poor response.

Conclusions: Being suicidal may limit response to treatment in depressed major affective disorder patients, independent of diagnosis or overall symptomatic severity.

A pilot study evaluating a support programme for parents of young people with suicidal behaviour

L Power, S Morgan, S Byrne, C Boylan, A Carthy, S Crowley, C Fitzpatrick, S Guerin (Ireland)
Child and Adolescent Psychiatry and Mental Health. Published online: 15 July 2009. doi: 10.1186/1753-2000-3-20, 2009

Background: Deliberate self-harm (DSH) is a major public health concern and has increased among young people in Ireland. While DSH is undoubtedly the result of interacting factors, studies have identified an association between DSH and family dysfunction as well as the protective role of positive family relationships. Following a focus group meeting held to identify the needs of parents and carers of young people with DSH, a support programme (SPACE) was developed. The aims of the current study are to evaluate the effectiveness of the SPACE programme in decreasing parental psychological distress, reducing parental report of young peoples' difficulties, increasing parental satisfaction and increasing parents' ratings of their own defined challenges and goals.

Methods: Participants were recruited from a Mental Health Service within a paediatric hospital, Community Child and Adolescent Mental Health Teams and family support services. All services were located within the greater Dublin area in Ireland. Forty-six parents of children who had engaged in or expressed thoughts of self harm attended the programme and participated in the evaluation study. The programme ran once a week over an 8-week period and included topics such as information on self harm in young people, parenting adolescents, communication and parental self care. Seventy percent ($N = 32$) of the original sample at Time 1 completed measures at Time 2 (directly following the programme) and 37% ($N = 17$) of the original sample at Time 1 completed them at Time 3 (6 months following the programme). A repeated measures design was used to iden-

tify changes in parental wellbeing after attendance at the programme as well as changes in parental reports of their child's difficulties.

Results: Participants had lower levels of psychological distress, increased parental satisfaction, lower ratings of their own defined challenges and higher ratings of their goals directly after the programme. These changes were maintained at 6 month follow up in the 37% of participants who could be followed up. Furthermore the young people who had engaged in or expressed thoughts of self harm had lower levels of difficulties, as reported by their parents, following the programme.

Conclusions: These findings suggest that the SPACE programme is a promising development in supporting the parents of young people with suicidal behaviour. The programme may also reduce parental reports of their children's difficulties. Further evaluation using a randomized controlled trial is indicated.

Correlates and antecedents of hospital admission for attempted suicide: a nationwide survey in Italy

A Preti, L Tondo, D Sisti, MB Rocchi, G de Girolamo & for the PROGRES-Acute group (Italy)
European Archives of Psychiatry and Clinical Neuroscience. Published online: 6 August 2009. doi:
10.1007/s00406-009-0037-x, 2009

The present study examined data on symptom patterns in the week prior to admission for suicide attempt, in a nationwide representative sample of patients. Socio-demographic, clinical, and treatment data was gathered for 1,547 patients admitted over a 12-day index period during the year 2004 to 130 public and 36 private psychiatric facilities in Italy. Patients were evaluated in terms of whether they had been admitted for having attempted suicide or not. A detailed checklist was used to assess symptom pattern at admission; diagnoses were based on ICD-10 categories. Two-hundred thirty patients (14.8%) in the sample had been admitted for suicide attempt. Patients with depression or with personality disorders were more frequently observed among suicide attempters. First-contact patients were significantly more likely to have been admitted after a suicide attempt, the only exception being individuals with bipolar disorder, manic phase. No diagnosis was statistically related to admission after suicide attempt, once symptoms pattern at admission had been accounted for. Disordered eating behavior, depressive symptoms, substance abuse, and non-prescribed medication abuse were positively related to attempted suicide, as were any traumatic events in the week prior to admission; symptoms of psychosis (hallucinations/delusions) and lack of self-care were negatively associated with suicide attempt admission. Greater attention to symptoms immediately preceding or concomitant with admission after a suicide attempt can be a key factor in establishing the best treatment plan and discharge strategy, the most effective community-service referral, and targeted intervention programmes for patients hospitalized for a suicide attempt.

Effects of intravenous Ketamine on explicit and implicit measures of suicidality in treatment-resistant depression

RB Price, MK Nock, DS Charney, SJ Mathew (USA)

Biological Psychiatry 66, 522–526, 2009

Background: Intravenous ketamine has shown rapid antidepressant effects in early trials, making it a potentially attractive candidate for depressed patients at imminent risk of suicide. The Implicit Association Test (IAT), a performance-based measure of association between concepts, may have utility in suicide assessment.

Methods: Twenty-six patients with treatment-resistant depression were assessed using the suicidality item of the Montgomery-Asberg Depression Rating Scale (MADRS-SI) 2 hours before and 24 hours following a single sub-anesthetic dose of intravenous ketamine. Ten patients also completed IATs assessing implicit suicidal associations at comparable time points. In a second study, nine patients received thrice-weekly ketamine infusions over a 12-day period.

Results: Twenty-four hours after a single infusion, MADRS-SI scores were reduced on average by 2.08 points on a 0 to 6 scale ($p < .001$; $d = 1.37$), and 81% of patients received a rating of 0 or 1 postinfusion. Implicit suicidal associations were also reduced following ketamine ($p = .003$; $d = 1.36$), with reductions correlated across implicit and explicit measures. MADRS-SI reductions were sustained for 12 days by repeated-dose ketamine ($p < .001$; $d = 2.42$).

Conclusions: These preliminary findings support the premise that ketamine has rapid beneficial effects on suicidal cognition and warrants further study.

Characteristics of clients to a suicide prevention centre: an epidemiological analysis of the users over a 10-year period

P Qin, BH Madsen, PB Mortensen (Denmark)

Journal of Affective Disorders 115, 339–346, 2009

Background: Suicide prevention centres play an important role on suicide prevention in communities. A better understanding of clients to these centres is essential and informative to suicide prevention. This study aimed to document the referral pattern of clients to a suicide prevention centre over a 10-year period and to capture their characteristics.

Methods: All suicidal clients during 1996 to 2005 were included and compared with the regional population. Data were retrieved from longitudinal registers.

Results: There were in total 4274 contacts from 3505 individuals because of suicide attempt (38%) or suicide ideation (62%). Source of referral included self-initiation or family (25.4%), psychiatric hospitals (23.5%), general practitioners (21.7%), and somatic hospitals (15.1%). The clients were more likely

females and persons at young ages. Compared with regional sex–age-matched counterparts, suicidal clients significantly more often had a history of psychiatric contact, were born by young parents, had no recorded link to a mother or father, had lost a parent, and had a parental psychiatric history. Also, they were often frequent movers and residents with a foreign citizenship.

Conclusions: This study provided insights about the referral pattern of suicidal clients as well as client characteristics on selected variables at the birth and during upbringing, which may be informative to suicide intervention targeting at this group of population.

Differences in mortality and suicidal behaviour between treated and never-treated people with schizophrenia in rural China

MS Ran, CL Chan, EY Chen, WJ Mao, SH Hu, CP Tang, FR Lin, Y Conwell (China)

British Journal of Psychiatry 195, 126-131, 2009

Background: Many people with schizophrenia remain untreated in the community. Long-term mortality and suicidal behaviour among never-treated individuals with schizophrenia in the community are unknown.

Aims: To explore 10-year mortality and suicidal behaviour among never-treated individuals with schizophrenia.

Method: We used data from a 10-year prospective follow-up study (1994–2004) among people with schizophrenia in Xinjin County, Chengdu, China.

Results: The mortality rate for never-treated individuals with schizophrenia was 2761 per 100 000 person-years during follow-up. There were no significant differences of rates of suicide and all-cause mortality between never-treated and treated individuals. The standardised mortality ratio (SMR) for never-treated people was 10.4 (95% CI 7.2–15.2) and for treated individuals 6.5 (95% CI 5.2–8.5). Compared with treated people, never-treated individuals were more likely to be older, poorer, have a longer duration of illness, marked symptoms and fewer family members.

Conclusions: The never-treated individuals have similar mortality to and a higher proportion of marked symptoms than treated people, which may reflect the poor outcome of the individuals without treatment. The higher rates of mortality, homelessness and never being treated among people with schizophrenia in low- and middle-income nations might challenge presumed wisdom about schizophrenia outcomes in these countries

Prognosis after suicide attempt: standard of care and the consequences of not meeting it

WH Reid (USA)

Journal of Psychiatric Practice 15, 141–144, 2009

A significant number of people who attempt suicide and survive eventually die by their own hands, many within a year of the index attempt. A history of multiple past attempts further increases risk of eventual suicide. That most attempters do not later die by suicide is a statistical fact that should not distract psychiatrists and other mental health professionals from the substantial increase in risk associated with a suicide attempt. Short-term intensive treatment, often with psychiatric hospitalization, reduces immediate risk, but the standard of care often requires more than just a few days of generic inpatient care. Before discharging patients, the psychiatrist should be reasonably certain that the conditions associated with the attempt and initial suicide risk have improved in some significant and lasting way. Although for many patients, severe suicide risk is a relatively transient condition, patients should not be discharged just because they say they feel better or show superficial signs of lessened risk. Before sending the patient into the community, the psychiatrist should have good reason to believe that the dangerous condition(s) that precipitated the attempt and hospital admission have been ameliorated, and that the important improvements in the patient and his or her environment, on which the patient's safety relies, are both real and stable.

Seasonality of suicide in Sweden: relationship with psychiatric disorder

J Reutfors, U Osby, A Ekbohm, P Nordstrom, J Jokinen, FC Papadopoulos (Sweden)

Journal of Affective Disorders. Published online: 26 March 2009. doi: 10.1016/j.jad.2009.02.020, 2009

Background: Little is known as to whether suicide seasonality is related to psychiatric disorders affecting suicide risk/incidence. The present study aims to assess suicide seasonality patterns with regard to the history of psychiatric morbidity among suicide victims.

Methods: The history of psychiatric inpatient diagnoses in the five years prior to suicide was identified among all suicides in Sweden from 1992 to 2003. Suicide seasonality was estimated as the relative risk of suicide during the month of highest to that in the month of lowest suicide incidence. Analyses were performed with respect to sex, suicide method and history of inpatient treatment of psychiatric disorder.

Results: Among both male ($n = 9,902$) and female ($n = 4,128$) suicide victims, there were peaks in suicide incidence in the spring/early summer. This seasonal variation was more evident in suicide victims with a psychiatric inpatient diagnosis than in those without such a diagnosis. A seasonal variation was found in

most diagnostic groups, with significant peaks in males with a history of depression and in females with a history of a neurotic, stress-related, or somatoform disorder. Overall, suicide seasonality was more evident in violent than in non-violent suicide methods.

Limitation: Only psychiatric disorders severe enough to require hospital admission were studied.

Conclusion: A history of inpatient-treated psychiatric disorder appears to be associated with an increase in suicide seasonality, especially in violent suicide methods. This increase is found in several psychiatric disorders

Explaining the relation between religiousness and reduced suicidal behavior: social support rather than specific beliefs

A Robins, A Fiske (USA)

Suicide and Life-Threatening Behavior 39, 386–395, 2009

Religiousness has been associated with decreased risk of suicidal ideation, suicide attempts, and completed suicide, but the mechanisms underlying these associations are not well characterized. The present study examined the roles of religious belief; and social support in that relation. A survey measuring religiousness, social support, suicidal ideation, and suicide attempts was administered to 454 undergraduate students. Involvement in public, but not private, religious practices was associated with lower levels of both suicidal ideation and history of suicide attempts. Social support mediated these relations but religious beliefs did not. Results highlight the importance of social support provided by religious communities.

Suicide in cancer patients in South East England from 1996 to 2005: a population-based study

D Robinson, C Renshaw, C Okello, H Møller, EA Davies (UK)

British Journal of Cancer 101, 198–201, 2009

Background: Studies from around the world have shown that suicide risk is increased in cancer patients, but no previous detailed analysis has been carried out in England.

Methods: We calculated standardised mortality ratios (SMRs) for suicide in 206 129 men and 211 443 women diagnosed with cancer in South East England between 1996 and 2005, relative to suicide rates in the general population.

Results: We found a significantly increased risk of suicide in men (SMR 1.45, 95% confidence interval (CI) 1.20–1.73) and a moderately increased risk in women (SMR 1.19, 95% CI 0.88–1.57). In both sexes, relative risk of suicide was greatest in the first year after cancer diagnosis (SMR for men 2.42, 95% CI 1.84–3.13; SMR for women 1.44, 95% CI 0.82–2.33), and was also greater in

individuals diagnosed with types of cancer with high fatality (SMR for men 2.67, 95% CI 1.71–3.97; SMR for women 2.17, 95% CI 0.80–4.73).

Conclusion: There is a critical period immediately after the diagnosis of cancer during which the excess risk of suicide is particularly high. Carers need to be aware of the importance of attending to both the physical and emotional needs of cancer patients and cancer survivors.

Physical disability and suicidal ideation: a community-based study of risk/protective factors for suicidal thoughts

D Russell, RJ Turner, TE Joiner (USA)

Suicide and Life-Threatening Behavior 39, 440–451, 2009

Although the significance of poor physical health for suicide risk is well established, the potential relevance of physical disability, as distinct from diseases and traumas that give rise to disability, has received little attention. Prior evidence suggests the possible utility of the stress process theoretical model for understanding variations in risk for suicide ideation and the contribution of physical disability to such risk. In this article, we examine the independent and joint explanatory significance of physical disability and components of the stress process model for risk of suicide ideation. Data from an ethnically diverse and representative sample of disabled and nondisabled adults ($n = 1,768$) reveal that physical disability is associated with a greater risk of lifetime suicidal ideation.

Childhood trauma and self-harm behavior among chronic pain patients

RA Sansone, JD Sinclair, MW Wiederman (USA)

International Journal of Psychiatry in Clinical Practice 13, 238–240, 2009

Associations between childhood trauma and self-harm behavior in adulthood have been explored in a variety of populations, but few studies have assessed multiple forms of childhood trauma as well as 22 self-harm behaviors, and none (that we are aware of) in a chronic pain population. In this study, we examined 5 types of childhood trauma (i.e., sexual, physical, and emotional abuses; physical neglect; witnessing of violence) and 22 self-harm behaviors in a sample of 117 chronic pain patients who were being evaluated by a pain management specialist in a private setting. All five forms of childhood trauma demonstrated statistically significant relationships with self-harm behavior in adulthood. We discuss the implications of these findings.

Risk factors for attempting suicide in prisoners

M Sarchiapone, V Carli, MD Giannantonio, A Roy (Italy)

Suicide and Life Threatening Behavior 39, 343–350, 2009

We wished to examine determinants of suicidal behavior in prisoners. 903 male prisoners had a psychiatric interview which included various psychometric tests. Suicide attempters were compared with prisoners who had never attempted suicide. Significantly more of the attempters had a history of psychiatric disorder, substance abuse, a family history of suicidal behavior, convictions for violent crime, had exhibited aggressive behavior in jail, and had higher BGLHA aggression scores. A similar pattern of risk factors was found for prisoners with suicidal ideation. A lifetime history of attempting suicide, or of having suicidal ideation, is frequent in prisoners. Risk factors include family, developmental, aggression, personality, psychiatric, and substance abuse factors.

Relations of psychological characteristics to suicide behaviour: results from a large sample of male prisoners

M Sarchiapone, N Jovanovic, A Roy, A Podlesek, V Carli, M Amore, M Mancini, A Marusic (Italy)

Personality and Individual Differences 47, 250–255, 2009

Aim was to investigate psychological characteristics that may predict suicide ideation and behaviour in male prisoners. Sample consisted of 1117 prisoners detained in jails of the District of Abruzzo-Molise in Italy. All underwent psychiatric interviews and comprehensive psychometric assessments related to different psychological characteristics. Principal component analysis of psychometric variables derived four components. Multivariate logistic regression was designed to test them as predictors of suicidal ideation and attempt. Main findings: (1) approximately 40% prisoners reported lifetime suicide ideation and 13% attempted suicide; (2) different psychometric variables tend to associate in male prisoners. Three of them — childhood trauma, emotional lability and substance abuse — seem to increase the risk of suicide ideation and attempt, while sensation seeking behaviour might decrease it; (3) ideators and attempters scored higher on scales measuring aggression, hostility, childhood trauma, depression, psychoticism and neuroticism, when compared to non-ideators and non-attempters; (4) suicide ideators and attempters scored lower on extraversion and resilience scales; and (5) childhood trauma was the strongest positive predictor for suicide ideation and attempt. This is the first report on psychological characteristics in a large sample of prisoners. We believe it might add new value to evidence-based suicide prevention strategies in prisons.

Attempted suicide in the elderly in England: age-associated rates, time trends and methods

A Shah (UK)

International Psychogeriatrics 21, 889–895, 2009

Background: Critical study of attempted suicides may allow greater understanding of completed suicides because of the considerable overlap between attempted and completed suicides in the elderly.

Methods: Age-associated rates (60–74 years versus 75+ years), trends over time and methods of attempted suicide in the elderly in England were examined using recently collected national data for a 9-year period.

Results: The rate of attempted suicides in the 60- to 74-years age-band increased over the 9-year study period. Rates of intentional self-poisoning by and exposure to non-opioid analgesics, antipyretics and antirheumatics, intentional self-poisoning by and exposure to narcotics and psychodysleptics and intentional self-poisoning by and exposure to other drugs acting on the autonomic nervous system increased over the nine-year study period in both elderly age-bands. The rates and the frequency of intentional self-poisoning by and exposure to non-opioid analgesics, antipyretics and antirheumatics and intentional self-harm by sharp objects were higher in the 75+ years age-band compared to the 60–74 years age-band. The rates and frequency of intentional self-poisoning by and exposure to other drugs acting on the autonomic nervous system, intentional self-poisoning by and exposure to alcohol and intentional self-harm by smoke, fire and flames were higher in the 60- to 74-year age-band compared to the 75+ years age-band.

Conclusions: There is a need to develop strategies to reduce access to targeted methods of attempted suicide in elderly that are most prevalent and increasing over time.

The relationship between general population suicide rates and mental health funding, service provision and national policy

A Shah, R Bhandarkar, G Bhatia (UK)

International Journal of Social Psychiatry. Published online: 3 August 2009.

doi: 10.1177/0020764009342384, 2009

Objective: The main aims were to examine the relationship between general population suicide rates and the presence of national policies on mental health, funding for mental health, and measures of mental health service provision.

Methods: Data on general population suicide rates for both genders were obtained from the World Health Organization (WHO) databank available on the WHO web-site. Data on the presence of national policies on mental health, funding for mental health and measures of mental health service provision

were obtained from the Mental Health Atlas 2005, also available on the WHO website.

Findings: The main findings were: (a) there was no relationship between suicide rates in both genders and different measures of mental health policy, except they were increased in countries with mental health legislation; (b) there was a significant positive correlation between suicide rates in both genders and the percentage of the total health budget spent on mental health; and (iii) suicide rates in both genders were higher in countries with greater provision of mental health services, including the number of psychiatric beds, psychiatrists and psychiatric nurses, and the availability of training in mental health for primary care professionals.

Conclusions: Cross-national ecological studies using national-level aggregate data are not helpful in establishing a causal relationship (and the direction of this relationship) between suicide rates and mental health funding, service provision and national policies. The impact of introducing national policies on mental health, increasing funding for mental health services and increasing mental health service provision on suicide rates requires further examination in longitudinal within-country studies.

Relationship of intentional self-harm using sharp objects with depressive and dissociative tendencies in pre-adolescence-adolescence

N Sho, A Oiji, C Konno, K Toyohara, T Minami, T Arai, Y Seike (Japan)
Psychiatry and Clinical Neurosciences 63, 410–416, 2009

Aims: The objectives of the present study were to (i) evaluate the prevalence of children and adolescents who have engaged in intentional self-harm using a sharp object; and (ii) investigate the relationship between self-harm with sharp objects and depressive tendencies or dissociative tendencies.

Methods: A total of 1938 students in grades 5–12 in Yokohama, Japan, were enrolled, and they completed anonymous self-report questionnaires including a question about intentional self-harm with a sharp object, the Depression Self-Rating Scale for Children (DSRSC) and the Adolescent Dissociative Experiences Scale (A-DES).

Results: The prevalence of self-harm using sharp object was 5.4% among male 5th–6th graders, 4.0% among female 5th–6th graders, 5.3% among male 7th–9th graders, 15.1% among female 7th–9th graders, 6.6% among male 10th–12th graders, and 9.6% among female 10th–12th graders. Categorical regression analysis showed that a small amount of variance in self-harm by sharp object was explained by DSRSC and A-DES scores.

Conclusions: Self-harm with a sharp object was prevalent among pre-adolescents and adolescents and was associated with depressive and dissociative tendencies.

Six-year follow-up of a clinical sample of self-harm patients

JMA Sinclair, K Hawton, A Gray (UK)

Journal of Affective Disorders. Published online: 28 June 2009. doi: 10.1016/j.jad.2009.05.027, 2009

Background: Mortality from suicide and other causes is significantly increased in patients who engage in self-harm, but their long-term morbidity and quality of life are poorly defined. As the majority of self-harm patients are under the age of 35 years, understanding their longer term health outcomes is important if we are to adequately manage their care. The aim of this study was to investigate the long-term mortality, morbidity and quality of life of such patients.

Method: A representative cohort of patients who had presented to hospital following an episode of self-harm was traced after 6 years. Mortality and repetition of self-harm were primary outcome measures. Psychiatric morbidity and indices of quality of life, and social functioning were also obtained.

Results: 143/150 (95.3%) patients were traced after a mean of 6.2 years. Eight (5.6%) had died during follow-up, significantly more than general population estimates ($p \leq .001$), four of these (2.8%) by probable suicide. Further self-harm occurred in 58/101 (57.4%) participants; 70/97 (72.2%) fulfilled criteria for at least one psychiatric disorder, and 51.3% screened positive for harmful use of alcohol. Measures of health status (EQ-5D and SF36-II) were significantly lower ($p < .001$) than in the general population.

Limitations: Due to the nature of this population group the attrition rate at 6 years is high; although this is the most complete such study to date.

Conclusion: Despite positive outcomes in some patients, overall levels of mortality, morbidity, and harmful use of alcohol are high, whilst quality of life is reported as low. This has significant implications for the long-term management of this group.

Effect of restricting access to a suicide jumping site

K Skegg, P Herbison (New Zealand)

Australian and New Zealand Journal of Psychiatry 43, 498-502, 2009

Objective: The road to a headland that had become a suicide jumping hotspot was temporarily closed because of construction work. This created an opportunity to assess whether loss of vehicular access would lead to a reduction in suicides and emergency police callouts for threatened suicide at the site.

Method: Deaths at the headland were ascertained for a 10 year period before road closure and for 2 years following closure using records from the local

police inquest officer, the coroner's pathologist and Marine Search and Rescue. Police provided a list of police callouts for threatened suicide at the site for a 4 year period before closure and for 2 years following closure. Simple rates were compared and incident rate ratios were calculated where possible.

Results: There were 13 deaths at the headland involving suicide or open verdicts in the 10 years before access was restricted, and none in the 2 years following road closure. This difference was statistically significant (incident rate difference = 1.3 deaths per year, 95% confidence interval (CI) = 0.6–2.0). No jumping suicides occurred elsewhere in the police district following the road closure. Police callouts for threatened suicide also fell significantly, from 19.3 per year in the 4 years prior to road closure to 9.5 per year for the following 2 years (incident rate ratio = 2.0, 95%CI = 1.2–3.5).

Conclusions: Preventing vehicular access to a suicide jumping hotspot was an effective means of suicide prevention at the site. There was no evidence of substitution to other jumping sites.

Childhood predictors of completed and severe suicide attempts: findings from the Finnish 1981 birth cohort study

A Sourander, A Brunstein Klomek, S Niemelä, A Haavisto, D Gyllenberg, H Helenius, L Siljanmäki, T Ristkari, K Kumpulainen, T Tamminen, I Moilanen, J Piha, F Almqvist, MS Gould (Finland)

Archives of General Psychiatry 66, 398–406, 2009

To our knowledge, no prospective, population-based study in existence examines predictive associations between early or middle childhood psychopathologic disorders and later completed suicides. To study predictive associations between childhood psychopathologic disorders at the age of 8 years and later completed suicides and severe suicide attempts. Birth cohort study of individuals 8 to 24 years old. Finland. The sample includes 5302 Finnish people born in 1981 who were examined at the age of 8 years to gather information about psychopathologic conditions, school performance, and family demographics from parents, teachers, and children. National register-based lifetime information about completed suicides and suicide attempts that prompted hospital admission. Of all 24 deaths among males between 8 and 24 years of age, 13 were suicides, whereas of 16 deaths among females, only 2 were suicides. Fifty-four males and females (1%) had either completed suicide or made a serious suicide attempt, defined as a suicide attempt that prompted hospital admission. Of 27 males with completed or serious suicide attempts, 78% screened positive on parent or teacher Rutter scales at the age of 8 years, whereas of 27 females only 11% screened positive. Among males, completed or serious suicide attempt outcome was predicted at the age of 8 years by living in a non-intact family; psychological problems as reported by the primary teacher; or conduct, hyperkinetic, and emotional problems. However, self-reports of depressive symptoms at the age of 8 years did not predict suicide outcome. No

predictive associations between the study variables measured at the age of 8 years and suicide outcome were found among females. Male suicide outcome was predicted most strongly by comorbid conduct and internalizing problems. Most males who completed suicide and/or made serious suicide attempts in adolescence or early adulthood had psychiatric problems by the age of 8 years, indicating a trajectory that persists throughout their lives. However, female severe suicidality is not predicted by psychopathologic disorders at the age of 8 years. The results give additional support to the importance of early detection and treatment of psychiatric problems in males.

