Public Awareness Campaigns About Depression and Suicide: A Review

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Public Awareness Campaigns About Depression and Suicide: A Review

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Objective: **Numerous institutions, including the World Health Organization, recommend education campaigns targeted at the general public to improve awareness of suicidal crises and, more broadly, of depression; to improve access to care; and to combat the stigma associated with these illnesses and discrimination against people who have them. The purpose of this literature review was to gather information on campaigns about depression or suicide awareness and summarize data on the impact and effectiveness of these campaigns.** ***Methods:*** **A search was conducted of MEDLINE, the Cochrane Library, PsycINFO, HDA (Health Development Agency) Evidence Base, DARE (Database of Abstracts of Reviews of Effects), and the ISI Web of Science to identify articles written in English and published between 1987 and 2007 that described depression or suicide awareness programs that targeted the public.** ***Results:*** **Among the 200 publications for which references were found, 43 publications that described 15 programs in eight countries met inclusion criteria. Comparing the programs was difficult because of the diversity of their objectives and the methods used to deliver the programs and to evaluate them. Results suggest that these programs contributed to a modest improvement in public knowledge of and attitudes toward depression or suicide, but most program evaluations did not assess the durability of the attitude changes. No study has clearly demonstrated that such campaigns help to increase care seeking or to decrease suicidal behavior.** ***Conclusions:*** **Developing guidelines for assessment of public education campaigns to improve knowledge about suicide and depression is essential for the sharing of knowledge among scientists and stakeholders. (*Psychiatric Services* 60:1203–1213, 2009)**

Suicide prevention is an international public health priority, and many countries have established national action plans (1,2) that combine various strategies to prevent suicidal behavior (3–10). Numerous institutions, including the World Health Organization, recommend targeting education campaigns to the general public to improve awareness of suicidal crises and, more broadly, to improve awareness of depression (11,12), which is a major risk factor for suicidal behavior (13,14). Lack of public information and stigmatization of persons with depression are major barriers to care and to the occupational and social integration of these individuals (15–18). Given the increasing use of campaigns to heighten public awareness and disseminate information, it is important to assess the effectiveness of these efforts in changing population attitudes and behaviors (19–21).

At the request of the French Southeast Regional Health and Welfare Bureau, we conducted a literature review with the goal of describing public awareness and information campaigns conducted that focus on depression or suicide and that aim to reduce suicide rates or the discrimination that limits care seeking by persons in need. A second goal of the review was to assess the effectiveness of these campaigns in changing attitudes and behaviors.

Methods

We searched for articles and reports published between 1987 and 2007, using MEDLINE, the Cochrane Library, PsycINFO, HDA (Health Development Agency) Evidence Base, DARE (Database of Abstracts of Reviews of Effects), and ISI Web of Science. The following keywords, separately or in combination, were used: suicide, mental health, depression, mass media, health promotion, health education, and evaluation. We also examined references in the identified publications.

We selected publications in English about public information and awareness programs that focused specifically on depression or suicide or that addressed mental illness more generally if the program included specific educational components on depression or suicide and reported evaluation data—either pre- and posttest evaluations or evaluations that involved a comparison group and defined objectives, target populations, assessment tools, and indicators. Programs delivered in schools or directed solely at

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health care professionals were excluded, because they were included in recent reviews (22–31). When a publication described a program that was addressed to both professionals and the general public, we present only the results concerning the public.

Results

The search yielded 200 reference citations, and 43 of the cited publications met our inclusion criteria. They covered 15 programs in eight countries. We found publications describing U.S. programs, but we did not include them in the review because they did not meet our inclusion criteria. We classified the programs into four categories: short media campaigns, which involved a single exposure (32–34) (Table 1); gatekeeper training programs (35–43) (Table 2); and long programs involving repeated exposures, conducted on either a national scale (44–62) (Table 3) or a local scale (63–72) (Table 4). In addition to describing the programs, the tables present evaluation information. Almost all the programs sought to improve knowledge about depression or suicidal crises—that is, at a minimum the program had one or both of these specific aims—and to reduce discrimination, counter misconceptions, and enhance help seeking. Only three programs, all local, were aimed specifically at reducing suicide risks (67,68,71).

