

Can better recognition and treatment of depression reduce suicide rates? A brief review

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Summary – Depression, the major cause of suicide, is prevalent but an under-detected, underdiagnosed and, under-treated illness and it is particularly true for depressed suicide victims. However, several studies consistently show that successful treatment of depression not only relieves depressive symptoms, but also decreases and makes suicidality vanish. If the rate of treated depressions in the population increases gradually, at a given point it will appear in the decline of the suicide rates. Although absolute evidence is lacking at present, recent reports from some European countries strongly suggest that increasing utilisation of antidepressants is one of the most important contributing factors in the decrease in suicide rates. © 2001 Éditions scientifiques et médicales Elsevier SAS

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INTRODUCTION

Suicide attempts and particularly committed suicides rank among the most tragic events of life, causing serious psychological distress among the relatives and friends of the victims, as well as great economic problems for the whole society. According to the World Health Organization, more than 800,000 deaths from suicide are recorded every year, and the number of persons who attempt suicide can be estimated at about 10 million [35]. Suicide is very complex human behaviour with multiple causes, including several biological and psychosocial components, and it is well recognised that among its risk factors, the most powerful is the previous suicide attempt(s) and/or the presence of major (i.e., DSM-IV Axis I) mental disorder [6, 12, 31]. Psychological autopsy studies from many countries consistently show that more than 90% of suicide victims have one or more Axis I psychiatric illnesses, and the

most common diagnosis is a major depressive episode (59–87%), while the rates of schizophrenia and substance use disorders are around 10% [6, 7, 12, 31]. On the other hand, recent literature reviews have shown that the lifetime risk of suicide for affective disorder is 6–15% [6, 13] and the possibility of dying by suicide in unipolar major depression and bipolar disorder is 20 and 15 times higher, respectively, than would be expected [7]. However, these types of studies can not make a clear distinction between treated and untreated depressives, and it is very possible that the suicide risk among untreated, inadequately treated and among non-compliant depressives is even higher.

DEPRESSION IS AN UNDER-REFERRED, UNDERDIAGNOSED AND UNDER-TREATED ILLNESS

In spite of the fact that the lifetime prevalence of (unipolar and bipolar) major depression in the popula

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tion is close to 20% [34, 36], it remains extremely under-referred, underdiagnosed and under-treated, particularly in primary care [9, 20, 31], and the rate of adequate antidepressant treatment among depressed suicide victims is also disturbingly low [15, 17, 26, 28].

The importance of better recognition and more appropriate treatment of depression in suicide prevention is underlined by the fact that 41–73% of consecutive suicide victims [2, 25] and 55–59% percent of consecutive depressed suicide victims [12, 17, 28] contact different levels of the health care system (mostly general practitioners [GP]) several days, weeks or months before their death. Considering the fact that psychotropic medications, and particularly antidepressants (as well as ECT) not only relieve depressive symptoms, but parallel with this also decrease or make suicidality vanish [19, 22] and that the suicide behaviour of affective disorder patients is extremely rare during the euthymic state [14], it is not surprising that expert clinical psychiatrists from different parts of the world strongly suggest that more widespread and more appropriate acute and long-term treatment of unipolar and bipolar depression is a key issue in suicide prevention [3, 4, 8, 15, 16, 19, 22, 26, 27]. Since the everyday clinical praxis clearly shows that successful acute and long-term treatment of major affective disorders substantially reduces the suicide morbidity and mortality in individual cases, and there are several long-term clinical studies showing the same on large samples of affective disorder patients [1, 3-5, 8, 18, 23], it is logical to assume that if the rate of treated depression in the population increases gradually, at a given point it will appear in the decline of the suicide rate. However, since the effect of a given (and effective) intervention largely depends on the baseline situation (i.e., the effect is greater when the baseline situation is more pathological), the role of better recognition and treatment of depression in reducing suicide rates can be easier to demonstrate in the populations where the suicide rate is high and the rate of treated depressions is low. Hungary, Sweden, Finland, and Denmark would be the best examples for this [16, 27]. On the other hand, in countries where suicide is rare and the rate of treated depression is also low, no significant effect would be expected. This speculation might be supported by the fact that there are no countries at present where the suicide rate is among the highest in the world and the rate of treated depressions is also very high.

Since the incidence of depression in the population shows an increasing tendency [36], ironically, no change

in the suicide rate means a relative improvement. The sometimes presented statement ('increasing use of antidepressants did not reduce suicide rates') is counter-productive, rather than a counter-argument.

CAN BETTER RECOGNITION AND TREATMENT OF DEPRESSION REDUCE SUICIDE RATES?

The first scientific suggestion that better and more widespread treatment of depression can reduce suicide mortality even on the level of the population comes from the Swedish Gotland study, which has demonstrated that after an intensive postgraduate training programme for GPs on the diagnosis and treatment of depression, a marked time-related decline in suicide rate emerged, and the prescription of antidepressants also increased substantially. The hospital admissions and days on sick leave for depression in the area served by trained GPs also decreased substantially, as well as the prescription of neuroleptics and benzodiazepines. These changes were statistically significant deviations both from the previous long-term trend on Gotland and from the trends in Sweden as a whole [32]. The rate of depressive suicides among all suicides decreased significantly after the training programme, indicating that the marked decrease in suicide rate of the Island of Gotland after the GPs' training resulted directly from a robust decrease in depressive suicides [24].