Teen suicide information on the internet: a systematic analysis of quality

M Szumilas, S Kutcher (Canada)

Canadian Journal of Psychiatry 54, 596-604, 2009

Objective: To synthesize the literature on youth suicide risk factors (RFs) and prevention strategies (PSs); evaluate quality of information regarding youth suicide RFs and PSs found on selected Canadian websites; determine if website source was related to evidence-based rating (EBR); and determine the association of website quality indicators with EBR.

Methods: Five systematic reviews of youth suicide research were analyzed to assemble the evidence base for RFs and PSs. The top 20 most commonly accessed youth suicide information websites were analyzed for quality indicators and EBR. Univariate logistic regression was conducted to determine if quality indicators predicted statements supported by evidence (SSEs). Multivariate analysis was used to calculate adjusted odds ratios for SSEs and quality indicators.

Results: Only 44.2% of statements were SSEs. The 10 most highly ranked websites contained almost 80% of the total statements analyzed, and one-half had a negative EBR. Compared with government websites, nonprofit organization websites were more likely (OR 1.45, 95% CI 0.66 to 3.18), and personal and media websites were less likely (OR 0.62, 95% CI 0.26 to 1.47), to have a positive EBR. Crediting of an author (AOR 2.65, 95% CI 1.34 to 5.28), and recommendation to consult a health professional (AOR 2.08, 95% CI 1.18 to 3.68), increased the odds of SSEs.

Conclusions: Fundamental to addressing youth suicide is the availability of high-quality, evidence-based information accessible to the public, health providers, and policy-makers. Many websites, including those sponsored by the federal government and national organizations, need to improve the evidence-based quality of the information provided.

Antidepressant discontinuation and risk of suicide attempt: a retrospective, nested case-control study

RJ Valuck, HD Orton, AM Libby (USA)

Journal of Clinical Psychiatry 70, 1069-1077, 2009

Objective: Prior efforts to assess the impact of antidepressant use on risk of suicide attempt focused on antidepressant initiation or duration of use. Gaps remain in understanding risks associated with antidepressant discontinuation in the context of the drug regimen. We assessed the effects of antidepressant discontinuation on the risk of suicide attempt.

Method: We report a nested case-control study of suicide attempt with at least 12 months of prior observation. A retrospective cohort of 2.4 million patients with depression (ICD-9 codes 296.2, 296.3, 300.4, and 311), aged 5-89 years, was created using standard Healthcare Effectiveness Data and Information Set (HEDIS) criteria; from this cohort, cases (n = 10,456) and controls (n = 41,815) were selected for study. Data were from a large, national, longitudinal, integrated claims database of managed care enrollees in the United States from calendar years 1999 through 2006.

Results: Compared to controls, cases were more likely to have used antidepressants, to have had multiple antidepressants, and to have had prior depressive episodes and inpatient stays that involved depression. After adjusting for confounding due to depression severity, comorbidities, and other medications, antidepressant use showed a protective effect for suicide attempt (OR = 0.62, $P < .001$). Compared to prior therapy, antidepressant discontinuation had a significant risk for suicide attempt (OR = 1.61, $P < .05$). Antidepressant initiation had the highest risk for suicide attempt (OR = 3.42, $P < .05$), followed by titration (titration up, OR = 2.62; down, OR = 2.19; $P < .05$).

Conclusions: Substantial confounding exists in examining the link between antidepressant use and suicide attempt, specifically regarding those factors associated with characteristics of depression. Antidepressant discontinuation showed a significant risk for suicide attempt, as did the period of an abbreviated trial, that is, stopping before a therapeutic regimen of 56 days had been reached. The highest risk was associated with initiation, a finding consistent with other studies, closely followed by periods of dosing changes and discontinuation. Patients should be closely monitored during these periods.

Does 'No pesticide' reduce suicides?

L Vijayakumar, RS Kumar (India)

International Journal of Social Psychiatry 55, 401-406, 2009

Introduction: Ingestion of pesticides is the most common method of suicide, particularly in China, Sri Lanka and India. Reported pesticide suicides in India numbered 22,000 in the year 2006.

Method: Four villages in the state of Andhra Pradesh in India that had stopped using chemical pesticides in favour of non-pesticide management (NPM) were visited to assess any change in suicide incidence before and after discontinuation of chemical pesticides. Four similar villages in the same region that continued to use chemical pesticides were used as controls for comparison.

Results: In the pesticide-free villages there were 14 suicides before introduction of NPM and only three suicides thereafter. The percentage of suicides not reported to authorities was 47%.

Conclusion: Restriction of pesticide availability and accessibility by NPM has the potential to reduce pesticide suicides, in addition to psychosocial and health interventions.

Depressive symptoms and clinical status during the treatment of adolescent suicide attempters study

B Vitiello, D Brent, LL Greenhill, G Emslie, K Wells, JT Walkup, B Stanley, O Bukstein, BD Kennard, S Compton, B Coffey, MF Cwik, K Posner, A Wagner, JS March, M Riddle, T Goldstein, J Curry, L Capasso, T Mayes, S Shen, SS Gugga, BJ Turner, S Barnett, J Zelazny (USA)
Journal of the American Academy of Child and Adolescent Psychiatry 48, 997–1004, 2009

Objective: To examine the course of depression during the treatment of adolescents with depression who had recently attempted suicide.

Method: Adolescents ($N = 124$), ages 12 to 18 years, with a 90-day history of suicide attempt, a current diagnosis of depressive disorder (96.0% had major depressive disorder), and a Children's Depression Rating Scale-Revised (CDRS-R) score of 36 or higher, entered a 6-month treatment with antidepressant medication, cognitive-behavioral therapy focused on suicide prevention, or their combination (Comb), at five academic sites. Treatment assignment could be either random or chosen by study participants. Intent-to-treat, mixed effects regression models of depression and other relevant ratings were estimated. Improvement and remission rates were computed with the last observation carried forward.

Results: Most patients ($n = 104$ or 84%) chose treatment assignment, and overall, three fourths ($n = 93$) received Comb. In Comb, CDRS-R declined from a baseline adjusted mean of 49.6 (SD 12.3) to 38.3 (8.0) at week 12 and to 27.0 (10.1) at week 24 ($p < .0001$), with a Clinical Global Impression-defined improvement rate of 58.0% at week 12 and 72.2% at week 24 and a remission (CDRS-R $< / = 28$) rate of 32.5% at week 12 and 50.0% at week 24. The CDRS-R and the Scale for Suicidal Ideation scores were correlated at baseline ($r = 0.43$, $p < .0001$) and declined in parallel.

Conclusions: When vigorously treated with a combination of medication and psychotherapy, adolescents with depression who have recently attempted suicide show rates of improvement and remission of depression that seem comparable to those observed in nonsuicidal adolescents with depression.

Suicidal events in the treatment for adolescents with depression study (TADS)

B Vitiello, SG Silva, P Rohde, CJ Kratochvil, BD Kennard, MA Reinecke, TL Mayes, K Posner, DE May, JS March (USA)

Journal of Clinical Psychiatry 70, 741–747, 2009

Objective: The Treatment for Adolescents with Depression Study (TADS) database was analyzed to determine whether suicidal events (attempts and ideation) occurred early in treatment, could be predicted by severity of depression or other clinical characteristics, and were preceded by clinical deterioration or symptoms of increased irritability, akathisia, sleep disruption, or mania.

Method: TADS was a 36-week randomized, controlled clinical trial of pharmacologic and psychotherapeutic treatments involving 439 youths with major depressive disorder (DSM-IV criteria). Suicidal events were defined according to the Columbia Classification Algorithm of Suicidal Assessment. Patients were randomly assigned into the study between spring 2000 and summer 2003.

Results: Forty-four patients (10.0%) had at least 1 suicidal event (no suicide occurred). Events occurred 0.4 to 31.1 weeks (mean \pm SD = 11.9 \pm 8.2) after starting TADS treatment, with no difference in event timing for patients receiving medication versus those not receiving medication. Severity of self-rated pre-treatment suicidal ideation (Suicidal Ideation Questionnaire adapted for adolescents score \geq 31) and depressive symptoms (Reynolds Adolescent Depression Scale score \geq 91) predicted occurrence of suicidal events during treatment ($P < .05$). Patients with suicidal events were on average still moderately ill prior to the event (mean \pm SD Clinical Global Impressions–Severity of Illness scale score = 4.0 \pm 1.3) and only minimally improved (mean \pm SD Clinical Global Impressions–Improvement scale score = 3.2 \pm 1.1). Events were not preceded by increased irritability, akathisia, sleep disturbance, or manic signs. Specific interpersonal stressors were identified in 73% of cases ($N = 44$). Of the events, 55% ($N = 24$) resulted in overnight hospitalization.

Conclusions: Most suicidal events occurred in the context of persistent depression and insufficient improvement without evidence of medication-induced behavioral activation as a precursor. Severity of self-rated suicidal ideation and depressive symptoms predicted emergence of suicidality during treatment. Risk for suicidal events did not decrease after the first month of treatment, suggesting the need for careful clinical monitoring for several months after starting treatment.

Peer-support suicide prevention in a non-metropolitan US community

RL Walker, J Ashby, OD Hoskins, FN Greene (USA)

Adolescence 44, 335–346, 2009

Though suicide is a leading cause of death for high school age youth, the overall base rates for suicide deaths are relatively low. Consequently, very few evidence-based suicide prevention programs that address suicide death have emerged. Relative to urban areas, non-metropolitan and rural communities in particular tend to report higher suicide rates that are compounded by poor access to mental health care. In the current study, 63 high school youth participated in the three-day, LifeSavers peer-support suicide prevention training program. The goals of the program are to teach youth to engage in teamwork and listen to others without judgment in addition to recognizing the signs for youth who may be at risk for suicide. The overall aim of LifeSavers is to create a culture whereby primary prevention is active and crisis situations are pre-empted. Each participant in the current study completed pre-test and post-training measures of suicide attitudes and knowledge, self-esteem, and also self-acceptance. Findings demonstrated a significant increase in knowledge and positive attitudes toward suicide prevention and also self-esteem, but not self-acceptance. Though more work is needed, these preliminary data reveal that youth in rural communities may benefit from programming such as LifeSavers that commit to advancing peer support-and peer-gatekeeping efforts.

International impacts of regulatory action to limit antidepressant prescribing on rates of suicide in young people

BW Wheeler, C Metcalfe, RM Martin, D Gunnell (UK)

Pharmacoepidemiology and Drug Safety 18, 579–588, 2009

Purpose: Concerns that selective serotonin reuptake inhibitors (SSRIs) may increase the risk of suicidal behaviour amongst young people led to regulatory action in 2003/4 in many countries. Antidepressant prescribing to young people in various countries declined, but subsequent analyses have demonstrated mixed effects on population suicide rates.

Methods: Annual, national suicide mortality rates from 1990 to 2006 for 10- to 19-year-olds in World Health Organisation (WHO) Mortality Stratum A countries were studied using the WHO mortality database. Departures from country-specific trends in 2004-2006 relative to overall trends 1990–2006 were calculated to estimate the impact of regulatory actions in 2003/4.

Results: There was no consistent change in rate after 2003, with some countries experiencing more and some fewer suicides than expected. Among 15–19 year olds the rate ratio was 0.999 (95%CI: 0.971–1.028), and in 10- to 14-year-olds

was 0.999 (95%CI: 0.929–1.074). There was some evidence of differential results for males and females. In 15- to 19-year-olds there were 1.8% fewer (95%CI: –5.0 to +1.5%) suicides than expected amongst males and 8.1% more (95%CI: +1.9 to +14.6%) suicides than expected amongst females during 2004–2006. Rate ratios for 10- to 14-year-olds demonstrated a similar pattern, but with much greater uncertainty.

Conclusions: There was no evidence of an overall effect on suicides of regulatory action to restrict prescribing of SSRIs to young people, although there was weak evidence of an increase in suicide amongst young women internationally.

Issues in designing, implementing, and evaluating suicide prevention strategies

K Windfuhr

Psychiatry 8, 272–275, 2009

Suicide is one of the leading causes of death globally. Suicide prevention has become a policy priority in many countries. Some countries have implemented national suicide prevention strategies, in line with guidance from the United Nations and the World Health Organization. However, there are still several issues that require further attention in relation to suicide prevention strategies. First, although a growing number of countries have adopted national suicide prevention strategies, suicide prevention is still not a health priority globally. Second, there is an ongoing debate regarding the efficacy and effectiveness of individual interventions. Although evidence on interventions from ‘gold standard’ studies (e.g., randomized controlled trials) is desirable, this is often not achievable. Using the best available evidence is a pragmatic approach to the development of suicide prevention strategies. Third, best practice is informed by evaluating what does and does not work. This requires an evaluation of both the efficacy of specific interventions and the effectiveness of suicide prevention strategies as health policy initiatives. A focus on international evaluation data would help to develop global understanding of best practice in relation to suicide prevention.

Emotional triggers and psychopathology associated with suicidal ideation in urban children with elevated aggressive–disruptive behavior

PA Wyman, PA Gaudieri, K Schmeelk-Cone, W Cross, CH Brown, L Sworts, J West, KC Burke, J Nathan (USA)

Journal of Abnormal Child Psychology 37, 917–928, 2009

8.6% suicidal ideation (SI) was found among 349 urban 6–9 year olds in the top tercile of aggressive–disruptive behavior. SI was associated with more self-reported depression, ODD, conduct problems, and ADHD symptoms (ES 0.70–0.97) and 3.5–5 times more clinically significant symptoms. Parents rated

more symptoms in older children associated with SI compared to parents of similar age children without SI, including greater somatic and behavior problems in 8-9 year olds with SI. Parent ratings did not differentiate SI and non-SI in 6-7 year olds. SI frequently co-occurred with thoughts about death. Children described anger, dysphoria and interpersonal conflict as motivators/triggers for SI and worries about safety/health as motivator/triggers for thoughts about death, suggesting that problems managing emotionally challenging situations are a specific factor in initiating SI. Universal and indicated interventions for children to strengthen emotional self-regulation and behavioral control are recommended to complement the current emphasis on suicide prevention among adolescents.

A psychological autopsy study of pathological gamblers who died by suicide

PW Wong, WS Chan, Y Conwell, KR Conner, PS Yip (Hong Kong)

Journal of Affective Disorders. Published online: 24 April 2009. doi: 10.1016/j.jad.2009.04.001, 2009

Background: Pathological gambling is associated with suicidal ideation and attempt. There is no known report on pathological gambling preceding suicide. By examining a series of 17 suicide cases with evidence of pathological gambling prior to death, we sought to generate hypotheses for further study of this under-researched but rapidly-increasing worldwide public health problem.

Method: Psychological autopsy interviews using a semi-structured format were conducted with proxy respondents for suicide and control subjects aged 15-59 years in Hong Kong SAR, China.

Results: Of the 150 suicides and 150 controls examined, 17 suicides (11.3%) and one control case (0.6%) met criteria for the diagnosis of pathological gambling at the time of death or interview. All 17 suicide cases with pathological gambling had unmanageable debt at the time of death. Fourteen cases (82.4%) had other associated psychiatric disorders, most often major depressive disorders ($n = 10$, 58.9%) and substance-use disorders ($n = 3$, 17.6%). None had ever received psychiatric treatment.

Limitations: Descriptive, retrospective case series with a small sample size.

Conclusions: Along with unmanageable debt, a high proportion of the suicide cases with pathological gambling also experienced other psychiatric illnesses, most often depression, at the time of death. None sought treatment for their addictive behavior or psychiatric illness prior to death. Pathological gambling is a modifiable risk factor for suicide for which means to enhance case identification and engagement in treatment are urgently needed. Clinicians treating depression should explore the presence of pathological gambling behavior or unmanageable debts among their patients. Addressing pathological gambling should be one important component of a comprehensive suicide prevention strategy especially in countries where gambling activities are legalized and expanding.

Psychological strains found from in-depth interviews with 105 Chinese rural youth suicides

J Zhang, N Dong, R Delprino, L Zhou (China)

Archives of Suicide Research 13, 185–194, 2009

The objective of this study was to investigate the role of different aspects of psychological strain in Chinese rural young suicides, so as to test the strain theory of suicide with the Chinese samples. A Psychological Autopsy (PA) was conducted on 105 suicides in rural China. The background and deep reasons for suicide were obtained from in-depth interviews with survivors and close friends. For each suicide, a story is composed out of the provided information, and the stories were content-analyzed with the SPSS Text Analysis for Surveys. Depression or other mental disorders were observed for less than half of the sampled suicides (42.9%). All suicides (100%) had experienced at least one type of the four strains: conflicting values; aspiration and reality; relative deprivation; and coping deficiency. While 24.9% of all suicides experienced only one type of strain, 36.2% experienced two types of strains, 32.4% experienced three types of strains, and only 6.7% of the suicides experienced all four types of strains. Males are more likely than females to experience aspiration and deprivation strains, and the younger suicides (15-22 years of age) were more likely than the older suicides (23-29 years of age) to experience coping strain. Psychological strains are more prevalent than mental disorders among Chinese rural young suicides. Mental illness might be a function of strain resulting from some negative life events, and future studies need to disentangle the relationship between strain and mental disorders.

Citation List

FATAL SUICIDAL BEHAVIOUR

Epidemiology

- Ait El Cadi M, Khabbal Y, Idrissi L (2009). Carbon monoxide poisoning in Morocco during 1999–2007. *Journal of Forensic and Legal Medicine* 16, 385–387.
- Anonymous (2009). Suicide rates in people of South Asian origin in England and Wales: 1993–2003 (response to: Br J Psychiatry 193, 406–409, 2009). *British Journal of Psychiatry* 194, 470–470.
- Aspinall PJ (2009). Suicide rates in people of South Asian origin in England and Wales. *British Journal of Psychiatry* 194, 566–567.
- Baeseman ZJ (2009). A comparison of Wisconsin's suicide rates by urbanization and sex. *Wisconsin Medical Journal* 108, 94–98.
- Bando DH, Scrivani H, Morettin PA, Teng CT (2009). Seasonality of suicide in the city of Sao Paulo, Brazil, 1979–2003. *Revista Brasileira De Psiquiatria* 31, 101–105.
- Bartram DJ (2009). Suicide in our profession. *Journal of Small Animal Practice* 50, 9–9.
- Bjorksten KS, Kripke DF, Bjerregaard P (2009). Accentuation of suicides but not homicides with rising latitudes of Greenland in the sunny months. *BMC Psychiatry*. Published online: 8 May 2009. doi: 10.1186/1471-244X-9-20.
- Bose A, Sandal Sejbaek C, Suganthy P, Raghava V, Alex R, Muliyl J, Konradsen F (2009). Self-harm and self-poisoning in southern India: choice of poisoning agents and treatment. *Tropical Medicine and International Health* 14, 761–765.
- Brecic P, Ostojic D, Vidovic D, Jukic V, Bagaric D, Vilibic M, Celic I, Krizaj A, Bilic P (2009). Characteristics of patients who committed suicide during hospitalization in psychiatric hospital 'Vrapce' in the period 1996–2006. *Collegium Antropologicum* 33, 233–236.
- Buckley L, Shah A (2009). Comparison of rates of suicide methods used by the elderly in England and Wales. *International Psychogeriatrics*. Published online: 23 September 2009. doi: 10.1017/S1041610209991062.
- Burger I, van Hemert AM, Schudel WJ, Middelkoop BJC (2009). Suicidal behavior in four ethnic groups in the Hague, 2002–2004. *Crisis* 30, 63–67.
- Byard RW, Haas E, Marshall DT, Gilbert JD, Krous HF (2009). Characteristic features of pediatric firearm fatalities - comparisons between Australia and the United States. *Journal of Forensic Sciences* 54, 1093–1096.
- Cash SJ, Bridge JA (2009). Epidemiology of youth suicide and suicidal behavior. *Current Opinions in Pediatrics*. Published online: 30 July 2009. doi: 10.1097/mop.0b013e32833063e1.
- Chang SS, Sterne JAC, Lu TH, Gunnell D (2009). 'Hidden' suicides amongst deaths certified as undetermined intent, accident by pesticide poisoning and accident by suffocation in Taiwan. *Social Psychiatry and Psychiatric Epidemiology*. Published online: 11 April 2009. doi: 10.1007/s00127-009-0049-x.
- Chen YJ, Wu ML, Deng JF, Yang CC (2009). The epidemiology of glyphosate-surfactant herbicide poisoning in Taiwan, 1986–2007: a poison center study. *Clinical Toxicology* 47, 670–677.
- Chen YY, Lee MB, Chang CM, Liao SC (2009). Methods of suicide in different psychiatric diagnostic groups. *Journal of Affective Disorders* 118, 196–200.
- Chen YY, Park NS, Lu TH (2009). Suicide methods used by women in Korea, Sweden, Taiwan and the United States. *Journal of the Formosan Medical Association* 1008, 452–459.
- Cheung AH (2009). Suicide rate in young people in the UK declined from 1997 to 2003. *Evidence Based Mental Health* 12, 96–96.

- Chowdhury AN, Brahma A, Banerjee S, Biswas MK (2009). Deliberate self-harm prevention in the Sundarbans region need immediate public health attention. *Journal of Indian Medical Association* 107, 88–93.
- Christodoulou C, Papadopoulos IN, Douzenis A, Kanakaris N, Leukidis C, Gournellis R, Vlachos K, Papadopoulos FC, Lykouras L (2009). Seasonality of violent suicides in the Athens greater area. *Suicide and Life-Threatening Behavior* 39, 321–323.
- Darke S, Duflou J, Torok M (2009). Drugs and violent death: comparative toxicology of homicide and non-substance toxicity suicide victims. *Addiction* 104, 1000–1005
- Fear NT, Ward VR, Harrison K, Davison L, Williamson S, Blatchley NF (2009). Suicide among male regular UK Armed Forces personnel, 1984–2007. *Occupational and Environmental Medicine* 66, 438–441.
- Fernquist RM (2009). Suicide rates and status integration in America. *Archives of Suicide Research* 13, 291–296.
- Flynn S, Swinson N, While D, Hunt IM, Roscoe A, Rodway C, Windfuhr K, Kapur N Appleby L, Shaw J (2009). Homicide followed by suicide: a cross-sectional study. *Journal of Forensic Psychiatry and Psychology* 20, 306–321.
- Gawarammana IB, Ariyananda PL, Palangasinghe C, De Silva NG, Fernando K, Vidanapathirana M, Kuruppuarachchi MA, Munasinghe MA, Dawson AH (2009). Emerging epidemic of fatal human self-poisoning with a washing powder in Southern Sri Lanka: a prospective observational study. *Clinical Toxicology (T and F)* 47, 407–411.
- Gravseth HM, Mehlum L, Bjerkedal T, Kristensen P (2009). Suicide in young Norwegians in a life course perspective: population based cohort study. *Journal of Epidemiology and Community Health*. Published online: 13 August 2009. doi: 10.1136/jech.2008.083485.
- Gray RW (2009). Physician suicide rates show alarming need for education. *Tennessee Medicine* 102, 39–39.
- Hayes LM (2009). Juvenile suicide in confinement - findings from the first national survey. *Suicide and Life-Threatening Behavior* 39, 353–363.
- Hepp U, Ring M, Frei A, Rössler W, Schnyder U, Ajdacic-Gross V (2009). Suicide trends diverge by method: Swiss suicide rates 1969–2005. *European Psychiatry*. Published online: 18 August 2009. doi: 10.1016/j.eurpsy.2009.05.005.
- Hernetkoski KM, Keskinen EO, Parkkari IK (2009). Driver suicides in Finland – are they different in Northern and Southern Finland? *International Journal of Circumpolar Health* 68, 249–260.
- Huisman A, van Houwelingen CA, Kerkhof AJ (2009). Psychopathology and suicide method in mental health care. *Journal of Affective Disorders*. Published online: 17 June 2009. doi: 10.1016/j.jad.2009.05.024.
- Inoue K (2009). Significant correlation of the change in the divorce rate with the suicide rate in Japan from 1992 to 2004. *American Journal of Forensic Medicine and Pathology* 30, 311–311.
- Inoue K (2009). The correlation of the suicide rates with the rates of unemployment and divorce in the United States during seventeen years. *American Journal of Forensic Medicine and Pathology* 30, 311–312.
- Islambulchilar M, Islambulchilar Z, Kargar-Maher MH (2009). Acute adult poisoning cases admitted to a university hospital in Tabriz, Iran. *Human and Experimental Toxicology* 28, 185–190.
- Johnson FW, Gruenewald PJ, Remer LG (2009). Suicide and alcohol: do outlets play a role? *Alcoholism: Clinical and Experimental Research*. Published online: 17 September 2009. doi: 10.1111/j.1530-0277.2009.01052.x.

