Mental Health Literacy

Empowering the Community to Take Action for Better Mental Health

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For major physical diseases, it is widely accepted that members of the public will benefit by knowing what actions they can take for prevention, early intervention, and treatment. However, this type of public knowledge about mental disorders (mental health literacy) has received much less attention. There is evidence from surveys in several countries for deficiencies in (a) the public's knowledge of how to prevent mental disorders, (b) recognition of when a disorder is developing, (c) knowledge of help-seeking options and treatments available, (d) knowledge of effective self-help strategies for milder problems, and (e) first aid skills to support others affected by mental health problems. Nevertheless, there is evidence that a range of interventions can improve mental health literacy, including whole-of-community campaigns, interventions in educational settings, Mental Health First Aid training, and information websites. There is also evidence for historical improvements in mental health literacy in some countries. Increasing the community's mental health literacy needs to be a focus for national policy and population monitoring so that the whole community is empowered to take action for better mental health.

Keywords: mental health literacy, prevention, early intervention, treatment, services

For major physical diseases, it is widely accepted that members of the public will benefit by knowing what actions they can take for prevention, early intervention, and treatment. For example, in the area of prevention, many people know about safe sex to prevent HIV, about the link between smoking and a range of diseases, and about what constitutes a healthy diet. In the area of early intervention, people often know about early warning signs of cancer and how to recognize a heart attack or stroke, and they might have done a first aid course teaching them how to give initial help in these and other medical emergencies. For the treatment of major physical diseases, many people know the appropriate sources of professional help available, some of the medical and complementary treatments they might receive, and the likely benefits of those treatments. This understanding also underpins widespread public support for investment of community resources to deal with these physical diseases.

This situation contrasts with what currently occurs with mental disorders, where many members of the public are ignorant about what they can do for prevention, people commonly delay or avoid seeking treatment and view recommended treatments with suspicion, and they are unsure how to assist others with mental disorders. Furthermore, the support for investment in resources to deal with mental disorders is not commensurate with their substantial contribution to national burden of disease.

Concept of Mental Health Literacy

In the mid-1990s, some colleagues and I in Australia were struck by this contrast and the lack of research and action on public knowledge and beliefs about mental disorders. At that time, the dominant view was that the focus needed to be on training general practitioners (GPs) and other primary healthcare workers to better identify and manage mental disorders. The public were simply not seen as an important target. To draw attention to this neglected area, we coined the term *mental health literacy*, which we defined as "knowledge and beliefs about mental disorders which aid their recognition, management or prevention" (Jorm et al., 1997, p. 182). It is important to note that mental health literacy is not simply a matter of having knowledge (as might be conveyed in an abnormal psychology course). Rather it is knowledge that is linked to the possibility of action to benefit one's own mental health or that of others. Mental health literacy has many components, including (a) knowledge of how to prevent mental disorders, (b) recognition of when a disorder is developing, (c) knowledge of help-seeking options and treatments available, (d) knowledge of effective self-help strategies for milder problems, and (e) first aid skills to support others who are developing a mental disorder or are in a mental health crisis.

While many components of mental health literacy are relevant to the whole community, others are relevant to

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people who are specifically affected by mental disorders. These include what patients need to know for management of their illness and what caregivers need to know to provide effective support to family members. Some of these more specialized components are covered by the concept of psychoeducation, which is often provided by mental health professionals. However, in this article, I focus on the wider needs of the whole community for greater mental health literacy.

Recognition of Developing Mental Disorders to Facilitate Early Help Seeking

National surveys of mental disorders in the United States and in many other countries have shown that the prevalence rates of disorders are high but that many people affected do not seek professional help or they delay seeking help for many years. For example, the World Health Organization's World Health Initiative has examined data from 28 developed and developing countries (Wang, Angermeyer, et al., 2007). These surveys found that only a minority received treatment for mood, anxiety, or substance use disorders in the year of disorder onset, even in developed countries. Furthermore, for those who eventually received treatment, the median delays ranged from 1 to 14 years for mood disorders, 3 to 30 years for anxiety disorders, and 6 to 18 years for substance use disorders. Even for the more severe psychotic disorders, delays of months are common (Marshall et al., 2005). Failure or delay in seeking treatment can have serious consequences for people with mental disorders. Studies of a range of mental disorders have shown that the longer the duration of untreated illness, the poorer the outcomes of treatment tend to be (Altamura et al., 2008, 2010; de Diego-Adelifio et al., 2010; Marshall et al., 2005).

Why do people delay or fail to get professional help? There are several factors involved, but one of the important ones is lack of recognition by the person that he or she has a mental disorder (Gulliver, Griffiths, & Christensen, 2010). This point is well illustrated by an Australian clinical study of people who sought treatment for anxiety or mood disorders, which found an average delay of 8.2 years (Thompson, Issakidis, & Hunt, 2008). Within this period of 8.2 years, it took an average of 6.9 years to recognize that a disorder was present but only an average of 1.3 years between recognition and help seeking.

Community surveys of mental health literacy in Australia, Canada, India, Japan, Sweden, the United Kingdom, and the United States show that many people are unable to correctly recognize mental disorders. The methodology typically used in these surveys is to present participants with a case scenario describing a person with a mental disorder and then ask what the participant thinks is wrong with the person. The results of these surveys differ greatly from country to country and according to the scenario presented, but underrecognition is common (Dahlberg, Waern, & Runeson, 2008; Jorm, Nakane, et al., 2005; Kermode, Bowen, Arole, Joag, & Jorm, 2009; Klineberg, Biddle, Donovan, & Gunnell, 2010; Pescosolido et al., 2008; Wang, Adair, et al., 2007). For example, when a scenario of depression is presented, fewer than 50% of people show correct recognition in Japan and Sweden (Dahlberg et al., 2008; Jorm, Nakane, et al., 2005), compared with over 75% in Australia and Canada (Jorm, Nakane, et al., 2005; Wang, Adair, et al., 2007). In the United States, 58% correctly recognize a child with depression (Pescosolido et al., 2008). Recognition of other disorders, such as schizophrenia, anxiety disorders, or attention-deficit/hyperactivity disorder, tends to be lower than for depression (Jorm, Nakane, et al., 2005; Pescosolido et al., 2008; Wright et al., 2005; Wright & Jorm, 2009). When people do not use mental disorder labels such as *depression*, they often use more normalizing labels such as *stress* or *life problem*. However, these alternative labels are less likely to facilitate professional help seeking. For example, in several Australian surveys, people who labeled a scenario of a depressed person with a label other than *depression* were more likely to believe that it would be helpful to deal with the problem on one's own (Jorm, Kelly, et al., 2006).

Another factor that contributes to delayed recognition of mental disorders is that they often have first onset during adolescence or early adulthood. For example, in the United States, the median age of onset for anxiety disorders has been reported as 11 years, for mood disorders 30 years, and for substance use disorders 20 years (Kessler et al., 2005). Similar ages of onset have been found in other countries (Kessler et al., 2007). This means that people are often first experiencing disorders during a period of their life when their knowledge and experience are underdeveloped. A U.S. national survey found that young people 15 to 24 years old, particularly adolescent boys and young men, had less positive attitudes toward mental health treatment than older age groups (Gonzalez, Alegria, & Prihoda, 2005).

Consequently, young people may need the help of parents or other supportive adults to recognize that what they are experiencing is a mental disorder and to seek appropriate professional help. Surveys of young people in which case scenarios are used show that correct recognition increases rapidly from early adolescence to the mid-20s and is associated with their parents' ability to recognize correctly (Wright & Jorm, 2009; Wright, Jorm, Harris, & McGorry, 2007).

As recognition improves, there are benefits for the young person if he or she develops a mental disorder. Young people who recognize a disorder in a scenario tend to have better help-seeking and treatment preferences (Wright et al., 2007). This may be because self-labeling as having a particular mental disorder activates a schema about appropriate action to take. Self-labeling as having a disorder may also help health practitioners recognize the young person's problem. An Australian study of young people with mental disorders attending GPs found that the GP was more likely to detect the disorder if the young person conceptualized his or her problem as a mental disorder (Haller, Sanci, Sawyer, & Patton, 2009).

Although early recognition of mental disorders may have benefits for earlier and more appropriate treatment, there is always the danger that it can increase stigma. There is a considerable sociological literature linking the labeling of a person as *mentally ill* with stigmatizing attitudes (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989), and these attitudes may be a barrier to receiving treatment (Corrigan, 2004). The solution to this dilemma is to always link the recognition of a disorder with specific actions that are likely to help a person's recovery, rather than see labeling as an act that is useful in its own right.

Knowledge of Professional Help and Effective Treatments Available

If a person recognizes his or her problem as a mental disorder, this may assist help seeking, but in order to get effective help, the person also needs to know about the range of professional help and evidence-based treatments available.

There are a variety of professions that provide mental health services, and these professions have standards of training and professional conduct, a scientific evidence base, and clinical practice guidelines that help to ensure that people affected by mental disorders receive good qual-

ity care. However, professional standards are not enough to ensure that people affected by mental disorders receive the benefits. The public has to believe that what professionals have to offer is likely to help them, otherwise they will not seek out their services or will not adhere to their treatment recommendations.

