

SUICIDE PREVENTION STRATEGIES – A BRIEF REVIEW

Zoltán Rihmer¹, Zsuzsa Kántor¹, Annamária Rihmer², Krisztina Seregi¹

¹National Institute for Psychiatry and Neurology, Budapest

²Clinic for Psychiatry and Psychotherapy at the Semmelweis Medical University, Budapest

Érkezett: 2004.10.1.

Elfogadva: 2004.11.20.

AZ ÖNGYILKOSSÁG MEGELŐZÉSI STRATÉGIÁJA

Mint ahogy az öngyilkosság egy rendkívül komplex, multikauzális humán jelenség, megelőzése is komplexitást igényel. A suicid magatartás előrejelzése az átlag populáció szintjén igen nehéz feladat. Könnyebb azonban a meghatározott mentális zavarban szenvedő páciensek körében, hiszen az öngyilkosságot elkövetők legtöbbszörnek felismerhető és kezelhető pszichiátriai betegsége van. A cikk áttekinti a legfontosabb biológiai és egyéb öngyilkossági prevenciósi stratégiákat.

KULCSSZAVAK: öngyilkosság, pszichiátriai betegségek, megelőzési stratégiák

SUMMARY

Since suicide is a very complex, multicausal human behaviour, its prevention should also be complex. The prediction of suicide is very difficult at the level of the general population, but it is much easier among patients with certain mental disorders, because most persons who kill themselves have diagnosable and treatable psychiatric disorders. This article reviews the most important biological and non-biological suicide prevention strategies.

KEYWORDS: suicide, psychiatric disorders, prevention strategies

SUICIDE AND THE HEALTH CARE SYSTEM

In spite of the fact that the lifetime prevalence of major mood disorders (unipolar and bipolar forms combined), the main causes of suicide in the general population are around 20%, they remain extremely underreferred, underdiagnosed and undertreated, particularly in primary care (Lecrubier 1998, Hawton et al. 2000, Wasserman 2000, Rutz 2001) and in general medical settings (Hawton et al. 2000, Wasserman 2000, Dhossche et al. 2001). Moreover, the rate of adequate antidepressant therapy among depressed suicide attempters and among depressed suicide victims is only between 10% and 16%, which is also disproportionally low (Oquendo et al. 1999, Hawton et al. 2000, Isacson 2000, Dhossche et al. 2001, Henriksson et al. 2001, Rihmer et al. 2002a).

Between 16 and 40% of consecutive suicide victims contact their general practitioners (GPs) and 9–11% of them visit their psychiatrists 1 week before their deaths, and the rates of medical contact with GPs and psychiatrists 4 weeks preceding suicide is 34–66% and 18–21%, respectively (Pirkis et al. 1998, Andersen et al. 2000, Hawton et al. 2000).

The rate of (most untreated) major mood disorders among consecutive suicide victims is 60–85% (Hawton et al. 2000, Wasserman 2000, Henriksson et al. 2001, Rihmer et al. 2002a,b). Out of the different major mood disorder subgroups (unipolar major depression, bipolar I and bipolar II disorder) bipolar (and particularly bipolar II) patients are at the highest risk of attempted and completed suicide (Rihmer et al. 2002b).

Since more than 90% of suicide victims have (mostly unrecognized and untreated) Axis I major mental disorder (mainly major depression) at the time of suicide (Hawton et al. 2000, Wasserman 2000, Dhossche et al. 2001, Henriksson et al. 2001, Rihmer et al. 2002a), but they frequently contact health care services some weeks before their deaths (Pirkis et al. 1998, Andersen et al. 2000, Rutz 2001), psychiatrists and other health care workers play a priority role in suicide prevention. They should focus primarily (but not exclusively) on the early recognition and adequate treatment of mental disorders, which would also be an ideal target even if the fact suicide were unknown. However, because health care workers can help only those persons who contact them,

public education on the symptoms and complications of mental disorders is also very important.

In the process of suicide prevention, there are two main fields of competence/responsibility (health care and community leaders) and two major targets (high-risk groups and general population). They are listed in Table 1. It should be noted that the term "high-risk group" does not refer here only to those persons who are acutely suicidal (the correct term for these would be "extreme-risk persons"), but also to all major depressives and schizophrenics, whose rate is about 80% among all suicide victims (Hawton et al. 2000, Wasserman 2000, Rihmer et al. 2002a). Targeting only those persons who are at acute suicide risk is frequently ineffective, because it is many times too late to make a successful intervention at his late stage.

