Journal of Affective Disorders 150 (2013) 320–329

Contents lists available at ScienceDirect

Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad

Research report

Public attitudes toward depression and help-seeking in four European countries baseline survey prior to the OSPI-Europe intervention

Evelien Coppens [a], Chantal Van Audenhove [a,(*)], Gert Scheerder [a], Ella Arensman [b], Claire Coffey [b], Susana Costa [c], Nicole Koburger [d], Katrin Gottlebe [d], Ricardo Gusmão [c], Rory O'Connor [e], Vita Postuvan [f], Marco Sarchiapone [g], Merike Sisask [h], András Székely [i], Christina van der Feltz - Cornelis [j], Ulrich Hegerl [d]

[a] LUCAS, Centre for Care Research and Consultancy, University of Leuven, Belgium
[b] National Suicide Research Foundation & Department of Epidemiology and Public Health, University College Cork, Ireland
[c] CEDOC, Departamento de Saúde Mental, Faculdade de Ciências Médicas da Universidade NOVA de Lisboa, Portugal
[d] Klinik und Poliklinik für Psychiatrie, Universität Leipzig, Germany
[e] School of Natural Sciences, University of Stirling, UK
[f] Slovene Center for Suicide Research, University of Primorska, Slovenia
[g] Health Sciences Department, University of Molise, Italy
[h] Estonian-Swedish Mental Health and Suicidology Institute (ERSI), Estonian Center for Behavioral and Health Sciences, Tallinn University, Estonia
[i] Institute of Behavioral Sciences, Semmelweis University Budapest, Hungary
[j] Faculty of Social Sciences, Tilburg University & GGz Breburg & Trimbos Instituut, the Netherlands

ARTICLE INFO

Article history:
Received 25 January 2013
Received in revised form
16 April 2013
Accepted 16 April 2013
Available online 21 May 2013

Keywords:
Depression
Public attitudes
Help-seeking
Mental health literacy

ABSTRACT

Background: Stigmatizing attitudes toward depression and toward help-seeking are important barriers for people with mental health problems to obtain adequate professional help. This study aimed to examine: (1) population attitudes toward depression and toward seeking professional help in four European countries; (2) the relation between depression stigma and attitudes toward help-seeking; (3) the relation between both attitudes and socio-demographic characteristics; and (4) differences in attitudes across countries.
Methods: A representative general population survey ($n=4011$) was conducted in Germany, Hungary, Ireland, and Portugal, assessing attitudes toward depression and toward help-seeking, and a number of socio-demographic variables.
Results: Respondents showed a moderate degree of personal stigma toward depression and a strikingly higher degree of perceived stigma. Although a substantial majority showed openness to seek professional help, only half of the people perceived professional help as valuable. More negative attitudes were found in Hungary and were associated with male gender, older age, lower educational level and living alone. Also, personal stigma was related to less openness to and less perceived value of professional treatment.
Limitations: The survey was cross-sectional, so no causal inferences could be drawn.
Conclusions: Personal and perceived stigma toward depression deserves public health attention, since they impact upon the intention of people with depression to seek professional help. Public media campaigns should focus on the credibility of the mental health care sector, and target males, older people, and those with a lower educational level and living alone. The content of each campaign should be adapted to the cultural norms of the country for which it is intended.

1. Introduction

Depression is a major public health challenge in many Western countries, with a high prevalence (Baumeister and Härter, 2007) and a major impact on patients (Collins et al., 2011; Moussavi et al., 2007) and economic resources (Stewart et al., 2003). Effective treatment is available (Anderson, 2000; Cipriani et al., 2009; DeRubeis et al., 2005; NICE, 2009), yet depression care is hindered by barriers at several levels, such as under-recognition, stigmatization, inadequate treatment and poor treatment adherence (Goldman et al., 1999). National surveys in Europe indicate that less than half of the people with major depression receive any formal professional help (Demyttenaere et al., 2004;

(*) Corresponding author. Tel.: +32 16 33 69 10/32 16 33 69 11; Ćfax: +32 16 33 69 22.
E-mail address: Chantal.Vanaudenhove@med.kuleuven.be (C. Van Audenhove).

0165-0327/$ - see front matter © 2013 Elsevier B.V. All rights reserved.
http://dx.doi.org/10.1016/j.jad.2013.04.013

Fernandez et al., 2007). Treatment seeking for depression is in particular lower in men, the oldest and youngest age groups, in those who have a lower educational or income level or who are married (Bramesfeld et al., 2007; Harman et al., 2004; Prins et al., 2010; Wang et al., 2007). Even when depression is diagnosed, only half of the individuals receive depression-specific treatment. Especially older men are at risk for not being treated (Boenisch et al., 2012).