- Kanchan T, Menon A, Menezes RG (2009). Methods of choice in completed suicides: gender differences and review of literature. *Journal of Forensic Science* 54, 938–942.
- Kang HK, Bullman TA (2009). Is there an epidemic of suicides among current and former U.S. military personnel? *Annals of Epidemiology* 19, 757–760.
- Kapur N, Gask L (2009). Introduction to suicide and self-harm. *Psychiatry* 8, 233–236.
- Khan MM, Ahmed A, Khan SR (2009). Female suicide rates in Ghizer, Pakistan. *Suicide and Life-Threatening Behavior* 39, 227–230.
- Khan F, Waheed W (2009). Suicide and self-harm in South Asian immigrants. *Psychiatry* 8, 261–264.
- Kivisto JE, Parkkari J, Mattila VM, Hoppu K (2009). Poisoning deaths among Finnish children from 1969 to 2003. *Acta Paediatrica* 98, 1661–1666.
- Landberg J (2009). Per capita alcohol consumption and suicide rates in the US, 1950–2002. *Suicide and Life-Threatening Behavior* 39, 452–459.
- Large M, Smith G, Nielssen O (2009). Correspondence: the epidemiology of abnormal homicide and murder followed by suicide. *Psychological Medicine* 39, 699–699.
- Large M, Smith G, Nielssen O (2009). The epidemiology of homicide followed by suicide: a systematic and quantitative review. *Suicide and Life-Threatening Behavior* 39, 294–306.
- Legato MJ (2009). Physician suicide: unnecessary losses. *Gender Medicine* 6, 247–248.
- Li X, Xiao Z, Xiao S (2009). Suicide among the elderly in mainland China. *Psychogeriatrics* 9, 62–66.
- Liem M, Postulart M, Nieuwebeerta P (2009). Homicide-suicide in the Netherlands: an epidemiology. *Homicide Studies* 13, 99–123.
- Lindfors PM, Meretoja OA, Luukkonen RA, Elovainio MJ, Leino TJ (2009). Suicidality among Finnish anaesthesiologists. *Acta Anaesthesiologica Scandinavica* 53, 1027–1035.
- Liu H-L (2009). An epidemiologic analysis of elderly suicide in Taiwan: 1985–2006. *Taiwan Journal of Public Health* 28, 103–114.
- Liu KY (2009). Suicide rates in the world: 1950–2004. *Suicide and Life-Threatening Behaviour* 39, 204–213.
- McKenzie K, Bhui K (2009). Suicide rates in people of South Asian origin in England and Wales (Author's Reply). *British Journal of Psychiatry* 194, 567–568.
- Miller M, Barber C, Azrael D, Calle EE, Lawler E, Mukamal KJ (2009). Suicide among US veterans: a prospective study of 500,000 middle-aged and elderly men. *American Journal of Epidemiology* 170, 494–500.
- Nayha S (2009). Suicide mortality in Finnish Lapland by small areas, with reference to temporal trends. *International Journal of Circumpolar Health* 68, 224–234.
- O'Hara AF, Violanti JM (2009). Police suicide: a web surveillance of national data. *International Journal of Emergency Mental Health* 11, 17–24.
- Palimar V, Arun M, Babu YPR (2009). Fatal mechanical asphyxia. *Medico-Legal Update* 9, 4–5.
- Pan YJ, Lee MB, Lin CS (2009). Physician suicide in Taiwan, 2000–2008: preliminary findings. *Journal of the Formosan Medical Association* 108, 328–332.
- Pan YJ, Liao SC, Lee MB (2009). Suicide by charcoal burning in Taiwan, 1995–2006. *Journal of Affective Disorders*. Published online: 1 May 2009. doi: 10.1016/j.jad.2009.04.003.
- Paraschakis A (2009). Psychiatric morbidity in physicians. *Archives of Hellenic Medicine* 26, 36–41.
- Perkins R, Sanddal TL, Howell M, Sanddal ND, Berman A (2009). Epidemiological and follow-back study of suicides in Alaska. *International Journal of Circumpolar Health* 68, 212–223.

- Power L, Brophy J (2009). Erratum: a comparison of suicide rates between older adults in Ireland and the UK: 1975–2005. *Irish Journal of Medical Science* 178, 243–244.
- Raleigh VS (2009). Suicide rates in people of South Asian origin in England and Wales. *British Journal of Psychiatry* 194, 567–567.
- Razvodovsky YE (2009). Suicide and fatal alcohol poisoning in Russia, 1956–2005. *Drugs-Education Prevention and Policy* 16, 127–139.
- Roberts K, Wassenaar D, Canetto SS, Pillay A (2009). Homicide-suicide in Durban, South Africa. *Journal of Interpersonal Violence*. Published online: 17 July 2009. doi: 10.1177/0886260509336964.
- Robinson D, Renshaw C, Okello C, Møller H, Davies EA (2009). Suicide in cancer patients in South East England from 1996 to 2005: a population-based study. *British Journal of Cancer* 101, 198–201.
- Sansone RA, Sansone LA (2009). Physician suicide: a fleeting moment of despair. *Psychiatry* 6, 18–22.
- Shaw J, Turnbull P (2009). Suicide in custody. *Psychiatry* 8, 265–268.
- Silviken A (2009). Prevalence of suicidal behavior among Indigenous Sami in Northern Norway. *International Journal of Circumpolar Health* 68, 204–211.
- Thakar MK, Sahota SS, Singh R (2009). Deaths due to drowning in Punjab — a survey 2005 to 2006. *Medico-Legal Update* 9, 18–23.
- Uzün I, Buyuk Y, Erkol Z, Aritmis H, Kir Z (2009). Fatalities caused by spherical bullets fired from blank cartridge guns in Istanbul, Turkey. *Journal of Forensic Sciences* 54, 1127–1130.
- Uzün I, Karayel FA, Akyıldız EU, Turan AA, Toprak S, Arpak BB (2009). Suicide among children and adolescents in a province of Turkey. *Journal of Forensic Science* 54, 1097–1100.
- Vougiouklakis T, Tsiligianni C, Boumba VA (2009). Children, adolescents and young adults suicide data from Epirus, northwestern Greece. *Forensic science, medicine, and pathology*. Published online: 16 September 2009. doi: 10.1007/s12024-009-9105-9.
- Wanta BT, Schlotthauer AE, Guse CE, Hargarten SW (2009). The burden of suicide in Wisconsin's older adult population. *Wisconsin Medical Journal* 108, 87–93.
- Weaver JC, Munro D (2009). Country living, country dying: rural suicides in New Zealand, 1900–1950. *Journal of Social History* 42, 933–961.
- Wheeler BW, Metcalfe C, Martin RM, Gunnell D (2009). International impacts of regulatory action to limit antidepressant prescribing on rates of suicide in young people. *Pharmacoepidemiology and Drug Safety* 18, 579–588.
- Wong PWC, Chan WSC, Lau TK, Morgan PR, Yip PSF (2009). Suicides by jumping from iconic bridges in Hong Kong. *Crisis* 30, 79–84.

Risk and protective factors

- Ahmadi A, Mohammadi R, Schwebel DC, Yeganeh N, Sourosh A, Bazargan-Hejazi S (2009). Familial risk factors for self-immolation: a case-control study. *Journal of Women's Health* 18, 1025–1031.
- Almasi K, Belso N, Kapur N, Webb R, Cooper J, Hadley S, Kerfoot M, Dunn G, Sotonyi P, Rihmer Z, Appleby L (2009). Risk factors for suicide in Hungary: a case-control study. *BMC Psychiatry* 9, 45.
- Altinanahtar A, Halicioğlu F (2009). A dynamic econometric model of suicides in Turkey. *Journal of Socio-Economics* 38, 903–907.
- Andriessen K, Kryszynska K (2009). Can sports events affect suicidal behavior? *Crisis* 30, 144–152.

- Anonymous** (2009). Do the 10 UK suicides among those taking the smoking cessation drug Varenicline suggest a causal link? *Addiction* 104, 864–865.
- Anonymous** (2009). Rimonabant: depression and suicide. *Prescribe International* 18, 24–24.
- Anonymous** (2009). Study fails to find a link between alcohol abuse and suicide in vets. *Veterinary Record* 164, 736–736.
- Anonymous** (2009). Why are vets at high risk of suicide? *Veterinary Record* 164, 575–575.
- Bahmanyar S, Sparen P, Mittendorfer Rutz E, Hultman C** (2009). Risk of suicide among operated and non-operated patients hospitalized for peptic ulcers. *Journal of Epidemiology and Community Health*. Published online: 13 July 2009. doi: 10.1136/jech.2008.086348.
- Baillargeon J, Penn JV, Thomas CR, Temple JR, Baillargeon G, Murray OJ** (2009). Psychiatric disorders and suicide in the nation's largest state prison system. *Journal of the Academy of Psychiatry and the Law* 37, 188–193.
- Becker M, Brown L, Ochshorn E, Diamond R** (2009). Risk for suicide among Medicaid beneficiaries. *Suicide and Life-Threatening Behavior* 39, 172–181.
- Bell GS, Gaitatzis A, Bell CL, Johnson AL, Sander JW** (2009). Suicide in people with epilepsy: how great is the risk? *Epilepsia* 50, 1933–1942.
- Bell GS, Mula M, Sander JW** (2009). Suicidality in people taking antiepileptic drugs: what is the evidence? *CNS Drugs* 23, 281–292.
- Besnier N, Gavaudan G, Navez A, Adida M, Jollant F, Courtet P, Lançon C** (2009). Clinical features of suicide occurring in schizophrenia (I). Risk-factors identification. *Encephale* 35, 176–181.
- Biddle VS, Sekula LK, Zoucha R, Puskar KR** (2009). Identification of suicide risk among rural youth: implications for the use of HEADSS. *Journal of Pediatric Health Care*. Published online: 24 June 2009. doi: 10.1016/j.pedhc.2009.03.003.
- Bradvik L, Berglund M, Frank A, Lindgren A, Lowenhielm P** (2009). Number of addictive substances used related to increased risk for unnatural death: a combined medico-legal and case-record study. *BMC Psychiatry* 9, 48.
- Braquehais MD, Oquendo MA, Baca-Garcia E, Sher L** (2009). Is impulsivity a link between childhood abuse and suicide? *Comprehensive Psychiatry*. Published online: 31 August 2009. doi: 10.1016/j.comppsy.2009.05.003.
- Carlborg A, Jokinen J, Nordström AL, Jonsson EG, Nordström P** (2009). CSF 5-HIAA, attempted suicide and suicide risk in schizophrenia spectrum psychosis. *Schizophrenia Research* 112, 80–85.
- Carlsten A, Waern M** (2009). Are sedatives and hypnotics associated with increased suicide risk in the elderly? *BMC Geriatrics* 9, 20.
- Chan SS, Chiu HF, Chen EY, Chan WS, Wong PW, Chan CL, Law YW, Yip PS** (2009). Population-attributable risk of suicide conferred by axis I psychiatric diagnoses in a Hong Kong Chinese population. *Psychiatric Services* 60, 1135–1138.
- Chandra PS, Babu GN** (2009). Lithium in drinking water and food, and risk of suicide (Comment on: Br J Psychiatry 194, 464–5, 2009; discussion 446). *British Journal of Psychiatry* 195, 271–271.
- Chen VC, Chou JY, Lai TJ, Lee CT** (2009). Suicide and unemployment rate in Taiwan, a population-based study, 1978–2006. *Social Psychiatry and Psychiatric Epidemiology*. Published online: 28 June 2009. doi: 10.1007/s00127-009-0083-8.
- Cheung A** (2009). Review: SSRIs are associated with increased risk for attempted or completed suicide in adolescents but not in adults or the elderly (Comment on CMAJ 180, 291–7, 2009). *Annals of Internal Medicine* 150, JC6–JC13.

- Chung A (2009). Gender difference in suicide, household production and unemployment. *Applied Economics* 41, 2495–2504.
- Chung I (2009). Changes in the sociocultural reality of Chinese immigrants: challenges and opportunities in help-seeking behavior. *International Journal of Social Psychiatry*. Published online: 3 August 2009. doi: 10.1177/0020764009105647.
- Cina SJ, Perper JA (2009). Is lymphocytic (hashimoto) thyroiditis associated with suicide? *American Journal of Forensic Medicine and Pathology* 30, 235–237.
- Ciuhodaru T, Romedea SN, Arhipescu T, Buda O (2009). Factors increasing mortality rates in suicide attempts in jail and prison. *Romanian Journal of Legal Medicine* 17, 69–72.
- Coklo M, Stemberga V, Cuculic D, Sosa I, Bosnar A (2009). Toxicology and methods of committing suicide other than overdose. *Medical Hypotheses*. Published online: 17 May 2009. doi: 10.1016/j.mehy.2009.03.047.
- Collings SC, Ivory V, Blakely T, Atkinson J (2009). Are neighbourhood social fragmentation and suicide associated in New Zealand? A national multilevel cohort study. *Journal of Epidemiology and Community Health*. Published online: 9 July 2009. doi: 10.1136/jech.2009.090985.
- Conwell Y, Duberstein PR, Hirsch JK, Conner KR, Eberly S, Caine ED (2009). Health status and suicide in the second half of life. *International Journal of Geriatric Psychiatry*. Published online: 6 July 2009. doi: 10.1002/gps.2348.
- Corcoran P, Nagar A (2009). Suicide and marital status in Northern Ireland. *Social Psychiatry and Psychiatric Epidemiology*. Published online: 18 September 2009. doi: 10.1007/s00127-009-0120-7.
- Crosby AE, Espitia-Hardeman V, Hill HA, Ortega L, Clavel-Arcas C (2009). Alcohol and suicide among racial/ethnic populations — 17 states, 2005–2006. *JAMA* 302, 733–734.
- Daly MC, Wilson DJ (2009). Happiness, unhappiness, and suicide: an empirical assessment. *Journal of the European Economic Association* 7, 539–549.
- Daniel AE (2009). Suicide-related litigation in jails and prisons: risk management strategies. *Journal of Correctional Health* 15, 19–27.
- Desai G, Chaturvedi SK (2009). Lithium in drinking water and food, and risk of suicide. *British Journal of Psychiatry* 195, 271–272.
- Eliason S (2009). Murder-suicide: a review of the recent literature. *Journal of the American Academy of Psychiatry and the Law* 37, 371–376.
- Ellis TE, Rutherford B (2009). Cognition and suicide: two decades of progress. *International Journal of Cognitive Therapy* 1, 47–68.
- Erlangsen A, Agerbo E, Hawton K, Conwell Y (2009). Early discontinuation of antidepressant treatment and suicide risk among persons aged 50 and over: a population-based register study. *Journal of Affective Disorders*. Published online: 18 April 2009. doi: 10.1016/j.jad.2009.03.011.
- Ernst C, Chen ES, Turecki G (2009). Histone methylation and decreased expression of TrkB.T1 in orbital frontal cortex of suicide completers. *Molecular Psychiatry* 14, 830–832.
- Ernst C, Dumoulin P, Cabot S, Erickson J, Turecki G (2009). SNAT1 and a family with high rates of suicidal behavior. *Neuroscience* 162, 415–422.
- Ernst C, Mechawar N, Turecki G (2009). Suicide neurobiology. *Progress in Neurobiology*. Published online: 18 September 2009. doi: 10.1016/j.pneurobio.2009.09.001.
- Fiedorowicz JG, Leon AC, Keller MB, Solomon DA, Rice JP, Coryell WH (2009). Do risk factors for suicidal behavior differ by affective disorder polarity? *Psychological Medicine* 39, 763–771.

- Flori LM, Mechawar N, Turecki G (2009). Identification and characterization of Spermidine/Spermine N1-Acetyltransferase Promoter variants in suicide completers. *Biological Psychiatry* 66, 460–467.
- Flensburg-Madsen T, Knop J, Mortensen EL, Becker U, Sher L, Grønbaek M (2009). Alcohol use disorders increase the risk of completed suicide — irrespective of other psychiatric disorders: a longitudinal cohort study. *Psychiatry Research* 167, 123–130.
- Fu K-W, Yip PSF (2009). Estimating the risk for suicide following the suicide deaths of 3 Asian entertainment celebrities: a meta-analytic approach. *Journal of Clinical Psychiatry* 70, 869–878.
- Fudalej S, Fudalej M, Kostrzewa G, Ku niar P, Franaszczyk M, Wojnar M, Krajewski P, Płoski R (2009). Angiotensin-converting enzyme polymorphism and completed suicide: an association in caucasians and evidence for a link with a method of self-injury. *Neuropsychobiology* 59, 151–158.
- Fudalej S, Ilgen M, Fudalej M, Wojnar M, Matsumoto H, Barry KL, Ploski R, Blow FC, Frederic C (2009). Clinical and genetic risk factors for suicide under the influence of alcohol in a Polish sample. *Alcohol and Alcoholism* 44, 437–442.
- Fujita Y, Inoue K, Nata M, Miyazawa T, Inoue T (2009). Is the suicide rate related to increased rates of mining and industrial production in Australia? *West Indian Medical Journal* 58, 77–78.
- Garvey KA, Penn JV, Campbell AL, Esposito-Smythers C, Spirito A (2009). Contracting for safety with patients: clinical practice and forensic implications. *Journal of the American Academy of Psychiatry and the Law* 37, 363–370.
- Gearing RE, Lizardi D (2009). Religion and suicide. *Journal of Religion and Health* 48, 332–341.
- Geddes JR, Barbui C, Cipriani A (2009). Risk of suicidal behaviour in adults taking antidepressants. *British Medical Journal* 339, b3066.
- Giltay EJ, Zitman FG, Menotti A, Nissinen A, Jacobs DR, Adachi H, Kafatos A, Kromhout D (2009). Respiratory function and other biological risk factors for completed suicide: 40 years of follow-up of European cohorts of the Seven Countries Study. *Journal of Affective Disorders*. Published online: 30 April 2009. doi: 10.1016/j.jad.2009.03.022.
- Gunnell D, Platt S, Hawton K (2009). The economic crisis and suicide. *British Medical Journal* 338, 1456–1457.
- Halligan FR (2009). Youth and trauma: terror, war, murder, incest, rape, and suicide. *Journal of Religion and Health* 48, 342–352.
- Haukka J, Arffman M, Partonen T, Sihvo S, Elovainio M, Tiihonen J, Lonnqvist J, Keskimaki I (2009). Antidepressant use and mortality in Finland: a register-linkage study from a nationwide cohort. *European Journal of Clinical Pharmacology* 65, 715–720.
- Haw C, Harwood D, Hawton K (2009). Dementia and suicidal behavior: a review of the literature. *International Psychogeriatrics* 21, 440–453.
- Haws CA, Gray DD, Yurgelun-Todd DA, Moskos M, Meyer LJ, Renshaw PF (2009). The possible effect of altitude on regional variation in suicide rates. *Medical Hypotheses* 73, 587–590.
- Hawton K, van Heeringen K (2009). Suicide. *Lancet* 373, 1372–1381.
- Hercher C, Parent M, Flores C, Canetti L, Turecki G, Mechawar N (2009). Alcohol dependence-related increase of glial cell density in the anterior cingulate cortex of suicide completers. *Journal of Psychiatry and Neuroscience* 34, 281–288.
- Hoyer EH, Licht RW, Mortensen PB (2009). Risk factors of suicide in inpatients and recently discharged patients with affective disorders. A case-control study. *European Psychiatry* 24, 317–321.
- Hultcrantz M, Svensson T, Derolf AR, Kristinsson SY, Ekblom A, Granath F, Bjorkholm M (2009). Risk factors for attempted suicide and suicide following a diagnosis of hematological malignancy. *Haematologica — The Hematology Journal* 94, 454–454.

- Inoue K, Tanii H, Abe S, Nishimura Y, Kaiya H, Nata M, Okazaki Y, Fukunaga T (2009). The report in the correlation between the factor of unemployment and suicide in Japan. *American Journal of Forensic Medicine and Pathology* 29, 199–200.
- Janis IB, Nock MK (2009). Are self-injurers impulsive? Results from two behavioral laboratory studies. *Psychiatry Research* 169, 261–267.
- Jokinen J, Forslund K, Nordström AL, Lindqvist P, Nordstrom P (2009). Suicide risk after homicide in Sweden. *Archives of Suicide Research* 13, 297–301.
- Kaplan MS, McFarland BH, Huguet N (2009). Firearm suicide among veterans in the general population: findings from the National Violent Death Reporting System. *Journal of Trauma* 67, 503–507.
- Kapur N (2009). Suicide in the mentally ill. *Psychiatry* 8, 257–260.
- Keks NA, Hill C, Sundram S, Graham A, Bellingham K, Dean B, Opeskin K, Dorissa A, Copolov DL (2009). Evaluation of treatment in 35 cases of bipolar suicide. *Australian and New Zealand Journal of Psychiatry* 43, 503–508.
- Kiankhooy A, Crookes B, Privette A, Osler T, Sartorelli K (2009). Fait accompli: suicide in a rural trauma setting. *Journal of Trauma* 67, 366–371.
- Kingshott BF (2009). Suicide by proxy: revisiting the problem of suicide by cop. *Journal of Police Crisis Negotiations* 9, 105–118.
- Kjølseth I, Ekeberg O, Steihaug S (2009). Why suicide? Elderly people who committed suicide and their experience of life in the period before their death. *International Psychogeriatrics*. Published online: 14 September 2009. doi: 10.1017/S1041610209990949.
- Kjølseth I, Ekeberg O, Steihaug S (2009). ‘Why do they become vulnerable when faced with the challenges of old age?’ Elderly people who committed suicide, described by those who knew them. *International Psychogeriatrics* 21, 903–912.
- Klempan TA, Ernst C, Deleva V, Labonté B, Turecki G (2009). Characterization of QKI gene expression, genetics, and epigenetics in suicide victims with major depressive disorder. *Biological Psychiatry*. Published online: 22 June 2009. doi: 10.1016/j.biopsych.2009.05.010.
- Klieve H, Svetcic J, De Leo D (2009). Who uses firearms as a means of suicide? A population study exploring firearm accessibility and method choice. *BMC Medicine*. Published online: 24 September 2009. doi: 10.1186/1741-7015-7-52.
- Kostic VS, Pekmezovic T, Tomic A, Jecmenica-Lukic M, Stojkovic T, Spica V, Svetel M, Stefanova E, Petrovic I, Dzoljic E (2009). Suicide and suicidal ideation in Parkinson’s disease. *Journal of the Neurological Sciences*. Published online: 8 September 2009. doi: 10.1016/j.jns.2009.08.016
- Kposowa AJ, D’Auria S (2009). Association of temporal factors and suicides in the United States, 2000–2004. *Social Psychiatry and Psychiatric Epidemiology*. Published online: 18 June 2009. doi: 10.1007/s00127-009-0082-9.
- Krysinska K, Lester D, Martin G (2009). Suicidal behavior after a traumatic event. *Journal of Trauma Nursing* 16, 103–110.
- Ku YC, Tsai YF, Lin YC, Lin YP (2009). Suicide experiences among institutionalized older veterans in Taiwan. *Gerontologist*. Published online: 13 July 2009. doi: 10.1093/geront/gnp114.
- Kurihara T, Kato M, Reverger R, Tirta IG (2009). Risk factors for suicide in Bali: a psychological autopsy study. *BMC Public Health* 9, 327.
- Lalovic A, Klempan T, Sequeira A, Luheshi G, Turecki G (2009). Altered expression of lipid metabolism and immune response genes in the frontal cortex of suicide completers. *Journal of Affective Disorders*. Published online: 13 May 2009. doi: 10.1016/j.jad.2009.04.007.
- Langhinrichsen-Rohling J, Friend J, Powell A (2009). Adolescent suicide, gender, and culture: a rate and risk factor analysis. *Aggression and Violent Behavior* 14, 402–414.

- Lee WY, Khang YH, Noh M, Ryu JI, Son M, Hong YP (2009). Trends in educational differentials in suicide mortality between 1993–2006 in Korea. *Yonsei Medical Journal* 50, 482–492.
- Lee HC, Lin HC (2009). Are psychiatrist characteristics associated with postdischarge suicide of schizophrenia patients? *Schizophrenia Bulletin* 35, 760–765.
- Lineberry TW (2009). Suicide rates in 2009. Do the economy and wars have an effect? *Minnesota Medicine* 92, 49–52.
- Lizardi D, Gearing RE (2009). Religion and suicide: Buddhism, Native American and African Religions, Atheism, and Agnosticism. *Journal of Religion and Health*. Published online: 4 April 2009. doi: 10.1007/s10943-009-9248-8.
- Lundin A, Hemmingsson T (2009). Unemployment and suicide. *Lancet* 374, 270–271.
- Mäki N, Martikainen P (2009). The role of socioeconomic indicators on non-alcohol and alcohol-associated suicide mortality among women in Finland: a register-based follow-up study of 12 million person-years. *Social Science & Medicine* 68, 2161–2169.
- Manalai P, Woo JM, Postolache TT (2009). Suicidality and montelukast. *Expert Opinion on Drug Safety* 8, 273–282.
- Mansdotter A, Lundin A, Falkstedt D, Hemmingsson T (2009). The association between masculinity rank and mortality patterns: a prospective study based on the Swedish 1969 conscript cohort. *Journal of Epidemiology and Community Health* 63, 408–413.
- McCain JA (2009). Antidepressants and suicide in adolescents and adults: a public health experiment with unintended consequences? *P and T* 34, 355–367.
- McGirr A, Alda M, Seguin M, Cabot S, Lesage A, Turecki G (2009). Familial aggregation of suicide explained by cluster B traits: a three-group family study of suicide controlling for major depressive disorder. *American Journal of Psychiatry* 166, 1124–1134.
- Mukamal KJ, Wee CC, Miller M (2009). BMI and rates of suicide in the United States: an ecological analysis. *Obesity* 17, 1946–1950.
- Niederkröthaler T, Till B, Kapusta ND, Voracek M, Dervic K, Sonneck G (2009). Copycat effects after media reports on suicide: a population-based ecologic study. *Social Science & Medicine* 69, 1085–1090.
- Nielsen AL, Martinez R (2009). The role of immigration for violent deaths. *Homicide Studies* 13, 274–287.
- Noh Y-H (2009). Does unemployment increase suicide rates? The OECD panel evidence. *Journal of Economic Psychology* 30, 575–582.
- Nordentoft M, Larsen T, Bertelsen M, Thorup A (2009). The challenge of suicidal behaviour in early psychosis. *Early Intervention in Psychiatry* 2, 1–2.
- Ocampo R, Bojorquez I, Cortes M (2009). Substance use in suicides in Mexico: results of the Epidemiological Surveillance System of Addictions, 1994–2006. *Salud Publica De Mexico* 51, 306–313.
- Oyen N, Boyd HA, Poulsen G, Wohlfahrt J, Melbye M (2009). The clustering of premature deaths in families. *Epidemiology* 20, 757–765.
- Panagioti M, Gooding P, Tarrier N (2009). Post-traumatic stress disorder and suicidal behavior: a narrative review. *Clinical Psychology Review* 29, 471–482.
- Pariente A, Daveluy A, Laribiere-Benard A, Miremont-Salame G, Begaud B, Moore N (2009). Effect of date of drug marketing on disproportionately measures in pharmacovigilance: the example of suicide with SSRIs using data from the UK MHRA. *Drug Safety* 32, 441–447.
- Perry AE, Gilbody S (2009). Detecting and predicting self-harm behaviour in prisoners: a prospective psychometric analysis of three instruments. *Social Psychiatry and Psychiatric Epidemiology* 44, 853–861.