Short media campaigns

Table 1 describes programs in the category of short media campaigns. A television series called You in Mind was broadcast in the United Kingdom in 1987 to sensitize the public about mental illness (32). Seven ten-minute episodes covered various topics—for example, Overcome Your Depression, Overcome Your Fears, and Express Your Feelings—and showed the audience examples of coping strategies. They offered a positive presentation of people describing their problems and how they deal with them. An information booklet about the topics covered and mental health services was available on request. The evaluation found that 11% of the people questioned had seen the program and they reported that it had a positive impact on their attitudes toward mental illness. Three-quarters of respondents reported that the portraits of individuals with mental illness in the series resembled people they knew. In addition, half the respondents reported that as a result of what they learned from the series, they had tried—or intended to try—to deal with their own mental health problems in a way that they had not done so in the past.

The Norwegian Mental Health Program was conducted in Norway in 1992 to improve public understanding of mental illnesses (including depression) and suicide and to diminish taboos about them (33,34). Its primary component was a six-hour information program that was broadcast during prime time on a national network. The broadcast was preceded by a month-long publicity campaign. The articles reviewed provide no details about how the campaign addressed depression. The evaluation showed that 94% of the people questioned reported that they had heard of the program and 62% had watched it. The proportion of people who correctly reported the ratio of mortality by suicide to mortality by traffic accidents increased; among men, the proportion increased from 28% before the campaign to 49% af-

Table 1

Public awareness campaigns categorized as short media campaigns

Campaign	Objectives	Evaluation	Sample	Indicators	Tools	Results[a]
You in Mind, United Kingdom, 1987 (32)	Inform the public about mental illness; convince the public to use appropriate coping strategies	Cohort study (before-after comparison)	1,040 in pretest; 544 at 1 year (52%); random selection	Visibility of program; attitudes about mental illness of others and self; attitudes about coping strategies; intention to seek care	NA[b]	Estimation of audience (visibility), 11%; slight effect on attitudes about mental illness of others but not significant for self; slight effect on attitudes about coping; no effect on intention to seek care
Norwegian Mental Health Program, Norway, 1992 (33,34)	Inform the public about prevention and treatment of mental illness	Cohort study (before-after comparison)	1,191 in pretest; 664 in posttest (56%); random selection	Visibility of program; knowledge of prevalence and severity of disorders; attitudes toward seeing a specialist; communicating with people with mental illness; worrying about having mental illness; intention to seek care	12-item questionnaire developed by an advisory expert group[c]	More than slight effect on visibility; slight effect on knowledge about prevalence of suicide; no effect on knowledge about severity or on attitude toward seeing a specialist (psychiatrist or psychologist); slight effect on attitude toward seeing a general practitioner and on communicating with people with mental illness; no effect on worry about having a mental illness; slight effect on intention to seek care for minor depression and for insomnia

[a] No effect: not statistically significant; slight effect: a significant improvement of less that 10 percentage points; more than slight effect, a significant improvement of 10 percentage points or more

[a] Not available

[c] Nonvalidated questionnaire constructed by a committee of mental health and suicide professionals

Table 2

Public awareness campaigns categorized as gatekeeper training

Campaign	Objectives	Evaluation	Sample	Indicators	Tools for evaluation	Results[a]
Training in mental health first aid, Australia, 2001–2004 (40,41)	Inform the public about mental illness; train in crisis intervention, listening, risk evaluation, and guidance of the person to appropriate professionals or resources	Randomized controlled trial (before-after comparison)	2002: 168 in pretest and 166 in posttest; 2004: 301 in pretest and 240 in posttest; random selection; 94 in qualitative survey (interview) (72% response rate)	Depression Literacy score: knowledge of and attitudes toward mental illness; identification of disorders; perceived capacity to help people with a mental health problem; evaluation of real capacity to help a person in difficulty (experience)	Depression Literacy Questionnaire (76,77)	Slight effect on Depression Literacy score and in both perceived and real capacity to help someone with a mental health problem
Depression Awareness Research Project, Australia, 2001–2004 (42,43)	Inform the public about depression and increase care seeking	Cohort study (before-after comparison)	5,443 in pretest and 1,725 in follow-up period	Number of people who attended the awareness meetings; Depression Literacy score	Depression Literacy Questionnaire (76,77)	Estimated 7,500 people attended awareness meetings; slight effect on Depression Literacy score at 4-month follow-up

[a] Slight effect: a significant improvement of less than 10 percentage points

terward ($p<.001$), with a similar but nonsignificant trend among women. In contrast, knowledge of the prevalence of mental illness and treatment sites did not improve significantly. The results suggest that viewers had a greater tolerance for mental illness after the program. Before the program 74% of women respondents reported being willing to talk openly about a close friend or family member admitted to a psychiatric hospital, and the proportion rose to 81% after the campaign ($p<.01$), with a similar but nonsignificant trend among men. After the program, the proportion of respondents who reported that they would recommend that someone close to them see a general practitioner in the case of a minor psychiatric disorder—notably symptoms of depression—increased from 19% to 31% among men ($p<.001$) and from 22% to 34% among women ($p<.001$).