Recent Swedish epidemiological data based on nearly half a million depressed people also show that the risk for suicide among untreated depressive patients is almost twice as high as among treated depressives, in spite of the fact that the inclusion of inadequately treated and noncompliant patients in the treated group tends to obscure differences in suicide risk between drug-treated and untreated depressives [14].

Analyzing the Swedish statistics on suicide, use of antidepressants, unemployment and alcohol consumption between 1978 and 1996, Isacsson has found that a fivefold increase in the use of antidepressants was followed by a 25% decrease in the Swedish suicide rate, while unemployment and alcohol consumption did not correlate well with suicide rates. Moreover, he has also demonstrated a significant inverse correlation between the use of antidepressants and suicide rates in Denmark, Finland and Norway during 1990 and 1996 [16]. The main conclusion of Isacsson is that although his naturalistic study is not conclusive, markedly increased use of antidepressants might be one of the contributing factors to the decrease in suicide rate. He

also notes that “the increased use of antidepressants may also reflect various other aspects of improved diagnosis, pharmacological as well as non-pharmacological treatment and aftercare of depressed individuals, possibly as a result of purposeful educational projects” [16].

Our previous studies in Hungary were in accordance with the published international findings and showed that under-referral, under-diagnosis and undertreatment of unipolar depression and bipolar disorder [28, 29], as well as the high prevalence of these illnesses [19], were among the most important factors contributing to the high suicide mortality in Hungary.

The suicide rate of Hungary (which was the highest in the world until 1992) has shown a steady decline from 45.9 per 100,000 in 1984 to 32.1 in 1998, a fall of more than 30%. This decline was greater after 1990, when the rate was 39.9 per 100,000 and when the political and economic changes in Eastern Europe began. This marked decrease in suicide mortality of Hungary has happened in spite of the fact that between 1989 and 1996 there was a sixfold increase in unemployment (from 1.7–10.9%), a 25% rise in official estimates of alcoholism rates and a 21% increase in divorce. However, the number of outpatient psychiatric departments increased from 95 in 1982 to 136 in 1998, the number of psychiatrists has increased from 550 in 1986 to 850 in 1998, and the number of emergency (SOS) telephone services has also increased from 5 to 28 during the same period. More extensive medical training on depression and suicide was followed by a marked rise in the use of antidepressants (mainly selective serotonin reuptake inhibitors [SSRI] after 1990) from 2.6 DDD/1000 people/d in 1984 to 12.0 in 1998, which is an approximately fivefold increase. In other words, despite the adverse changes in key ‘social-psychiatric’ suicide risk factors, a fivefold rise in the use of antidepressants (which is a reflection of the widespread and improved care of psychiatric and particularly depressed patients) was followed by a 30% decline in the suicide rate in Hungary between 1984 and 1998 [27]. The fact that other former Communist countries showed either no substantial change or a substantial increase in their suicide rates after 1989, and several Western and Nordic European countries showed a marked decline in their suicide rates in the last 10–15 years [16, 21, 33] strongly supports the findings and conclusion of Isacson’s study [16].

However, since the suicide rates are affected by many other (social, cultural, climatic, etc.) factors, the precise isolation of the result of improved care for depression is

not easy. Since the seasonality of suicide (spring/early summer peak, winter low) in the population is believed to be the reflection of the seasonal nature of depressive suicides, analysis of seasonality of suicide may be a simple method to elucidate whether suicide figures in the population are significantly due to a high degree of untreated depression-related suicide or whether a decrease of suicide mortality in a region is primarily the consequence of a decrease of untreated depression and/or better antidepressive diagnostic and treatment strategies [30]. Analysing the seasonality of all suicide events on Gotland between 1981 and 1996, a marked and significant seasonality (spring peak, winter low) was found between 1981 and 1989, when the prescription of antidepressants was relatively low and stable. However, this significant seasonality disappeared in the period between 1990 and 1996, when the utilisation of antidepressants increased dramatically fivefold, indicating that many more depressed patients were pharmacologically treated [30]. Very similar results were published from Finland regarding the period between 1980 and 1995 [10], while the suicide rate declined and utilisation of antidepressants increased markedly in Finland [10, 16]. Our preliminary analysis of the seasonal occurrence of 68,699 suicide deaths in Hungary between 1981 and 1996 also shows a decreasing tendency in the seasonal variation [30].

CONCLUSION

Depression, the major cause of suicide, is a prevalent, but under-referred, underdiagnosed and under-treated illness. Since a small minority of depressed suicide victims are adequately treated, it is expected that more widespread treatment of depression reduces the number of suicide victims. If that is true, at a given point the result should appear in reducing suicide rates. Although not exactly proven, recent reports from some European countries strongly suggest that a huge increase in the use of antidepressants (which is the reflection of better treatment of psychiatric and particularly depressed patients) can contribute to the decrease in the suicide rates.

Considering the well-known great economic burden of untreated affective disorders, it should be noted that diagnosis and treatment of depression means less cost than what is otherwise lost.

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