The public's knowledge and attitudes toward mental health and mental health care are often described in terms of mental health literacy (Jorm et al., 1997, 2006). This refers to the knowledge and beliefs about mental illness and treatment options that aid their recognition, management or prevention (Goldney and Fisher, 2008; Jorm, 2000) and may be an important determinant of help-seeking (Goldney et al., 2001). Previous research commonly reports poor mental health literacy in the general population, including inadequate knowledge and stigmatizing attitudes with regard to depression and its treatment (Barney et al., 2006; Jorm et al., 2006).

Stigmatizing attitudes toward people with mental illness such as perceiving them as dangerous, unpredictable, untrustworthy, difficult to talk to, weak, themselves to blame for their condition and unlikely to fully cure are widespread (Angermeyer and Dietrich, 2006; Jorm et al., 2006; Thornicroft, 2006). This is especially the case for mental illnesses such as schizophrenia (Thornicroft et al., 2009). Public attitudes regarding depression tend to be somewhat more positive (Angermeyer and Dietrich, 2006; Mann and Himelein, 2004). For instance, it has been reported that about three quarters of the people agree that depression is a disease like any other (Priest et al., 1996). Also, depression is often recognized as a 'crisis' (Holzinger et al., 2011; Lauber et al., 2003) or a fluctuation of mood under the individual's control rather than as a disorder (Lauber et al., 2001; Schomerus et al., 2006). Nevertheless, nearly half of the general public perceives people with depression as weak, responsible for their own condition and unpredictable, and nearly a quarter considers them to be dangerous (Aromaa et al., 2011; Wang and Lai, 2008). Negative attitudes toward depression are mainly associated with older age, less literacy, less familiarity with mental illness, male gender and lower educational level (Aromaa et al., 2011; Connery and Davidson, 2006; Griffiths et al., 2008; Mann and Himelein, 2004). Recent longitudinal studies report that stigmatizing attitudes are increasing, which is a worrisome finding (Angermeyer et al., 2009; Mehta et al., 2009). Similarly, in a recent multisite cross-sectional survey conducted in 1082 participants with a diagnosis of major depression, 79% of the respondents reported to have experienced discrimination in at least one life domain (Lasalvia et al., 2012).

Although stigmatizing attitudes toward depression are often used in a broad sense, several studies demonstrate that it is important to make a distinction between personal and perceived stigma (Calear et al., 2011; Eisenberg et al., 2009; Griffiths et al., 2008). Personal stigma is generally referred to as an individual's personal thoughts and beliefs about depression, while perceived depression stigma is used to represent an individual's perception of what other people think and feel about depression (Calear et al., 2011; Griffiths et al., 2006). It is generally assumed that both stigmatizing concepts negatively affect an individual's decision to seek help for a mental health problem (Barney et al., 2006; Griffiths et al., 2008).

With regard to the attitude to seeking professional help in the case of mental health problems (e.g. mood disorders, anxiety disorders, and alcohol disorders), several European studies indicate that many people would not prefer formal professional help (Have et al., 2010). Rather they would deal with it themselves. Australian research further demonstrates that especially with regard to the treatment of depression, the use of informal support or self-help resources, such as self-help books and websites, are rated as helpful (Highet et al., 2002; Oh et al., 2009). In general, the public largely prefers and believes in the effectiveness of non-medical interventions for depression, especially lifestyle interventions, such as physical activity, social activities, stress management and relaxation (Jorm et al., 2005a, 2005b; Lauber et al., 2005). Medical treatment options such as antidepressants are far less supported (Jorm et al., 2005a, 2005b). If people would seek professional help, the general practitioner is generally preferred over specialist mental health care, especially in the elderly (Highet et al., 2002). More negative attitudes toward seeking professional help for depression are observed in men and the elderly, in those with lower mental health literacy and lower socioeconomic status, and in adolescents (Hernan et al., 2010; Jorm et al., 2005a, 2005b; ten Have et al., 2010). Men are also more likely to mention inadequate strategies to cope with depression, such as using alcohol (Lauber et al., 2001), while women are more likely to cite informal social support (Highet et al., 2002). In addition, psychiatric treatment is more frequently recommended by the general public for illnesses that are perceived as more severe and unrelated to a crisis, e.g. more so for schizophrenia than for depression (Lauber et al., 2001). However, recent studies indicate that public attitudes toward mental health service use are becoming more positive (Goldney et al., 2005; Mojtabai, 2007).