Gatekeeper training

Gatekeeper training—training community members to identify people with problems and direct them toward assistance—has been applied in the workplace, in the military, (35–37), and among police officers (38). It has been shown to reduce suicide rates (35,36,38) and suicide risks (37). Because these programs targeted specific occupations, they are not described in Table 2, which presents information on programs in the gatekeeper training category.

The 1997 Australian Survey of Mental Health and Wellbeing showed that a substantial proportion of individuals did not know how to behave with people who have mental illness, especially during crises (39). The "mental health first aid" program was set up in 2001 in Australia to teach professionals and the general population how to help "a person developing a mental health problem or in a mental health crisis . . . until appropriate professional treatment is received or until the crisis resolves." The course, initially nine hours long and subsequently expanded to 12 hours, described steps for providing early help to adults in crisis situations or developing a mental illness: assess the risk level, listen nonjudgmentally, reassure and inform, and encourage the person to see a professional. By the end of 2007 a total of 600 instructors had been trained in Australia. The program has been replicated in numerous countries. Successive assessments suggest that the training increases participants' capacity to recognize mental illness, raising their knowledge to a level close to that of mental health professionals, and reduces stigmatizing attitudes and social distance between participants and people with mental illness (40,41). After training, participants reported increased confidence that they could help people in crisis. The improvements continued to be evident at six-month follow-up (40). A qualitative study of former participants' experiences showed that 78% had used what they learned in the mental health first aid program to help people and 79% were sure that they had been able to help people with problems (41).

A program of this type was set up in the Australian state of Victoria from 2001 to 2004. The Depression Awareness Research Project sought to make communities aware of depression and to reduce its associated stigma (42,43). The principle was to recruit and train "educators"—more than 200 in three years—who were then assigned to lead awareness meetings within their communities. The following key messages were delivered:

Table 3

Public awareness campaigns categorized as long national programs

Campaign	Objectives	Evaluation	Sample	Indicators	Tools for evaluation	Results[a]
Defeat Depression Campaign, United Kingdom, 1992–1996	Inform the public about depression and its treatment; encourage care seeking; inform professionals about management of depression; reduce discrimination	Before-after cross-sectional studies; door-to-door surveys in 1991, 1995, and 1997	2,003 in 1991, 2,050 in 1995, 1,946 in 1997; quota method	Visibility data NA;[b] perceived causes of depression and attitudes toward depression and treatment among the public; attitudes of general practitioners; suicide rates over time	25-item questionnaire developed by an advisory expert group[c]	Low visibility in general public; slight effect on perceived causes of depression, on attitudes toward depression and treatment, and on perceived efficacy of treatment; no effect on perception of addiction caused by medications or on suicide rates
Changing Minds, United Kingdom, 1998–2002 (47–49)	Reduce stigmatization and discrimination associated with mental illness; increase public understanding of this topic	Before-after cross-sectional studies, 1998 and 2003; random selection; door-to-door survey	1,737 in 1998 (response rate, 67%); 1,725 in 2003 (response rate, 67%)	Attitudes toward 7 diseases (8 items per disease), including severe depression; calculation of a global attitudinal score (negative, neutral, or positive) for each disease	56-item attitudes to mental illness questionnaire	Slight effect on attitudes toward mental illness on 24 of 56 items and in global attitudes toward severe depression; no effect after brochure; slight effect on visibility and slight improvement in knowledge of local services
Community Awareness Program, Australia, 1995 (51–53)	Make the public aware of mental illness; reduce discriminatory attitudes toward people with mental illness	Before-after cross-sectional studies in April, August, and December 1995; telephone interviews	1,200; nonrandom selection	Campaign visibility; knowledge of local services; attitudes toward mental illness and people with it (tolerance and social acceptance)	NA[b]	Slight effect on visibility, on knowledge of local services, and on attitudes toward mental illness
beyondblue, Australia, 2001–2005 (54–56)	Sensitize the public to the problem of depression and reduce stigmatization	Before-after cross-sectional studies, 1995 and 2003–2004	1,010 in 1995 (response rate, 50%); 910 in 2003 (response rate, 23%); random selection	Knowledge of depression, prevalence, symptoms, and treatments; attitudes toward depression; association between exposure to the campaign and awareness of depression	Depression Literacy Questionnaire (76,77)	Slight effect on knowledge of depression prevalence, symptoms, and treatments; and on attitudes toward depression; persons with most exposure to the campaign were most aware of depression
Like Minds, Like Mine, New Zealand, 1997–2004 (57–59)	Reduce stigmatization of and discrimination against people with mental illness	4 before-after cross-sectional studies by an independent body; qualitative survey of people with mental illness	1,017 in final survey (response rate, 61%); random selection	Exposure to and visibility of the campaign; knowledge of depression; attitudes toward mental illness	Questionnaire developed by an advisory expert group[c]	More than slight effect on exposure and visibility, on knowledge of depression, and on attitudes; effects were stronger for the campaign's first wave; impact on Maori and Pacific Islanders was less
See Me, Scotland, 2002–2004 (61,62)	Stop discrimination and stigmatization associated with mental illness	Before-after cross-sectional studies, 2002 and 2004	1,381 in 2002 (response rate, 92%); 1,401 in 2004 (93%); selection by quotas	Visibility of campaign; attitudes toward mental illness; knowledge and attitudes by disease; stress, depression, and schizophrenia	Questionnaire developed by an advisory expert group;[c] use of scenarios[d]	More than slight effect on visibility and on negative attitudes toward mental illness in general