- Petrovic B, Kocic B, Nikic D, Nikolic M, Bogdanovic D (2009). The influence of marital status on epidemiological characteristics of suicides in the south-eastern part of Serbia. *Central European Journal of Public Health* 17, 41–46.
- Pfeiffer PN, Ganoczy D, Ilgen M, Zivin K, Valenstein M (2009). Comorbid anxiety as a suicide risk factor among depressed veterans. *Depression and Anxiety* 26, 752–757.
- Pirkis J (2009). Suicide and the media. *Psychiatry* 8, 269–271.
- Placido A, Sposito AC (2009). Association between suicide and cardiovascular disease: time series of 27 years. *International Journal of Cardiology* 135, 261–262.
- Pompili M, Lester D, Grispini A, Innamorati M, Calandro F, Iliceto P, De Pisa E, Tatarelli R, Girardi P (2009). Completed suicide in schizophrenia: evidence from a case-control study. *Psychiatry Research* 167, 251–257.
- Postolache TT, Mortensen PB, Tonelli LH, Jiao X, Frangakis C, Soriano JJ, Qin P (2009). Seasonal spring peaks of suicide in victims with and without prior history of hospitalization for mood disorders. *Journal of Affective Disorders*. Published online: 16 June 2009. doi: 10.1016/j.jad.2009.05.015.
- Prager LM (2009). Depression and suicide in children and adolescents. *Paediatric Review* 30, 199–205.
- Pratt D, Appleby L, Piper M, Webb R, Shaw J (2009). Suicide in recently released prisoners: a case-control study. *Psychological Medicine*. Published online: 1 September 2009. doi: 10.1017/S0033291709991048.
- Preti A, Meneghelli A, Pisano A, Cocchi A & the Programma 2000 Team (2009). Risk of suicide and suicidal ideation in psychosis: results from an Italian multi-modal pilot program on early intervention in psychosis. *Schizophrenia Research* 113, 145–150.
- Price JH, Mrdjenovich AJ, Dake JA (2009). Prevalence of state firearm mortality and mental health care resources. *Journal of Community Health* 34, 383–391.
- Purselle DC, Heninger M, Hanzlick R, Garlow SJ (2009). Differential association of socioeconomic status in ethnic and age-defined suicides. *Psychiatry Research* 167, 258–265.
- Ran MS, Chan CL, Chen EY, Mao WJ, Hu SH, Tang CP, Lin FR, Conwell Y (2009). Differences in mortality and suicidal behaviour between treated and never-treated people with schizophrenia in rural China. *British Journal of Psychiatry* 195, 126–131.
- Rodi PM, Roskar S, Marusic A (2009). Suicide victims' last contact with the primary care physician: report from Slovenia. *International Journal of Social Psychiatry*. Published online: 10 July 2009. doi: 10.1177/0020764009105330.
- Ryb GE, Cooper CC, Dischinger PC, Kufera JA, Auman KM, Soderstrom CA (2009). Suicides, homicides, and unintentional injury deaths after trauma center discharge: cocaine use as a risk factor. *Journal of Trauma* 67, 490–496.
- Qin P, Jepsen P, Nørgård B, Agerbo E, Mortensen PB, Vilstrup H, Sørensen HT (2009). Hospital admission for non-fatal poisoning with weak analgesics and risk for subsequent suicide: a population study. *Psychological Medicine* 39, 1867–1873.
- Qin P, Mortensen PB, Pedersen CB (2009). Frequent change of residence and risk of attempted and completed suicide among children and adolescents. *Archives of General Psychiatry* 66, 628–632.
- Reeves RR, Ladner ME (2009). Antidepressant-induced suicidality: implications for clinical practice. *Southern Medical Journal* 102, 713–718.
- Reutfors J, Osby U, Ekblom A, Nordstrom P, Jokinen J, Papadopoulos FC (2009). Seasonality of suicide in Sweden: relationship with psychiatric disorder. *Journal of Affective Disorders*. Published online: 26 March 2009. doi: 10.1016/j.jad.2009.02.020.

- Rodrigo A, McQjillin A, Pimm J (2009). Effect of the 2004 tsunami on suicide rates in Sri Lanka. *Psychiatric Bulletin* 33, 179–180.
- Roy A, Sarchiopone M, Carli V (2009). Gene–environment interaction and suicidal behaviour. *Journal of Psychiatric Practice* 15, 282–288.
- Saetre P, Lundmark P, Hansen T, Rasmussen HB, Djurovic S, Melle I, Andreassen OA, Werge T, Agartz I, Hall H, Terenius L, Jonsson EG (2009). The tryptophan hydroxylase 1 (TPH1) gene, schizophrenia susceptibility, and suicidal behavior: a multi-centre case-control study and meta-analysis. *American Journal of Medical Genetics. Part B, Neuropsychiatric Genetics*. Published online: 12 June 2009. doi: 10.1002/ajmg.b.30991.
- Scorza FA, Terra VC, Arida RM, de Albuquerque M, Cavalheiro EA (2009). How low can we go? A possible relationship between low plasma cholesterol levels and suicide in people with epilepsy. *Epilepsy & Behavior* 16, 368.
- Sequeira PA, Mamdani F, Ernst C, Vawter MP, Bunney WE, Lebel V, Rehal S, Klempan T, Gratton A, Benkelfat C, Rouleau GA, Mechawar N, Turecki G. (2009). Global brain gene expression analysis links glutamatergic and GABAergic alterations to suicide and major depression. *PLoS One* 4, 6585.
- Shah A (2009). A preliminary cross-national study of a possible relationship between elderly suicide rates and tuberculosis. *International Psychogeriatrics*. Published online: 5 June 2009. doi: 10.1017/S1041610209990378.
- Shah A (2009). A replication of a cross-national study of the relationship between elderly suicide rates and urbanization. *International Psychogeriatrics*. Published online: 10 July 2009. doi: 10.1017/S1041610209990627.
- Shah A (2009). Association of general population suicide rates with urbanisation. *Psychological Reports* 104, 609–612.
- Shah A (2009). National alcohol consumption and suicide rates. *International Psychogeriatrics*. Published online: 10 July 2009. doi: 10.1017/S1041610209990548.
- Shah A (2009). The relationship between elderly suicide rates and the internet: a cross-national study. *International Journal of Social Psychiatry*. Published online: 10 July 2009. doi: 10.1177/0020764009105645.
- Shah A, Bhandarkar R, Bhatia G (2009). The relationship between general population suicide rates and mental health funding, service provision and national policy. *International Journal of Social Psychiatry*. Published online: 3 August 2009. doi: 10.1177/0020764009342384.
- Shah A, Sinha T, Makena R (2009). The relationship between elderly suicide rates, population density and room density. *International Psychogeriatrics*. Published online: 25 June 2009. doi: 10.1017/S1041610209990172.
- Sher L (2009). Suicide in war veterans: the role of comorbidity of PTSD and depression. *Expert Review of Neurotherapeutics* 9, 921–923.
- Shiner M, Scourfield J, Fincham B, Langer S (2009). When things fall apart: gender and suicide across the life-course. *Social Science & Medicine* 69, 738–746.
- Sourander A, Brunstein Klomek A, Niemelä S, Haavisto A, Gyllenberg D, Helenius H, Sillanmäki L, Ristkari T, Kumpulainen K, Tamminen T, Moilanen I, Piha J, Almqvist F, Gould MS (2009). Childhood predictors of completed and severe suicide attempts: findings from the Finnish 1981 birth cohort study. *Archives of General Psychiatry*, 66, 398–406.
- Stanley N, Mallon S, Bell J, Manthorpe J (2009). Trapped in transition: findings from a UK study of student suicide. *British Journal of Guidance & Counselling* 37, 419–433.

- Stone M, Laughren T, Jones ML, Levenson M, Holland PC, Hughes A, Hammad TA, Temple R, Rochester G (2009). Risk of suicidality in clinical trials of antidepressants in adults: analysis of proprietary data submitted to US Food and Drug Administration. *British Medical Journal* 339, b2880.
- Surrence K, Miranda R, Marroquín BM, Chan S (2009). Brooding and reflective rumination among suicide attempters: cognitive vulnerability to suicidal ideation. *Behaviour Research and Therapy* 47, 803–808.
- Teixeira MZ (2009). Antidepressants, suicidality and rebound effect: evidence of similitude? *Homeopathy* 98, 114–121.
- Temel Y, Tan S, Visser-Vandewalle V, Sharp T (2009). Parkinson's disease, DBS and suicide: a role for serotonin? *Brain*. Published online: 24 June 2009. doi: 10.1093/brain/awp150.
- Tsai JF (2009). Comments on 'Seasonality and climatic associations with violent and nonviolent suicide'. *Neuropsychobiology* 59, 190–190.
- Vanderburg DG, Batzar E, Fogel I, Kremer CME (2009). A pooled analysis of suicidality in double-blind, placebo-controlled studies of sertraline in adults. *Journal of Clinical Psychiatry* 70, 674–683.
- Van Spijker BAJ, Graafsma T, Dullaart HIA, Kerkhof AJFM (2009). Impulsive but fatal self-poisoning with pesticides among south Asians in Nickerie, Suriname: an exploratory autopsy study. *Crisis* 30, 102–105.
- Videtic A, Peternelj TT, Zupanc T, Balazic J, Komel R (2009). Promoter and functional polymorphisms of HTR2C and suicide victims. *Genes, Brain and Behavior* 8, 541–545.
- Voon V, Krack P, Lang AE, Lozano AM, Dujardin K, Schüpbach M, Thobois S, Tamma F, Herzog J, Samanta J, Kubu C, Rossignol H, Poon YY, Saint-Cyr JA, Ardouin C, Moro E (2009). Parkinson's disease, DBS and suicide: a role for serotonin? *Brain*. Published online: 24 June 2009. doi: 10.1093/brain/awp151.
- Webb L (2009). Counting girls out: a review of suicide among young substance misusers and gender difference implications in the evaluation of risk. *Drugs-Education Prevention and Policy* 16, 103–126.
- Weich S, Patterson J, Shaw R, Stewart-Brown S (2009). Family relationships in childhood and common psychiatric disorders in later life: systematic review of prospective studies. *British Journal of Psychiatry* 194, 392–398.
- Wexler L (2009). Identifying colonial discourses in Inupiat young people's narratives as a way to understand the no future of Inupiat youth suicide. *American Indian and Alaska Native Mental Health Research* 16, 1–24.
- Wong PW, Chan WS, Conwell Y, Conner KR, Yip PS (2009). A psychological autopsy study of pathological gamblers who died by suicide. *Journal of Affective Disorders*. Published online: 24 April 2009. doi: 10.1016/j.jad.2009.04.001.
- Wright F (2009). Pediatric suicide. *Salmagundi* 162/163, 102–102.
- Ying YH, Chang KY (2009). A study of suicide and socioeconomic factors. *Suicide and Life-Threatening Behavior* 39, 214–226.
- Yoon J, Bruckner TA (2009). Does deinstitutionalization increase suicide? *Health Services Research* 44, 1385–1405.
- Zarrilli F, Angiolillo A, Castaldo G, Chiariotti L, Keller S, Sacchetti S, Marusic A, Zagar T, Carli V, Roy A, Sarchiapone M (2009). Brain derived neurotrophic factor (BDNF) genetic polymorphism (Val66Met) in suicide: a study of 512 cases. *American Journal of Medical Genetics. Part B, Neuropsychiatric Genetics* 150B, 599–600.

- Zhang J, Dong N, Delprino R, Zhou L (2009). Psychological strains found from in-depth interviews with 105 Chinese rural youth suicides. *Archives of Suicide Research* 13, 185–194.
- Zhang J, Wieczorek W, Conwell Y, Tu XM, Wu BY, Xiao S, Jia C (2009). Characteristics of young rural Chinese suicides: a psychological autopsy study. *Psychological Medicine*. Published online: 6 August 2009. doi: 10.1017/S0033291709990808.
- Zhang J, Zhou L (2009). A case control study of suicides in China with and without mental disorder. *Crisis* 30, 68–72.

Prevention

- Allen J, Mohatt G, Fok CCT, Henry D (2009). Suicide prevention as a community development process: understanding circumpolar youth suicide prevention through community level outcomes. *International Journal of Circumpolar Health* 68, 274–291.
- Anonymous (2009). Assessing patients' potential suicide risk. *Joint Commission Perspectives on Patient Safety* 9, 8–9.
- Baber K, Bean G (2009). Frameworks: a community-based approach to preventing youth suicide. *Journal of Community Psychology* 37, 684–696.
- Bateman DN (2009). Limiting paracetamol pack size: has it worked in the UK? *Clinical Toxicology* 47, 536–541.
- Beautrais AL, Gibb SJ, Fergusson DM, Horwood LJ, Larkin GL (2009). Removing bridge barriers stimulates suicides: an unfortunate natural experiment. *Australian and New Zealand Journal of Psychiatry* 43, 495–497.
- Berman AL (2009). School-based suicide prevention: research advances and practice implications. *School Psychology Review* 38, 233–238.
- Brown MA, Grumet JG (2009). School-based suicide prevention with African American youth in an urban setting. *Professional Psychology: Research and Practice* 40, 111–117.
- Bryan CJ, Corso KA, Neal-Walden TA, Rudd MD (2009). Managing suicide risk in primary care: practice recommendations for behavioral health consultants. *Professional Psychology: Research and Practice* 40, 148–155.
- Bryan CJ, Steiner-Pappalardo N, Rudd MD (2009). Exposure to a mnemonic interferes with recall of suicide warning signs in a community-based suicide prevention program. *Suicide and Life-Threatening Behavior* 39, 194–203.
- Campo JV (2009). Suicide prevention: time for 'zero tolerance'. *Current Opinion in Pediatrics* 21, 611–612.
- Campo JV (2009). Youth suicide prevention: does access to care matter? *Current Opinions in Pediatrics*. Published online: 30 July 2009. doi: 10.1097/mop.0b013e32833069bd.
- Chan SW-C, Chien W-T, Tso S (2009). Evaluating nurses' knowledge, attitude and competency after an education programme on suicide prevention. *Nurse Education Today* 29, 763–769.
- Conwell Y (2009). Suicide prevention in later life: a glass half full, or half empty? *American Journal of Psychiatry* 166, 845–848.
- Daniel SS, Goldston DB (2009). Interventions for suicidal youth: a review of the literature and developmental considerations. *Suicide and Life-Threatening Behavior* 39, 252–268.
- De Leo D (2009). Cross-cultural research widens suicide prevention horizons. *Crisis* 30, 59–62.
- Edwards SD (2009). An argument in support of suicide centres. *Health Care Analysis*. Published online: 7 May 2009. doi: 10.1007/s10728-009-0122-3.
- Fawcett JA, Baldessarini RJ, Coryell WH, Silverman MM, Stein DJ (2009). Defining and managing suicidal risk in patients taking psychotropic medications. *Journal of Clinical Psychiatry* 70, 782–789.

- Fitzpatrick JJ (2009). Preventing suicide: developing meaning in life. *Archives of Psychiatric Nursing* 23, 275–276.
- Folse VN, Hahn RL (2009). Suicide risk screening in an emergency department: engaging staff nurses in continued testing of a brief instrument. *Clinical Nursing Research* 18, 253–271.
- Fujita Y, Inoue K, Sakuta A, Inoue T (2009). The urgent need for additional suicide prevention measures among men in the United States of America. *West Indian Medical Journal* 58, 190–190.
- Greydanus DE, Bacopoulou F, Tsalamaniotis E (2009). Suicide in adolescents: a worldwide preventable tragedy. *Keio Journal of Medicine* 58, 95–102.
- Harris MG, Burgess PM, Chant DC, Pirkis JE, McGorry PD (2009). Impact of a specialized early psychosis treatment programme on suicide: retrospective cohort study. *Early Intervention in Psychiatry* 2, 11–21.
- Hawton K, Bergen H, Simkin S, Brock A, Griffiths C, Romeri E, Smith KL, Kapur N, Gunnell D (2009). Effect of withdrawal of co-proxamol on prescribing and deaths from drug poisoning in England and Wales: time series analysis. *British Medical Journal* 338, b2270.
- Hegerl U, Wittenburg L (2009). The European Alliance Against Depression: a multilevel approach to the prevention of suicidal behaviour. *Psychiatric Services* 60, 596–599.
- Hesdorffer DC, Kanner AM (2009). The FDA alert on suicidality and antiepileptic drugs: Fire or false alarm? *Epilepsia* 50, 978–986.
- Horowitz LM, Ballard ED, Pao M (2009). Suicide screening in schools, primary care and emergency departments. *Current Opinion in Pediatrics* 21, 620–627.
- Joiner Jr TE (2009). Suicide prevention in schools as viewed through the interpersonal-psychological theory of suicidal behavior. *School Psychology Review* 38, 244–248.
- Johnson RM, Coyne-Beasley T (2009). Lethal means reduction: what have we learned? *Current Opinion in Pediatrics*. Published online: 20 July 2009. doi: 10.1097/mop.0b013e32833057d0.
- Kawashima D, Koyama T, Kawano K, Ito H (2009). Physicians' explanatory model for suicide prevention: text-mining analysis of physicians' statements to suicidal patients. *Japanese Journal of Personality* 17, 121–132.
- Keller DP, Schut LJA, Puddy RW, Williams L, Stephens RL, McKeon R, Lubell K (2009). Tennessee lives count: statewide gatekeeper training for youth suicide prevention. *Professional Psychology: Research and Practice* 40, 126–133.
- Kerfoot M (2009). Managing suicidal behaviour in adolescents. *Psychiatry* 8, 252–256.
- Klimes-Dougan B, Yuan C, Lee S, Hourii AK (2009). Suicide prevention with adolescents. *Crisis* 30, 128–135.
- Kovacsics CE, Gottesman II, Gould TD (2009). Lithium's antisuicidal efficacy: elucidation of neurobiological targets using endophenotype strategies. *Annual Review of Pharmacology and Toxicology* 49, 175–198.
- Kral MJ, Wiebe PK, Nisbet K, Dallas C, Okalik L, Enuaraq N, Cinotta J (2009). Canadian Inuit community engagement in suicide prevention. *International Journal of Circumpolar Health* 68, 292–308.
- Marsden E (2009). Reducing suicide in the North-East of England: progress so far. *Practice Development in Health Care* 8, 58–60.
- Martin J, Ghahramanlou-Holloway M, Lou K, Tucciarone P (2009). A comparative review of U.S. military and civilian suicide behavior: implications for OEF/OIF suicide prevention efforts. *Journal of Mental Health Counselling* 31, 101–118.
- Mendelson D (2009). Prevention of suicide: police powers, parliamentary intent and judicial interpretation. *Journal of Law and Medicine* 16, 728–744.

- Miller DN, Eckert TL (2009). Youth suicidal behavior: an introduction and overview. *School Psychology Review* 38, 153–167.
- Miller DN, Eckert TL, Mazza JJ (2009). Suicide prevention programs in the schools: a review and public health perspective. *School Psychology Review* 38, 168–188.
- Muehlenkamp JJ, Marrone S, Gray JS, Brown DL (2009). A college suicide prevention model for American Indian students. *Professional Psychology: Research and Practice* 40, 134–140.
- National Commission on Correctional Health Care (2009). Position statement: prevention of juvenile suicide in correctional settings. *Journal of Correctional Health Care* 15, 227–231.
- Ohayon MM (2009). About suicide and its prevention (comment on J Psychiatric Research, 43, 895–900 and 901–5, 2009). *Journal of Psychiatric Research* 43, 885–886.
- Ohgami H, Terao T, Shiotsuki I, Ishii N, Iwata N (2009). Lithium levels in drinking water and risk of suicide. *British Journal of Psychiatry* 194, 464–465.
- Owens C, Owen G, Lambert H, Donovan J, Belam J, Rapport F, Lloyd K (2009). Public involvement in suicide prevention: understanding and strengthening lay responses to distress. *BMC Public Health* 9, 308.
- Papadopoulos FC, Skalkidou A, Sergentanis TN, Killekidis S, Ekselius L, Petridou ET (2009). Preventing suicide and homicide in the United States: the potential benefit in human lives. *Psychiatry Research* 169, 154–158.
- Parker G, Hawkins J, Weigel C, Fanning L, Round T, Reyna K. (2009). Adolescent suicide prevention: the Oklahoma community reaches out. *Journal of Continual Education in Nursing* 40, 177–180.
- Pirkis J, Neal L, Dare A, Blood RW, Studdert D (2009). Legal bans on pro-suicide web sites: an early retrospective from Australia. *Suicide and Life-Threatening Behavior* 39, 190–193.
- Plakun EM (2009). A view from Riggs: treatment resistance and patient authority - XI. An alliance based intervention for suicide. *Journal of the American Academy of Psychoanalysis and Dynamic Psychiatry* 37, 539-560.
- Pompili M, Serafini G, Del Casale A, Rigucci S, Innamorati M, Girardi P, Tatarelli R, Lester D (2009). Improving adherence in mood disorders: the struggle against relapse, recurrence and suicide risk. *Expert Review of Neurotherapeutics* 9, 985–1004.
- Pompili M, Lester D, Innamorati M, Del Casale A, Girardi P, Ferracuti S, Tatarelli R (2009). Preventing suicide in jails and prisons: suggestions from experience with psychiatric inpatients. *Journal of Forensic Sciences* 54, 1155–1162.
- Ratnayake R, Links P (2009). Examining student perspectives on suicidal behaviour and its prevention in Sri Lanka. *International Journal of Social Psychiatry* 55, 387-400.
- Regan J, Smith L (2009). Is suicide foreseeable? *Tennessee Medicine* 102, 41–42.
- Robinson J (2009). Early intervention and suicide prevention. *Early Intervention in Psychiatry* 2, 119–121.
- Robinson J, Hetrick S, Gook S, Cosgrave EM, Yuen HP, McGorry PD, Yung AR (2009). Study protocol: the development of a randomised controlled trial testing a postcard intervention designed to reduce suicide risk among young help-seekers. *BMC Psychiatry* 9, 59.
- Schmutte T, O'Connell M, Weiland M, Lawless S, Davidson L (2009). Stemming the tide of suicide in older white men: a call to action. *American Journal of Mens Health* 3, 189–200.
- Sher L (2009). Preventing suicide in post-traumatic stress disorder. *Australian and New Zealand Journal of Psychiatry* 43, 691-692.
- Shim RS, Compton MT (2009). Pilot testing and preliminary evaluation of a suicide prevention education program for emergency department personnel. *Community Mental Health Journal*. Published online: 17 September 2009. doi: 10.1007/s10597-009-9241-4.

- Silenzio VM, Duberstein PR, Tang W, Lu N, Tu X, Homan CM (2009). Connecting the invisible dots: reaching lesbian, gay, and bisexual adolescents and young adults at risk for suicide through online social networks. *Social Science and Medicine* 69, 469–474.
- Skegg K, Herbison P (2009). Effect of restricting access to a suicide jumping site. *Australian and New Zealand Journal of Psychiatry* 43, 498–502.
- Terao T, Goto S, Inagaki M, Okamoto Y (2009). Even very low but sustained lithium intake can prevent suicide in the general population? *Medical Hypotheses*. Published online: 20 May 2009. doi: 10.1016/j.mehy.2009.02.043.
- Trinidad AMO (2009). Toward kuleana (responsibility): a case study of a contextually grounded intervention for Native Hawaiian youth and young adults. *Aggression and Violent Behavior*. Published online: 11 July 2009. doi: 10.1016/j.avb.2009.07.008.
- Tsai W-P, Lin L-Y, Chang W-L, Chang H-C, Chou M-C (2009). The effects of the suicide awareness program in enhancing community volunteers' awareness of suicide warning signs. *Archives of Psychiatric Nursing*. Published online: 26 March 2009. doi: 10.1016/j.apnu.2009.01.004.
- Vijayakumar L, Kumar RS (2009). Does 'No pesticide' reduce suicides? *International Journal of Social Psychiatry* 55, 401–407.
- Walker RL, Ashby J, Hoskins OD, Greene FN (2009). Peer-support suicide prevention in a non-metropolitan US community. *Adolescence* 44, 335–346.
- Windfuhr K (2009). Issues in designing, implementing, and evaluating suicide prevention strategies. *Psychiatry* 8, 272–275.
- Young AH (2009). Invited commentary on "Lithium levels in drinking water and risk of suicide." *British Journal of Psychiatry* 194, 466–466.
- Zenere FJ, Lazarus PJ (2009). The sustained reduction of youth suicidal behavior in an urban multicultural school district. *School Psychology Review* 38, 189–199.