Suicide behaviour does not usually occur in the early stages of depression and other major mental illnesses, and this offers some time for making a correct diagnosis and effective acute and long-term treatment. However, since the 6-month prevalence of major depression in the general population is around 5-7 percent (Lépine et al. 1997), it should be admitted that this target is too wide. The hierarchical classification of suicide risk factors (primary risk factors, such as depression, personal and family history of suicidal behaviour; secondary risk factors, such as unemployment, adverse

life events; and tertiary risk factors, such as male gender, old age, spring/early summer (Rihmer et al. 2002a,b) can help to narrow this target since primary suicide risk factors have the best predictive power.

STRATEGIES FOR SUICIDE PREVENTION

1. Competence/responsibility of health care

1.1. Patient-oriented perspective (i.e. targeting high-risk groups)

1.1.1. Elimination of acute suicide crisis. Although the elimination of acute suicide danger by all possible means is a common task for everyone, it is particularly the health care that persons with acute suicide risk should be identified and managed successfully.

1.1.1.1. Psychiatry emergency admissions. Persons with acute suicide risk related to severe mental disorder (e.g. depression, schizophrenia) or severe psychological crisis need urgent psychiatric hospitalization, close observation and promptly started intensive biological treatment in connection with supportive psychotherapy or crisis intervention (Hawton et al. 2000, Rutz 2001, Shaffer et al. 2001). The new generation of psychotropics (SSRI, SNRI and dual-action antidepressants, high-potency anxiolytics and atypical antipsycho-

Table 1. Suicide prevention strategies

1. Competence/responsibility of health care

1.1. Patient oriented perspective (i.e. targeting high-risk groups)

1.1.1. Elimination of acute suicide crisis

1.1.1.1. Psychiatric emergency crisis

1.1.1.2. Crisis centers and hotline (SOS) telephone services

1.1.2. Improving the diagnosis and treatment of mental disorders

1.1.2.1. Acute and prophylactic treatment of mental of mental disorders

1.1.2.2. Education of patients, relatives and health care workers

1.1.3. Aftercare of persons with high suicide risk

1.1.4. Focus on special subgroups: adolescents and old people

1.2. Public oriented perspective (i.e. targeting general population via media)

1.2.1. Decreasing negative attitudes regarding mental illness and suicide

1.2.2. Responsible media coverage

1.2.3. Education of the public on the symptoms and dangers of mental disorders, suicide risk factors and show successful cases

2. Competence/responsibility of community leaders (public oriented perspective)

2.1. Improve well-being of people in general (incl. decreasing unemployment)

2.2. Increase support for health and social care systems

2.3. More restrictive alcohol and drug policy

2.4. Decrease in the access of lethal suicide methods (domestic- and car-exhaust gas, guns etc)

tics) provide the possibility of an effective and safe treatment either for short or long-term. The low incidence of fatal toxicity of the newer psychotropics in overdose can also contribute to lowering suicide mortality.

1.1.1.2. Crisis centers and hotline (SOS) telephone services. Community oriented crisis intervention centers and hotline (SOS) telephone services are useful for identifying high-risk patients and to offer them appropriate treatment alternatives. However, gender preferences in seeking help result in the overrepresentation of females among callers, whereas males are at the highest risk for suicide (Rihmer 1996, Shaffer et al. 2001, Gould et al. 2001).

1.1.2. Improving the diagnosis and treatment of mental disorders

1.1.2.1. Acute and prophylactic treatment of mental disorders. Acute treatment studies and long-term (prophylactic) treatment of unipolar major depression and bipolar disorders by antidepressants, mood-stabilizers and antipsychotics substantially reduces the suicide morbidity (suicide attempts) and mortality even in this high-risk patients population. While successful acute treatment can only prevent suicide connected with the given depressive episode, it is adequate long-term therapy that can provide effective protection for a longer period of time (Kasper et al. 1996, Ahrens et al. 2001, Tondo et al. 2001, Angst et al. 2002). Particularly lithium seems to exert a specific anti-suicidal effect, since a significant reduction in suicide attempts has been found either in responders or in nonresponders to prophylactic lithium therapy in suicidal patients with recurrent affective illness (Ahrens et al. 2001).

Psychoeducation and adjunctive psychotherapy improves the compliance and further decrease the suicide risk among bipolar patients with long-term (prophylactic) pharmacotherapy (Rucci et al. 2002).

1.1.1.2. Education of patients, relatives and health care workers. Education of patients and their relatives on the origin and treatment of mental disorders as well as on suicide risk factors increases the patients' compliance. On the other hand, the training of health care professionals (especially GPs and nonpsychiatrist medical doctors) on the recognition, referral and appropriate acute and long-term treatment of mental disorders (most importantly depression) is also an important part of suicide prevention (Rihmer 1996, Hawton et al. 2000, Wasserman 2000, Gould et al. 2001, Rutz 2001, Shaffer et al. 2001).