[a] No effect: not statistically significant; slight effect: a significant improvement of less that 10 percentage points; more than slight effect, a significant improvement of 10 percentage points or more

[b] Not available

[c] Nonvalidated questionnaire constructed by a committee of mental health and suicide professionals

[d] Case vignettes describing patient with various mental disorders

depression is common, it is a disease and not a character trait, and it is a serious but treatable disease. The evaluation indicated that among people who attended the community meetings, mental health education levels remained significantly elevated four months later.

Long national programs

Table 3 provides information on long national programs. Most long programs used several concomitant strategies, in-

Table 4

Public awareness campaigns categorized as long local or community programs

Campaign	Objectives	Evaluation	Sample	Indicators	Tools for evaluation	Results[a]
Defeat Depression Campaign, Hong Kong (63,64) 1999–2002	Inform the public about depression and its prevention and treatment	Before-after cross-sectional studies, 1999 and 2002, of persons exposed and not exposed to the campaign	855 in pretest, 913 in posttest; random selection	Knowledge of depression symptoms and suicide risk; number of persons reporting willingness to seek care	NA[b]	More than slight effect on knowledge of depression and its impact and on the number willing to seek care
Compass Strategy, Australia, 2001–2003 (65)	Increase knowledge of mental illness among people aged 12 to 25; promote early help seeking among young people	Before and 14 months after cross-sectional studies of persons exposed and not exposed to the campaign; evaluation of process and impact	1,200 in pretest (response rate, 90%); 1,200 in posttest (87%); random selection	Media exposure; recognition of various mental illnesses; knowledge of suicide risk, prevalence of depression and local resources	Mental health literacy	Slight effect on media exposure, on knowledge of suicide risk and depression prevalence, and on willingness to seek care; no effect on recognition of various disorders, knowledge of local resources, and attitudes toward mental illness; mean of 465 visits to Web site and 28 calls to information line each month
Suicide Prevention Week, Canadian communities, 1991 (67)	Make the public aware of suicide and prevention; reduce suicide rates	Before (weeks 1 and 2) and after (weeks 4, 5, and 6) study of indicators	NA[b]	Exposure to campaign; number of calls to suicide prevention centers; number of hospitalizations for suicide risk	NA[b]	Exposure of about 20%; slight effect on number of calls during the week after Suicide Prevention Week and then no effect; slight effect on number of admissions during Suicide Prevention Week and then no effect
Suicide Prevention Week, Quebec, Canada, 1999–2001 (68,69)	Increase public and professional awareness of suicide; reduce suicide rates	Before-after cross-sectional studies	1,090 in pretest; 998 in posttest; random selection	Exposure to campaign; knowledge of suicide prevention; attitudes about suicide prevention; reported intention to seek care	Questionnaire developed by an advisory expert group[c]	Low level of exposure; slight effect on knowledge of suicide prevention; no effect on attitudes about suicide prevention or intention to seek care
Nuremberg Alliance Against Depression, Nuremberg, Germany, 2001 (70–72)	Reduce suicide rates by increasing awareness of depression and its treatment	Before-after cross-sectional studies, 2000 and 2001, of persons not exposed and exposed to the campaign	1,426 in 2000 (response rate, 52%); 1,508 in 2001 (69%)	Visibility of campaign; knowledge of causes and symptoms of and treatments for depression; attitudes toward drug treatment; rates of completed and attempted suicide	Questionnaire developed by an advisory expert group[c]	Slight effect on visibility and on knowledge of causes, symptoms, and treatments; no effect on attitudes about drug treatment, in particular among those over age 60; no effect on completed suicide rate; more than slight effect on rates of suicidal behavior and attempted suicide, especially by violent methods