Postvention and bereavement

- Braiden HJ, McCann M, Barry H, Lindsay C (2009). Piloting a therapeutic residential for children, young people and families bereaved through suicide in Northern Ireland. *Child Care in Practice* 15, 81–93.
- Brent D, Melhem N, Donohoe MB, Walker M (2009). The incidence and course of depression in bereaved youth 21 months after the loss of a parent to suicide, accident, or sudden natural death. *American Journal of Psychiatry* 166, 786–794.
- Callender JS, Eagles JM (2009). Coping with suicide: a perspective from Scotland. *Advances in Psychiatric Treatment* 15, 17–22.
- Cerel J, Padgett JH, Conwell Y, Reed GA (2009). A call for research: the need to better understand the impact of support groups for suicide survivors. *Suicide and Life-Threatening Behavior* 39, 269–281.
- De Groot M, van der Meer K, Burger H (2009). A survey of Dutch GPs' attitudes towards help seeking and follow-up care for relatives bereaved by suicide. *Family Practice* 26, 372–376.
- Derer P (2009). Suicide from the perspective of the patient's family. *Wisconsin Medical Journal* 108, 83–84.
- Dyregrov K (2009). The important role of the school following suicide in Norway. What support do young people wish that school could provide? *Omega* 59, 147–161.
- Feigelman W, Gorman BS, Jordan JR (2009). Stigmatization and suicide bereavement. *Death Studies* 33, 591–608.

- Feigelman W, Jordan JR, Gorman BS (2009). Personal growth after a suicide loss: cross-sectional findings suggest growth after loss may be associated with better mental health among survivors. *Omega* 59, 181–202.
- Gaffney P, Russell V, Collins K, Bergin A, Halligan P, Carey C, Coyle S (2009). Impact of patient suicide on front-line staff in Ireland. *Death Studies* 33, 639–656.
- Hung NC, Rabin LA (2009). Comprehending childhood bereavement by parental suicide: a critical review of research on outcomes, grief processes, and interventions. *Death Studies* 33, 781–814.
- Kaslow NJ, Ivey AZ, Berry-Mitchell F, Franklin K, Bethea K (2009). Postvention for African American families following a loved one's suicide. *Professional Psychology: Research and Practice* 40, 165–171.
- Kinder A, Cooper CL (2009). The costs of suicide and sudden death within an organization. *Death Studies* 33, 411–419.
- Kuramoto SJ, Brent DA, Wilcox HC (2009). The impact of parental suicide on child and adolescent offspring. *Suicide and Life-Threatening Behavior* 39, 137–151.
- Mangurian C, Harre E, Reliford A, Booty A, Cournos F (2009). Improving support of residents after a patient suicide: a residency case study. *Academic Psychiatry* 33, 278–281.
- Rajalin M, Wickholm-Petrus L, Hursti T, Jokinen J (2009). Dialectical behavior therapy-based skills training for family members of suicide attempters. *Archives of Suicide Research* 13, 257–263.
- Stepakoff S (2009). From destruction to creation, from silence to speech: poetry therapy principles and practices for working with suicide grief. *Arts in Psychotherapy* 36, 105–113.
- Vandecreek L, Mottram K (2009). The religious life during suicide bereavement: a description. *Death Studies* 33, 741–761.

NON-FATAL SUICIDAL BEHAVIOUR

Epidemiology

- Bethell J, Rhodes AE (2009). Identifying deliberate self-harm in emergency department data. *Health Reports* 20, 35–42.
- De Munck S, Portzky G, van Heeringen K (2009). Epidemiological trends in attempted suicide in adolescents and young adults between 1996 and 2004. *Crisis* 30, 115–119.
- Hatcher S, Sharon C, Collins N (2009). Epidemiology of intentional self-harm presenting to four district health boards in New Zealand over 12 months, and comparison with official data. *Australian and New Zealand Journal of Psychiatry* 43, 659–665.
- Hutchinson G, Bruce C, Simmons V (2009). Increasing incidence of admissions to a general hospital for deliberate self-harm in Trinidad. *West Indian Medical Journal* 57, 346–351.
- Johnston AK, Pirkis JE, Burgess PM (2009). Suicidal thoughts and behaviours among Australian adults: findings from the 2007 National Survey of Mental Health and Wellbeing. *Australian and New Zealand Journal of Psychiatry* 43, 635–643.
- Lari AR, Alaghebandan R, Panjeshahin MR, Joghataei MT (2009). Suicidal behavior by burns in the province of Fars, Iran: a socioepidemiologic approach. *Crisis* 30, 98–101.
- Maloney E, Degenhardt L, Darke S, Nelson EC (2009). Are non-fatal opioid overdoses misclassified suicide attempts? Comparing the associated correlates. *Addictive Behavior* 34, 723–729.
- Margonato FB, Thomson Z, Paoliello MM (2009). Acute intentional and accidental poisoning with medications in a southern Brazilian city. *Cadernos de Saúde Pública* 25, 849–856.
- Matsumoto T, Imamura F, Chiba Y, Katsumata Y, Kitani M, Takeshima T (2009). Prevalences of lifetime histories of self-cutting and suicidal ideation in Japanese adolescents: differences by age. *Psychiatry and Clinical Neurosciences* 62, 362–364.
- Patel K, Uptegrove R (2009). Self-harm in first-episode psychosis. *Psychiatric Bulletin* 3, 104–107.
- Pérez de Los Cobos J, Trujols J, Ribalta E, Pinet C (2009). A typology of heroin-dependent patients based on their history of self-injurious behaviours. *Psychiatry Research* 167, 169–177.
- Prescott K, Stratton R, Freyer A, Hall I, Le Jeune I (2009). Detailed analyses of self-poisoning episodes presenting to a large regional teaching hospital in the UK. *British Journal of Clinical Pharmacology* 68, 260–268.
- Qin P, Madsen BH, Mortensen PB (2009). Characteristics of clients to a suicide prevention centre — an epidemiological analysis of the users over a 10-year period. *Journal of Affective Disorders* 115, 339–346.
- Roesler J, Petcoff M, Azam A, Westberg S, Kinde M, Crosby A (2009). Nonfatal suicide attempts and other self-inflicted harm, Beltrami County youths, 2002–2006. *Minnesota Medicine* 92, 53–55.
- Saddichha S, Vibha P, Saxena MK, Methuku M (2009). Behavioral emergencies in India: a population based epidemiological study. *Social Psychiatry and Psychiatric Epidemiology*. Published online: 28 July 2009. doi: 10.1007/s00127-009-0103-8.
- Sinno D, Majdalani M, Chatila R, Musharrafieh U, Al-Tannir M (2009). The pattern of self-poisoning among Lebanese children and adolescents in two tertiary care centres in Lebanon. *Acta Paediatrica* 98, 1044–1048.
- Shah A (2009). Attempted suicide in the elderly in England: age-associated rates, time trends and methods. *International Psychogeriatrics* 21, 889–895.

- Stanford S, Jones MP (2009). Psychological subtyping finds pathological, impulsive, and 'normal' groups among adolescents who self-harm. *Journal of Child Psychology and Psychiatry* 50, 807–815.
- Subba SH, Binu VS, Menezes RG, Kanchan T, Arun M, Patil R, Pant S, Saha A, De A, Rana MS (2009). Pattern and trend of deliberate self-harm in Western Nepal. *Journal of Forensic Sciences* 54, 704–707.
- Uppal G, McMurrin M (2009). Recorded incidents in a high-secure hospital: a descriptive analysis. *Criminal Behaviour and Mental Health* 19, 265–276.

Risk and protective factors

- Afifi TO, Boman J, Fleisher W, Sareen J (2009). The relationship between child abuse, parental divorce, and lifetime mental disorders and suicidality in a nationally representative adult sample. *Child Abuse & Neglect* 33, 139–147.
- Akechi T, Okamura H, Nakano T, Akizuki N, Okamura M, Shimizu K, Okuyama T, Furukawa TA, Uchitomi Y (2009). Gender differences in factors associated with suicidal ideation in major depression among cancer patients. *Psychooncology*. Published online: 26 May 2009. doi: 10.1002/pon.1587.
- Alati R, Gunnell D, Najman J, Williams G, Lawlor D (2009). Is IQ in childhood associated with suicidal thoughts and attempts? Findings from The Mater University Study of pregnancy and its outcomes. *Suicide and Life-Threatening Behavior* 39, 282–293.
- Amiri AH, Tarrahi MJ, Rafiei A (2009). Clinical finding and outcome in suicidal attempt due to intravenous injection of kerosene. *Pakistan Journal of Biological Sciences* 12, 439–442.
- Antypa N, Van der Does AJ, Penninx BW (2009). Cognitive reactivity: investigation of a potentially treatable marker of suicide risk in depression. *Journal of Affective Disorders*. Published online: 7 July 2009. doi: 10.1016/j.jad.2009.06.013.
- Arria AM, O'Grady KE, Caldeira KM, Vincent KB, Wilcox HC, Wish ED (2009). Suicide ideation among college students: a multivariate analysis. *Archives of Suicide Research* 13, 230–246.
- Arun P, Chavan BS (2009). Stress and suicidal ideas in adolescent students in Chandigarh. *Indian Journal of Medical Sciences* 63, 281–287.
- Ayalon L, Litwin H (2009). What cognitive functions are associated with passive suicidal ideation? Findings from a national sample of community dwelling Israelis. *International Journal of Geriatric Psychiatry* 24, 472–478.
- Babiss LA, Gangwisch JE (2009). Sports participation as a protective factor against depression and suicidal ideation in adolescents as mediated by self-esteem and social support. *Journal of Developmental and Behavioral Pediatrics*. Published online: 18 August. doi: 10.1097/DBP.0b013e3181b33659.
- Baca-Garcia E, Vaquero-Lorenzo C, Perez-Rodriguez MM, Gratacòs M, Bayés M, Santiago-Mozos R, Leiva-Murillo JM, de Prado-Cumplido M, Artes-Rodriguez A, Ceverino A, Diaz-Sastre C, Fernandez-Navarro P, Costas J, Fernandez-Piqueras J, Diaz-Hernandez M, de Leon J, Baca-Baldomero E, Saiz-Ruiz J, Mann JJ, Parsey RV, Carracedo A, Estivill X, Oquendo MA (2009). Nucleotide variation in central nervous system genes among male suicide attempters. *American Journal of Medical Genetics Part B Neuropsychiatric Genetics*. Published online: 19 May 2009. doi: 10.1002/ajmg.b.30975.
- Baethge C, Tondo L, Lepri B, Baldessarini RJ (2009). Coffee and cigarette use: association with suicidal acts in 352 Sardinian bipolar disorder patients. *Bipolar Disorders* 11, 494–503.

- Baller RD, Richardson KK (2009). The 'dark side' of the strength of weak ties: the diffusion of suicidal thoughts. *Journal of Health and Social Behavior* 50, 261–276.
- Barlas S (2009). FDA dictates suicide ideation warning for antiepileptics used for bipolar disorder. *Psychiatric Times* 26, 49–49.
- Barksdale CL, Walrath CM, Compton JS, Goldston DB (2009). Caregiver strain and youth suicide attempt: are they related? *Suicide and Life-Threatening Behavior* 39, 152–160.
- Bebbington PE, Cooper C, Minot S, Brugha TS, Jenkins R, Meltzer H, Dennis M (2009). Suicide attempts, gender, and sexual abuse: data from the 2000 British Psychiatric Morbidity Survey. *American Journal of Psychiatry* 166, 1135–1140.
- Bell GS, Sander JW (2009). Suicide and epilepsy. *Current Opinion in Neurology* 22, 174–178.
- Bergmans Y, Langley J, Links P, Lavery JV (2009). The perspectives of young adults on recovery from repeated suicide-related behavior. *Crisis* 30, 120–127.
- Blasco-Fontecilla H, Baca-Garcia E, Dervic K, Perez-Rodriguez MM, Lopez-Castroman J, Saiz-Ruiz J, Oquendo MA (2009). Specific features of suicidal behavior in patients with narcissistic personality disorder. *Journal of Clinical Psychiatry*. Published online: 14 July 2009. doi: 10.4088/JCP.08m04899.
- Borges G, Benjet C, Medina-Mora ME, Orozco R, Familiar I, Nock MK, Wang PS (2009). Service use among Mexico City adolescents with suicidality. *Journal of Affective Disorders*. Published online: 2 May 2009. doi: 10.1016/j.jad.2009.04.008.
- Brez J, Bureau A, Merette C, Jomphe V, Barker ED, Vitaro F, Hebert M, Carbonneau R, Tremblay RE, Turecki G (2009). Differences and similarities in the serotonergic diathesis for suicide attempts and mood disorders: a 22-year longitudinal gene-environment study. *Molecular Psychiatry*. Published online: 21 April 2009. doi: 10.1038/mp.2009.19.
- Brown MZ, Linehan MM, Comtois KA, Murray A, Chapman AL (2009). Shame as a prospective predictor of self-inflicted injury in borderline personality disorder: a multi-modal analysis. *Behaviour Research and Therapy* 47, 815–822.
- Brown SA (2009). Personality and non-suicidal deliberate self-harm: trait differences among a non-clinical population. *Psychiatry Research* 169, 28–32.
- Cailhol L, Moraru R, Barbe R, Moncany A-H, Garcin S, Lazignac C, Damsa C (2009). Month of birth, a risk factor for violent behaviour in suicidal patients admitted in emergency. *Psychiatric Quarterly* 80, 125–130.
- Cassidy C, McNicholas F, Lennon R, Tobin B, Doherty M, Adamson N (2009). Deliberate self-harm (DSH): a follow-up study of Irish children. *Irish Medical Journal* 102, 102–104.
- Cavanna AE, Cavanna S, Bertero L, Monaco F, Critchley HD (2009). Childhood-onset multiple self-injurious behaviors in Gilles de la Tourette syndrome. *Journal of Pediatric Neurology* 7, 293–296.
- Chan C, Shaw T (2009). Suicidality induced by steroid treatment. *Australian and New Zealand Journal of Psychiatry* 43, 484–484.
- Chan WSC, Law CK, Liu KY, Wong PWC, Law YW, Yip PSF (2009). Suicidality in Chinese adolescents in Hong Kong: the role of family and cultural influences. *Social Psychiatry and Psychiatric Epidemiology* 44, 278–284.
- Chapman AL, Derbidge CM, Cooney E, Hong PY, Linehan MM (2009). Temperament as a prospective predictor of self-injury among patients with borderline personality disorder. *Journal of Personality Disorders* 23, 122–140.
- Chen SX, Wu WCH, Bond MH (2009). Linking family dysfunction to suicidal ideation: mediating roles of self-views and world-views. *Asian Journal of Social Psychology* 12, 133–144.

- Cheng Y, Tao M, Riley L, Kann L, Ye L, Tian X, Tian B, Hu J, Chen D (2009). Protective factors relating to decreased risks of adolescent suicidal behaviour. *Child Care, Health and Development* 35, 313–322.
- Cheung YB, Ashorn P (2009). Linear growth in early life is associated with suicidal ideation in 18-year-old Filipinos. *Paediatric and Perinatal Epidemiology* 23, 463–471.
- Cheung A, Dewa C, Cairney J, Veldhuizen S, Schaffer A (2009). Factors associated with use of mental health services for depressed and/or suicidal youth aged 15–24. *Community Mental Health Journal* 45, 300–306.
- Cicchetti D, Rogosch FA, Sturge-Apple M, Toth SL (2009). Interaction of child maltreatment and 5-HTT polymorphisms: suicidal ideation among children from low-SES backgrounds. *Journal of Pediatric Psychology*. Published online: 24 September 2009. doi: 10.1093/jpepsy/jsp078.
- Cho Y-B, Haslam N (2009). Suicidal ideation and distress among immigrant adolescents: the role of acculturation, life stress, and social support. *Journal of Youth and Adolescence*. Published online: 6 May 2009. doi: 10.1007/s10964-009-9415-y.
- Clements-Nolle K, Wolden M, Bargmann-Losche J (2009). Childhood trauma and risk for past and future suicide attempts among women in prison. *Womens Health Issues* 19, 185–192.
- Coccaro EF, Lee R, Kavoussi RJ (2009). Aggression, suicidality, and intermittent explosive disorder: serotonergic correlates in personality disorder and healthy control subjects. *Neuropsychopharmacology*. Published online: 23 September 2009. doi: 10.1038/npp.2009.148.
- Csorba J, Dinya E, Ferencz E, Steiner P, Bertalan G, Zsador A (2009). Novelty seeking: difference between suicidal and non-suicidal Hungarian adolescent outpatients suffering from depression. *Journal of Affective Disorders*. Published online: 21 April 2009. doi: 10.1016/j.jad.2009.03.008.
- Daffern M, Howells K (2009). Self-harm and aggression in dangerous and severely personality disordered patients of a high-security hospital. *Psychiatry Psychology and Law* 16, 150–154.
- Da Silva Cais CF, Stefanello S, Fabricio Mauro MLE, de Freitas GVS, Botega NJ (2009). Factors associated with repeated suicide attempts preliminary results of the WHO Multisite Intervention Study on suicidal behavior (SUPRE-MISS) from Campinas, Brazil. *Crisis* 30, 73–78.
- Das S (2009). Risk factors associated with postpartum suicide attempt: the chilling story. *American Journal of Obstetrics and Gynaecology* 200, e9–e10.
- De Giacomo A, Lozito V, Portoghese C (2009). Olanzapine in adolescents with schizophrenia who manifest suicidal behaviour. *Early Intervention in Psychiatry* 2, 114–115.
- DeHart DD, Smith HP, Kaminski RJ (2009). Institutional responses to self-injurious behavior among inmates. *Journal of Correctional Health Care* 15, 129–141.
- Dell'osso L, Carmassi C, Rucci P, Ciapparelli A, Paggini R, Ramacciotti CE, Conversano C, Balestrieri M, Marazziti D (2009). Lifetime subthreshold mania is related to suicidality in Posttraumatic Stress Disorder. *CNS Spectrums* 14, 262–266.
- Diaconu G, Turecki G (2009). Obsessive-compulsive personality disorder and suicidal behavior: evidence for a positive association in a sample of depressed patients. *Journal of Clinical Psychiatry*. Published online: 14 July 2009. doi: 10.4088/JCP.08m04636.
- Dinya E, Csorba J, Sorfozo Z, Steiner P, Ficsor B, Horvath A (2009). Profiles of suicidality and clusters of Hungarian adolescent outpatients suffering from suicidal behaviour. *Psychopathology* 42, 299–310.
- Dougherty DM, Mathias CW, Marsh-Richard DM, Pevette KN, Dawes MA, Hatzis ES, Palmes G, Nouvion SO (2009). Impulsivity and clinical symptoms among adolescents with non-suicidal self-injury with or without attempted suicide. *Psychiatry Research* 169, 22–27.

- Drum DJ, Brownson C, Denmark AB, Smith SE (2009). New data on the nature of suicidal crises in college students: shifting the paradigm. *Professional Psychology: Research and Practice* 40, 213–222.
- Duffy DF (2009). Self-injury. *Psychiatry* 8, 237–240.
- Duldulao AA, Takeuchi DT, Hong S (2009). Correlates of suicidal behaviors among Asian Americans. *Archives of Suicide Research* 13, 277–290.
- Duno R, Pousa E, Miguez M, Montalvo I, Suarez D, Tobena A (2009). Suicidality connected with mentalizing anomalies in schizophrenia: a study with stabilized outpatients. *Annals of the New York Academy of Sciences* 1167, 207–211.
- Dupéré V, Leventhal T, Lacourse E (2009). Neighborhood poverty and suicidal thoughts and attempts in late adolescence. *Psychological Medicine* 39, 1295–1306.
- Dyer KF, Dorahy MJ, Hamilton G, Corry M, Shannon M, Macsherry A, McRobert G, Elder R, McElhill B (2009). Anger, aggression, and self-harm in PTSD and complex PTSD. *Journal of Clinical Psychology* 65, 1099–1114.
- Else IRN, Goebert DA, Bell C, Carlton B, Fukuda M (2009). The relationship between violence and youth suicide indicators among Asian American and Pacific Islander youth. *Aggression and Violent Behavior* 14, 470–477.
- Emanuele E (2009). Of love and death: the emerging role of romantic disruption in suicidal behavior. *Suicide and Life-Threatening Behavior* 39, 240–240.
- Engin E, Gurkan A, Dulgerler S, Arabaci LB (2009). University students' suicidal thoughts and influencing factors. *Journal of Psychiatric and Mental Health Nursing* 16, 343–354.
- Epstein JA, Spirito A (2009). Risk factors for suicidality among a nationally representative sample of high school students. *Suicide and Life-Threatening Behavior* 39, 241–251.
- Fishbain DA, Bruns D, Disorbio JM, Lewis JE (2009). Risk for five forms of suicidality in acute pain patients and chronic pain patients vs. pain-free community controls. *Pain Medicine* 10, 1095–1105.
- Foley S, Jackson D, McWilliams S, Renwick L, Sutton M, Turner N, Kinsella A, O'Callaghan E (2009). Suicidality prior to presentation in first-episode psychosis. *Early Intervention in Psychiatry* 2, 242–246.
- Freeman SA (2009). Suicide risk and psychopharmacology: assessment and management of acute and chronic risk factors. *Journal of Clinical Psychiatry* 70, 1052–1053.
- Fridner A, Belkic K, Marini M, Minucci D, Pavan L, Schenck-Gustafsson K (2009). Survey on recent suicidal ideation among female university hospital physicians in Sweden and Italy (the HOUPE study): cross-sectional associations with work stressors. *Gender Medicine* 6, 314–328.
- Frosch E, McCulloch J, Yoon Y, Dosreis S (2009). Paediatric emergency consultations: prior mental health service use in suicide attempters. *Journal of Behavioral Health Services and Research*. Published online: 19 September 2009. doi: 10.1007/s11414-009-9192-0.
- Fu K-W, Chan Y-Y, Yip PSF (2009). Testing a theoretical model based on social cognitive theory for media influences on suicidal ideation: results from a panel study. *Media Psychology* 12, 26–49.
- Fuller-Thomson E, Shaked Y (2009). Factors associated with depression and suicidal ideation among individuals with arthritis or rheumatism: findings from a representative community survey. *Arthritis and Rheumatism* 61, 944–950.
- Gabbay V, Klein RG, Guttman LE, Babb JS, Alonso CM, Nishawala M, Katz Y, Gaité MR, Gonzalez CJ (2009). A preliminary study of cytokines in suicidal and nonsuicidal adolescents with major depression. *Journal of Child and Adolescent Psychopharmacology* 19, 423–430.

- Gagnon A, Davidson SI, Cheifetz PN, Martineau M, Beauchamp G (2009). Youth suicide: a psychological autopsy study of completers and controls. *Vulnerable Children and Youth Studies* 4, 13–22.
- Galfalvy H, Currier D, Oquendo MA, Sullivan G, Huang YY, Mann JJ (2009). Lower CSF MHPG predicts short-term risk for suicide attempt. *International Journal of Neuropsychopharmacology*. Published online: 2 July 2009. doi: 10.1017/S1461145709990228.
- Galfalvy H, Huang YY, Oquendo MA, Currier D, Mann JJ (2009). Increased risk of suicide attempt in mood disorders and TPH1 genotype. *Journal of Affective Disorders* 115, 331–338.
- Gao K, Tolliver BK, Kemp DE, Ganocy SJ, Bilali S, Brady KL, Findling RL, Calabrese JR (2009). Correlates of historical suicide attempt in rapid-cycling bipolar disorder: a cross-sectional assessment. *Journal of Clinical Psychiatry* 70, 1032–1040.
- Ganz D, Sher L (2009). Suicidal behavior in adolescents with comorbid depression and alcohol abuse. *Minerva Pediatrica* 61, 333–347.
- Garisch JA, Wilson MS (2009). Vulnerabilities to deliberate self-harm among adolescents: the role of alexithymia and victimization. *British Journal of Clinical Psychology*. Published online: 18 May 2009. doi: 10.1348/014466509X441709.
- Gausia K, Fisher C, Ali M, Oosthuizen J (2009). Antenatal depression and suicidal ideation among rural Bangladeshi women: a community-based study. *Archives of Women's Mental Health* 12, 351–358.
- Géhin A, Kabuth B, Pichené C, Vidailhet C (2009). Ten year follow-up study of 65 suicidal adolescents. *Journal of the Canadian Academy of Child and Adolescent Psychiatry* 18, 117–125.
- Ghazinour M, Emami H, Richter J, Abdollahi M, Pazhumand A (2009). Age and gender differences in the use of various poisoning methods for deliberate parasuicide cases admitted to Loghman hospital in Tehran (2000–2004). *Suicide and Life-Threatening Behavior* 39, 231–239.
- Ghazinour M, Mofidi N, Richter J (2009). Continuity from suicidal ideations to suicide attempts? An investigation in 18–55 years old adult Iranian Kurds. *Social Psychiatry and Psychiatric Epidemiology*. Published online: 11 September 2009. doi: 10.1007/s00127-009-0136-z.
- Gibbs LM, Dombrowski AY, Morse J, Siegle GJ, Houck PR, Szanto K (2009). When the solution is part of the problem: problem solving in elderly suicide attempters. *International Journal of Geriatric Psychiatry*. Published online: 29 April 2009. doi: 10.1002/gps.2276.
- Giegling I, Olgiati P, Hartmann AM, Calati R, Moller HJ, Rujescu D, Serretti A (2009). Personality and attempted suicide: analysis of anger, aggression and impulsivity. *Journal of Psychiatric Research*. Published online: 28 May 2009. doi: 10.1016/j.jpsychires.2009.04.013.
- Glashouwer KA, de Jong PJ, Penninx BWJH, Kerkhof AJFM, van Dyck R, Ormel J (2009). Do automatic self-associations relate to suicidal ideation? *Journal of Psychopathology and Behavioral Assessment*. Published online: 19 August 2009. doi: 10.1007/s10862-009-9156-y.
- Goldney RD, Dunn KI, Air TM, Dal Grande E, Taylor AW (2009). Relationships between body mass index, mental health, and suicidal ideation: population perspective using two methods. *Australian and New Zealand Journal of Psychiatry* 43, 652–658.
- Gomes FA, O'Brien B, Nakano AM (2009). Attempted suicide in reproductive age women. *Health Care for Women International* 30, 707–719.
- Gonzalez VM, Bradizza CM, Collins RL (2009). Drinking to cope as a statistical mediator in the relationship between suicidal ideation and alcohol outcomes among underage college drinkers. *Psychology of Addictive Behaviors* 23, 443–451.
- Gonzalez VM, Collins RL, Bradizza CM (2009). Solitary and social heavy drinking, suicidal ideation, and drinking motives in underage college drinkers. *Addictive Behaviors* 34, 993–999.