Surveys of public beliefs about professionals and treatments have been carried out in a range of countries and show that there are sometimes major discrepancies between public and professional views. One consistent finding is that members of the public view informal sources of help, such as family and friends, very positively. In fact, they are often rated more positively than mental health professionals (Burns & Rapee, 2006; Cotton, Wright, Harris, Jorm, & McGorry, 2006; Jorm, Angermeyer, & Katschnig, 2000; Jorm, Nakane, et al., 2005; Jorm & Wright, 2007). Although seeking social support from family and friends can be a useful strategy, the concern is when this is done in place of seeking professional help. A particular area of concern is with adolescents, who often say they will turn to friends as a source of help if they have a mental health problem (Burns & Rapee, 2006; Jorm & Wright, 2007). However, adolescent peers may not have the experience and maturity to take on this role or to facilitate professional help seeking.

When the public's beliefs about various professionals are examined, a striking finding is that professionals who have specialized training in mental disorders may not be viewed as positively as more generic professional help. For example, in Australia, *psychologists* are nationally registered health professionals who have to adhere to rigorous standards of training, whereas *counselor* is an unregulated label that anyone can apply to themselves. Nevertheless, national surveys of the Australian public consistently show that counselors are more likely than psychologists to be seen as potentially helpful for a range of mental disorders (Jorm, Christensen, & Griffiths, 2006b; Jorm & Wright, 2007). A similar finding has been reported from Canada (Wang, Adair, et al., 2007). Table 1 summarizes these findings.

Surveys of the public in many countries have also looked at public views on treatments, revealing some marked differences from the views of mental health professionals. The most striking findings are in relation to psychiatric medications, which are recommended in clinical practice guidelines but are often viewed negatively by

Table 1
Percentages of Community Believing That Counselors and Psychologists Are Likely to Be Helpful for a Person Who Is Depressed

Study	Country	Age group surveyed	Counselors helpful (%)	Psychologists helpful (%)
Jorm et al. (2006b)	Australia	18+	83	68
Jorm & Wright (2007)	Australia	12–17	91	64
Jorm & Wright (2007)	Australia	18–25	94	83
Wang, Adair, et al. (2007)	Canada	18–74	89	78

the public (Dahlberg et al., 2008; Jorm, Nakane, et al., 2005; Kovess-Masféty et al., 2007; Riedel-Heller, Matschinger, & Angermeyer, 2005). In some surveys, more people see psychiatric medications as potentially harmful than see them as helpful (Jorm et al., 1997; Lauber, Nordt, Falcato, & Rössler, 2001) or rate them on a par with non-evidence-based treatments such as vitamins and changes in diet (Wang, Adair, et al., 2007). On the other hand, beliefs about psychological interventions are generally more positive (Jorm, Nakane, et al., 2005; Kovess-Masféty et al., 2007; Lauber et al., 2001; Wang, Adair, et al., 2007), although generic counseling is often seen more positively than focused psychological interventions such as cognitive-behavior therapy (Jorm, Morgan, & Wright, 2008a, 2008c).

At first glance, it might appear ·that the public is stating an either/or preference for psychological versus medical treatments. However, it is not as simple as that. For example, people who believe that antidepressants are harmful have been found to be more negative about other standard treatments including psychological ones, indicating that for some people there is a rejection of treatment in general (Jorm, Christensen, & Griffiths, 2005a). Indeed, a survey in six European countries found that around a third of adults believe that professional mental health care is worse than or equal to no help at all for mental disorders (ten Have et al., 2010).

These differences between public and professional beliefs can affect the action people take if they develop a mental disorder. For example, the above-cited study of help seeking for mental disorders in six European countries found that the perceived effectiveness of mental health care was associated with actually receiving mental health care (ten Have et al., 2010). In relation to beliefs about medication, it has been found that depressed patients who have negative attitudes toward antidepressants are less likely to be prescribed these medications, less likely to fill prescriptions, and less likely to benefit overall (Pyne et al., 2005). If people affected by mental disorders are to receive the full benefits of evidence-based health care, they need some knowledge about what is known to work and to have some concordance of beliefs with professionals.

Fortunately, it is possible to change community beliefs about treatments. There·is historical evidence from repeat community surveys in Australia, Germany, and the United States that attitudes toward treatment, including psychiatric medications, have become more positive over time (Angermeyer & Matschinger, 2005; Jorm et al., 2006b; Mojtabai, 2007; Pescosolido et al., 2010).

Knowledge of Effective Self-Help Strategies

Self-help strategies are actions that a person can take on his or her own to deal with a mental disorder. Sometimes self-help strategies are used under the guidance of a health professional as part of psychological therapy (e.g., use of a book or website providing cognitive-behavior therapy). However, more often these are used informally without any professional guidance.

A number of community surveys have assessed public beliefs about informal self-help. These surveys show that self-help tends to be viewed very positively, in fact often more positively than professional mental disorder treatments. For example, in both Australia and Canada, majorities of the public believe that clinical depression is likely to be helped by vitamins; physical activity; reading about the problem; getting out more; a special diet; and doing courses on relaxation, stress management, or yoga (Jorm, Nakane, et al., 2005; Wang, Adair, et al., 2007). Furthermore, in both countries these self-help strategies receive a higher endorsement as likely to be helpful than does psychotherapy. Even for more severe mental disorders, these strategies are popular. For example, when presented with a psychosis scenario,·Australian young people showed strong endorsement of the likely helpfulness of becoming more physically active, using meditation, and getting up early and out in the sunlight (Jorm et al., 2008a). Similarly, in Switzerland, getting fresh air was commonly endorsed for a person depicted with schizophrenia (Lauber et al., 2001), whereas in rural India, distraction from the problem, vitamins, and appetite stimulants were commonly endorsed (Kermode et al., 2009).

Not only are self-help strategies endorsed as likely to be helpful, but they are also commonly used in practice. As an example, in an Australian survey, the following strategies were most commonly used to deal with high levels of anxiety and depression symptoms: alcohol to relax, pain relievers, physical activity, help from family and friends, holidays, and time off work (Jorm, Medway, et al., 2000). Some of these strategies are likely to be helpful. For example, physical activity has been found to reduce depression (Jorm et al., 2002). However, other strategies, such as use of alcohol, may worsen symptoms in the long term (Jorm et al., 2002). It is of particular concern when people with clinical disorders use self-help as an alternative to professional help. In the Australian survey cited earlier, these self-help strategies were more commonly used than the most frequent type of professional help, which was seeing a GP (Jorm, Medway, et al., 2000). For some people, self-help was used without professional help seeking, whereas for others both were used together.

To better understand what actions people take at different levels of symptom severity, an Australian study examined the use of a variety of self-help and professional help-seeking actions according to level of psychological distress (Jorm, Griffiths, Christensen, Parslow, & Rogers, 2004). Not unexpectedly, professional interventions such as seeing a GP or a counselor, or taking antidepressants, increased in frequency with increasing severity of distress. However, many self-help actions, such as getting help from family and friends, increasing physical activity, and engaging in enjoyable activities, show an initial rise in use with mild distress, followed by a drop in use as distress becomes more severe. Figure 1 shows some examples.

These findings led us (Jorm et al., 2004) to develop an "overlapping waves of action" model of coping with psychological distress. According to this model, an individual may take actions in any order or in any combination.

Figure 1

Frequency of Using Some Professional and Self-Help Interventions for Depression With Increasing Severity of Symptoms
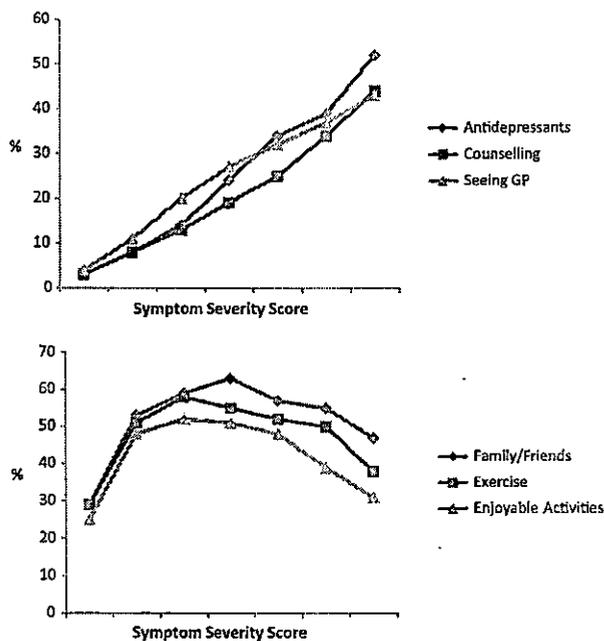
Note. Adapted from "Actions Taken to Cope With Depression at Different Levels of Severity: A Community Survey," by A. F. Jorm, K. M. Griffiths, H. Christensen, R. A. Parslow, and B. Rogers, 2004, *Psychological Medicine, 34,* p. 297. Copyright 2004 by Cambridge University Press.