[a] No effect: not statistically significant; slight effect: a significant improvement of less that 10 percentage points; more than slight effect, a significant improvement of 10 percentage points or more

[b] Not available

[c] Nonvalidated questionnaire constructed by a committee of mental health and suicide professionals

cluding, for example, screening, professional training, media education, and restriction of access to lethal means.

In the United Kingdom, the Royal College of Psychiatrists implemented the Defeat Depression Campaign in 1992 (44–46). It lasted five years and had three principal objectives: educate health care professionals, especially general practitioners, to recognize and manage depression; make the public aware of depression and of various treatment options to encourage early care seeking; and reduce discrimination associated with depression. The key message—that depression is a common disease, serious but treatable—was disseminated to the public in a three-week media campaign each year in 1994, 1995, and 1996. More detailed messages

were disseminated by use of audio- and videocassettes and books aimed at several population subgroups, and these messages were debated during seminars and conferences. Brochures addressing certain aspects of depression (for example, among elderly persons, among coworkers, or among postnatal women) were translated into several languages and made available at the campaign's Web site.

Evaluations indicated that this program was barely visible to the public; it was estimated that 5% of the public were aware of the campaign in 1995 and 2% in 1997 (44,45). The Defeat Depression Campaign increased population awareness of depression and various treatment options only slightly. For example, from 1991, before the campaign began, to 1997, a year after it ended, the proportion of respondents who recognized that depression is a disease increased by less than 10%. The perception of available treatments also changed little: in both 1991 and 1997 most respondents considered both antidepressants and tranquilizers to be addictive. Finally, suicide rates did not change significantly.

The Royal College of Psychiatrists launched its next program, Changing Minds, in 1998 (47–49). Over a five-year period, the program addressed six of the most common mental disorders, including depression, in order to reduce the stigma and discrimination associated with them. The campaign relied on distribution of educational material in various formats for each disorder. They included a book of first-hand accounts by people with mental illness, brochures and books aimed at various target populations, and a scientific report on attitudes and behaviors among health care professionals that maintained discrimination and stigmatization (50). Several media campaigns were conducted simultaneously. The evaluation of this program indicated a significant reduction of several percentage points in the proportion of people expressing negative attitudes toward individuals with mental illness. Nineteen percent of interviewees in 2003 reported that persons with severe depression were dangerous, compared with 23% in 1998. In addition, 56% reported in 2003 that it was difficult to talk with severely depressed persons, compared with 62% in 1998.

A mental health educational campaign, the Community Awareness Program, was launched in April 1995 in Australia to inform the public about mental illness, including depression, and reduce discrimination toward people with these illnesses (51–53). The program included a campaign that presented advertisements on television and in movie theaters as well as on a billboard and in other types of displays. The campaign involved two successive phases of exposure, two months apart, and distribution of an information kit for mental health professionals, general practitioners, and schools. It delivered the following key messages: anyone can have a mental illness, mental illness is a disease like any other, help is available for people with mental illnesses, and mental illnesses can be cured. Brochures were edited to address the various mental illnesses targeted in the campaign.

Assessments indicated that awareness of mental illness among persons who were questioned increased: before the campaign 61% reported having seen, heard, or read something about mental health, and after the first and the second waves of the campaign, the proportions were 66% and 70%, respectively. People who were exposed to the campaign were more likely than those who were not to report that they would be willing to engage in social or work relationships with people with mental illness. A slight increase in knowledge of available services was also observed after the campaign. However, to the best of our knowledge, no specific results about depression were published.