- Gormley B, McNiel DE (2009). Adult attachment orientations, depressive symptoms, anger, and self-directed aggression by psychiatric patients. *Cognitive Therapy and Research*. Published online: 3 September 2009. doi: 10.1007/s10608-009-9267-5.
- Graves K.N, Kaslow NJ, Frabutt JM (2009). A culturally-informed approach to trauma, suicidal behavior, and overt aggression in African American adolescents. *Aggression and Violent Behavior*. Published online: 19 July 2009. doi: 10.1016/j.avb.2009.07.014.
- Guillaume S, Jausseant I, Jollant F, Rihmer Z, Malafosse A, Courtet P (2009). Suicide attempt characteristics may orientate toward a bipolar disorder in attempters with recurrent depression. *Journal of Affective Disorders*. Published online: 15 July 2009. doi: 10.1016/j.jad.2009.06.006.
- Gul ES, Yilmaz A, Berksun O (2009). The association of perfectionism with depression, antidepressant medication response and suicidal ideation. *Klinik Psikofarmakoloji Bulteni — Bulletin of Clinical Psychopharmacology* 19, 48–54.
- Han MA, Kim KS, Ryu SY, Kang MG, Park J (2009). Associations between smoking and alcohol drinking and suicidal behavior in Korean adolescents: Korea Youth Behavioral Risk Factor Surveillance, 2006. *Preventive Medicine* 49, 248–252.
- Heath NL, Ross S, Toste JR, Charlebois A, Nedecheva T (2009). Retrospective analysis of social factors and nonsuicidal self-injury among young adults. *Canadian Journal of Behavioral Science - Revue Canadienne Des Sciences Du Comportement* 41, 180–186.
- Hills AL, Afifi TO, Cox BJ, Bienvenu OJ, Sareen J (2009). Externalizing psychopathology and risk for suicide attempt: cross-sectional and longitudinal findings from the Baltimore epidemiologic catchment area study. *Journal of Nervous and Mental Disease* 197, 293–297.
- Hobbs M, McLaren S (2009). The interrelations of agency, depression, and suicidal ideation among older adults. *Suicide and Life-Threatening Behavior* 39, 161–171.
- Huang M-F, Yen C-F, Lung F-W (2009). Moderators and mediators among panic, agoraphobia symptoms, and suicidal ideation in patients with panic disorder. *Comprehensive Psychiatry*. Published online: 31 August 2009. doi: 10.1016/j.comppsy.2009.07.005.
- Jablonska B, Lindberg L, Lindblad F, Rasmussen F, Ostberg V, Hjern A (2009). School performance and hospital admissions due to self-inflicted injury: a Swedish national cohort study. *International Journal of Epidemiology* 38, 1334–1341.
- Jakupcak M, Cook J, Imel Z, Fontana A, Rosenheck R, McFall M (2009). Posttraumatic stress disorder as a risk factor for suicidal ideation in Iraq and Afghanistan war veterans. *Journal of Traumatic Stress* 22, 303–306.
- Jennings WG, Maldonado-Molina MM, Piquero AR, Canino G (2009). Parental suicidality as a risk factor for delinquency among Hispanic youth. *Journal of Youth and Adolescence*. Published online: 6 August 2009. doi: 10.1007/s10964-009-9439-3.
- Joiner TE Jr, van Orden KA, Witte TK, Selby EA, Ribeiro JD, Lewis R, Rudd MD (2009). Main predictions of the interpersonal-psychological theory of suicidal behavior: empirical tests in two samples of young adults. *Journal of Abnormal Psychology* 118, 634–646.
- Jorgensen EL, Jorgensen SL, Heard MP, Whitbeck LB (2009). Suicidal ideation among homeless youth: the impact of family dysfunction, morbidity and deliberate self-harm. *Journal of Adolescence*. doi: 10.1016/j.adolescence.2009.05.007. Published online: 17 June 2009.
- Kaminski JW, Fang X (2009). Victimization by peers and adolescent suicide in three US samples. *Journal of Pediatrics*. Published online: 21 July 2009. doi: 10.1016/j.jpeds.2009.04.061.
- Keizer I, Gex-Fabry M, Eytan A, Bertschy G (2009). Smoking in psychiatric inpatients: association with working status, diagnosis, comorbid substance abuse and history of suicide attempts. *Addictive Behaviors* 34, 815–820.

- Kolves K, Ide N, De Leo D (2009). Suicidal ideation and behaviour in the aftermath of marital separation: gender differences. *Journal of Affective Disorders*. Published online: 9 May 2009. doi: 10.1016/j.jad.2009.04.019.
- Koutek J, Kocourkova J, Hladikova M, Hrdlicka M (2009). Suicidal behavior in children and adolescents: does a history of trauma predict less severe suicidal attempts? *Neuroendocrinology Letters* 30, 99–106.
- Kraus JE, Horrigan JP, Carpenter DJ, Fong R, Barrett PS, Davies JT (2009). Clinical features of patients with treatment-emergent suicidal behavior following initiation of paroxetine therapy. *Journal of Affective Disorders*. Published online: 12 May 2009. doi: 10.1016/j.jad.2009.04.004.
- Kvernmo S, Rosenvinge JH (2009). Self-mutilation and suicidal behavior in Sami and Norwegian adolescents: prevalence and correlates. *International Journal of Circumpolar Health* 68, 235–348.
- Kwok SYCL, Shek, DTL (2009). Social problem solving, family functioning and suicidal ideation among Chinese adolescents in Hong Kong. *Adolescence* 44, 391–406.
- Laflamme L, Hasselberg M, Reimers AM, Cavalini LT, de Leon AP (2009). Social determinants of child and adolescent traffic-related and intentional injuries: a multilevel study in Stockholm County. *Social Science & Medicine* 68, 1826–1834.
- Laje G, Allen AS, Akula N, Manji H, John Rush A, McMahon FJ (2009). Genome-wide association study of suicidal ideation emerging during citalopram treatment of depressed outpatients. *Pharmacogenetics and Genomics* 19, 666–674.
- Lanes E (2009). Identification of risk factors for self-injurious behavior in male prisoners. *Journal of Forensic Sciences* 54, 692–698.
- Lanes E (2009). The association of administrative segregation placement and other risk factors with the self-injury-free time of male prisoners. *Journal of Offender Rehabilitation* 48, 529–546.
- La Salvia EA, Domek GJ, Gitlin DF (2009). Fluoroquinolone-induced suicidal ideation. *General Hospital Psychiatry*. Published online: 6 April 2009. doi: 10.1016/j.genhosppsy.2009.03.002.
- Lee J, Choi H, Kim MJ, Park CG, Shin DS (2009). Anger as a predictor of suicidal ideation in middle-school students in Korea: gender difference in threshold point. *Adolescence* 44, 433–446.
- Lewine R, Shriner B (2009). Work expectations, cultural sensitivity, schizophrenia, and suicide risk in male patients. *Journal of Nervous and Mental Disease* 197, 239–243.
- Liem M, Hengeveld M, Koenraadt F (2009). Domestic homicide followed by parasuicide: a comparison with homicide and parasuicide. *International Journal of Offender Therapy and Comparative Criminology* 53, 497–516.
- Lin YY, Huang XY, Chen CY, Shao WC (2009). The lived experiences of brokered brides who have attempted suicide in Taiwan. *Journal of Clinical Nursing*. Published online: 20 July 2009. doi: 10.1111/j.1365-2702.2009.02839.x.
- Liu IC, Chiu CH (2009). Case-control study of suicide attempts in the elderly. *International Psychogeriatrics* 21, 896–902.
- Liu XC, Gentzler AL, George CJ, Kovacs M (2009). Responses to depressed mood and suicide attempt in young adults with a history of childhood-onset mood disorder. *Journal of Clinical Psychiatry* 70, 644–652.
- Lizardi D, Sher L, Sullivan GM, Stanley B, Burke A, Oquendo MA (2009). Association between familial suicidal behavior and frequency of attempts among depressed suicide attempters. *Acta Psychiatrica Scandinavica* 119, 406–410.

- Logan JE (2009). Prevention factors for suicide ideation among abused pre/early adolescent youths. *International Journal of Injury Prevention* 15, 278–280.
- Lofthouse N, Yager-Schweller J (2009). Nonsuicidal self-injury and suicide risk among adolescents. *Current Opinion in Pediatrics*. Published online: 20 July 2009. doi: 10.1097/mop.0b013e3283306825.
- Lossnitzer N, Müller-Tasch T, Löwe B, Zugck C, Nelles M, Remppis A, Haass M, Rauch B, Jünger J, Herzog W, Wild B (2009). Exploring potential associations of suicidal ideation and ideas of self-harm in patients with congestive heart failure. *Depression and Anxiety* 26, 764–768.
- Ma X, Xiang YT, Cai Z-J, Lu J-Y, Li S-R, Xiang Y-Q, Guo H-L, Hou Y-Z, Li Z-B, Li Z-J, Tao Y-F, Dang W-M, Wu X-M, Deng J, Lai KYC, Ungvari GS (2009). Generalized anxiety disorder in China: prevalence, sociodemographic correlates, comorbidity, and suicide attempts. *Perspectives in Psychiatric Care* 45, 119–127.
- Mahadevan S, Hawton K, Casey D (2009). Deliberate self-harm in Oxford University students, 1993–2005: a descriptive and case-control study. *Social Psychiatry and Psychiatric Epidemiology*. Published online: 25 April 2009. doi: 10.1007/s00127-009-0057-x.
- Mahgoub NA (2009) Insomnia and suicide risk. *Journal of Neuropsychiatry and Clinical Neurosciences* 21, 232–233.
- Maloney E, Degenhardt L, Darke S, Nelson EC (2009). Impulsivity and borderline personality as risk factors for suicide attempts among opioid-dependent individuals. *Psychiatry Research* 169, 16–21.
- Mannion A (2009). Self-harm in a dangerous and severely personality disordered population. *Journal of Forensic Psychiatry and Psychology* 20, 322–331.
- Manor I, Gutnik I, Ben-Dor DH, Apter A, Sever J, Tyano S, Weizman A, Zalsman G (2009). Possible association between attention deficit hyperactivity disorder and attempted suicide in adolescents: a pilot study. *European Psychiatry*. Published online: 20 August 2009. doi: 10.1016/j.eurpsy.2009.06.001.
- Martinotti G, Carli V, Tedeschi D, Di Giannantonio M, Roy A, Janiri L, Sarchiapone M (2009). Mono- and polysubstance dependent subjects differ on social factors, childhood trauma, personality, suicidal behaviour, and comorbid Axis I diagnoses. *Addictive Behaviors* 34, 790–793.
- Maurex L, Lekander M, Nilsson A, Andersson EE, Asberg M, Ohman A (2009). Social problem solving, autobiographical memory, trauma, and depression in women with borderline personality disorder and a history of suicide attempts. *British Journal of Clinical Psychiatry*. Published online: 24 June 2009. doi: 10.1348/014466509X454831.
- Maurex L, Zaboli G, Ohman A, Asberg M, Leopardi R (2009). The serotonin transporter gene polymorphism (5-HTTLPR) and affective symptoms among women diagnosed with borderline personality disorder. *European Psychiatry*. Published online: 20 August 2009. doi: 10.1016/j.eurpsy.2009.05.001.
- Merchant C, Kramer A, Joe S, Venkataraman S, King CA (2009). Predictors of multiple suicide attempts among suicidal black adolescents. *Suicide and Life-Threatening Behavior* 39, 115–124.
- Miller M, Barber C, Azrael D, Hemenway D, Molnar BE (2009). Recent psychopathology, suicidal thoughts and suicide attempts in households with and without firearms: findings from the National Comorbidity Study replication. *Injury Prevention* 15, 183–187.
- Mislav B, Dalibor K, Zlatko T, Arijana LH, Vlasta V, Jelena B, Vida D (2009). Brainstem raphe lesion in patients with major depressive disorder and in patients with suicidal ideation recorded on transcranial sonography. *European Archives of Psychiatry and Clinical Neuroscience*. Published online: 15 September 2009. doi: 10.1007/s00406-009-0043-z.

- Moniruzzaman A, Pearce ME, Patel SH, Chavoshi N, Teegee M, Adam W, Christian WM, Henderson E, Craib KJP, Schechter MT, Spittal PM (2009). The Cedar Project: correlates of attempted suicide among young Aboriginal people who use injection and non-injection drugs in two Canadian cities. *International Journal of Circumpolar Health* 68, 261–273.
- Mullany B, Barlow A, Goklish N, Larzelere-Hinton F, Cwik M, Craig M, Walkup JT (2009). Toward understanding suicide among youths: results from the White Mountain Apache tribally mandated suicide surveillance system, 2001–2006. *American Journal of Public Health* 99, 1840–1848.
- Nakagawa M, Kawanishi C, Yamada T, Iwamoto Y, Sato R, Hasegawa H, Morita S, Odawara T, Hirayasu Y (2009). Characteristics of suicide attempters with family history of suicide attempt: a retrospective chart review. *BMC Psychiatry* 9, 32.
- Neves FS, Malloy-Diniz LF, Barbosa IG, Brasil PM, Correa H (2009). Bipolar disorder first episode and suicidal behavior: are there differences according to type of suicide attempt. *Revista Brasileira de Psiquiatria - Brazilian Journal of Psychiatry* 21, 114–118.
- Nickerson AB, Slater ED (2009). School and community violence and victimization as predictors of adolescent suicidal behavior. *School Psychology Review* 38, 218–232.
- Nielssen OB, Large MM (2009). Untreated psychotic illness in the survivors of violent suicide attempts. *Early Intervention in Psychiatry* 3, 116–122.
- Nishida A, Sasaki T, Nishimura Y, Tani H, Hara N, Inoue K, Yamada T, Takami T, Shimodera S, Itokawa M, Asukai N, Okazaki Y (2009). Psychotic-like experiences are associated with suicidal feelings and deliberate self-harm behaviors in adolescents aged 12–15 years. *Acta Psychiatrica Scandinavica*. Published online: 15 July 2009. doi: 10.1111/j.1600-0447.2009.01439.x.
- Nock MK (2009). Why do people hurt themselves? New insights into the nature and functions of self-injury. *Current Directions in Psychological Science* 18, 78–83.
- Nock MK, Hwang I, Sampson N, Kessler RC, Angermeyer M, Beautrais A, Borges G, Bromet E, Bruffaerts R, de Girolamo G, de Graaf R, Florescu S, Gureje O, Haro JM, Hu C, Huang Y, Karam EG, Kawakami N, Kovess V, Levinson D, Posada-Villa J, Sagar R, Tomov T, Viana MC, Williams DR (2009). Cross-national analysis of the associations among mental disorders and suicidal behavior: findings from the WHO World Mental Health Surveys. *PLoS Medicine*. Published online: 11 August 2009. doi: 10.1371/journal.pmed.1000123.
- Nye EC, Katzman J, Bell JB, Kilpatrick J, Brainard M, Haaland KY (2009). Attachment representation and suicidal ideation in Vietnam combat veterans with posttraumatic stress disorder. *Archives of Suicide Research* 13, 195–199.
- O'Connor RC, Rasmussen S, Hawton K (2009). Predicting deliberate self-harm in adolescents: a six month prospective study. *Suicide and Life-Threatening Behavior* 39, 364–375.
- O'Leary P, Gould N (2009). Men who were sexually abused in childhood and subsequent suicidal ideation: community comparison, explanations and practice implications. *British Journal of Social Work* 39, 950–968.
- Olié E, Guillaume S, Jausse I, Courtet P, Jollant F (2009). Higher psychological pain during a major depressive episode may be a factor of vulnerability to suicidal ideation and act. *Journal of Affective Disorders*. Published online: 24 April 2009. doi: 10.1016/j.jad.2009.03.013.
- Oliver C, Sloneem J, Hall S, Arron K (2009). Self-injurious behaviour in Cornelia de Lange syndrome: 1. Prevalence and phenomenology. *Journal of Intellectual Disability Research* 53, 575–589.
- Quendo MA, Carballo JJ, Rajouria N, Currier D, Tin A, Merville J, Galfalvy HC, Sher L, Grunebaum MF, Burke AK, Mann JJ (2009). Are high-lethality suicide attempters with bipolar disorder a distinct phenotype? *Archives of Suicide Research* 13, 247–256.

- Ortigo KM, Westen D, Bradley B (2009). Personality subtypes of suicidal adults. *The Journal of Nervous and Mental Disease* 197, 687–694.
- Ozdel O, Varma G, Atesci FC, Oguzhanoglu NK, Karadag F, Amuk T (2009). Characteristics of suicidal behavior in a Turkish sample. *Crisis* 30, 90–93.
- Pagura J, Fotti S, Katz LY, Sareen J & Swampy Cree Suicide Prevention Team (2009). Help seeking and perceived need for mental health care among individuals in Canada with suicidal behaviors. *Psychiatric Services* 60, 943–949.
- Park S, Cho MJ, Jeon HJ, Lee HW, Bae JN, Park JI, Sohn JH, Lee YR, Lee JY, Hong JP (2009). Prevalence, clinical correlations, comorbidities, and suicidal tendencies in pathological Korean gamblers: results from the Korean Epidemiologic Catchment Area Study. *Social Psychiatry and Psychiatric Epidemiology*. Published online: 28 July 2009. doi: 10.1007/s00127-009-0102-9.
- Park Y-J, Ryu H, Han KS, Kwon JH, Kim HK, Kang HC, Yoon J-W, Cheon S-H, Shin H (2009). Anger, anger expression, and suicidal ideation in Korean adolescents. *Archives of Psychiatric Nursing*. Published online: 17 August 2009. doi: 10.1016/j.apnu.2009.04.004.
- Paris R, Bolton RE, Weinberg MK (2009). Postpartum depression, suicidality, and mother-infant interactions. *Archives of Women's Mental Health*. Published online: 29 August 2009. doi: 10.1007/s00737-009-0105-2.
- Perroud N, Aitchison KJ, Uher R, Smith R, Huezo-Diaz P, Marusic A, Maier W, Mors O, Placentino A, Henigsberg N, Rietschel M, Hauser J, Souery D, Kapelski P, Bonvicini C, Zobel A, Jorgensen L, Petrovic A, Kalember P, Schulze TG, Gupta B, Gray J, Lewis CM (2009). Genetic predictors of increase in suicidal ideation during antidepressant treatment in the GENDEP project. *Neuropsychopharmacology*. Published online: 29 July 2009. doi: 10.1038/npp.2009.81.
- Perroud N, Uher R, Hauser J, Rietschel M, Henigsberg N, Placentino A, Kozel D, Maier W, Mors O, Souery D, Dmitrzak-Weglaz M, Jorgensen L, Kovacic Z, Giovannini C, Mendlewicz J, Zobel A, Strohmaier J, McGuffin P, Aitchison KJ, Farmer A (2009). History of suicide attempts among patients with depression in the GENDEP project. *Journal of Affective Disorder*. Published online: 22 September 2009. doi: 10.1016/j.jad.2009.09.001.
- Peterson J, Freedenthal S, Sheldon C, Andersen R (2009). Nonsuicidal self injury in adolescents. *Psychiatry (MMC)* 5, 20–26.
- Pettit JW, Temple SR, Norton PJ, Yaroslavsky I, Grover KE, Morgan ST, Schatte DJ (2009). Thought suppression and suicidal ideation: preliminary evidence in support of a robust association. *Depression and Anxiety* 26, 758–763.
- Pirelli G, Jeglic EL (2009). The influence of death exposure on suicidal thoughts and behaviors. *Archives of Suicide Research* 13, 136–146.
- Pompili M, Di Cosimo D, Innamorati M, Lester D, Tatarelli R, Martelletti P (2009). Psychiatric comorbidity in patients with chronic daily headache and migraine: a selective overview including personality traits and suicide risk. *Journal of Headache and Pain* 10, 283–290.
- Posada-Villa J, Camacho JC, Valenzuela JI, Arguello A, Cendales JG, Fajardo R (2009). Prevalence of suicide risk factors and suicide-related outcomes in the national mental health study. *Suicide and Life-Threatening Behavior* 39, 408–424.
- Pradhan SN, Adhikary SR (2009). A study of severity of intention of suicide in various psychiatric diagnoses. *Kathmandu University Medical Journal* 7, 63–66.
- Preti A, Tondo L, Sisti D, Rocchi MB, de Girolamo G; for the PROGRES-Acute group (2009). Correlates and antecedents of hospital admission for attempted suicide: a nationwide survey in Italy. *European Archives of Psychiatry and Clinical Neuroscience*. Published online: 6 August 2009. doi: 10.1007/s00406-009-0037-x.

- Price RB, Nock MK, Charney DS, Mathew SJ (2009). Effects of intravenous Ketamine on explicit and implicit measures of suicidality in treatment-resistant depression. *Biological Psychiatry* 66, 522–526.
- Radobuljac MD, Bratina NU, Battelino T, Tomori M (2009). Lifetime prevalence of suicidal and self-injurious behaviors in a representative cohort of Slovenian adolescents with type 1 diabetes. *Pediatric Diabetes*. Published online: 9 April 2009. doi: 10.1111/j.1399-5448.2009.00501.x.
- Rehn L, Meririnne E, Höök-Nikanne J, Isometsä E, Henriksson M (2009). Depressive symptoms and suicidal ideation during isotretinoin treatment: a 12-week follow-up study of male Finnish military conscripts. *Journal of the European Academy of Dermatology and Venereology*. Published online: 11 June 2009. doi: 10.1111/j.1468-3083.2009.03313.x.
- Renner LM, Markward MJ (2009). Factors associated with suicidal ideation among women abused in intimate partner relationships. *Smith College Studies in Social Work* 79, 139–154.
- Riala K, Hakko H, Rasanen P (2009). Nicotine dependence is associated with suicide attempts and self-mutilation among adolescent females. *Comprehensive Psychiatry* 50, 293–298.
- Robbins M, Francis LJ (2009). The spiritual revolution and suicidal ideation: an empirical enquiry among 13-to 15-year-old adolescents in England and Wales. *International Journal of Children's Spirituality* 14, 261–272.
- Robins A, Fiske A (2009). Explaining the relation between religiousness and reduced suicidal behavior: social support rather than specific beliefs. *Suicide and Life-Threatening Behavior* 39, 386–395.
- Russell D, Turner RJ, Joiner TE (2009). Physical disability and suicidal ideation: a community-based study of risk/protective factors for suicidal thoughts. *Suicide and Life-Threatening Behavior* 39, 440–451.
- Russell G, Moss D, Miller J (2009). Appalling and appealing: a qualitative study of the character of men's self-harm. *Psychology and Psychotherapy*. Published online: 9 September 2009. doi: 10.1348/147608309X466826.
- Sánchez-Gistau V, Colom F, Mané A, Romero S, Sugranyes G, Vieta E (2009). Atypical depression is associated with suicide attempt in bipolar disorder. *Acta Psychiatrica Scandinavica* 120, 30–36.
- Sansone, RA, Sinclair JD, Wiederman MW (2009). Childhood trauma and self-harm behavior among chronic pain patients. *International Journal of Psychiatry in Clinical Practice* 13, 238–240.
- Sarchiapone M, Carli V, Giannantonio MD, Roy A (2009). Risk factors for attempting suicide in prisoners. *Suicide and Life-Threatening Behavior* 39, 343–350.
- Sarchiapone M, Carli V, Janiri L, Marchetti M, Cesaro C, Roy A (2009). Family history of suicide and personality. *Archives of Suicide Research* 13, 178–184.
- Sarchiapone M, Jovanovic N, Roy A, Podlesek A, Carli V, Amore M, Mancini M, Marusic A (2009). Relations of psychological characteristics to suicide behaviour: Results from a large sample of male prisoners. *Personality and Individual Differences* 47, 250–255.
- Sarno I, Madeddu F, Gratz KL (2009). Self-injury, psychiatric symptoms, and defense mechanisms: Findings in an Italian nonclinical sample. *European Psychiatry*. Published online: 18 August 2009. doi: 10.1016/j.eurpsy.2009.05.007.
- Schillani G, Goljevscek S, Carlino D, De Vanna M, Aguglia E, Giraldi T (2009). Repeated suicidal behaviour: stressful life events and 5-HTTLPR genetic polymorphism. *International Journal of Psychiatry in Clinical Practice* 13, 229–232.
- Scoliers G, Portzky G, van Heeringen K, Audenaert K (2009). Sociodemographic and psychopathological risk factors for repetition of attempted suicide: a 5-year follow-up study. *Archives of Suicide Research* 13, 201–213.