However, when the population as a whole is looked at, certain waves of action can be seen (see Figure 2). The first wave of action involves increasing use of self-help strategies that are readily available and may already be in use. This wave of action increases with mild distress but then decreases as distress becomes more severe. The second wave of action involves new self-help strategies that may not be already in use and are adopted specifically to cope with the distress. Examples are use of vitamins and St. John's wort, cutting out caffeine, and taking up yoga. This wave of action peaks with moderate distress and then declines. The third wave of action involves professional help seeking and continues to increase with severity of distress. It must be emphasized that these waves of action do not imply a set sequence for any individual but rather general trends in the community as a whole.

The overlapping waves of action model proposes that self-help strategies will be most commonly used for mild levels of symptoms. People with these subclinical symptoms still experience some level of disability, although at a lower level than people with clinical disorders. However, because of the very large number of people affected by these symptoms, the impact on disability in the population as a whole is substantial (Judd, Schettler, & Akiskal, 2002).

People with subclinical symptoms are also at higher risk of developing clinical disorders and suicide (Sadek & Bona, 2000). Clearly, action needs to be taken to reduce subclinical symptoms, but people affected by these symptoms are a lower priority for mental health services than people with full clinical disorders. It has been proposed that a way of reducing these symptoms is to have promotion campaigns educating the public about self-help strategies that are more likely to be effective (Jorm & Griffiths, 2006). To find out what strategies are most likely to work for subclinical depression, Morgan and Jorm (2008, 2009) carried out a review of the evidence from randomized trials and a Delphi expert consensus study with mental health professionals and consumer advocates. This work produced the list of strategies shown in Table 2. Currently, a large randomized controlled trial is being carried out to see if promotion of these strategies by e-mail messages is effective in reducing subclinical depressive symptoms and preventing depressive disorders (Morgan, Jorm, & Mackinnon, 2011).

Knowledge and Skills to Give Mental Health First Aid and Support to Others

As well as being able to deal with mental health problems in themselves, members of the community need to know how they can best assist and support others. As we have seen, many people experiencing a mental disorder do not correctly recognize what is happening to them, and they may fail to seek professional help or delay help seeking for a long period. In such cases, the person's social network may facilitate recognition and help seeking. Indeed, there is evidence that people experiencing a mental disorder are more likely to seek professional help if someone else suggests it (Cusack, Deane, Wilson, & Ciarrochi, 2004;

Figure 2

The Overlapping Waves of Action Model
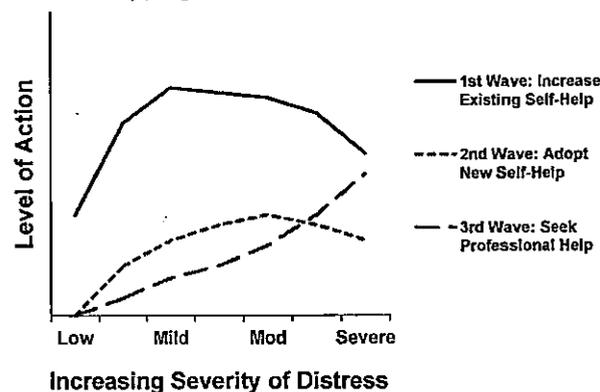
Increasing Severity of Distress

Note. Adapted from "Actions Taken to Cope With Depression at Different Levels of Severity: A Community Survey," by A. F. Jorm, K. M. Griffiths, H. Christensen, R. A. Parslow, and B. Rogers, 2004, *Psychological Medicine, 34,* p. 298. Copyright 2004 by Cambridge University Press.

Table 2

Self-Help Strategies That Professional and Consumer Experts Agree Are Likely to Be Helpful for Subclinical Depression

Strategy
• Engage in exercise or physical activity
• Practice good sleep hygiene
• Maintain a regular sleep schedule
• Do something you enjoy
• Try to remain involved in purposeful activities for at least a small part of every day
• Make a list of strategies that have worked in the past for depression and use them
• Engage in an activity that gives a feeling of achievement
• Enlist a trusted friend or relative to help you get out and about or do activities
• Make sure you get out of the house for at least a short time each day
• Reward yourself for reaching a small goal
• Learn relaxation methods
• Talk over problems or feelings with someone who is supportive and caring
• Let family and friends know how you are feeling so that they are aware of what you are going through
• Eat a healthy, balanced diet

Note. Adapted from "Self-Help Strategies That Are Helpful for Sub-Threshold Depression: A Delphi Consensus Study," by A. J. Morgan and A. F. Jorm, 2009, *Journal of Affective Disorders, 115,* p. 199. Copyright 2009 by Elsevier.

Dew, Bromet, Schulberg, Parkinson, & Curtis, 1991). The assistance of others in facilitating recognition and help seeking may be particularly important during adolescence, when mental disorders often have first onset, because adolescents often lack the knowledge and experience to take optimal action. Another way in which people in the social network can assist is to provide ongoing social support. For example, there is evidence that recovery from depression is assisted when family members provide good social support (Keitner et al., 1995) and that positive social support helps reduce the impact of traumatic life events (Charuvastra & Cloitre, 2008).

Providing assistance to others of this sort has been termed *mental health first aid* (Kitchener & Jorm, 2002). To find out what are the best strategies to use in providing mental health first aid for a broad range of mental disorders and mental health crisis situations, a number of Delphi studies have been carried out to establish expert consensus using panels of mental health professionals, consumers, and caregivers (Hart, Jorm, Paxton, Kelly, & Kitchener, 2009; Kelly, Jorm, & Kitchener, 2009, 2010; Kelly, Jorm, Kitchener, & Langlands, 2008a, 2008b; Kingston et al., 2009, 2011; Langlands, Jorm, Kelly, & Kitchener, 2008a, 2008b). Eight common elements to providing good mental health first aid were found, as summarized in Table 3.

Several surveys in Australia have been carried out to find out what members of the public believe about providing mental health first aid. A survey of adults presented a range of case scenarios and asked participants what they would do if this was a person they knew and cared about

(Jorm, Blewitt, et al., 2005; Jorm et al., 2005a). The most common responses were to encourage professional help seeking and to listen to and support the person, which is in accordance with the above expert recommendations. However, significant minorities of individuals in the survey did not mention these responses. Of greatest concern was that, when presented with a scenario of a depressed and suicidal individual, only 15% mentioned assessing the risk of harm.

A later Australian survey looked at mental health first aid responses to a range of scenarios by young people 12 to 25 years old and their parents (Jorm et al., 2008b). The responses of the young people and parents were compared with the recommendations of mental health professionals. The biggest gap was that young people and parents were less likely to believe it would be helpful to ask a young person with a mental disorder about suicidal feelings and more likely to believe it would be harmful. They were also less likely than professionals to believe that it would be harmful to "[talk] to the person firmly about getting their act together" (Jorm et al., 2008b, p. 6).

A particular issue with young people supporting peers is their reluctance to approach an adult about their concerns. Kelly, Jorm, and Rodgers (2006) found that only a minority of Australian high school students would engage the help of an adult, such as a parent, teacher, or school counselor, for a depressed peer. In the United States, Dunham (2004) examined how young adults would respond to a suicidal peer and found that many would not tell a responsible adult about it.

Table 3
Key Elements of Practicing Good Mental Health First Aid

Element
● Approach the person.
● Assess the situation.
● Assist with any crisis (e.g., suicidal thoughts or behaviors, nonsuicidal self-injury, acute psychosis, aggression, substance overdose).
● Listen nonjudgmentally.
● Offer support.
● Offer information.
● Encourage the person to get professional help.
● Encourage other supports (including social supports and self-help strategies).

Note. Adapted from *Mental Health First Aid Manual* (2nd ed.), by B. A. Kitchener, A. F. Jorm, and C. M. Kelly, 2010, pp. 14–16. Copyright 2010 by B. A. Kitchener, A. F. Jorm, and C. M. Kelly.

All of these surveys looked at stated intentions to provide assistance in hypothetical situations. Only one study has examined actual mental health first aid actions taken. Yap, Wright, and Jorm (2011) surveyed young Australians 13 to 28 years old and found that the most common responses toward a friend or family member who had a mental health problem were to listen to the person (reported by 91%), encourage physical activity (69%), bring together friends to cheer the person up (67%), and keep the person busy to keep his or her mind off problems (66%). Only 58% suggested professional help, and only 38% asked about suicidal feelings. Some reported doing potentially unhelpful things like talking to the person firmly about getting his or her act together (45%), suggesting use of alcohol to forget his or her troubles (6%), or ignoring the person until he or she got over it (4%). These and the earlier results support the conclusion that greater mental health first aid knowledge and skills are needed.

Knowledge of How to Prevent Mental Disorders

Undoubtedly, the least developed area of mental health literacy is the area of prevention. A possible contributing factor is that we know less about what are the major modifiable risk factors for mental disorders than we know for cancer, heart disease, and diabetes. The one major risk factor that is known is traumatic life events, but reducing these is a social goal in its own right and often difficult to achieve. Nevertheless, there are modifiable risk factors for mental disorders that the public needs to know about.