Since this strategy is useful primarily in preventing depression-related female suicides (Rihmer 1996, Rutz 2001), suicide prevention could be further improved by diagnosing better and treating more effectively male depression, which is often masked with abusive, risk-taking and impulsive behaviour as well as aggressive features (Wasserman 2000, Rutz 2001).

1.1.3. After-care of persons with high suicide risk

The suicide risk of psychiatric patients is especially high shortly after hospital discharge (Appleby et al. 1999, Andersen et al. 2000, Hawton et al. 2000, Wasserman 2000, King et al. 2001) and lacking or reduced after-care is among main contributing factors to this (Appleby et al. 1999, King et al. 2001). Continuing psychiatric contact (i.e. regular after-care, including both pharmacotherapy and psychotherapy) reduces suicide mortality (King et al. 2001).

Patients with major psychiatric disorders and all suicide attempters should be the candidates for regular follow-up with a fixed after-care appointment. However, a systematic programme of contact (regular letters) with individuals who had made suicide attempts but refused to remain in the health care system also showed a significant suicide preventive effect, at least for some years (Motto et al. 2001).

1.1.4. Focus on special subgroups: adolescents and old people

1.1.4.1. Adolescents. Since curriculum-based suicide awareness programmes can disturb some high risk students, a safer method might be to focus on the clinical characteristics of depression and other mental disorders with high suicide risk (Hawton et al. 2000, Wasserman 2000, Gould et al. 2001, Shaffer et al. 2001). School-wide screening programmes, focusing on depression, alcohol and other substance use disorders, followed by a second-stage evaluation (Hawton et al. 2000, Gould et al. 2001) as well as "gate-keeper training" (e.g. teachers, counsellors, pediatricians, clergy, policemen) are also effective (Hawton et al. 2000, Gould et al. 2001).

1.1.4.2. Old people. The rates of (untreated) depressive disorders and the medical contact few weeks before death is the highest among suicide victims over 65 years of age (Hawton 2000, Pearson et al. 2000, Wasserman 2000), which markedly underlines the role of recognition and treatment of depression in this age cohort. Systematic monitoring of physical and psychic health (i.e. annual physical and mental examination of all old

patients by their GPs), better social support and telephone helpline and emergency response service (e.g. TeleHelp-TeleCheck Service) can reduce suicide mortality among old people even for a long period time (Hawton et al. 2000, De Leo et al. 2002).

1.2. Public oriented perspective (i.e. targeting general population via media)

1.2.1. Mass media offers the best possibility for opinion leader suicidologists to make a public education resulting in decreasing negative attitudes regarding mental illness and suicide. The role of media in the education of the public (including community leaders) on the symptoms, dangers and economic consequences as well as on the treatable nature of major mental disorders is extremely important.

1.2.2. Since irresponsible and sensational media reporting of suicide may contribute to precipitating or inducing suicide, particularly among adolescents (Hawton et al. 2000, Wasserman 2000, Gould et al. 2001, Shaffer et al. 2001), responsible and professional media coverage (i.e. to avoid sensational journalism, to escape glorifying, martyrification or mystification of suicide, no detailed description of suicide method used, and focusing on the treatable nature of mental disorders and preventable nature of suicide) reduces the contagion effect of media (Hawton et al. 2000, Wasserman 2000).

1.2.3. Education of the public via media on the symptoms, complications and treatable nature of mental disorders and psychological crises as well as on the suicide risk factors and high risk groups is also beneficial. It is also important to offer treatment possibilities and to show successful examples indicating that suicide is preventable in

many cases (Hawton et al. 2000, Wasserman 2000).

2. Competence/responsibility of community leaders (public oriented perspective)

As psychosocial and community factors also play an important role in suicide, it is not only health care workers that are responsible for its prevention. To improve the well-being of people in general (including decreasing unemployment and providing more support for health and social services), to restrict lethal suicide methods (e.g. to reduce domestic and car exhaust gas toxicity and to introduce stricter laws on gun control) and to initiate more restrictive alcohol policies, which also reduce suicide mortality (Hawton et al. 2000, Wasserman 2000, Gould et al. 2001, Shaffer et al. 2001, Rihmer et al. 2002-a), these already exceed the limits of the health care and are rather the leaders' competence and responsibility at any level of the society.

We are, of course, unable to prevent all suicides. Nevertheless our theoretical knowledge and the available treatment and preventive strategies are sufficient to prevent many, probably most of them.

