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Review

Alliances against depression – A community based approach to target depression and to prevent suicidal behaviour

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ABSTRACT

Depressive disorders as well as fatal and non-fatal suicidal behaviour continue to be important mental health issues. Because of the close relation between depression and suicidal behaviour, it is likely that preventive actions improving care and optimising treatment for depressed patients result in a reduction of suicidal acts. This was shown in the *Nuremberg Alliance against Depression*, a two-year four-level community based intervention program associated with a 24% reduction of suicidal acts (completed and attempted suicides combined) compared to a baseline year and a control region. Serving as a model project, this approach has up to now been adopted in more than 100 regions in Germany and Europe. Within the suicide prevention project *OSPI-Europe*, the four-level-approach was optimized and further implemented and evaluated in different European regions.

Contents

1. Depression and suicidal behaviour as important mental health issues

In the past years, awareness of depressive disorders as a prevalent (point prevalence of about 5%) and often life threatening disease with outstanding medical and health economic impact has increased. Depression is associated with deep suffering and means a strong burden to the people affected. In high income countries, unipolar depression ranks first when considering the index "years lived with disability" (YLD) which takes into account the number of years affected in a certain population weighted with the severity of disability (Lopez et al., 2006; Collins et al., 2011). The negative impact of unipolar depression on somatic disorders such as cardiovascular disorders (Suls and Bunde, 2005; Pieper et al., 2008) as well as the high suicide rate associated with depression leads to a reduced life expectancy. About 90% of all suicides occur in the context of psychiatric disorders, of which the majority are depressive disorders (Mann et al., 2005; Yoshimasu et al., 2008).

According to the World Health Organization (WHO), worldwide approximately one million people die from suicide every year. The rate of attempted suicides is estimated to be about 10–20 times higher (WHO, 2003). Although suicide rates are

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consistently higher in males than in females, they differ remarkably throughout the various countries, ranging from 2.9 per 100.000 inhabitants in Greece to 30.6 per 100.000 in Lithuania (Eurostat, 2011). Recently, figures on death causes are investigated in more detail, taking into account the statistics on undetermined deaths. Country differences in the latter suggest that there are methodological uncertainties and inconsistencies in the statistical registration of suicides throughout different European countries (Värnik et al., 2008b, 2011).

Whereas in most countries suicide rates are highest for men in the oldest age group above 75 years (De Leo et al., 2001; Schmidtke et al., 2008; Shah et al., 2009), rates for attempted suicides are highest for younger females from 15 to 19 years (Nock et al., 2008). This is partly explained by the fact that women use mainly intoxication and other less lethal measures as suicide method (Värnik et al., 2008a; Large and Nielssen, 2010; Schrijvers et al., 2012), which are survived in the majority of cases. However, even within the same method, the lethality of suicidal acts remains higher for males (Cibis et al., 2012).

Statistics published by health insurance companies and other sources suggest that there is an increase in the prevalence of depressive disorders in Germany. For example a rise of 23% in between the years 2004 and 2008 is reported by a recent report on depression (Allianz Deutschland and RWI, 2011). Mental illness has become the fourth most common source of medical leaves from the workplace (DAK, 2011; Wittchen et al., 2011). However, it remains unclear whether or not this reflects a truly growing number of cases. Rather it is likely that the reported growth results from increased help-seeking behaviour of people affected, improved diagnostic skills at the primary care level and a reduced tendency to hide depressive disorders behind less stigmatized diagnoses, such as chronic lower back pain, tinnitus, fibromyalgia, burnout, and others. Therefore, the numerical increase in the number of diagnosed patients might indicate a positive development: more depressed patients seek and receive professional help. In line with this reasoning is the fact that prescription rates of antidepressants have increased during the past 30 years, while suicide rates are decreasing considerably. In Germany, around 18,000 people committed suicide in the early 1980s and this number dropped to approximately 10,000 in 2010 (Destatis, 2007, 2011).

The most important therapeutic options for patients with depression are pharmacotherapy and certain forms of psychotherapy, such as cognitive behavioural therapy (CBT). Especially for the use of antidepressants, efficacy was shown by studies using randomized placebo controlled trials (Anderson, 2000; Cipriani et al., 2009). In recent years it has been discussed whether in patients with mild depression the effect size is sufficient to be of clinical significance. In this debate some methodological issues inherent in large randomized controlled trials have been neglected, possibly leading to an underestimation of effects of antidepressants under real life conditions (Hegerl et al., 2012).