An important example is the association between cannabis use and risk of psychosis. The evidence is now sufficiently firm to justify educating young people about the risk (Moore et al., 2007). Other examples concern the role of parenting in mental disorders. Parents need to know that a range of parenting behaviors affect the risk of their adolescent children misusing alcohol and other substances

(Lac & Crano, 2009; Ryan, Jorm, & Lubman, 2010). Similarly, parenting has effects on the development of depression and anxiety in children (McLeod, Weisz, & Wood, 2007; McLeod, Wood, & Weisz, 2007), and conflict between parents increases risk of psychological distress in their offspring (Kelly, 2000). Although the effects of parenting are modest in size, there could be a substantial gain in population mental health if shifts in parenting behavior occur across the whole community.

Comparatively little survey research has been carried out on community beliefs about prevention. In Germany, Schomerus, Angermeyer, Matschinger, and Riedel-Heller (2008) found that 75% of adults believed that prevention of depression was possible, and 58% of this group were willing to pay to take part in a prevention program. When participants were presented with a list of possible preventive strategies, the ones rated as likely to be helpful by over 80% of participants were the following: forming stable friendships, having enjoyable leisure activities, having family support, thinking positively, disclosing oneself to a confidante, doing activities that increase self-confidence, doing meaningful activities, getting enough sleep, abstaining from drugs, doing exercise, and relaxing while listening to music. This list has many similarities with the strategies recommended by experts for subclinical depressive symptoms in Table 2.

A survey of Australian youth assessed beliefs about the prevention of a range of mental disorders and compared these with beliefs of mental health professionals (Jorm, Morgan, & Wright, 2010). There was agreement between young people and professionals about a range of prevention strategies: physical activity, keeping contact with family and friends, avoiding use of substances, and making time for relaxing activities. The biggest difference was that most young people believed it would be helpful to avoid stressful situations, whereas professionals did not think this would

be helpful. For social phobia, in particular, many professionals thought that avoidance would be harmful.

These findings show that there is fertile ground for preventive action by the public. However, in contrast to the situation with major physical diseases, nothing is known about what members of the public do in practice for prevention of mental disorders.

Mental Health Literacy and Cultural Diversity

Mental health literacy represents a Western scientific conceptualization that may conflict with traditional folk beliefs. This conflict is often seen more strongly in people from cultural minorities or in developing countries. For example, people from cultural minorities are often low users of mental health services, and research with these communities has identified lack of mental health literacy as a major barrier. Studies of Southeast Asian refugee communities in the United States have found that many people lack knowledge of what mental illness is, how to recognize early signs, what treatments are available, and how and when to seek professional help (Collier, Munger, & Moua, 2011; Lee, Lytle, Yang, & Lum, 2010). Some languages lack words to adequately describe concepts such as depression (Lee et al., 2010). Furthermore, mental disorders may be seen as due to spirits, curses, or bad karma, leading to feelings of powerlessness or to non-evidence-based actions (Lee et al., 2010). However, belonging to a minority group does not necessarily imply greater problems with mental health literacy. For example, African Americans have been found to have more positive attitudes toward mental health treatment than Anglos and Latinos (Diala et al., 2000; Gonzalez et al., 2005).

In developing countries, it has been found that traditional explanatory models of mental disorders can delay seeking help from Western healthcare services and that some models of traditional healing contribute to human rights abuses, stigma, and discrimination (Petersen, Lund, & Stein, 2011). It has been recognized that having access to healthcare services is not enough to improve treatment of people with mental disorders and that this must be accompanied by efforts to increase community mental health literacy.

Because of the potential impact of language and culture, efforts to improve mental health literacy must take account of cultural and linguistic diversity if they are to reach the whole community.

Interventions to Improve Mental Health Literacy

There is good evidence that the mental health literacy of a whole community can be improved. In Australia, Germany, and the United States, repeats of community surveys have found significant improvements over periods of a decade or more in beliefs about mental health professionals and treatments (Angermeyer & Matschinger, 2005; Goldney, Dunn, Dal Grande, Crabb, & Taylor, 2009; Jorm et al., 2006b; Mojtabai, 2007; Pescosolido et al., 2010). Such historical

changes are difficult to attribute to specific causes; however, there are a number of specific interventions that are known to work. Reviewed below are some of the larger scale or better evaluated interventions to improve mental health literacy.

Whole-of-Community Campaigns

In several countries there have been community campaigns that have aimed to improve aspects of mental health literacy (Dumesnil & Verger, 2009). Here I describe the most rigorously evaluated ones.

Since 2000, Australia has had a national government-funded depression initiative, called *beyondblue*, the aims of which include raising community understanding of depression and related disorders (Hickie, 2004). The community education activities of *beyondblue* have been wide ranging, including providing advertising campaigns, educating journalists, enlisting prominent people to speak about depression, sponsoring artistic and sporting events, and providing free information through printed materials and the Internet. *Beyondblue* has also targeted information at a broad range of cultural and language groups within Australia. In its early years of operation, *beyondblue* was financially supported by some Australian states but not by others. The organization was active in all states but had a higher level of activity in those that provided funding, allowing the lower activity states to be used as a type of control group. Awareness of *beyondblue* was greater in members of the public in the high-activity states, and there was a greater improvement in depression literacy, with greater ability to recognize depression, more positive beliefs about the potential helpfulness of treatments, and greater public openness about depression (Jorm, Christensen, & Griffiths, 2005b; Jorm, Christensen, & Griffiths, 2006a).

In Germany, a community campaign was run from 2001 to 2002 in the city of Nuremberg by the Nuremberg Alliance Against Depression. The intervention was multifaceted and involved a public information campaign, interventions with GPs and community facilitators (e.g., teachers, police, clergy), and interventions with consumers and their relatives (Dietrich, Mergl, Freudenberg, Althaus, & Hegerl, 2010). To evaluate the intervention, community surveys were carried out in Nuremberg, with the nearby city of Würzburg serving as a control. The intervention produced increased awareness of depression, with the effects being greater in people whose lives had been affected by depression. Attitudes toward antidepressants became more positive, and there was a decrease in the belief that depression was due to a lack of self-discipline. More important, there was a greater reduction in suicidal acts in Nuremberg compared with Würzburg, and this change was found to persist one year after the end of the intervention (Hegerl, Wittenburg, & the European Alliance, 2010). Given these successes, the European Alliance Against Depression was formed in 2004 with funding from the European Commission, and the approach has been extended to 17 countries (Hegerl et al., 2009).

While both the above campaigns focused on depression, the Treatment and Intervention in Psychosis (TIPS)

program in Norway was designed to reduce the duration of untreated psychosis in first-episode schizophrenia (Joa et al., 2008). TIPS had two components: an intensive information campaign for the general public, schools, and GPs about how to recognize psychosis, and an early detection team that could be contacted by anyone. In the period from 1997 to 2000, the TIPS program was run in two areas in Norway, and two other areas in Norway and Denmark served as controls. The TIPS program was found to reduce the duration of untreated psychosis to a median of 5 weeks, compared with 16 weeks in the control regions. From 2002 to 2004 the early detection team continued to operate, but without the information campaign, leading to an increase of the duration of untreated psychosis back up to a median 15 weeks. This reversal led the authors of the program to conclude that the intensive information campaign was an essential part of the success of the TIPS intervention (Joa et al., 2008).

Interventions Based in Educational Settings

Schools, colleges, and universities are well placed as settings for improving mental health literacy because of the high-risk age groups they serve and their educational mission. Although many programs have been carried out throughout the world, few have been rigorously evaluated. However, three small randomized trials have been carried out in U.S. high schools and one in a Pakistani high school. The first U.S. study looked at the effects of trainee psychiatrists giving a talk to students about substance use, depression, and suicide, and found an increase in willingness to seek help from a psychiatrist or counselor (Battaglia, Coverdale, & Bushong, 1990). In another U.S. study, students were given a lesson about mental illness and sources of help available. This trial also found an improvement in attitudes to treatment and seeking help (Esters, Cooker, & Ittenbach, 1998). More recently, a study has been carried out on a consumer-delivered educational intervention (*In Our Own Voice*) and found improvements in mental health literacy at four and eight weeks follow-up (Pinto-Foltz, Logsdon, & Myers, 2011).

A study in rural Pakistan looked at the effect of a four-month program of mental health education in schools (Rahman, Mubbashar, Gater, & Goldberg, 1998). This study found improved knowledge in the school children, as well as in their parents, friends, and neighbors, indicating that in a developing country a school-based program can have a broader community impact.

There is more limited evidence on mental health literacy interventions in higher education institutions. An exception is a controlled trial of a social marketing campaign with U.K. university students (Merritt, Price, Mollison, & Geddes, 2007). The campaign used posters and postcards to convey information about depression and its treatment. Improvements were found in recognition of depression and attitudes toward antidepressants but no change in belief that depression can be treated effectively.