The current study draws upon data from Optimizing Suicide Prevention Programs and their Implementation in Europe (OSPI-Europe), a large scale European research project. The overall aim of the project is to evaluate the effectiveness of a multilevel suicide prevention program in four different regions in Europe (Germany, Hungary, Ireland, and Portugal), using a single group prospective design (Hegerl et al., 2009). One of these components is a public media campaign about depression and its treatment. Other levels of the OSPI-Europe intervention focus on initiatives for primary care providers, high-risk groups, and community facilitators as well as on restricting access to lethal means. The multilevel intervention was implemented in four intervention regions. Four other regions served as control regions. Prior to the implementation of the OSPI-Europe intervention a general population survey was conducted in all intervention and control regions. The current paper specifically focuses on the findings of this baseline survey. The goal of the study is fourfold. First, we aimed to describe personal and perceived stigma toward depression as well as attitudes toward seeking professional help in four European countries at baseline. The second purpose was to examine the association between the two types of stigma and attitudes toward help-seeking. Third, we investigated which socio-demographic characteristics were related to personal and perceived stigma and attitudes toward help-seeking. Finally, we explored differences in attitudes between countries in order to provide recommendations regarding cultural sensitivity in public awareness campaigns.

2. Method

2.1. Design and procedure

A representative general population survey by means of telephone interviews was conducted in the intervention and control regions of the four OSPI-Europe intervention countries (Germany, Hungary, Ireland and Portugal). The survey was carried out prior to the implementation of any of the multilevel OSPI-Europe intervention activities. Table 1 provides an overview of the intervention and control regions, the number of inhabitants and the survey period. The population size of the intervention regions varied

Table 1
Region and survey characteristics.

	Region name	N inhabitants	Survey period	*N* survey	Response rate (in %)
Germany					
Intervention region	Leipzig	516430	May 2009	502	21.5
Control region	Magdeburg	230540	May 2009	500	21.9
Hungary					
Intervention region	Miskolc	171096	December 2009	500	40.3
Control region	Szeged	167039	December 2009	500	39.8
Ireland					
Intervention region	Limerick	184085	December 2009	500	21.3
Control region	Galway	231670	December 2009	500	22.6
Portugal					
Intervention region	Amadora	175872	February 2010	505	38.4
Control region	Almada	174030	February 2010	504	39.6
Mean					
Intervention region		261870		502	30.4
Control region		200819		501	31
Total		231344		501	30.7

considerably between countries, with the number of inhabitants ranging from 53 000 to 523 000. The population size of the control regions and intervention regions were intended to match as much as possible. The public awareness campaign was implemented in the four intervention regions only. Across the four intervention regions, the campaign had different starting points and lasted for at least 18 months. The baseline survey was conducted in the four intervention regions as well as in their respective control regions, and was performed within one month prior to the onset of the campaign. Due to the varying starting points of the campaign, data collection was conducted between May 2009 and February 2010.

A European market research firm with a track record in conducting surveys related to mental health, Euroexpansão, was commissioned to perform the telephone interviews. For each country, native language interviewers were involved to conduct the interviews. All interviewers received training which included how to introduce the OSPI-program, ethical issues and personal safety. However, the training procedure differed slightly across countries. In Germany, Ireland, and Hungary senior interviewers of the research firm were trained by members of the OSPI-Europe consortium. Subsequently, the trained senior interviewers provided training to all interviewers involved. In Portugal, all interviewers were directly trained and managed by the OSPI-Europe consortium. In addition, to maximize standardization across the four countries, each interviewer received a protocol manual.

2.2. Participants

In each region, a stratified sample of 500 adult subjects (18+) was selected using the random digit dialing method. Accordingly, each sample was representative to the local population in terms of gender and age distribution. All subjects were contacted by telephone and asked to participate in the interview. The response rate within each country ranged from 21% to 40% and is described in Table 1. Across countries, there was a mean response rate of 31%.

The total sample comprised of 4011 participants. In accordance with the stratification quota, 52% of the respondents were females and 48% males, with a mean age of 47.8 years (Table 2). The mean number of years of schooling was 13. Further, 41% of the respondents were not currently married or cohabitating. About half of the respondents (54%) worked (either paid work, self-employed or voluntary work), 8% was unemployed, and 20% suffered from a depressive disorder in the past. Finally, nearly half of the respondents (43%) had experienced depression in close family members or friends and a minority had dealt with deliberate self-harm (17%) or suicide (13%) in relatives in the past.