In 2001 Australia launched the national "beyondblue" project to increase the population's ability to prevent and respond to depression (54–56). This program combined various levels of actions and aimed especially to create community awareness and mobilization about depression, reduce discrimination, and improve support of people with mental illness. A media campaign presented the experiences of Australians affected by depression and delivered the following message: depression is a major health problem in Australia that can be recognized by specific signs and symptoms. The presentations also explained how to react to a person with depression and how to find help. People with mental illness participated in the project's design and implementation. The evaluation showed improvements in public knowledge and attitudes about depression (for example, fewer false beliefs), especially in the states where the campaign was most active (56).

The Like Minds, Like Mine project began in 1997 in New Zealand to change attitudes about and behavior toward people with mental illness, including depression, by reducing negative stereotypes (57–59). People with mental illness participated in all stages of the program, which combined regional and community action, training and education of professionals and media, and a media campaign (waves of exposure in 2000, 2002, and 2004) with other communication strategies—for example, a Web site and four newsletters a year. The first wave of the media campaign presented accounts by celebrities and "ordinary" people who had had a mental illness. During the second wave, well-known personalities talked about the importance of social support. The last wave challenged some common ideas about people with mental illness and disseminated the slogan "Learn to know people before you judge them." Specific ads were addressed to different communities (Maori, Pacific Islanders, and Pakeha).

In evaluations half of the people questioned reported that they had seen or heard at least one of the campaign's ads after the first wave of exposure, and the proportion was 75% after the second wave. Recall of the principal messages about support and discrimination increased with the number of waves of exposure (from 32% to 50%), as did recall of the availability of help (from 7% to 17%). The results also suggested improvement in knowledge of mental illness and attitudes toward people with mental illness. In particular, awareness of depression increased from 28% to 49%

between the first and fourth surveys. The impact was smaller in some ethnic communities, such as the Maori and Pacific Islander communities. An evaluation in which people with mental illness were interviewed found that 85% considered the campaign to have "helped a little or a lot to reduce the stigmatization and discrimination associated with mental illness"(58).

At the end of 2002 Scotland launched a national suicide prevention plan, Choose Life (60). A key activity was a media campaign against stigmatization, See Me, which was based on accounts of people with mental illness (61,62). This campaign, organized in four waves, included a billboard and display campaign, distribution of educational materials, and creation of a Web site. Evaluations showed that the program increased the general public's awareness of mental health. Seventy-two percent of those questioned in 2004 reported having seen, heard, or read something about mental health during the year, compared with 43% in 2002. Television was the campaign's most effective and visible medium. Moreover, 60% of those questioned believed that the campaign was likely to modify their attitudes toward people with mental illness. Over two years, a significant reduction was noted in reported negative attitudes. For example, the proportion of people who agreed with the following statement fell by 5 percentage points: "If I had a mental illness, I would not want anyone to know," and the proportion who agreed that "people with mental illness are often dangerous" fell by 17 percentage points. A very slight increase in positive attitudes was also found.

Local and community programs

Table 4 presents information on local and community programs. The Defeat Depression Campaign was a four-year program established in 1999 in western Hong Kong to inform Chinese-speaking communities about depression and its prevention and treatment (63,64). After a preliminary study of inhabitants' needs, it distributed educational material, in particular brochures from the U.K. Defeat Depression Campaign that were translated into Chinese. With the help of local media and a Web site, the campaign also organized more than 30 events on the topic of depression, including road shows and exhibitions. In 2001 and 2002 a radio series broadcast 20-minute case studies about depression in several at-risk groups. A training kit was also distributed to professionals, particularly to physicians. The pre-post evaluation study showed a significant improvement in public knowledge about depression; 54% of respondents understood that depression was a mental illness in 1999, compared with 77% in 2002 ($p<.01$). Moreover, more people reported seeking formal treatment—2.1% in 1999, compared with 9.1% in 2002 ($p<.01$).

The Compass Strategy program, conducted in the Melbourne, Australia, region from 2001 through 2003, targeted the population aged 12 to 25 years to promote early diagnosis and treatment of mental illness (65). It was based on the Precede-Proceed health promotion model (66) and on a detailed study of the epidemiologic, environmental, cultural, and social context in which the program was to be implemented and used a variety of media: a large billboard campaign, distribution of educational material, a Web site, and a telephone information service. The evaluation indicated that in the exposed region, knowledge of suicide risks associated with depression and of the prevalence of mental illness improved, negative attitudes toward help seeking were reduced, perception of treatments and their effectiveness became more positive, the proportion of people who considered themselves depressed increased slightly but significantly, help-seeking behavior increased significantly but not among those who perceived themselves as depressed, and knowledge of resources and recognition of various mental illnesses did not improve.