Mental Health First Aid Training

A Mental Health First Aid training course began in Australia in 2001. The aim of this course is to train members of the public in how to provide support to someone who is developing a mental disorder or in a mental health crisis situation until professional help is obtained or the crisis resolves (Kitchener & Jorm, 2008). Four randomized controlled trials have been carried out comparing the course with wait-list controls (Jorm, Kitchener, Fischer, & Cvetkovski, 2010; Jorm, Kitchener, O'Kearney, & Dear, 2004; Jorm, Kitchener, Sawyer, Scales, & Cvetkovski, 2010; Kitchener & Jorm, 2004). These trials have found improvements in knowledge, confidence in providing help, actual helping behavior, and stigmatizing attitudes. These changes are maintained for five to six months after course completion. Mental Health First Aid training has also been adapted for cultural minority groups within Australia, including Indigenous peoples and Vietnamese and Chinese speakers (Jorm & Kitchener, 2011). The Mental Health First Aid training course has been widely disseminated in Australia, where 1% of the adult population has done the course (Jorm & Kitchener, 2011). The course has been adapted to the cultures and healthcare systems of 15 other countries (Jorm & Kitchener, 2011), including the United States (Rosenberg, 2011). It appears quite feasible for this type of training to eventually reach very large numbers of people, similar to the reach of first aid courses for physical health emergencies.

Web-Based Interventions

The Internet is a major source of health information for the public, including information on mental disorders. Numerous studies have been carried out to evaluate the quality of this information using expert assessments or quality rating tools (Reavley & Jorm, 2011). Most studies have concluded that the general quality is poor, although some high-quality websites are available. For example, the National Institute of Mental Health website (www.nimh.nih .gov) has been rated highly in several studies (Reavley & Jorm, 2011). Most of the research on website quality has focused on the content of the websites rather than the more important issue of whether websites produce beneficial effects on website users. However, there have been some randomized controlled trials evaluating effects on users.

A study by Christensen, Griffiths, and Jorm (2004) used a randomized controlled trial to examine the effects of websites on a community sample of people with a high level of depressive symptoms. This trial compared a website giving information about depression and its treatment (BluePages: www.bluepages.anu.edu.au) with a website providing cognitive-behavior therapy (MoodGYM: www .moodgym.anu.edu.au) and an attention-placebo control intervention. The information website was found to increase the participants' understanding of treatments for depression relative to the other interventions, although it did not improve professional help seeking (Christensen, Leach, Barney, Mackinnon, & Griffiths, 2006). More surprising, the information website reduced depressive symptoms more

than the attention-placebo control and produced effects equivalent to those of the cognitive-behavior therapy website. These therapeutic benefits were found to be maintained over 12 months (Mackinnon, Griffiths, & Christensen, 2008). These and other similar findings raise the possibility that increasing mental health literacy may lead to a therapeutic benefit (Donker, Griffiths, Cuijpers, & Christensen, 2009).

Another trial examined a website aimed at educating parents about prevention and early intervention (Deitz, Cook, Billings, & Hendrickson, 2009). The website had information about anxiety disorders, depression, treatment options, what parents can do, and links to other resources. Parents in a workplace were randomized to use the website or to be placed on a waiting list. The website was found to improve knowledge and self-efficacy in handling mental health issues. However, there was no follow-up to determine the longer term effects on children. While this trial was small and brief, it does illustrate the potential for using the Web to promote prevention efforts by parents.

A limitation of web-based interventions is that they are less likely to be accessed by people who are older, less educated, and with lower incomes. However, it has been argued that Internet interventions have the potential to reduce health inequalities if they are publicly funded and available in a wide range of languages and in formats that do not require literacy (Muñoz, 2010). For such services to reduce disparities, disadvantaged members of the community would need to be aware of these services and believe in their effectiveness.

Mental Health Literacy and Support for Mental Health Services

Mental health literacy involves spreading the expertise for dealing with mental disorders across the whole community. In doing so, it complements the efforts of professionals working in mental health services. However, there may be another indirect benefit to mental health services. In many countries, mental health consumers and professionals have expressed frustration that services are poorly resourced, with consequent effects on their quality. To improve this situation, a greater commitment of public funds is required, but better funding will only occur if voters and the people they elect support better funding. Such support is more likely if citizens understand the societal impact of mental disorders and potential for services to reduce this impact.

This link is clearly shown by a community survey in Germany in which the public was asked about which diseases should get a reduction in services if the overall health budget had to be cut (Schomerus, Matschinger, & Angermeyer, 2006). Mental disorders such as alcoholism, depression, and schizophrenia were more often favored for cuts than physical diseases, with cancer and heart disease seldom selected. The most important determinant of people's selection of a disease for cuts was the perceived severity of the disorder. The implication is that if community priorities are to be changed, the public needs to be convinced that mental disorders have a major impact. Because mental disorders affect primarily disability rather than mortality, it is important to promote their role as the most important contributors to disability in the population and the particular impact they have on young people (World Health Organization, 2008).

The Future

Mental health literacy has a fairly short history (15 years) as a topic for research and action. However, enough has been achieved to justify further efforts in this area. A number of future directions can be anticipated. First, much of the work so far has focused on beliefs, but the associations between beliefs and actions are modest. In the future, there needs to be more emphasis on changing actions that the public takes to benefit mental health.

It can also be anticipated that mental health literacy will be increasingly seen as a goal of health policy, on a par with what occurs for major physical disorders. Such policy changes are already occurring in some countries. In Australia, a national mental health plan has identified improving mental health literacy as a means to increase prevention and early intervention (Australian Department of Health and Ageing, 2009). Similarly, British Columbia in Canada has a plan to increase the province's mental health literacy (British Columbia Ministry of Health Services, 2003) and improving mental health literacy has featured in the Scottish government's national action plan (The Scottish Government, 2003). Such policy developments have not as yet occurred in the United States and other countries.

Finally, when mental health literacy becomes a national policy goal, there needs to be national monitoring of trends over time to see whether goals are being met. Existing time series data from Australia and Germany show the feasibility of national monitoring (Angermeyer & Matschinger, 2005; Goldney et al., 2009; Jorm et al., 2006b). Ideally, this monitoring would be linked to surveys covering the prevalence of psychological distress and other indicators of national mental health.

The ultimate aim is a society where people with mental disorders take prompt action to seek professional help, where they receive and adhere to evidence-based treatments, where they feel supported by others in their social network, where people take preventive action to benefit themselves and their families, and where mental health services are seen as making a valuable contribution that merits public support.

REFERENCES

Altamura, A. C., Dell'Osso, B., Berlin, H., Buoli, M., Bassetti, R., & Mundo, E. (2010). Duration of untreated illness and suicide in bipolar disorder: A naturalistic study. *European Archives of Psychiatry and Clinical Neuroscience, 260*, 385–391. doi:10.1007/s00406-009-0085-2

Altamura, A. C., Dell'osso, B., D'Urso, N., Russo, M., Fumagalli, S., & Mundo, E. (2008). Duration of untreated illness as a predictor of treatment response and clinical course in generalized anxiety disorder. *CNS Spectrums, 13*, 415–422.

Angermeyer, M. C., & Matschinger, H. (2005). Have there been any changes in the public's attitudes towards psychiatric treatment? Results from representative population surveys in Germany in the years 1990

and 2001. *Acta Psychiatrica Scandinavica, 111,* 68–73. doi:10.1111/j.1600-0447.2004.00441.x

Australian Department of Health and Ageing. (2009). *Fourth national mental health plan: An agenda for collaborative government action in mental health 2009–2014.* Canberra, ACT: Commonwealth of Australia.

Battaglia, J., Coverdale, J., & Bushong, C. (1990). Evaluation of a Mental Illness Awareness Week program in public schools. *The American Journal of Psychiatry, 147,* 324–329.

British Columbia Ministry of Health Services, Department of Mental Health and Addictions. (2003). *Development of a mental health and addictions information plan for mental health literacy 2003–2005.* Vancouver, BC, Canada: British Columbia Ministry of Health Services.