In spite of the fact that effective treatments are available (De Rubeis et al., 2005; NICE, 2009; DGPPN, 2009), they are used only in a minority of depressed patients (Demyttenaere et al., 2004; Fernandez et al., 2007). Many of them lack energy, hope and motivation to seek professional help. Very often they experience their depressed state as a personal weakness which is their own fault, instead of seeing it as a consequence of a disorder which should be professionally treated (Barney et al., 2006). If patients with depression seek help, they often present mainly somatic complaints (Simon et al., 1999; Haftgoli et al., 2010). This is one reason why only about 50% of depressed patients are correctly diagnosed at the primary care level (Jacobi et al., 2002). Even if diagnosis is correct, very often there is neither specific psychotherapy nor pharmacotherapy. If pharmacotherapy is started, often it is done so without an adequate drug, dosage or time span (Boenisch et al., 2012; Pence et al., 2012). Finally, even if treatment is offered, there are considerable compliance problems (Demyttenaere, 2003; Pinto-Meza et al., 2011).

Considering all the reasons mentioned above, it can be expected that less than 10% of depressive patients receive optimal treatment. Hence, the combination of (1) prevalence and severity of depression plus (2) availability of effective treatments plus (3) diagnostic and therapeutic deficits defines a much larger range of optimization compared to other areas in medicine and mental health. Consequently, prevention and intervention programs in the specific field of depression and suicide prevention addressing the aforementioned challenges are urgently needed.

2. Suicide prevention strategies and multi-level prevention programs

Suicide is a major public health problem and was identified as a priority condition in the Mental Health Gap Action Programme (mhGAP) by the World Health Organization (WHO, 2008). Nevertheless, the evidence base for its prevention remains limited (Althaus and Hegerl, 2003). In a systematic literature review Mann et al. (2005) found education of physicians and restricting access to lethal means to be effective and other methods such as gatekeeper education, awareness campaigns to educate the general public, screening programs, treatment interventions and educating the media about responsible suicide reporting promising in preventing suicide. Both reviews conclude that a combination of different strategies might be most effective in targeting suicidal behaviour (Althaus and Hegerl, 2003; Mann et al., 2005), which is in line with recent WHO recommendations (WHO, 2012). Although in recent years multi-level programs are considered in the formation and implementation of national strategies for suicide prevention, their number on community level remains limited. Recent reviews reporting about school-based suicide prevention programs (Miller et al., 2009; Cusimano and Sameem, 2011), elderly suicide prevention programs (Lapierre et al., 2011) and community based suicide prevention programs (Fountoulakis et al., 2011), draw upon a majority of papers focusing on one area of priority or a specific target group. A database search (PubMed, Web of Science) for the key words of multi-level or multi-modal suicide prevention programs yields few results apart from publications related to the multi-level approach of the alliances against depression. While the latter will be described in greater detail in the following paragraph, Table 1 outlines the major characteristics of three other recent multi-modal suicide approaches from different settings.

3. The Alliances against Depression – a successful example of an integrated approach

3.1. The Nuremberg Alliance against Depression

A two-year four-level intervention program based on available evidence and best practice examples of the time (Rutz et al., 1989, 1992; Morgan et al., 1993; Paykel et al., 1997, 1998) was implemented in the city of Nuremberg in the years 2001/2002. The four levels (Table 2) comprised a variety of measures and activities for different target groups at the community level (Hegerl et al., 2006).

The intensity of the intervention was high, e.g. more than 2000 community facilitators were trained. The effects of this intervention program were carefully evaluated, using as the a priori defined primary outcome criterion the number of suicidal acts (completed and attempted suicides). Numbers of suicidal acts in Nuremberg (intervention region, 488,400 inhabitants when starting the intervention) were compared over three time-spans (baseline, intervention period, follow-up period) as well as to a control region

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Table 1
Examples of recent multi-modal intervention programs aiming at the reduction of suicidal behaviour.