Local and community programs to reduce suicide rates

Thematic days or weeks organized each year in various countries, such as international suicide day and mental health information week, aim to increase population awareness and mobilize professionals around the issue of suicide—and mental illness more broadly—to reduce stigmatization and promote care seeking. More specifically, Suicide Prevention Week (SPW) is an annual event organized to reduce suicide rates over the long term. Generally, the broad themes are decided upon each year at the national level, and local or community implementation is then organized. As part of SPW in Canada, assessments were conducted locally in 1991 (67) and in Quebec province from 1999 to 2001 (68,69). Suicide prevention centers prepare and distribute promotional material and organize local media campaigns, training workshops, and seminars. The 1991 evaluation indicated that the number of calls and visits to suicide prevention centers increased, as did hospital admissions for mental illness, but only in the week following SPW. From 1999 to 2001 evaluations in Quebec revealed the poor visibility of SPW: knowledge about suicide crises improved but not negative attitudes toward people who are suicidal. Statements of intent to seek help and the number of calls and visits to suicide prevention centers did not change.

The Nuremberg Alliance Against Depression was launched in 2001 in Germany for two years to improve the identification and management of depression and to reduce suicide rates (70–72). It combined a public awareness campaign, cooperation with general practitioners, gatekeepers (for example, teachers, priests, and police officers), and support of self-help activities by people with mental illness. The evaluation of the awareness campaign found improved knowledge about depression and its treatment; a significant reduction—approximately 20%—in suicidal behavior (attempted and completed suicides) in Nuremberg compared with Wurzburg, a city that was not exposed to the program; and no significant effect on negative public attitudes about antidepressants (70). The project was replicated in several regions of Germany and served as a model for the European Alliance Against Depression, a project launched in 16 European regions in 2004 (73).

Discussion

The studies reviewed above have several limitations in terms of their characterization of context, their program design, and their evaluation methods. Few of the published reports described preliminary "diagnostic" surveys intended to pinpoint the epidemiologic, environmental, social, and cultural context in which the program was to be introduced. Such surveys are essential for determining what has been already done and what is needed by various population subgroups, for designing the programs (objectives, target populations, methods, and means), and for collecting data for pre-post comparisons. Preliminary surveys should document viewpoints of various stakeholders and of people with mental illness.

Few programs appeared to be based on theoretical foundations or to follow a model for their implementation and evaluation. (An exception is the Precede-Proceed model [66].) Models and theories from social sciences and notably health and social psychology—social representations, reasoned action, and planned behavior theories (74,75)—as well as health promotion, communication, and social marketing models are examples of theories useful for designing and implementing awareness programs.

Certain programs were very ambitious because they had several objectives (improvement of knowledge, attitudes, and help-seeking behavior), were targeted to the entire population, and focused on mental illness—that is, on disorders with various symptoms, origins, and treatments, such as depression, suicidal behavior, anorexia, and schizophrenia. The published material did not always make it clear how depression or suicide were addressed (33,57). Moreover, this heterogeneity and ambition may perhaps explain the lack of effectiveness of certain programs.

Program evaluation

Study design. The evaluations were not all published in peer-reviewed scientific journals. Only one evaluation study was a randomized controlled trial (of a gatekeeper training program [40,41]), because public campaigns are collective interventions that cannot be randomly allocated to individuals. Three evaluations were based on cohort studies (32,33,42) with pre- and postintervention comparisons; all included a control (unexposed) group, but the studies also had a high rate of loss to follow-up. Most of the remaining 11 evaluation studies were repeated cross-sectional studies, conducted before and after the intervention. Three included a control group (51,54,70), but two (51,54) had serious methodological limitations, such as nonrandom sample selection, low response rates, or small sample sizes.

Indicators and instruments. We observed substantial between-study variation in the indicators used to measure the visibility and effects of programs, which was partly but not entirely attributable to variations in objectives. For example, visibility was measured by different variables: having heard of the program, having seen it, or remembering its messages. Evaluation of knowledge about mental illness focused on several items that raise the question of what most adults in the general population should reasonably know about various mental illnesses: prevalence, symptoms, treatments, or types and places of care. Attitudes toward mental illness and people with mental illnesses considered in each study varied substantially. In campaigns aimed at several mental illnesses, specific results about depression or suicide were not always presented, so that it was unclear whether the evaluation included indicators about these problems (49,51,57). Instruments used to assess the population's knowledge about and attitudes toward mental illness and people with mental illnesses frequently appeared to be ad hoc instruments and were rarely standardized or validated, although some validated tools exist and have been used, such as the Depression Literacy Questionnaire (39,76,77). Substantial variations existed in the timing of posttests.