Burns, J. R., & Rapee, R. M. (2006). Adolescent mental health literacy: Young people's knowledge of depression and help seeking. *Journal of Adolescence, 29,* 225–239. doi:10.1016/j.adolescence.2005.05.004

Charuvastra, A., & Cloitre, M. (2008). Social bonds and posttraumatic stress disorder. *Annual Review of Psychology, 59,* 301–328. doi: 10.1146/annurev.psych.58.110405.085650

Christensen, H., Griffiths, K. M., & Jorm, A. F. (2004). Delivering interventions for depression by using the Internet: Randomised controlled trial. *BMJ: British Medical Journal, 328,* 265–269. doi:10.1136/bmj.37945.566632.EE

Christensen, H., Leach, L. S., Barney, L., Mackinnon, A. J., & Griffiths, K. M. (2006). The effect of web based depression interventions on self reported help seeking: Randomised controlled trial. *BMC Psychiatry, 6,* 1–11. doi:10.1186/1471-244X-6-13

Collier, A. F., Munger, M., & Moua, Y. K. (2011). Hmong mental health needs assessment: A community-based partnership in a small midwestern community. *American Journal of Community Psychology.* Advance online publication. doi:10.1007/s10464-011-9436-z

Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist, 59,* 614–625. doi:10.1037/0003-066X.59.7.614

Cotton, S. M., Wright, A., Harris, M. G., Jorm, A. F., & McGorry, P. D. (2006). Influence of gender on mental health literacy in young Australians. *Australian and New Zealand Journal of Psychiatry, 40,* 790–796. doi:10.1080/j.1440-1614.2006.01885.x

Cusack, J., Deane, F. P., Wilson, C. J., & Ciarrochi, J. (2008). Who influence men to go to therapy? Reports from men attending psychological services. *International Journal for the Advancement of Counselling, 26,* 271–283. doi:10.1023/B:ADCO.0000035530.44111.a8

Dahlberg, K. M., Waern, M., & Runeson, B. (2008). Mental health literacy and attitudes in a Swedish community sample: Investigating the role of personal experience of mental health care. *BMC Public Health, 8.* doi:810.1186/1471-2458-8-8

de Diego-Adeliño, J., Portella, M. J., Puigdemont, D., Pérez-Egea, R., Álvarez, E., & Pérez, V. (2010). A short duration of untreated illness (DUI) improves response outcomes in first-depressive episodes. *Journal of Affective Disorders, 120,* 221–225. doi:10.1016/j.jad.2009.03.012

Deitz, D. K., Cook, R., Billings, D., & Hendrickson, A. (2009). Brief report: A web-based mental health program: Reaching parents at work. *Journal of Pediatric Psychology, 34,* 488–494. doi:10.1093/jpepsy/jsn108

Dew, M. A., Bromet, E. J., Schulberg, H. C., Parkinson, D. K., & Curtis, E. C. (1991). Factors affecting service utilization for depression in a white collar population. *Social Psychiatry and Psychiatric Epidemiology, 26,* 230–237. doi:10.1007/BF00788971

Diala, C., Muntaner, C., Walrath, C., Nickerson, K. J., LaVeist, T. A., & Leaf, P. J. (2000). Racial differences in attitudes toward professional mental health care and in the use of services. *American Journal of Orthopsychiatry, 70,* 455–464. doi:10.1037/h0087736

Dietrich, S., Mergl, R., Freudenberg, P., Althaus, D., & Hegerl, U. (2010). Impact of a campaign on the public's attitudes towards depression. *Health Education Research, 25,* 135–150. doi:10.1093/her/cyp050

Donker, T., Griffiths, K., Cuijpers, P., & Christensen, H. (2009). Psychoeducation for depression, anxiety and psychological distress: A meta-analysis. *BMC Medicine, 7.* doi:10.1186/1741-7015-7-79

Dumesnil, H., & Verger, P. (2009). Public awareness campaigns about depression and suicide: A review. *Psychiatric Services, 60,* 1203–1213. doi:10.1176/appi.ps.60.9.1203

Dunham, K. (2004). Young adults' support strategies when peers disclose suicidal intent. *Suicide and Life-Threatening Behavior, 34,* 56–65. doi:10.1521/suli.34.1.56.27773

Esters, I. G., Cooker, P. G., & Ittenbach, R. F. (1998). Effects of a unit of instruction in mental health on rural adolescents' conceptions of mental illness and attitudes about seeking help. *Adolescence, 33,* 469–476.

Goldney, R. D., Dunn, K. I., Dal Grande, E., Crabb, S., & Taylor, A. (2009). Tracking depression-related mental health literacy across South Australia: A decade of change. *Australian and New Zealand Journal of Psychiatry, 43,* 476–483. doi:10.1080/00048670902817729

Gonzalez, J. M., Alegria, M., & Prihoda, T. J. (2005). How do attitudes toward mental health treatment vary by age, gender, and ethnicity/race in young adults? *Journal of Community Psychology, 33,* 611–629. doi:10.1002/jcop.20071

Gulliver, A., Griffiths, K., & Christensen, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: A systematic review. *BMC Psychiatry, 10.* doi:10.1186/1471-244X-10-113

Haller, D. M., Sanci, L. A., Sawyer, S. M., & Patton, G. C. (2009). The identification of young people's emotional distress: A study in primary care. *British Journal of General Practice, 59*(560), e61–e70. doi:10.3399/bjgp09X419510

Hart, L. M., Jorm, A. F., Paxton, S. J., Kelly, C. M., & Kitchener, B. A. (2009). First aid for eating disorders. *Eating Disorders: The Journal of Treatment & Prevention, 17,* 357–384. doi:10.1080/10640260903210156

Hegerl, U., Wittenburg, L., & the European Alliance Against Depression Consortium. (2009). Focus on mental health care reforms in Europe: The European Alliance Against Depression: A multilevel approach to the prevention of suicidal behavior. *Psychiatric Services, 60,* 596–599. doi:10.1176/appi.ps.60.5.596

Hickie, I. (2004). Can we reduce the burden of depression? The Australian experience with *beyondblue*: The national depression initiative. *Australasian Psychiatry, 12,* S38–S46. doi:10.1111/j.1039-8562.2004.02098.x-i1

Joa, I., Johannessen, J. O., Auestad, B., Friis, S., McGlashan, T., Melle, I., ... Larsen, T. K. (2008). The key to reducing duration of untreated first psychosis: Information campaigns. *Schizophrenia Bulletin, 34,* 466–472. doi:10.1093/schbul/sbm095

Jorm, A. F., Angermeyer, M., & Katschnig, H. (2000). Public knowledge of and attitudes to mental disorders: A limiting factor in the optimal use of treatment services. In G. Andrews & S. Henderson (Eds.), *Unmet need in psychiatry* (pp. 399–414). Cambridge, England: Cambridge University Press. doi:10.1017/CBO9780511543562.032

Jorm, A. F., Blewitt, K. A., Griffiths, K. M., Kitchener, B. A., & Parslow, R. A. (2005). Mental health first aid responses of the public: Results from an Australian national survey. *BMC Psychiatry, 5.* doi:10.1186/1471-244X-5-9

Jorm, A. F., Christensen, H., & Griffiths, K. M. (2005a). Belief in the harmfulness of antidepressants: Results from a national survey of the Australian public. *Journal of Affective Disorders, 88,* 47–53. doi:10.1016/j.jad.2005.06.002

Jorm, A. F., Christensen, H., & Griffiths, K. M. (2005b). The impact of *beyondblue*: The national depression initiative on the Australian public's recognition of depression and beliefs about treatments. *Australian and New Zealand Journal of Psychiatry, 39,* 248–254. doi:10.1080/j.1440-1614.2005.01561.x

Jorm, A. F., Christensen, H., & Griffiths, K. M. (2006a). Changes in depression awareness and attitudes in Australia: The impact of *beyondblue*: The national depression initiative. *Australian and New Zealand Journal of Psychiatry, 40,* 42–46.

Jorm, A. F., Christensen, H., & Griffiths, K. M. (2006b). The public's ability to recognize mental disorders and their beliefs about treatment: Changes in Australia over 8 years. *Australian and New Zealand Journal of Psychiatry, 40,* 36–41. doi:10.1080/j.1440-1614.2006.01738.x

Jorm, A. F., Christensen, H., Griffiths, K. M., & Rodgers, B. (2002). Effectiveness of complementary and self-help treatments for depression. *Medical Journal of Australia, 176*(Suppl. 10), S84–S95.

Jorm, A. F., & Griffiths, K. M. (2006). Population promotion of informal self-help strategies for early intervention against depression and anxiety. *Psychological Medicine, 36,* 3–6. doi:10.1017/S0033291705005659

Jorm, A. F., Griffiths, K. M., Christensen, H., Parslow, R. A., & Rogers, B. (2004). Actions taken to cope with depression at different levels of severity: A community survey. *Psychological Medicine, 34,* 293–299. doi:10.1017/S003329170300895X

Jorm, A. F., Kelly, C. M., Wright, A., Parslow, R. A., Harris, M. G., & McGorry, P. D. (2006). Belief in dealing with depression alone: Results from community surveys of adolescents and adults. *Journal of Affective Disorders, 96,* 59–65. doi:10.1016/j.jad.2006.05.018

Jorm, A. F., & Kitchener, B. A. (2011). Noting a landmark achievement: Mental health first aid training reaches 1% of Australian adults. *Australian and New Zealand Journal of Psychiatry. 45,* 808–813. doi: 10.3109/00048674.2011.594785

Jorm, A. F., Kitchener, B. A., Fischer, J. A., & Cvetkovski, S. (2010). Mental health first aid training by e-learning: A randomized controlled trial. *Australian and New Zealand Journal of Psychiatry, 44,* 1072–1081. doi:10.3109/00048674.2010.516426

Jorm, A. F., Kitchener, B. A., O'Kearney, R., & Dear, K. B. G. (2004). Mental health first aid training of the public in a rural area: A cluster randomized trial. *BMC Psychiatry, 4.* doi:10.1186/1471-244X-4-33

Jorm, A. F., Kitchener, B. A., Sawyer, M. G., Scales, H., & Cvetkovski, S. (2010). Mental health first aid training for high school teachers: A cluster randomized trial. *BMC Psychiatry, 10.* doi:5110.1186/1471-244x-10-51

Jorm, A. F., Korten, A. E., Jacomb, P. A., Christensen, H., Rodgers, B., & Pollitt, P. (1997). "Mental health literacy": A survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia, 166,* 182–186.