Program name	NOCOMIT-J	MATES in construction	PROGRAMA 2000
Reference	Ono et al. (2008)	Gullestrup et al. (2011)	Cocchi et al. (2008), Preti et al. (2009)
Overall description	A multimodal community suicide intervention program	A workplace-based suicide prevention program	A multi-modal, comprehensive program for persons at onset of or at high risk of psychosis
Location	Japan (7 intervention regions)	Queensland (9000 construction sites)	Italy (Milan, 1 service centre)
Duration	Aug 05–Mar 10 (intervention lasting from July 06 to Dec 09)	Since Feb 2008	Since Apr 2008
Target group(s)	All age groups; different sub-populations	Construction workers	Young people aged 17–30
Number of levels	6	8	Intervention package with several levels based on first assessment and patient's needs
Measures	• Building social support networks • Primary prevention • Secondary prevention • After care for persons bereaved after suicide • Measures for mental health patients • Measures for individuals with work-related problems	• General Awareness Training • Connector (gatekeeper) training • Suicide First Aid (=Applied Suicide Intervention Skills Training, ASIST) • Field Officers • Case Management • Suicide prevention hotline • Specialised intervention • Postvention	• Psychoeduation (individual and family level) • Therapy (minuscule, cognitive behavioural therapy, therapeutic group activities) • Family support • Social therapeutic components (e.g. school and/or employment support, planning of recreational activities)

Table 2
Description of the 4-level-intervention program.

Level	Target group(s)	Measures
1	General practitioners from primary care	• Certified medical training activities: 4-h-trainings with an interactive educational package (video demonstration, discussion, role plays, presentation) • Handouts, e.g. WHO-5 screening questionnaire to use in waiting room and laminated desk pad • Videos for (1) the GPs themselves about diagnosis and treatment and (2) patients and relatives to facilitate treatment • Specialist hotline for consultation regarding treatment of depressed patients
2	General public	Multifaceted awareness campaign, including: • Public events on varies topics in relation to depression • Distribution of leaflets and information brochures • Poster advertising campaign in public space • Cinema trailer • Website • Support of the campaign by well-known local patrons • Collaboration with the local media
3	Community facilitators, e.g. • Pharmacists • Priests • Police • Teachers • Geriatric care-givers • Journalists	• Target group specific trainings sessions (recognizing depression and giving recommendations to facilitate the access to care) • Workshops for journalists: provision of media guidelines
4	Depressed patients, suicide attempters and their relatives	• Initiation of and support for self-help groups • Support for patients after attempted suicide via emergency cards

(Wuerzburg, 287,000 inhabitants when starting the intervention). As illustrated in Fig. 1, during the two-year intervention a significant reduction in the number of suicidal acts (−24%) was observed in Nuremberg compared to the baseline year and the control region.

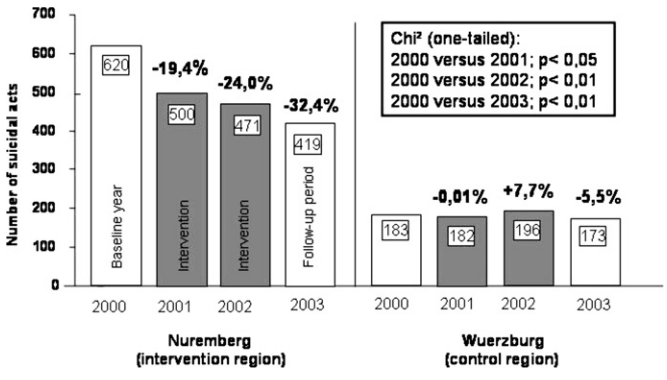

Fig. 1. Evaluation results of the Nuremberg Alliance against Depression. Modified from Hegerl et al. (2006).

Wuerzburg, where no such decrease was found (Hegerl et al., 2006). These effects were sustainable with a reduction of −32.4% in the follow-up year (2003) compared to the baseline year (2001) (Hegerl et al., 2009a).

3.2. The German Alliance against Depression

The promising evaluation results of the Nuremberg Alliance against Depression triggered the interest of other German regions, adopting the concept of the four-level intervention as well as the intervention materials for own regional depression alliances. Meanwhile over 70 regions in Germany have started own four-level interventions within the German Alliance against Depression. The German Alliance against Depression is a registered non-profit association targeting people affected, their relatives, health experts and the general public via its local alliances. While the activities are carried out by each partner locally, the head office in Leipzig is coordinating and assisting the regions and cities with established local alliances and those with interest in founding one. Combined aim of all involved is to raise awareness for the topic depression in the public as well as improving the care for depressed patients.

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This overall goal is also pursued by cross-regional projects, joint activities and public relations.