- Segal DL (2009). Self-reported history of sexual coercion and rape negatively impacts resilience to suicide among women students. *Death Studies* 33, 848–855.
- Seok SJ, Gil HW, Jeong DS, Yang JO, Lee EY, Hong SY (2009). Paraquat intoxication in subjects who attempt suicide: why they chose paraquat. *Korean Journal of Internal Medicine* 24, 247–251.
- Shahid M, Khan MM, Khan MS, Jamal Y, Badshah A, Rehmani R (2009). Deliberate self-harm in the emergency department experience from Karachi, Pakistan. *Crisis* 30, 85–89.
- Shahmanesh M, Wayal S, Cowan F, Mabey D, Copas A, Patel V (2009). Suicidal behavior among female sex workers in Goa, India: the silent epidemic. *American Journal of Public Health* 99, 1239–1246.
- Sharaf AY, Thompson EA, Walsh E (2009). Protective effects of self-esteem and family support on suicide risk behaviors among at-risk adolescents. *Journal of Child and Adolescent Psychiatric Nursing* 22, 160–168.
- Sheikholeslami H, Kani C, Kani K, Ghafelebashi H (2009). Repetition of suicide-related behavior: a study of the characteristics, psychopathology, suicidality and negative life events in Iran. *International Journal of Psychiatry in Medicine* 39, 45–62.
- Shin YM, Chung YK, Lim KY, Lee YM, Oh EY, Cho SM (2009). Childhood predictors of deliberate self-harm behavior and suicide ideation in Korean adolescents: a prospective population-based follow-up study. *Journal of Korean Medical Science* 24, 215–222.
- Sho N, Oiji A, Konno C, Toyohara K, Minami T, Arai T, Seike Y (2009). Relationship of intentional self-harm using sharp objects with depressive and dissociative tendencies in pre-adolescence-adolescence. *Psychiatry and Clinical Neurosciences* 63, 410–416.
- Sinai C, Hirvikoski T, Vansvik ED, Nordstrom A-L, Linder J, Nordstrom P, Jokinen J (2009). Thyroid hormones and personality traits in attempted suicide. *Psychoneuroendocrinology*. Published online: 13 June 2009. doi: 10.1016/j.psyneuen.2009.05.009.
- Sinclair JMA, Hawton K, Gray A (2009). Six year follow-up of a clinical sample of self-harm patients. *Journal of Affective Disorders*. Published online: 28 June 2009. doi: 10.1016/j.jad.2009.05.027.
- Sisask M, Kolves K, Varnik A (2009). Severity of attempted suicide as measured by the Pierce Suicidal Intent Scale. *Crisis* 30, 136–143.
- Sloneem J, Arron K, Hall SS, Oliver C (2009). Self-injurious behaviour in Cornelia de Lange syndrome: 2. Association with environmental events. *Journal of Intellectual Disability Research* 53, 590–603.
- Spijker J, de Graaf R, ten Have M, Nolen WA, Speckens A (2009). Predictors of suicidality in depressive spectrum disorders in the general population: results of the Netherlands Mental Health Survey and Incidence Study. *Social Psychiatry and Psychiatric Epidemiology*. Published online: 19 July 2009. doi: 10.1016/j.psychres.2008.06.005.
- Spinhoven P, Slee N, Garnefski N, Arensman E (2009). Childhood sexual abuse differentially predicts outcome of Cognitive-Behavioral Therapy for deliberate self-harm. *Journal of Nervous and Mental Disease* 197, 455–457.
- Spokas M, Wenzel A, Stirman SW, Brown GK, Beck AT (2009). Suicide risk factors and mediators between childhood sexual abuse and suicide ideation among male and female suicide attempters. *Journal of Traumatic Stress*. Published online: 26 August 2009. doi: 10.1002/jts.20438.
- Sturgiss EA (2009). Suicide in people over 65 years of age in the Australian Capital Territory. *Journal of Forensic and Legal Medicine* 16, 338–339.

- Suda A, Kawanishi C, Kishida I, Sato R, Yamada T, Nakagawa M, Hasegawa H, Kato D, Furuno T, Hirayasu Y, Dopamine D (2009). Dopamine D(2) Receptor gene polymorphisms are associated with suicide attempt in the Japanese population. *Neuropsychobiology* 59, 130–134.
- Swahn MH, Reynolds MR, Tice M, Miranda-Pierangeli MC, Jones CR, Jones IR (2009). Perceived overweight, BMI, and risk for suicide attempts: findings from the 2007 youth risk behavior survey. *Journal of Adolescent Health* 45, 292–295.
- Swogger MT, Conner KR, Meldsrum SC, Caine ED (2009). Dimensions of psychopathy in relation to suicidal and self-injurious behavior. *Journal of Personality Disorders* 23, 201–210.
- Taliaferro LA, Rienzo BA, Pigg RM, Miller MD, Dodd VJ (2009). Spiritual well-being and suicidal ideation among college students. *Journal of American College Health* 58, 83–90.
- Tyrer P (2009). Recurrence of self-harm and severity of personality disorder. *Acta Psychiatrica Scandinavica* 120, 82–82.
- Uygur F, Sever C, Oksüz S, Duman H (2009). Profile of self-inflicted burn patients treated at a tertiary burn centre in Istanbul. *Journal of Burn Care & Research* 30, 427–431.
- Valuck RJ, Orton HD, Libby AM (2009). Antidepressant discontinuation and risk of suicide attempt: a retrospective, nested case-control study. *Journal of Clinical Psychiatry* 70, 1069–1077.
- Vang FJ, Lindstrom M, Sunnqvist C, Bah-Rösman J, Johanson A, Traskman-Bendz L (2009). Lifetime adversities, reported thirteen years after a suicide attempt: relationship to recovery, 5HTTLPR genotype, and past and present morbidity. *Archives of Suicide Research* 13, 214–229.
- Vitiello B, Silva SG, Rohde P, Kratochvil CJ, Kennard BD, Reinecke MA, Mayes TL, Posner K, May DE, March JS (2009). Suicidal events in the treatment for adolescents with depression study (TADS). *Journal of Clinical Psychiatry* 70, 741–747.
- Violanti JM, Fekedulegn D, Charles LE, Andrew ME, Hartley TA, Mnatsakanova A, Burchfiel CM (2009). Suicide in police work: exploring potential contributing influences. *American Journal of Criminal Justice* 34, 41–53.
- Vance DE, Struzick T, Burrage J (2009). Suicidal ideation, hardiness, and successful aging with HIV considerations for nursing. *Journal of Gerontological Nursing* 35, 27–33.
- Wachter T, Murphy S, Kennerley H, Wachter S (2009). A preliminary study examining relationships between childhood maltreatment, dissociation, and self-injury in psychiatric outpatients. *Journal of Trauma and Dissociation* 10, 261–275.
- Walker T (2009). ‘Seeing beyond the battled body’ — an insight into selfhood and identity from women’s accounts who self-harm with a diagnosis of borderline personality disorder. *Counselling and Psychotherapy Research* 9, 122–128.
- Walls NE, Potter C, Van Leeuwen J (2009). Where risks and protective factors operate differently: homeless sexual minority youth and suicide attempts. *Child and Adolescent Social Work Journal* 26, 235–257.
- Weizman T, Yagil Y, Schreiber S (2009). Association between terror attacks and suicide attempts. *Suicide and Life-Threatening Behavior* 39, 425–432.
- Wichstrom L (2009). Predictors of non-suicidal self-injury versus attempted suicide: similar or different? *Archives of Suicide Research* 13, 105–122.
- Williams F, Hasking P (2009). Emotion regulation, coping and alcohol use as moderators in the relationship between non-suicidal self-injury and psychological distress. *Prevention Science*. Published online: 26 August 2009. doi: 10.1007/s11121-009-0147-8.
- Wyman PA, Gaudieri PA, Schmeelk-Cone K, Cross W, Brown CH, Sworts L, West J, Burke KC, Nathan J (2009). Emotional triggers and psychopathology associated with suicidal ideation in urban children with elevated aggressive-disruptive behavior. *Journal of Abnormal Child Psychology* 37, 917–928.

- Zalsman G, Mann MJ, Huang Y-Y, Oquendo MA, Brent DA, Burke AK, Ellis SP, Mann JJ (2009). Wolframín gene H611R polymorphism: no direct association with suicidal behavior but possible link to mood disorders. *Progress in Neuro-Psychopharmacology and Biological Psychiatry* 33, 707–710.
- Zawahir S, Roberts DM, Palangasinghe C, Mohamed F, Eddleston M, Dawson AH, Buckley NA, Ren L, Medley GA, Gawarammana I (2009). Acute intentional self-poisoning with a herbicide product containing fenoxaprop-P-ethyl, ethoxysulfuron, and isoxadifen ethyl: a prospective observational study. *Clinical Toxicology (T and F)* 47, 792–797.
- Zayas LH, Bright CL, Alvarez-Sánchez T, Cabassa LJ (2009). Acculturation, familism and mother-daughter relations among suicidal and non-suicidal adolescent Latinas. *Journal of Primary Prevention* 30, 351–369.
- Zeyrek EY, Gençöz F, Bergman Y, Lester D (2009). Suicidality, problem-solving skills, attachment style, and hopelessness in Turkish students. *Death Studies* 33, 815–827.

Prevention

- Alexopoulos GS, Reynolds CF 3rd, Bruce ML, Katz IR, Raue PJ, Mulsant BH, Oslin DW, Ten Have T & The PROSPECT Group (2009). Reducing suicidal ideation and depression in older primary care patients: 24-month outcomes of the PROSPECT study. *American Journal of Psychiatry* 166, 882–890.
- Asarnow JR, Berk MS, Baraff LJ (2009). Family intervention for suicide prevention: a specialized emergency department intervention for suicidal youths. *Professional Psychology: Research and Practice* 40, 118–125.
- Kapur N (2009). Self-harm in the general hospital. *Psychiatry* 8, 189–193.
- Lawrence ST, Willig JH, Crane H, Nevin C, Batey DS, Files-Kennedy B, Mugavero M, Raper JL, Saag MS, Schumacher J (2009). Novel implementation of routine suicidal ideation assessment in HIV primary care: a lifesaving technology. *Journal of General Internal Medicine* 24, 127–127.
- Muehlenkamp JJ, Walsh BW, McDade M (2009). Preventing non-suicidal self-injury in adolescents: the signs of self-injury program. *Journal of Youth and Adolescence*. Published online: 16 September 2009. doi: 10.1007/s10964-009-9450-8.
- Slater S, Villalba MM, Davis J (2009). Key neurochemical markers for the prevention of suicide. *TrAC — Trends in Analytical Chemistry*. Published online: 27 June 2009. doi: 10.1016/j.trac.2009.06.002.
- Stewart D, Bowers L, Warburton F (2009). Constant special observation and self-harm on acute psychiatric wards: a longitudinal analysis. *General Hospital Psychiatry*. Published online: 24 June 2009. doi: 10.1016/j.genhosppsych.2009.05.008.
- Tusaie KR, Acierto S, Murray A, Fitzgerald K, Chiu S.-H (2009). Screening for adolescent self-injury: a survey of Ohio advanced practice nurses. *Journal for Nurse Practitioners* 5, 359–364.

Care and support

- Alexander MJ, Haugland G, Ashenden P, Knight E, Brown I (2009). Coping with thoughts of suicide: techniques used by consumers of mental health services. *Psychiatric Services* 60, 1214–1221.
- Bergmans Y, Spence JM, Strike C, Links PS, Ball JS, Rufo C, Rhodes AE, Watson WJ, Eynan R (2009). Repeat substance-using suicidal clients-how can we be helpful? *Social Work in Health Care* 48, 420–431.
- Brosi M, Weaver J (2009). Family therapy with suicidal adolescents. *Death Studies* 33, 481–486.
- Catanese AA, John MS, Di Battista J, Clarke DM (2009). Acute cognitive therapy in reducing suicide risk following a presentation to an emergency department. *Behaviour Change* 26, 16–26.
- Chisolm DJ, Klima J, Gardner W, Kelleher KJ (2009). Adolescent behavioral risk screening and use of health services. *Administration and Policy in Mental Health and Mental Health Services Research*. Published online: 24 September 2009. doi: 0.1007/s10488-009-0245-8.
- Daigeler A, Langer S, Hüllmann K, Illes F, Juckel G, Echterhoff S, Selbach D, Steinsträer L, Steinau HU, Lehnhardt M (2009). A follow-up study of adults with suicidal burns: psychosocial adjustment and quality of life. *Journal of Burn Care & Research* 30, 844–851.
- Davis SP, Arnette NC, Bethea KS, Graves KN, Rhodes MN, Harp SE, Dunn SE, Patel MN, Kaslow NJ (2009). The Grady Nia project: a culturally competent intervention for low-income, abused, and suicidal African American women. *Professional Psychology: Research and Practice* 40, 141–147.
- Dyregrov K (2009). How do the young suicide survivors wish to be met by psychologists? A user study. *Omega* 59, 221–238.
- Dieppe C, Stanhope B, Rakhra K (2009). Children who harm themselves: development of a paediatric emergency department triage tool. *Emergency Medicine Journal* 26, 418–420.
- Gask L, Morriss R (2009). Assessment and immediate management of people at risk of harming themselves. *Psychiatry* 8, 241–245.
- Groholt B, Ekeberg O (2009). Prognosis after adolescent suicide attempt: mental health, psychiatric treatment, and suicide attempts in a nine-year follow-up study. *Suicide and Life-Threatening Behavior* 39, 125–136.
- Hadfield J, Brown D, Pembroke L, Hayward M (2009). Analysis of accident and emergency doctors' responses to treating people who self-harm. *Qualitative Health Research* 19, 755–765.
- Hayakawa M (2009). How repeated 15-minute assertiveness training sessions reduce wrist cutting in patients with borderline personality disorder. *American Journal of Psychotherapy* 63, 41–51.
- Hazell PL, Martin G, McGill K, Kay T, Wood A, Trainor G, Harrington R (2009). Group therapy for repeated deliberate self-harm in adolescents: failure of replication of a randomized trial. *Journal of the American Academy of Child and Adolescent Psychiatry* 48, 662–670.
- Heisel MJ, Duberstein PR, Talbot NL, King DA, Tu XM (2009). Adapting interpersonal psychotherapy for older adults at risk for suicide: preliminary findings. *Professional Psychology: Research and Practice* 40, 156–164.
- Hepburn SR, Crane C, Barnhofer T, Duggan DS, Fennell MJ, Williams JM (2009). Mindfulness-based cognitive therapy may reduce thought suppression in previously suicidal participants: findings from a preliminary study. *British Journal of Clinical Psychology* 48, 209–215.
- Hicks KM, Hinck SM (2009). Best-practice intervention for care of clients who self-mutilate. *Journal of the American Academy of Nurse Practitioners* 21, 430–436.

- Hindley P (2009). Self-harm in children and young people: from research to practice: a European perspective. *Journal of Psychosomatic Research* 66, 564–565.
- Johnson GM, Zastawny S, Kulpa A (2009). E-message boards for those who self-injure: implications for e-health. *International Journal of Mental Health and Addiction*. Published online: 18 August 2009. doi: 10.1007/s11469-009-9237-x.
- Kibler J (2009). Self-injury in the schools: an exploratory analysis of Midwest school counselors' knowledge and experience. *North American Journal of Psychology* 11, 309–322.
- Kim JM, Jeon BS (2009). Survivors from beta-fluoroethyl acetate poisoning show a selective cerebellar syndrome. *Journal of Neurology, Neurosurgery and Psychiatry* 80, 528–532.
- Kim LH, Abel SJ (2009). Survival after a massive overdose of arsenic trioxide. *Critical Care and Resuscitation* 11, 42–45.
- Kimball JS (2009). Treatment for deliberate self-harm: integrating emotion-focused therapy. *Journal of Contemporary Psychotherapy* 39, 197–202.
- Krin P (2009). Safe return to school for students with risky behaviors. *NASN School Nurse* 24, 111–113.
- Lilley R, Owens D (2009). Services for assessment, aftercare, and psychological treatment following self-harm. *Psychiatry* 8, 246–251.
- McAllister M, Moyle W, Billett S, Zimmer-Gembeck M (2009). 'I can actually talk to them now': qualitative results of an educational intervention for emergency nurses caring for clients who self-injure. *Journal of Clinical Nursing* 18, 2838–2845.
- Mir F, Dargan P, Ashcroft A, Wood D (2009). Clinicians' awareness of the NICE self-harm guideline, and their knowledge of the guideline's advice on the appropriate use of gut decontamination in deliberate self-poisoning. *British Journal of Clinical Pharmacology* 68, 279–280.
- Paul HA (2009). Helping teens who cut: understanding and ending self injury. *Child and Family Behavior Therapy* 31, 65–69.
- Pompili M, Baldessarini RJ, Tondo L, Innamorati M, Tatarelli R, Girardi P, De Pisa E (2009). Response to intravenous antidepressant treatment by suicidal vs. nonsuicidal depressed patients. *Journal of Affective Disorders*. Published online: 25 August 2009. doi: 10.1016/j.jad.2009.07.018.
- Quraishi AHM (2009). Inferior vena caval injury following self-inflicted abdominal stab wound. *Indian Journal of Surgery* 70, 35–36.
- Rajapakse S (2009). Management of yellow oleander poisoning. *Clinical Toxicology* 47, 206–212.
- Reid WH (2009). Prognosis after suicide attempt: standard of care and the consequences of not meeting it. *Journal of Psychiatric Practice* 15, 141–144.
- Rissanen M-L, Kylmä J, Laukkanen E (2009). Helping adolescents who self-mutilate: parental descriptions. *Journal of Clinical Nursing* 18, 1711–171721.
- Shah A (2009). Does improvement in the treatment of those who attempt suicide contribute to a reduction in elderly suicide rates in England? *International Psychogeriatrics* 21, 768–773.
- Short V, Cooper J, Shaw J, Kenning C, Abel K, Chew-Graham C (2009). Custody vs. care: attitudes of prison staff to self-harm in women prisoners: a qualitative study. *Journal of Forensic Psychiatry and Psychology* 20, 408–426.
- Siyez DM, Bas AU (2009). Turkish school counsellors and counselling students' knowledge of adolescent suicide. *Australian Journal of Guidance and Counselling* 19, 24–40.

- Suokas J, Suominen K, Lönnqvist J (2009). The attitudes of emergency staff toward attempted suicide patients. *Crisis* 30, 161–165.
- Tang T-C, Jou S-H, Ko C-H, Huang S-Y, Yen C-F (2009). Randomized study of school-based intensive interpersonal psychotherapy for depressed adolescents with suicidal risk and parasuicide behaviors: regular article. *Psychiatry and Clinical Neurosciences* 63, 463–470.
- Tauser RG (2009). Neurochemical basis of treatment in suicide — forensic implications. *Romanian Journal of Legal Medicine* 17, 73–78.
- Townsend E, Walker DM, Sargeant S, Vostanis P, Hawton K, Stocker O, Sithole J (2009). Systematic review and meta-analysis of interventions relevant for young offenders with mood disorders, anxiety disorders, or self-harm. *Journal of Adolescence*. Published online: 27 June 2009. doi: 10.1016/j.adolescence.2009.05.015.
- Vitiello B, Brent D, Greenhill LL, Emslie G, Wells K, Walkup JT, Stanley B, Bukstein O, Kennard BD, Compton S, Coffey B, Cwik ME, Posner K, Wagner A, March JS, Riddle M, Goldstein T, Curry J, Capasso L, Mayes T, Shen S, Gugga SS, Turner BJ, Barnett S, Zelazny J (2009). Depressive symptoms and clinical status during the treatment of adolescent suicide attempters study. *Journal of the American Academy of Child and Adolescent Psychiatry* 48, 997–1004.
- Wheatley M, Austin-Payne H (2009). Nursing staff knowledge and attitudes towards deliberate self-harm in adults and adolescents in an inpatient setting. *Behavioural and Cognitive Psychotherapy* 37, 293–309.
- Zerler H (2009). Motivational interviewing in the assessment and management of suicidality. *Journal of Clinical Psychology* 65, 1207–1217.

CASE REPORTS

- Aebi M (2009). Expert's comment concerning Grand Rounds case entitled 'Multiple revisions in a L2 burst fracture in a suicide jumper: a retrospective analysis of what went wrong' (by P. Gahr, S.K. Tschöke, D. Haschtmann, C-E. Heyde). *European Spine Journal* 18, 935–937.
- Afshari R, Ghooshkhanehee H (2009). Tramadol overdose induced seizure, dramatic rise of CPK and acute renal failure. *Journal of the Pakistan Medical Association* 59, 178–178.
- Amuluru K, Erickson BA, Okotie O, Nadler RB (2009). Bilateral ureteral obstruction from papillary necrosis secondary to household cleaner ingestion. *Canadian Journal of Urology* 16, 4701–4703.
- Asamura H, Ito M, Fukushima H (2009). An unusual suicide case of the combination of asphyxia. *American Journal of Forensic Medicine and Pathology* 30, 215–216.
- Ashawesh K, Padinjakara RN, Murthy NP, Nizar H, Anwar A (2009). Intentional overdose with insulin glargine. *American Journal of Health-System Pharmacy* 66, 534.
- Belen B, Akman A, Yuksel N, Dilsiz G, Yenicesu I, Olgunturk R (2009). A case report of amitriptyline poisoning successfully treated with the application of plasma exchange. *Therapeutic Apheresis and Dialysis* 13, 147–149.
- Biedrzycki OJ, Bevan D, Lucas S (2009). Fatal overdose due to prescription Fentanyl patches in a patient with Sick Cell/beta-Thalassemia and Acute Chest Syndrome: a case report and review of the literature. *American Journal of Forensic Medicine and Pathology* 30, 188–190.
- Bucaretychi F, De Capitani EM, Madureira PR, Cesconetto DM, Lanaro R, Vieira RJ (2009). Suicide attempt using pure methanol with hospitalization of the patient soon after ingestion: case report. *Sao Paulo Medical Journal* 127, 108–110.
- Chan TY, Gomersall CD, Cheng CA, Woo J (2009). Overdose of methyldopa, indapamide and theophylline resulting in prolonged hypotension, marked diuresis and hypokalaemia in an elderly patient. *Pharmacoepidemiology and Drug Safety* 18, 977–979.
- Chen YY, Tsai PC, Chen PH, Fan CC, Hung GC, Cheng AT (2009). Effect of media reporting of the suicide of a singer in Taiwan: the case of Ivy Li. *Social Psychiatry and Psychiatric Epidemiology*. Published online: 26 May 2009. doi: 10.1007/s00127-009-0075-8.
- Chesneau P, Knibiehly M, Tichadou L, Calvez M, Joubert M, Hayek-Lanthois M, De Haro L (2009). Suicide attempt by ingestion of rotenone-containing plant extracts: one case report in French Guiana. *Clinical Toxicology* 47, 830–833.
- Cheuk JTY, Lee E, Ungvari GS (2009). A patient with chronic schizophrenia presenting with multiple deliberate self-harm and genital self-mutilation. *Hong Kong Journal of Psychiatry* 19, 87–89.
- Coopman V, De Leeuw M, Cordonnier J, Jacobs W (2009). Suicidal death after injection of a castor bean extract (*Ricinus communis* L.). *Forensic Science International* 189, e13–e20.
- Demirci S, Dogan KH, Erkol Z, Deniz I (2009). A series of complex suicide. *American Journal of Forensic Medicine and Pathology* 30, 152–154.
- Demirci S, Dogan KH, Erkol Z, Gunaydin G (2009). Unusual suicide note written on the body: two case reports. *American Journal of Forensic Medicine and Pathology* 30, 276–279.
- Deroux S, Leffers B (2009). Asphyxiation by occlusion of nose and mouth by duct tape: two unusual suicides. *Journal of Forensic Sciences*. Published online: 8 September 2009. doi: 10.1111/j.1556-4029.2009.01157.x.
- Descatha A, Mégarbane B, Garcia V, Baud F (2009). Delayed immunosuppressive treatment in life-threatening Paraquat ingestion: a case report. *Journal of Medical Toxicology* 5, 76–79.
- Fertel BS, Nelson LS, Goldfarb DS (2009). The underutilization of hemodialysis in patients with salicylate poisoning. *Kidney International* 75, 1349–1353.