Indicators of behavior and intended behavior were considered less frequently: six programs used none. For the others, the indicators differed between studies: intention to seek help (32,34,64,65,68), seeking mental health care services or seeing professionals (55,67), and rates of suicide or attempted suicide (45,71). Assessing the impact of campaigns on rates of suicide or attempted suicide is especially difficult, because of the relative rarity of suicide in the overall population and the large population size required to demonstrate an effect (78).

Limited evaluations. Few studies assessed the persistence of the attitudinal and behavior changes beyond six months. None of the studies estimated the cost-effectiveness of the interventions.

Impact on knowledge, attitudes, and behavior

Despite the limitations described above, this literature review suggests that public awareness and information programs about suicide or depression improve knowledge and awareness of mental illness in the population, at least in the short term. On the other hand, improvement in knowledge of key places to obtain information and professional help was less evident. This review also suggests that with two exceptions, the campaigns contributed to improving public attitudes toward mental illness and its treatment and attitudes toward people with mental illness and therefore contributed to increasing social acceptance of persons with mental illness. Nonetheless, the first campaign in the United Kingdom (45) and the Nuremberg project (70) did not affect negative attitudes about medication treatments, which were still perceived to be highly addictive. Moreover, improvements noted in knowledge and changes in attitudes, although significant, were often modest (fewer than 10 percentage points).

On the other hand, the effects of these campaigns on public behavior (intention to seek care, care seeking, and suicidal behavior) are uncertain. Only three programs led to a significant increase in reports of intention to seek professional care (34,63,65). The programs that evaluated changes in seeking specialist treatment produced positive results only in the very short term (67). Two projects included suicide rate trends in their evaluations (45,71), and neither generated a significant reduction in suicide rates.

However, the Nuremberg program led to a large and significant reduction in rates of suicidal behavior and attempted suicide (71).

Some program characteristics appear to be associated with a positive impact. Simultaneous application of several strategies, such as distribution of educational material, a media campaign, and training of gatekeepers and health care professionals, appears more effective in achieving significant results than the distribution of educational material alone. Although implementation of programs at the national level is appealing because of the size of the potentially exposed population, it appears necessary to organize programs at a local level, to target relatively limited and homogeneous populations, and to adapt the messages to them. Similarly, it appears more appropriate to target one or two diseases rather than attempt to make the population aware of mental illness in general, because of the heterogeneity of mental illnesses and their different characteristics and treatment approaches.

Repeated exposure to the campaign also seems to be associated with the best results, because it reinforces the messages. Similarly, it appears to be important to employ several types of exposure (for example, television, print media, and billboards) and to focus on the clarity and specificity of the messages. The involvement of people with mental illness appears useful. By sharing their experiences they can promote a reduction in stigmatization. Nonetheless, media exposure may entail uncontrollable and unpredictable risks for them and for the campaign. Gatekeeper training has the advantage of being applicable on a local or community scale (40,42,71) and has yielded some very positive results in the workplace (35–38).

Conclusions

To heighten public awareness of mental illness, an increasing number of countries are establishing action programs, which sometimes but not always target depression or suicide. The results of this review suggest that these programs improve the general public's knowledge of suicide and depression and contribute at least moderately to better social acceptance of people with depression and other mental illnesses. However, it is difficult to establish whether these programs help to increase care seeking or to reduce suicidal behavior.

Comprehensive evaluation of the impact of these programs presents several difficulties, particularly because of the lack of comparability between programs and between the methods used to evaluate them. Efforts should be made to consolidate international expertise and knowledge and develop guidelines to help design programs and their evaluation. We particularly recommend that guidelines focus on the types of information and data that need to be gathered in order to appropriately assess needs and context before the program is designed; a review of existing theoretical models and the criteria for selecting a model and program objectives; standardized indicators for evaluation of visibility and effects, especially regarding attitudes and behavior; and a review of validated instruments for measuring these indicators or identifying the necessary steps to develop them. We also recommend that research focus on the duration of attitudinal and behavioral changes and on the cost-effectiveness of programs with various characteristics.

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