Table 2
Participants' characteristics (in %).

	Germany	Hungary	Ireland	Portugal	Total
Gender					
Male	47.7	45.8	50.8	46.3	47.6
Female	52.3	54.2	49.2	53.7	52.4
Age					
Mean age (SD)	49.4 (17.6)	48.4 (17.6)	45.3 (15.0)	48.0 (17.6)	47.8 (17.0)
18–29 y	11.9	16.9	12.3	18.8	15.0
30–39 y	28.3	23.0	34.7	17.2	25.8
40–49 y	14.6	10.2	18.7	15.7	14.8
50–59 y	15.8	23.2	14.3	19.7	18.3
60–69 y	12.9	13.7	11.4	14.3	13.1
+69 y	16.6	13.0	8.6	14.3	13.1
Years of schooling					
Mean years (± SD)	12.2 (2.9)	14.2 (3.6)	13.9 (2.9)	11.7 (5.8)	13.0 (4.1)
<7 y	.4	1.5	.6	23.9	6.6
7–12 y	57.7	37.6	34.6	33.9	40.9
13–16 y	35.5	36.7	49.7	21.3	35.8
>16 y	6.4	24.2	15.1	20.9	16.6
Marital status					
Living with partner	60.8	56.9	62.2	57.0	59.2
Currently married	49.9	53.7	54.4	53.7	52.9
Cohabiting	10.9	3.2	7.8	3.3	6.3
Living alone	39.2	43.1	37.8	43.0	40.8
Never married	15.8	19.2	21.8	27.2	21.0
Separated	5.8	2.1	5.3	1.4	3.6
Divorced	5.6	8.5	4.6	7.4	6.5
Widowed	12.1	13.3	6.1	7.0	9.6
Occupational status					
Working	53.2	51.3	60.3	49.6	53.6
Paid work	43.1	44.9	47.1	41.5	44.2
Self employed	9.8	6.0	12.8	7.9	9.1
Volunteer work	.3	.4	.4	.2	.3
Retired	26.3	34.1	15.6	28.7	26.2
Student	4.2	7.4	5.1	8.7	6.4
House keeping	10.0	1.1	5.2	4.5	5.2
Unemployed	6.4	5.6	12.0	8.4	8.1
Experience with mental ill-health in relatives					
Depression	23.8	39.0	43.9	65.2	43.0
Deliberate self-harm	8.5	12.6	19.8	28.0	17.2
Suicide	5.5	13.2	14.1	18.6	12.9

2.3. Survey instrument

The survey instrument consisted of four parts. First, socio-demographic information was collected, including gender, age, years of schooling, marital status and occupational status. Second, the participants' experience with mental illness was investigated. Therefore, each participant was asked whether he or she suffered from any form of depression in the past. Accordingly, three items assessed whether a close family member or friend had ever (1) suffered from a depressive disorder, (2) deliberately self-harmed him or herself, or (3) died by suicide. Third, the Depression Stigma Scale (DSS) (Griffiths et al., 2004) which consists of two subscales – the Personal Stigma subscale and the Perceived Stigma subscale – was used to address public attitudes toward depression. The DSS Personal Stigma subscale comprises

nine items and is concerned with respondents' personal attitudes toward depression (e.g. “Depression is a sign of personal weakness”). The DSS Perceived Stigma subscale comprises nine similar items, assessing respondents' beliefs about the attitudes of others toward depression (e.g. “Most people believe that depression is a sign of personal weakness”). Participants respond on each of the 18 items via a five-point Likert scale ranging from “strongly disagree” (score 1) to “strongly agree” (score 5) (Table 3). Scale scores are calculated by summing scale items, with higher scores indicating more stigmatizing attitudes. The DSS has demonstrated acceptable test-retest reliability and internal consistency, with Cronbach's alpha scores for the Total, Personal and Perceived Stigma scales being .78, .76 and .82 respectively. Fourth, public attitudes toward help-seeking were assessed via the Attitude Toward Seeking Professional Psychological Help-Short Form (ATSPPH-SF) (Fischer and Farina, 1995). The questionnaire consists of 10 items assessed on a four-point Likert scale ranging from “disagree” (score 0) to “agree” (score 3) and is subdivided in two subscales – Openness to Seeking Treatment for Emotional Problems and Value and Need in Seeking Treatment. Each subscale consists of five items (Table 4). Scale scores of the Openness scale are calculated by summing scale items, with higher scores indicating more openness toward professional help. Scores on the Value scale items were reversed and then summed such that higher scores indicated less stigmatizing attitudes toward treatment. The questionnaire has been well validated, with a test–retest reliability of .80 and Cronbach's alpha scores of the scales ranging from .82 to .84. The DSS and the ATSPPH-SF were selected for use following a review of international research into intermediate outcome measures. To ensure that the survey instrument was adequately translated in German, Hungarian, and Portuguese, the original English version of the questionnaires was translated in each language via a translation and back translation procedure.