- Finsterer J, Pulgram T, Enzelsberger B, Molzer G (2009). Rhabdomyolysis from ziprasidone after attempted suicide. *Acta Neuropsychiatrica* 21, 154–155.
- Fracasso T, Löhrer L, Karger B (2009). Self-inflicted gunshot injury simulating a criminal offence. *Forensic Science International* 188, e21–e22.
- Gahr P, Tschöke SK, Haschtmann D, Heyde CE (2009). Multiple revisions of a L2 burst fracture in a suicide jumper: a retrospective analysis of what went wrong. *European Spine Journal* 18, 927–934.
- Gottzein AK, Musshoff F, Doberentz E, Madea B (2009). Combined suicide by oxydemeton-methyl (Metasystox®) ingestion and hanging. *Forensic Science International* 189, e21–e25.
- Grellner W, Wilske J (2009). Unusual suicides of young women with tentative cuts and fatal neck injuries by chain saw and circular saw. *Forensic Science International* 190, e9–e11.
- Hagemeyer L, Schyma C, Madea B (2009). Extended suicide using an atypical stud gun. *Forensic Science International* 189, e9–e12.
- Haschtmann D, Stahel PF, Heyde CE (2009). Management of a multiple trauma patient with extensive instability of the lumbar spine as a result of a bilateral facet dislocation and multiple complete vertebral burst fractures. *Journal of Trauma* 66, 922–930.
- Hicks LE, Wood N (2009). Depression and suicide risks in older adults: a case study. *Home Healthcare Nurse* 27, 482–487.
- Honda Y, Yanagawa Y (2009). A case of hanging accompanying pulmonary edema. *Respiration and Circulation* 57, 863–865.
- Hurdle AC, Moss RD (2009). Unrecognized valproic acid intoxication. *American Journal of Emergency Medicine* 27, e1–e2.
- Illner N, Gerth J, Pfeiffer R, Bruns T, Wolf G (2009). ‘Nearly a stairway to heaven’ — severe dichromate intoxication in a young man. *Clinical Nephrology* 71, 338–341.
- Iwata K, Masuda M, Soejima K, Ohashi M (2009). Combination of electroconvulsive therapy with skin graft surgery for a schizophrenic patient with burns. *The Journal of ECT* 25, 210–212.
- Kashiwagi M, Hara K, Takamoto M, Kageura M, Matsusue A, Sugimura T, Kubo S (2009). An autopsy case of suicide by acetylene explosion: a case report. *Medicine, Science and the Law* 49, 132–135.
- Kidiyoor Y, Nayak VC, Devi V, Bakkannavar SM, Kumar GP, Menezes RG (2009). A rare case of myocardial infarction due to parathion poisoning. *Journal of Forensic and Legal Medicine* 16, 472–474.
- Klausz G, Róna K, Kristóf I, Toro K (2009). Evaluation of a fatal propofol intoxication due to self administration. *Journal of Forensic Legal Medicine* 16, 287–289.
- Kobayashi M, Mellen PF (2009). Rubber bullet injury: case report with autopsy observation and literature review. *American Journal of Forensic Medicine and Pathology* 30, 262–267.
- Koller MF, Schmid M, Iten PX, Vonlanthen B, Bar W (2009). Fatal intoxication with naftidrofuryl. *Legal Medicine* 11, 229–233.
- Kumar A (2009). Fatality due to sodium fluoride ingestion — suicide or accident? *Journal of Canadian Society of Forensic Science* 42, 69–74.
- Ladd MV, Luiselli JK, Baker L (2009). Continuous access to competing stimulation as intervention for self-injurious skin picking in a child with Autism. *Child and Family Behavior Therapy* 31, 54–60.
- Lee H-Y, Song S-Y, Lee S-H, Lee S-Y, Kim S-H, Ryu S-W (2009). Vasogenic edema in striatum following ingestion of glufosinate-containing herbicide. *Journal of Clinical Neuroscience* 16, 1372–1373.

- Martinez MA, Ballesteros S (2009). Toxicological findings in two planned complex suicide cases: ingestion of petroleum distillates and subsequent hanging. *Journal of Analytical Toxicology* 33, 336–342.
- Michiue T, Ishikawa T, Zhao D, Kamikodai Y, Zhu B-L, Maeda H (2009). Pathological and biochemical analysis of the pathophysiology of fatal electrocution in five autopsy cases. *Legal Medicine* 11, S549–S552.
- Novikova N, Chitnis M, Linder V, Hofmeyr GJ (2009). Atypical antipsychotic (clozapine) self-poisoning in late pregnancy presenting with absent fetal heart rate variability without acidosis and delayed peristalsis in the newborn baby: a case report. *Australian and New Zealand Journal of Obstetrics and Gynaecology* 49, 442–424.
- Ozcan O, Selimo lu MA (2009). Self-injury behavior in an adolescent with Wilson's disease. *European Child and Adolescent Psychiatry*. Published online: 17 June 2009. doi: 10.1007/s00787-009-0040-9.
- Pai HS, Parikshit S, Pai GS (2009). Attempted suicide or homicide: skin reveals a clue. *International Journal of Dermatology* 48, 786–787.
- Palitz S, Oquendo MA, Sher L (2009). A high lethality suicide attempt in a patient with unrecognized bipolar disorder: a case report. *International Journal on Disability and Human Development* 8, 75–77.
- Paulzen M, Hiemke C, Gründer G (2009). Plasma levels and cerebrospinal fluid penetration by duloxetine in a patient with a non-fatal overdose during a suicide attempt. *International Journal of Neuropsychopharmacology*. Published online: 6 August 2009. doi: 10.1017/S1461145709990484.
- Raja M, Azzoni A (2009). Suicidal ideation induced by episodic cannabis use. *Journal of Medical Case Reports*. Published online: 11 June 2009. doi: 10.1155/2009/321456.
- Santos O, Restrepo JC, Velasquez L, Castano J, Correa G, Sepulveda E, Yepes N, Hoyos S, Guzman C, Osorio G, Cardenas A (2009). Acute liver failure due to white phosphorus ingestion. *Annals of Hepatology* 8, 162–165.
- Schrom T, Amm S (2009). Unusual case of oesophageal foreign body as part of a self-harm syndrome. *Laryngo-Rhino-Otologie* 88, 253–256.
- Seeman MV (2009). Suicide among women with schizophrenia spectrum disorders. *Journal of Psychiatric Practice* 15, 235–242.
- Shadnia S, Soltaninejad K (2009). Spontaneous ignition due to intentional acute aluminum phosphide poisoning. *Journal of Emergency Medicine*. Published online: 23 July 2009. doi: 10.1016/j.jemermed.2009.05.028.
- Shetty BSK, Babu YPR, Sameer KSM, Salian PR, Shetty M, Manipady S, Majumdar KP (2009). 'Rib betrays heart' — a case report. *Legal Medicine* 11, 139–141.
- Shetty BSK, Padubidri JR, Shetty AJ, Bhandarkar AM, Shetty M (2009). 'Atypical suicidal' cut throat injury: a case report. *Journal of Forensic and Legal Medicine* 16, 492–493.
- Smyk D (2009). Crossbow injuries: a case report. *Journal of Forensic and Legal Medicine* 16, 343–345.
- Sonmez Ergun S, Ozturk K, Su O, Basar Gursoy E, Ugurad I, Yuksel G (2009). Delayed neuropathy due to organophosphate insecticide injection in an attempt to commit suicide. *Hand* 4, 84–87.
- Srisont S, Peonim AVMV, Chirachariyavej T (2009). An autopsy case report of suicide by multiple self-cutting and self-stabbing over the chest and neck. *Journal of the Medical Association of Thailand* 92, 861–864.

- Sung YF, Huang CT, Fan CK, Lin CH, Lin SP (2009). Avermectin intoxication with coma, myoclonus, and polyneuropathy. *Clinical Toxicology* 47, 686–688.
- Su-Yin A, Wong J, Wiegand T, Olson K (2009). Tretinoin overdose: a first case report. *Journal of Medical Toxicology* 5, 73–75.
- Tayyem R, Siddiqui T, Musbahi K, Ali A (2009). Gastric stricture following zinc chloride ingestion. *Clinical Toxicology* 47, 689–690.
- Tiger JH, Fisher WW, Boussein KJ (2009). Therapist and self monitored dro contingencies as a treatment for the self-injurious skin picking of a young man with Asperger Syndrome. *Journal of Applied Behavior Analysis* 42, 315–319.
- Yang PW, Lin KH, Lo SH, Wang LM, Lin HD (2009). Successful treatment of severe lactic acidosis caused by a suicide attempt with a Metformin overdose. *Kaohsiung Journal of Medical Sciences* 25, 93–99.
- Yamasaki S, Takase I, Takada N, Nishi K (2009). Measurement of force to obstruct the cervical arteries and distribution of tension exerted on a ligature in hanging. *Legal Medicine* 11, 175–180.
- Yeh Y-W, Kuo S-C, Chen C-Y, Huang S-Y (2009). Hyperventilation with acute respiratory alkalosis veils an unusual suicidal attempt. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*. Published online: 26 August 2009. doi: 10.1016/j.pnpbp.2009.08.010.
- Yilmaz Y, Armagan E, Olmez OF, Esen M, Alkis N, Dolar E (2009). Acute arsenic self-poisoning for suicidal purpose in a dentist: a case report. *Human and Experimental Toxicology* 28, 63–65.
- Zoja R, Battistini A, Gentile G (2009). Death with complete decapitation: report of four suicides by train. *American Journal of Forensic Medicine and Pathology* 30, 303–306.
- Zorrilla P, Morales C, Gomez LA, Salido JA (2009). Intravenous and subcutaneous injection of mercury: an unusual self-injury. *Journal of Trauma* 66, e32–e33.

MISCELLANEOUS

- Adam J (2009). Welsh lessons. *Mental Health Today* 9, 10–11.
- Anonymous (2009). Suicide watch. *Nursing Standard* 23, 28–29.
- Anonymous (2009). Wrongful death: correct HIV test results may have prevented man's suicide. *AIDS Policy and Law* 24, 5–5.
- Baldwin S, Griffiths P (2009). Do specialist community public health nurses assess risk factors for depression, suicide, and self-harm among South Asian mothers living in London? *Public Health Nursing* 26, 277–289.
- Bell Jr. I (2009). A perspective on soldier suicide. *Psychiatry* 6, 4–4.
- Besag FM (2009). Is suicidality serious? *Current Drug Safety* 4, 95–96.
- Birbal R, Maharajh HD, Birbal R, Clapperton M, Jarvis J, Ragoonath A, Uppalapati K (2009). Cybersuicide and the adolescent population: challenges of the future? *International Journal of Adolescent Medicine and Health* 21, 151–159.
- Blasco-Fontecilla H, Lopez-Castroman J, Gomez-Carrillo A, Baca-Garcia E (2009). Towards an evolutionary framework of suicidal behavior. *Medical Hypotheses*. Published online: 5 June 2009. doi: 10.1016/j.mehy.2009.05.008.
- Bostwick JM (2009). Commentary on 'Distinguishing among irrational suicide, rational suicide, and other forms of hastened death: implications for clinical practice' (by Cavin P. Leeman). *Psychosomatics* 50, 192–193.
- Brendel RW (2009). Commentary on 'Distinguishing among irrational suicide, rational suicide, and other forms of hastened death: implications for clinical practice' (by Cavin P. Leeman). *Psychosomatics* 50, 193–194.
- Bridges FS, Kunselman JC (2009). Comment on Zekeri (2007). *Psychological Reports* 104, 418–420.
- Byford S, Barrett B, Aglan A, Harrington V, Burroughs H, Kerfoot M, Harrington RC (2009). Lifetime and current costs of supporting young adults who deliberately poisoned themselves in childhood and adolescence. *Journal of Mental Health* 18, 297–306.
- Cardone R, Amore M, Pompili M, Ciampalini S, De Feo A, Fotaras M, Colonna A, Leomporra G, Cannizzaro G, Ghirardini A (2009). Suicide in the national protocol for monitoring sentinel events. *Annali dell'Istituto Superiore di Sanita* 45, 205–212.
- Chang H-J, Lin C-C, Chou K-R, Ma W-F, Yang C-Y (2009). Chinese version of the positive and negative suicide ideation: instrument development. *Journal of Advanced Nursing* 65, 1485–1496.
- Chavez-Hernandez AM, Lenaars AA, Chavez-de Sanchez MI, Leenaars L (2009). Suicide notes from Mexico and the United States: a thematic analysis. *Salud Pública de México* 51, 314–320.
- Christianson CL, Everall R (2009). Breaking the silence: school counsellors' experiences of client suicide. *British Journal of Guidance and Counselling* 37, 157–168.
- Clayton M (2009). Suicide in the works of Aelfric. *Review of English Studies* 60, 339–370.
- Connor J, Rueter M (2009). Predicting adolescent suicidality: comparing multiple informants and assessment techniques. *Journal of Adolescence* 32, 619–631.
- Conrad AK, Jacoby AM, Jobs DA, Lineberry TW, Shea CE, Arnold Ewing TD, Schmid PJ, Ellenbecker SM, Lee JL, Fritsche K, Grenell JA, Gehin JM, Kung S (2009). A psychometric investigation of the suicide status form II with a psychiatric inpatient sample. *Suicide and Life-Threatening Behavior* 39, 307–320.

- Conrad KJ, Bezruczko N, Chan YF, Riley B, Diamond G, Dennis ML (2009). Screening for atypical suicide risk with person fit statistics among people presenting to alcohol and other drug treatment. *Drug and Alcohol Dependence*. Published online: 12 September 2009. doi: 10.1016/j.drugalcdep.2009.07.023.
- Cooke E, James V (2009). A self-harm training needs assessment of school nurses. *Journal of Child Health Care* 13, 260–274.
- Coric V, Stock EG, Pultz J, Marcus R, Sheehan DV (2009). Sheehan Suicidality Tracking Scale (Sheehan-STs): preliminary results from a multicenter clinical trial in generalized anxiety disorder. *Psychiatry (MMC)* 6, 26–31.
- Dolgin E (2009). Epigenetic suicide note. *Scientist* 23, 18–19.
- Dumesnil H, Verger P (2009). Public awareness campaigns about depression and suicide: a review. *Psychiatric Services* 60, 1203–1213.
- Edelstein BA, Heisel MJ, McKee DR, Martin RR, Koven LP, Duberstein PR, Britton PC (2009). Development and psychometric evaluation of the reasons for living — older adults scale: a suicide risk assessment inventory. *Gerontologist*. Published online: 21 June 2009. doi: 10.1093/geront/gnp052.
- Elwood T (2009). A Pirandellian perspective on suicide. *International Quarterly of Community Health Education* 29, 3–21.
- Exner CJ, Ayala GU (2009). Organophosphate and Carbamate intoxication in La Paz, Bolivia. *Journal of Emergency Medicine* 36, 348–352.
- Farrelly T, Francis K (2009). Definitions of suicide and self-harm behavior in an Australian Aboriginal community. *Suicide and Life-Threatening Behavior* 39, 182–189.
- Föllmer M (2009). Suicide and crisis in Weimar Berlin. *Central European History* 42, 195–221.
- Freckelton SCI (2009). Compensability for suicide: a causation dilemma. *Psychiatry Psychology and Law* 16, s1-s2.
- Frottier P, Koenig F, Seyringer M, Matschnig T, Fruehwald S (2009). The distillation of ‘VISCI’: towards a better identification of suicidal inmates. *Suicide and Life-Threatening Behavior* 39, 376–385.
- Gangwisch JE, Jacobson CM (2009). New perspectives on assessment of suicide risk. *Current Treatment Options in Neurology* 11, 371–376.
- Gau SS, Chen CH, Lee CT, Chang JC, Cheng AT (2009). Development of a Chinese version of the suicide intent scale. *Suicide and Life-Threatening Behavior* 39, 332–342.
- Grieg J (2009). Suicide psychology — letter. *New Scientist* 201, 24–24.
- Gutierrez PM (2009). Suicidal thoughts: essays on self-determined death. *American Journal of Psychiatry* 166, 1069–1072.
- Gutierrez PM, Osman A (2009). Getting the best return on your screening investment: an analysis of the Suicidal Ideation Questionnaire and Reynolds Adolescent Depression Scale. *School Psychology Review* 38, 200–217.
- Hampson NB, Rudd RA, Hauff NM (2009). Increased long-term mortality among survivors of acute carbon monoxide poisoning. *Critical Care Medicine* 37, 1941–1947.
- Harris KM, McLean JP, Sheffield J (2009). Examining suicide-risk individuals who go online for suicide-related purposes. *Archives of Suicide Research* 13, 264–276.
- Hatcher S, Sharon C, Coggan C (2009). Beyond randomized controlled trials in attempted suicide research. *Suicide and Life-Threatening Behavior* 39, 396–407.
- Hatcher SS (2009). Deliberate indifference in jail suicide litigation: a fatal judicial loophole. *Social Work in Public Health* 24, 401–413.
- Haw C (2009). Dementia: suicide by drowning. *British Journal of Psychiatry* 194, 563–564.

- Hermes B, Deakin K, Lee K, Robinson S (2009). Suicide risk assessment: 6 Steps to a better instrument. *Journal of Psychosocial Nursing and Mental Health Services* 47, 44–49.
- Hicks DW (2009). Comment on ‘Distinguishing among irrational suicide, rational suicide, and other forms of hastened death: implications for clinical practice’ (by Cavin P. Leeman). *Psychosomatics* 50, 194–195.
- Hitosugi M, Nagai T, Tokudome S (2009). Proposal of new ICD code for suicide by charcoal burning. *Journal of Epidemiology and Community Health* 63, 862–863.
- Hokans KD, Lester D (2009). Anger and hopelessness in suicide notes: a preliminary study. *Psychological Reports* 104, 608–608.
- Horne O, Csipke E (2009). From feeling too little and too much, to feeling more and less? A non-paradoxical theory of the functions of self-harm. *Qualitative Health Research* 19, 655–657.
- Ingram A (2009). From sin to insanity: suicide in early modern Europe. *Eighteenth-Century Studies* 42, 630–631.
- Latimer S, Covic T, Cumming SR, Tennant A (2009). Psychometric analysis of the Self-Harm Inventory using Rasch modelling. *BMC Psychiatry* 9, 53.
- Leeman CP (2009). Distinguishing among irrational suicide and other forms of hastened death: implications for clinical practice. *Psychosomatics* 50, 185–191.
- Liang BA (2009). Responsibility for anesthesiologist suicide relating to drug abuse. *Journal of Clinical Anesthesia* 21, 135–136.
- Karacay Cakmak H, Altuntas N (2009). Reconsidering gender inequality and honour suicide within the frame of different liberal theories: Turkey-batman case. *Muslim World Journal of Human Rights* 5, 4.
- Klonsky ED, Glenn CR (2009). Assessing the functions of non-suicidal self-injury: Psychometric properties of the Inventory of Statements about Self-injury (ISAS). *Journal of Psychopathology and Behavioral Assessment* 31, 215–219.
- Lang M, Uttaro T, Caine E, Carpinello S, Felton C (2009). Implementing routine suicide risk screening for psychiatric outpatients with serious mental disorders: II. Quantitative results. *Archives of Suicide Research* 13, 169–177.
- Macdonald CJH (2009). The anthropology of suicide. Interpretation or explanation? *Homme* 191, 201–209.
- Mahal SK, Chee CB, Lee JC, Nguyen T, Woo BK (2009). Improving the quality of suicide risk assessments in the psychiatric emergency setting: physician documentation of process indicators. *Journal of the American Osteopathic Association* 109, 354–358.
- McCarthy L, Gijbels H (2009). An examination of emergency department nurses’ attitudes towards deliberate self-harm in an Irish teaching hospital. *International Emergency Nursing*. Published online: 30 July 2009. doi: 10.1016/j.ienj.2009.05.005
- McCarthy MJ (2009). Internet monitoring of suicide risk in the population. *Journal of Affective Disorders*. Published online: 12 September 2009. doi: 10.1016/j.jad.2009.08.015.
- Mead J (2009). Application of article 2 to patient suicides: Savage v South Essex partnership nhs foundation trust (House of Lords. 10/12/08). *Clinical Risk* 15, 85–86.
- Meyer H (2009). Lives in the balance. *Medical Economics* 86, 12–14.
- Mills PD, Bagian JP (2009). Response to Tishler and Reiss’ review of inpatient suicide. *General Hospital Psychiatry*. Published online: 23 July 2009. doi:10.1016/j.genhosppsych.2009.06.003.
- Miret M, Nuevo R, Ayuso-Mateos JL (2009). Documentation of suicide risk assessment in clinical records. *Psychiatric Services* 60, 994–994.

- Misson H, Mathieu F, Jollant F, Yon L, Guillaume S, Parmentier C, Raust A, Jausse I, Slama F, Leboyer M, Bellivier F, Courtet P (2009). Factor analyses of the Suicidal Intent Scale (SIS) and the Risk-Rescue Rating Scale (RRRS): toward the identification of homogeneous subgroups of suicidal behaviors. *Journal of Affective Disorders*. Published online: 12 June 2009. doi: 10.1016/j.jad.2009.05.012.
- Moore S, Cooney J (2009). Potential limitations in generalizing findings from the TORDIA study. *American Journal of Psychiatry* 166, 935–936.
- Nair S, Jacob J, Aaron S, Thomas M, Joseph M, Alexander M (2009). Pulmonary distress following attempted suicidal hanging. *Indian Journal of Medical Sciences* 63, 53–57.
- Naud H, Daigle MS (2009). Predictive validity of the Suicide Probability Scale in a male inmate population. *Journal of Psychopathology and Behavioral Assessment*. Published online: 2 September 2009. doi: 10.1007/s10862-009-9159-8.
- O'Meara P (2009). Suicide and the body politic in imperial Russia. *Slavonic and East European Review* 87, 362–363.
- Palermo GB (2009). The ubiquity of murder-suicide. *International Journal of Offender Therapy and Comparative Criminology* 53, 495–496.
- Perry AE, Olaso DT (2009). A new psychometric instrument assessing vulnerability to risk of suicide and self-harm behaviour in offenders: suicide concerns for offenders in prison environment (SCOPE). *International Journal of Offender Therapy and Comparative Criminology* 53, 385–400.
- Peteet JR, Meyer F, deLima Thomas J, Vitagliano HL (2009). Psychiatric indications for admission to an inpatient palliative care unit. *Journal of Palliative Medicine* 12, 521–524.
- Pettit JW, Garza MJ, Grover KE, Schatte DJ, Morgan ST, Harper A, Saunders AE (2009). Factor structure and psychometric properties of the Modified Scale for Suicidal Ideation among suicidal youth. *Depression and Anxiety* 26, 769–774.
- Power L, Morgan S, Byrne S, Boylan C, Carthy A, Crowley S, Fitzpatrick C, Guerin S (2009). A pilot study evaluating a support programme for parents of young people with suicidal behaviour. *Child and Adolescent Psychiatry and Mental Health* 3, 20–28.
- Purandare N, Voshaar RCO, Rodway C, Bickley H, Burns A, Kapur N (2009). Dementia: suicide by drowning — reply. *British Journal of Psychiatry* 194, 564–564.
- Ramgoon S, Patel CJ, Paruk Z (2009). Preliminary validation of the Multi-Attitude Suicide Tendency (MAST) scale using a South African adolescent sample. *Journal of Child and Adolescent Mental Health* 21, 39–45.
- Robinson V (2009). A cry for help. *Nursing Standard* 23, 26–27.
- Salib E (2009). Dementia: suicide by drowning. *British Journal of Psychiatry* 194, 562–563.
- Sarma K, Griffin D, Kola S (2009). Firearm-assisted suicide: legislative, policing and clinical concerns. *Journal of Forensic and Legal Medicine*. Published online: 19 August 2009. doi: 10.1016/j.jflm.2009.07.009.
- Sauvageau A, Godin A, Desnoyers S, Kremer C (2009). Six-year retrospective study of suicidal hangings: determination of the pattern of limb lesions induced by body responses to asphyxia by hanging. *Journal of Forensic Sciences* 54, 1089–1092.
- Schwarz JK (2009). Stopping eating and drinking: this is one option for 'decisionally capable' adults who wish to hasten dying. What are the ethical and legal implications for nurses? *American Journal of Nursing* 109, 52–61.
- Sher L (2009). A model of suicidal behavior in war veterans with posttraumatic mood disorder. *Medical Hypotheses* 73, 215–219.

- Simon RI (2009). Suicide risk assessment forms: form over substance? *Journal of the American Academy of Psychiatry and the Law* 37, 290–293.
- Smith E (2009). TORDIA: unique opportunity to explore half-life theory. *American Journal of Psychiatry* 166, 936–937.
- Steinberg MD (2009). Comment on: ‘Distinguishing among irrational suicide, rational suicide, and other forms of hastened death: implications for clinical practice’ (Psychosomatics 50, 185–91, 2009). *Psychosomatics* 50, 195–197.
- Szumilas M, Kutcher S (2009). Teen suicide information on the internet: a systematic analysis of quality. *Canadian Journal of Psychiatry* 54, 596–604.
- Tabano C (2009). ‘Nother one for Narcan’. *JEMS: Journal of Emergency Medical Services* 34, 20–20.
- Timmermann G, Acs N, Bánhidly F, Czeizel AE (2009). Congenital abnormalities of 88 children born to mothers who attempted suicide with phenobarbital during pregnancy: the use of a disaster epidemiological model for the evaluation of drug teratogenicity. *Pharmacoepidemiology and Drug Safety* 18, 815–825.
- Tishler C, Reiss N (2009). Response to Mills et al. regarding Tishler and Reiss’ Review of inpatient suicide. *General Hospital Psychiatry*. Published online: 22 July 2009. doi: 10.1016/j.genhosppsy.2009.06.003.
- Titscher A, Lumenta DB, Belke V, Kamolz L, Frey M (2009). A new diagnostic tool for the classification of patients with self-inflicted burns (SIB): the SIB-Typology and its implications for clinical practice. *Burns* 35, 733–737.
- Thompson P (2009). Suicide psychology — letter. *New Scientist* 201, 24–24.
- Tournier M, Grolleau A, Cougnard A, Verdoux H, Molimard M (2009). The prognostic impact of psychotropic drugs in intentional drug overdose. *Pharmacopsychiatry* 42, 51–56.
- Weiss H (2009). Suicidality as an expression of ‘psychic retreats’: some clinical and theoretical aspects. *Psychoanalytic Psychotherapy* 23, 99–108.
- Wu P-C (2009). Differential functioning of the Chinese version of beck depression inventory-ii in adolescent gender groups: use of a multiple-group mean and covariance structure model. *Social Indicators Research*. Published online: 28 May 2009. doi: 10.1007/s11205-009-9491-0.
- Zayas LH, Hausmann-Stabile C, Pilat AM (2009). Recruiting urban Latina adolescents and their families: challenges and lessons learned in suicide attempts research. *Youth & Society* 40, 591–602.