Correspondence to
Dr. Zoltán Rihmer, MD, PhD
Director and Head In- and Outpatient
Department of Psychiatry No III,
National Institute for Psychiatry and Neurology,
Budapest, Hungary
H1281 Budapest 27, Pf. 1, Hungary
Tel: (361) 391-5353
Fax: (361) 200-0770
e-mail: rihmer.z@opni.hu

REFERENCES

- Ahrens B, Müller-Oerlinghausen B. Does lithium exert an independent antisuicidal effect? *Pharmacopsychiatry* 2001; 34: 132-136.
- Andersen UA, Andersen M, Rosholm JU, et al. Contacts to the health care system prior to suicide: a comprehensive analysis using registers for general and psychiatric hospital admissions, contacts to general practitioners and practising specialists and drug prescriptions. *Acta Psychiatr Scand* 2000; 102: 126-134.
- Angst F, Stassen HH, Clayton PJ et al. Mortality of patients with mood disorders: follow-up over 34-38 years. *Journal of Affective Disorders* 2002; 68: 167-181.
- Appleby L, Dennehy JA, Thomas CS, et al. Aftercare and clinical characteristics of people with mental illness who commit suicide: a case-control study. *Lancet* 1999; 353: 1397-1400.
- DeLeo D, Dello Buono M, Swyer J. Suicide among the elderly: the long-term impact of a telephone support and assessment intervention in northern Italy. *British Journal of Psychiatry* 2002; 181: 226-229.
- Dhossche DM, Ulusarac A, Syed W. A retrospective study of general hospital patients who commit suicide shortly after being discharged from the hospital. *Archives of Internal Medicine* 2001; 161: 991-994.
- Gould MS, Kramer RA. Youth suicide prevention. *Suicide and Life-Treating Behavior* 2001; 31 (Supplement): 6-31.
- Hawton K, van Heeringen C, (Editors). *International handbook of suicide and attempted suicide*. Chichester: John Wiley and Sons, 2000.
- Henriksson S, Boëthius G, Isacson G. Suicides are seldom prescribed antidepressants: findings from a prospective prescription database in Jämtland county, Sweden, 1985-95. *Acta Psychiatrica Scand* 2001; 103: 301-306.

- Isacsson G. Suicide prevention – a medical breakthrough? *Acta Psychiatrica Scand* 2000; 102: 113-117.
- Kasper S, Schindler S, Neumeister A. Risk of suicide in depression and its implication for psychopharmacological treatment. *Int Clinical Psychopharmacology* 1996; 11: 71-79.
- King EA, Baldwin DS, Sinclair JMA, et al. The Wessex recent in-patient suicide study, I. Case-control study of 234 recently discharged psychiatric patient suicides. *British Journal of Psychiatry* 2001; 178: 531-536.
- Lecrubier Y. Is depression under-recognised and undertreated? *International Clinical Psychopharmacology* 1998; 13 (Suppl. 5): 3-6.
- Lépine J-P, Gastpar M, Mendlewicz J et al.: Depression in the community: the first pan-European study DEPRES (Depression Research in European Society). *Int Clinical Psychopharmacology* 1997; 12: 19-29.
- Motto JA, Bostrom AG. A randomised controlled trial of postcrisis suicide prevention. *Psychiatric Services* 2001; 52: 828-833.
- Oquendo MA, Malone KM, Ellis SP, et al. Inadequacy of antidepressant treatment for patients with major depression who are at risk for suicidal behavior. *American Journal of Psychiatry* 1999; 156: 190-194.
- Pearson JL, Brown GK. Suicide prevention in late life: directions for science and practice. *Clinical Psychology Review* 2000; 20: 685-705.
- Pirkis J, Burgess P. Suicide and recency of health care contacts. A systematic review. *British Journal of Psychiatry* 1998; 173: 462-474.
- Rihmer Z. Strategies of suicide prevention: Focus on health care. *Journal of Affective Disorders* 1996; 39: 83-91.
- Rihmer Z, Belső N, Kiss K. Strategies for suicide prevention. *Current Opinion in Psychiatry* 2002-a; 15: 83-87.
- Rihmer Z, Kiss K: Bipolar disorders and suicide risk. *Clinical Approaches in Bipolar Disorders* 2002-b; 1: 15-21.
- Rucci P, Frank E, Kostelnik B et al. Suicide attempts in patients with Bipolar I disorder during acute and maintenance phases of intensive treatment with pharmacotherapy and adjunctive psychotherapy. *American Journal of Psychiatry* 2002; 159: 1150-1164
- Rutz W. Preventing suicide and premature death by education and treatment. *Journal of Affective Disorders* 2001; 62: 123-129.
- Shaffer D, Pferre CR, Work Group on Quality Issues. Practice parameter for the assessment and treatment of children and adolescent with suicidal behavior. *Journal of American Academy of Child and Adolescent Psychiatry* 2001; 40 (Supplement 7): 24-51.
- Tondo L, Hennen J, Baldessarini RJ. Lower suicide risk with long-term lithium treatment in major affective illness: a meta-analysis. *Acta Psychiatrica Scand* 2001; 104: 163-172.
- Wasserman D, (Editor). *Suicide. An unnecessary death*. London: Martin Dunitz; 2000