Jorm, A. F., Medway, J., Christensen, H., Korten, A. E., Jacomb, P. A., & Rodgers, B. (2000). Public beliefs about the helpfulness of interventions for depression: Effects on actions taken when experiencing anxiety and depression symptoms. *Australian and New Zealand Journal of Psychiatry, 34,* 619–626. doi:10.1080/j.1440-1614.2000.00761.x

Jorm, A. F., Morgan, A. J., & Wright, A. (2008a). A comparison of clinician, youth, and parent beliefs about helpfulness of interventions for early psychosis. *Psychiatric Services, 59,* 1115–1120. doi:10.1176/appi.ps.59.10.1115

Jorm, A. F., Morgan, A. J., & Wright, A. (2008b). First aid strategies that are helpful to young people developing a mental disorder: Beliefs of health professionals compared to young people and parents. *BMC Psychiatry, 8.* doi:10.1186/1471-244x-8-42

Jorm, A. F., Morgan, A. J., & Wright, A. (2008c). Interventions that are helpful for depression and anxiety in young people: A comparison of clinicians' beliefs with those of youth and their parents. *Journal of Affective Disorders, 111,* 227–234. doi:10.1016/j.jad.2008.02.021

Jorm, A. F., Morgan, A. J., & Wright, A. (2010). Actions that young people can take to prevent depression, anxiety and psychosis: Beliefs of health professionals and young people. *Journal of Affective Disorders, 126,* 278–281. doi:10.1016/j.jad.2010.03.011

Jorm, A. F., Nakane, Y., Christensen, H., Yoshioka, K., Griffiths, K. M., & Wata, Y. (2005). Public beliefs about treatment and outcome of mental disorders: A comparison of Australia and Japan. *BMC Medicine, 3.* doi:10.1186/1741-7015-3-12

Jorm, A. F., & Wright, A. (2007). Beliefs of young people and their parents about the effectiveness of interventions for mental disorders. *Australian and New Zealand Journal of Psychiatry, 41,* 656–666. doi:10.1080/00048670701449179

Judd, L. L., Schettler, P. J., & Akiskal, H. S. (2002). The prevalence, clinical relevance, and public health significance of subthreshold depressions. *Psychiatric Clinics of North America, 25,* 685–698. doi:10.1016/S0193-953X(02)00026-6

Keitner, G., Ryan, C., Miller, I., Kohn, R., Bishop, D., & Epstein, N. (1995). Role of the family in recovery and major depression. *American Journal of Psychiatry, 152,* 1002–1008.

Kelly, C. M., Jorm, A. F., & Kitchener, B. A. (2009). Development of mental health first aid guidelines for panic attacks: A Delphi study. *BMC Psychiatry, 9.* doi:10.1186/1471-244X-9-49

Kelly, C. M., Jorm, A. F., & Kitchener, B. A. (2010). Development of mental health first aid guidelines on how a member of the public can support a person affected by a traumatic event: A Delphi study. *BMC Psychiatry, 10.* doi:10.1186/1471-244X-10-49

Kelly, C. M., Jorm, A. F., Kitchener, B. A., & Langlands, R. L. (2008a). Development of mental health first aid guidelines for deliberate non-suicidal self-injury: A Delphi study. *BMC Psychiatry, 8.* doi:10.1186/1471-244x-8-62

Kelly, C. M., Jorm, A. F., Kitchener, B. A., & Langlands, R. L. (2008b). Development of mental health first aid guidelines for suicidal ideation and behaviour: A Delphi study. *BMC Psychiatry, 8.* doi:10.1186/1471-244x-8-17

Kelly, C. M., Jorm, A. F., & Rodgers, B. (2006). Adolescents' responses to peers with depression or conduct disorder. *Australian and New Zealand Journal of Psychiatry, 40,* 63–66. doi:10.1111/j.1440-1614.2006.01744.x

Kelly, J. B. (2000). Children's adjustment in conflicted marriage and divorce: A decade review of research. *Journal of the American Academy of Child & Adolescent Psychiatry, 39,* 963–973. doi:10.1097/00004583-200008000-00007

Kermode, M., Bowen, K., Arole, S., Joag, K., & Jorm, A. F. (2009). Community beliefs about treatments and outcomes of mental disorders: A mental health literacy survey in a rural area of Maharashtra, India. *Public Health, 123,* 476–483. doi:10.1016/j.puhe.2009.06.004

Kessler, R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Üstün, T. B. (2007). Age of onset of mental disorders: A review of recent literature. *Current Opinion in Psychiatry, 20,* 359–364. doi:10.1097/YCO.1090b1013e32816ebc32818c

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of *DSM–IV* disorders in the national comorbidity survey replication. *Archives of General Psychiatry, 62,* 593–602. doi:10.1001/archpsyc.62.6.593

Kingston, A. H., Jorm, A. F., Kitchener, B. A., Hides, L., Kelly, C. M., Morgan, A. J., ... Lubman, D. I. (2009). Helping someone with problem drinking: Mental health first aid guidelines—A Delphi expert consensus study. *BMC Psychiatry, 9.* doi:10.1186/1471-244X-9-79

Kingston, A. H., Morgan, A. J., Jorm, A. F., Hall, K., Hart, L. M., Kelly, C. M., & Lubman, D. I. (2011). Helping someone with problem drug use: A Delphi consensus study of consumers, carers, and clinicians. *BMC Psychiatry, 11.* doi:10.1186/1471-244X-11-3

Kitchener, B. A., & Jorm, A. F. (2002). Mental health first aid training for the public: Evaluation of effects on knowledge, attitudes and helping behavior. *BMC Psychiatry, 2.* doi:10.1186/1471-244X-2-10

Kitchener, B. A., & Jorm, A. F. (2004). Mental health first aid training in a workplace setting: A randomized controlled trial. *BMC Psychiatry, 4.* doi:10.1186/1471-244X-4-23

Kitchener, B. A., & Jorm, A. F. (2008). Mental health first aid: An international programme for early intervention. *Early Intervention in Psychiatry, 2,* 55–61. doi:10.1111/j.1751-7893.2007.00056.x

Kitchener, B. A., Jorm, A. F., & Kelly, C. M. (2010). *Mental health first aid manual* (2nd ed.). Melbourne, Victoria, Australia: Orygen Youth Health Research Centre.

Klineberg, E., Biddle, L., Donovan, J., & Gunnell, D. (2010). Symptom recognition and help seeking for depression in young adults: A vignette study. *Social Psychiatry and Psychiatric Epidemiology, 46,* 495–505. doi:10.1007/s00127-010-0214-2

Kovess-Masféty, V., Saragoussi, D., Sevilla-Dedieu, C., Gilbert, F., Suchocka, A., Arveiller, N., ... Hardy-Bayle, M.-C. (2007). What makes people decide who to turn to when faced with a mental health problem? Results from a French survey. *BMC Public Health, 7.* doi:10.1186/1471-2458-7-188

Lac, A., & Crano, W. D. (2009). Monitoring matters: A meta-analytic review reveals the reliable linkage of parental monitoring with adolescent marijuana use. *Perspectives on Psychological Science, 4,* 578–586. doi:10.1111/j.1745-6924.2009.01166.x

Langlands, R. L., Jorm, A. F., Kelly, C. M., & Kitchener, B. A. (2008a). First aid for depression: A Delphi consensus study with consumers, carers and clinicians. *Journal of Affective Disorders, 105,* 157–165. doi:10.1016/j.jad.2007.05.004

Langlands, R. L., Jorm, A. F., Kelly, C. M., & Kitchener, B. A. (2008b). First aid recommendations for psychosis: Using the Delphi method to gain consensus between mental health consumers, carers, and clinicians. *Schizophrenia Bulletin, 34,* 435–443. doi:10.1093/schbul/sbm099

Lauber, C., Nordt, C., Falcato, L., & Rössler, W. (2001). Lay recommendations on how to treat mental disorders. *Social Psychiatry and Psychiatric Epidemiology, 36,* 553–556. doi:10.1007/s001270170006

Lee, H. Y., Lytle, K., Yang, P. N., & Lum, T. (2010). Mental health literacy in Hmong and Cambodian elderly refugees: A barrier to understanding, recognizing, and responding to depression. *The International Journal of Aging and Human Development, 71*, 323–344. doi:10.2190/AG.71.4.d

Link, B. G., Cullen, F. T., Struening, E., Shrout, P., & Dohrenwend, B. P. (1989). A modified labeling theory approach in the area of mental disorders: An empirical assessment. *American Sociological Review, 54*, 400–423. doi:10.2307/2095613