3.3. The European Alliance against Depression

The four-level intervention approach also received attention at a broader level, and other European countries showed interest in implementing it as well. Therefore, the European Alliance against Depression was started in 2004. Targeting depression and suicidal behaviour, four-level interventions were implemented in 17 European countries in two project phases following a common strategic approach and using comparable materials.

After completion of the project period funded by the European Commission, it was commonly decided by all members of the European Alliance against Depression to establish a registered association in order to further promote the implementation of regional depression alliances throughout Europe. Up to now a total of more than 100 European regions have started such an initiative. The European Alliance against Depression serves as best practice example for preventing depression and suicidal behaviour in the European context. It was awarded the European Health Forum Award at the European Health Forum Gastein 2007 in Austria and is mentioned within the Green Paper on Mental Health, adopted by the European Commission on 17 October 2005 to highlight the importance of mental well-being and develop a comprehensive EU strategy on mental health.

An evaluation of the Hungarian activities within the European Alliance against Depression project took place in Szolnok town with an average population of about 75,000. Preliminary results were presented at the 10th World Conference on Injury Prevention and Safety Promotion by Prof. Mária Kopp in London 2010, indicating a more pronounced decrease in the suicide rate from the baseline year (2004) compared to the 2-years-intervention period in Szolnok than corresponding changes in the control region.

3.4. The OSPI-Europe project: optimising the 4-level-approach

Based on the results and experiences of the European Alliance against Depression, the project OSPI-Europe (Optimizing Suicide Prevention Programs and their Implementation in Europe), funded within the 7th Framework Programme of the European Commission, has been started. It aims to further optimize the four-level intervention previously applied and to provide health politicians, stakeholders and the European Commission with an evidence based and efficient concept for suicide prevention with corresponding materials and instruments for community based interventions, as well as guidelines for the implementation process (Hegerl et al., 2009b). In order to achieve these goals, such interventions have been implemented in four European model regions. The established four-level intervention concept thereby was complemented by efforts to restrict the access to lethal means. The intervention program is evaluated in terms of primary and secondary outcomes including suicide and non-fatal suicidal behaviour. In addition, process evaluation is conducted addressing efficiency, capacity building processes and synergistic effects unfolded by the interplay between the single intervention measures.

The community based four-level interventions target both, depression and suicidal behaviour. This approach has an essential advantage. When addressing the general public, the focus can be laid upon depression and it can be shifted additionally to the topic of suicide, when targeting health professionals. This is important, because a public campaign focusing primarily on suicidal behaviour, might have undesirable results: By drawing attention to the topic and possibility of suicide and hence increasing the cognitive availability of its mechanisms and methods, even more people affected in an acute crisis might take this measure in order to find relief from their symptoms. For this reason and because of the close association between depression and suicidal behaviour described above, it is justifiable and favourable to integrate national suicide prevention programs in alliances against depression or at least to combine both aspects.

4. Summary and lessons learned from the European Alliance against Depression and the OSPI-Europe project

There is reasonable evidence that community based four-level intervention programs targeting depression and suicidal behaviour are a cost-effective approach to suicide prevention. The bottom-up approach inherent to the intervention concept, proved to be helpful for the successful implementation by strengthening the motivation of the participating regional partners and their identification with their regional alliance against depression. Further, synergistic effects are triggered by the fact that the intervention starts simultaneously at four different levels. For example a patient might be motivated by the public relation campaign to ask his primary care provider whether his complaints might be symptoms of a depression. This might, in turn, increase the willingness of the primary care provider to participate in a training program, resulting in increased skills for diagnosis and for confronting a patient, reporting somatic complaints without identifiable organic sources, with the possible diagnosis of depression. As a result of efforts to sustain and transfer this knowledge to other programs, intervention concepts and an extensive catalogue of intervention and evaluation materials are available in different languages for further implementation. Experiences showed that they can easily be adapted to different cultures and health care systems. The European Alliance against Depression (www.EAAD.net) provides support for other regions in and outside of Europe that intend to start own four-level intervention programs.

In spite of the results of the Nuremberg Alliance against Depression and the interventions in Hungary, the efficacy of community based interventions cannot be proven with the same rigor as is the case for studies with randomized placebo controlled trials. Nevertheless, the evidence appears to be consistent and robust in order to consider four-level interventions as a cost-effective approach to improve the care of depression and to prevent suicidal behaviour.

We believe that the following statement is justified: We know enough about how to improve the care of depression and how to prevent suicidal behaviour; we simply have to do it!

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