Mackinnon, A., Griffiths, K. M., & Christensen, H. (2008). Comparative randomised trial of online cognitive-behavioural therapy and an information website for depression: 12-month outcomes. *British Journal of Psychiatry, 192*, 130–134. doi:10.1192/bjp.bp.106.032078

Marshall, M., Lewis, S., Lockwood, A., Drake, R., Jones, P., & Croudace, T. (2005). Association between duration of untreated psychosis and outcome in cohorts of first-episode patients: A systematic review. *Archives of General Psychiatry, 62*, 975–983. doi:10.1001/archpsyc .62.9.975

McLeod, B. D., Weisz, J. R., & Wood, J. J. (2007). Examining the association between parenting and childhood depression: A meta-analysis. *Clinical Psychology Review, 27*, 986–1003. doi:10.1016/ j.cpr.2007.03.001

McLeod, B. D., Wood, J. J., & Weisz, J. R. (2007). Examining the association between parenting and childhood anxiety: A meta-analysis. *Clinical Psychology Review, 27*, 155–172. doi:10.1016/j.cpr.2006 .09.002

Merritt, R. K., Price, J. R., Mollison, J., & Geddes, J. R. (2007). A cluster randomized controlled trial to assess the effectiveness of an intervention to educate students about depression. *Psychological Medicine, 37*, 363–372. doi:10.1017/S0033291706009056

Mojtabai, R. (2007). Americans' attitudes toward mental health treatment seeking: 1990–2003. *Psychiatric Services, 58*, 642–651. doi:10.1176/ appi.ps.58.5.642

Moore, T. H. M., Zammit, S., Lingford-Hughes, A., Barnes, T. R. E., Jones, P. B., Burke, M., & Lewis, G. (2007). Cannabis use and risk of psychotic or affective mental health outcomes: A systematic review. *The Lancet, 370*, 319–328. doi:10.1016/S0140-6736(07)61162-3

Morgan, A. J., & Jorm, A. F. (2008). Self-help interventions for depressive disorders and depressive symptoms: A systematic review. *Annals of General Psychiatry, 7*. doi:10.1186/1744-859X-7-13

Morgan, A. J., & Jorm, A. F. (2009). Self-help strategies that are helpful for sub-threshold depression: A Delphi consensus study. *Journal of Affective Disorders, 115*, 196–200. doi:10.1016/j.jad.2008.08.004

Morgan, A. J., Jorm, A. F., & Mackinnon, A. J. (2011). Protocol for a randomised controlled trial investigating self-help email messages for sub-threshold depression: The Mood Memos study. *Trials, 12*. doi: 10.1186/1745-6215-12-11

Muñoz, R. F. (2010). Using evidence-based Internet interventions to reduce health disparities worldwide. *Journal of Medical Internet Research, 12*. doi:10.2196/jmir.1463

Pescosolido, B. A., Jensen, P. S., Martin, J. K., Perry, B. L., Olafsdottir, S., & Fettes, D. (2008). Public knowledge and assessment of child mental health problems: Findings from the National Stigma Study—Children. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*, 339–349. doi:10.1097/CHI.0b013e318160e3a0

Pescosolido, B. A., Martin, J. K., Long, J. S., Medina, T. R., Phelan, J. C., & Link, B. G. (2010). "A disease like any other"? A decade of change in public reactions to schizophrenia, depression, and alcohol dependence. *The American Journal of Psychiatry, 167*, 1321–1330. doi: 10.1176/appi.ajp.2010.09121743

Petersen, I., Lund, C., & Stein, D. J. (2011). Optimizing mental health services in low-income and middle-income countries. *Current Opinion in Psychiatry, 24*, 318–323. doi:10.1097/YCO.0b013e3283477afb

Pinto-Foltz, M. D., Logsdon, M. C., & Myers, J. A. (2011). Feasibility, acceptability, and initial efficacy of a knowledge-contact program to reduce mental illness stigma and improve mental health literacy in adolescents. *Social Science & Medicine, 72*, 2011–2019. doi:10.1016/ j.socscimed.2011.04.006

Pyne, J. M., Rost, K. M., Farahati, F., Tripathi, S. P., Smith, J., Williams, D. K., . . . Coyne, J. C. (2005). One size fits some: The impact of patient treatment attitudes on the cost-effectiveness of a depression primary-care intervention. *Psychological Medicine, 35*, 839–854. doi:10.1017/ S0033291704003332

Rahman, A., Mubbashar, M. H., Gater, R., & Goldberg, D. (1998). Randomised trial of impact of school mental-health programme in rural Rawalpindi, Pakistan. *The Lancet, 352*, 1022–1025. doi:10.1016/ S0140-6736(98)02381-2

Reavley, N. J., & Jorm, A. F. (2011). The quality of mental disorder information websites: A review. *Patient Education and Counseling, 85*, e16–e25. doi:10.1016/j.pec.2010.10.015

Riedel-Heller, S. G., Matschinger, H., & Angermeyer, M. C. (2005). Mental disorders—who and what might help?: Help-seeking and treatment preferences of the lay public. *Social Psychiatry and Psychiatric Epidemiology, 40*, 167–174. doi:10.1007/s00127-005-0863-8

Rosenberg, L. (2011). Mental health first aid: A "radical efficiency" in health promotion. *The Journal of Behavioral Health Services & Research, 38*, 143–145. doi:10.1007/s11414-011-9236-0

Ryan, S. M., Jorm, A. F., & Lubman, D. I. (2010). Parenting factors associated with reduced adolescent alcohol use: A systematic review of longitudinal studies. *Australian and New Zealand Journal of Psychiatry, 44*, 774–783. doi:10.1080/00048674.2010.501759

Sadek, N., & Bona, J. (2000). Subsyndromal symptomatic depression: A new concept. *Depression and Anxiety, 12*, 30–39. doi:10.1002/1520-6394(2000)12:1<30::AID-DA4>3.0.CO;2-P

Schomerus, G., Angermeyer, M. C., Matschinger, H., & Riedel-Heller, S. G. (2008). Public attitudes towards prevention of depression. *Journal of Affective Disorders, 106*, 257–263. doi:10.1016/j.jad.2007.06.013

Schomerus, G., Matschinger, H., & Angermeyer, M. C. (2006). Preferences of the public regarding cutbacks in expenditure for patient care: Are there indications of discrimination against those with mental disorders? *Social Psychiatry and Psychiatric Epidemiology, 41*, 369–377. doi:10.1007/s00127-005-0029-8

ten Have, M., de Graaf, R., Ormel, J., Vilagut, G., Kovess, V., & Alonso, J. (2010). Are attitudes towards mental health help-seeking associated with service use? Results from the European study of epidemiology of mental disorders. *Social Psychiatry and Psychiatric Epidemiology, 45*, 153–163. doi:10.1007/s00127-009-0050-4

The Scottish Government. (2003). *National programme for improving mental health and well-being: Action plan 2003–2006.* Edinburgh, Scotland: Author.

Thompson, A., Issakidis, C., & Hunt, C. (2008). Delay to seek treatment for anxiety and mood disorders in an Australian clinical sample. *Behaviour Change, 25*, 71–84. doi:10.1375/bech.25.2.71

Wang, J., Adair, C., Fick, G., Lai, D., Evans, B., Perry, B. W., . . . Addington, D. (2007). Depression literacy in Alberta: Findings from a general population sample. *Canadian Journal of Psychiatry/La revue canadienne de psychiatrie, 52*, 442–449.

Wang, P. S., Angermeyer, M., Borges, G., Bruffaerts, R., Chiu, W. T., de Girolamo, G., . . . Üstün, T. B. (2007). Delay and failure in treatment seeking after first onset of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry, 6*, 177–185.

World Health Organization. (2008). *The global burden of disease: 2004 update.* Geneva, Switzerland: Author.

Wright, A., Harris, M. G., Wiggers, J. H., Jorm, A. F., Cotton, S. M., Harrigan, S. M., . . . McGorry, P. D. (2005). Recognition of depression and psychosis by young Australians and their beliefs about treatment. *Medical Journal of Australia, 183*, 18–23.

Wright, A., & Jorm, A. F. (2009). Labels used by young people to describe mental disorders: Factors associated with their development. *Australian and New Zealand Journal of Psychiatry, 43*, 946–955. doi:10.1080/00048670903179129

Wright, A., Jorm, A. F., Harris, M. G., & McGorry, P. D. (2007). What's in a name? Is accurate recognition and labelling of mental disorders by young people associated with better help-seeking and treatment preferences? *Social Psychiatry and Psychiatric Epidemiology, 42*, 244–250. doi:10.1007/s00127-006-0156-x

Yap, M. B. H., Wright, A., & Jorm, A. F. (2011). First aid actions taken by young people for mental disorders in a close friend or family member: Findings from a national survey of Australian youth. *Psychiatry Research, 188*, 123–128. doi:10.1016/j.psychres.2011.01.014