2.4. Ethical approval

The OSPI-Europe research project is executed in accordance with the principles laid down in the Helsinki declaration (2000). Ethical approval of the general population survey in the participating regions in Germany, Hungary, Portugal and Ireland was granted by the ethical research committees of all participating countries.

2.5. Data analysis

Statistical analyses were carried out using SAS 9.1. Descriptive statistics for each item were calculated. Several analyses were conducted to determine the relation between participants' characteristics and their attitudes toward depression and help-seeking. To analyze differences in attitudes according to country, gender, marital status, occupational status, self-experience with depression, and experience of mental illness in relatives, analysis of variance was used. For these analyses, marital status was dichotomized as living with a partner (currently married, cohabiting) or living alone (never married, separated, divorced, widowed). Occupational status was dichotomized as unemployed versus other. For country, which contains several levels, analysis of variance was followed by Tukey's HSD post hoc comparisons. Analyses of covariance were conducted to control for age and years of education in relation to country and attitudes. Finally, Pearson correlations were executed to examine the relation between age and years of schooling on the one hand, and scores on the attitude scales on the other hand. Partial correlations between attitude scales were calculated to control for age and years of schooling.

3. Results

3.1. Attitudes toward depression

Participants obtained a score of 24 on the Personal Stigma scale ranging from 5 to 45. Moreover, on average, more than a quarter (28%) of the respondents agreed with the personal stigma items. Together, these findings indicate a moderate degree of personal stigma toward depression. On an item level, there was in particular high agreement with the items “people with depression are unpredictable” (48%) and “people with depression could snap out of it if they wanted” (35%). Also, many of the respondents would

Table 3
Attitude towards depression (% agree for single items; mean scores for subscales and scale).

	Germany	Hungary	Ireland	Portugal	Total
Personal stigma scale (% agree)	**25.6**	**34.4**	**20.7**	**32.1**	**27.9**
People with depression could snap out of it if they wanted	20.1	60.4	18.5	42.4	**35.4**
Depression is a sign of personal weakness	25.9	46.0	18.6	33.3	**30.9**
Depression is not a real medical illness	14.7	27.8	16.5	25.8	**21.2**
People with depression are dangerous	28.6	35.3	14.9	35.5	**28.6**
It's best to avoid people with depression so you don't become depressed yourself	13.7	20.3	8.2	24.6	**16.7**
People with depression are unpredictable	36.5	46.2	38.0	70.0	**47.7**
If I had depression I would not tell anyone	25.2	22.5	21.1	27.8	**21.7**
I would not employ someone if I knew they had been depressed	24.3	17.1	20.3	9.2	**17.7**
I would not vote for a politician if I knew they had been depressed	41.3	34.1	30.3	20.3	**31.5**
Perceived Stigma scale (% agree)	**54.5**	**44.4**	**35**	**53.8**	**46.9**
Most people believe that people with depression could snap out of it if they wanted	47.3	64.8	32.1	55.1	**49.8**
Most people believe that depression is a sign of personal weakness	58.9	50.5	30.7	56.8	**49.2**
Most people believe that depression is not a real medical illness	43.1	42.7	32.4	50.9	**42.3**
Most people believe that people with depression are dangerous	50.5	35.5	26.3	37.8	**37.5**
Most people believe it is best to avoid people with depression so you don't become depressed yourself	46.6	33.8	23.6	50.2	**38.6**
Most people believe that people with depression are unpredictable	55.2	47.0	42.0	67.5	**53.0**
If they had depression, most people would not tell anyone	62.1	41.0	42.9	63.8	**52.5**
Most people would not employ someone they knew had been depressed	60.7	40.0	41.3	52.6	**48.7**
Most people would not vote for a politician they knew had been depressed	66.2	44.0	43.7	49.3	**50.8**
Mean score and SD					
Personal Stigma scale	23.4 (6.9)	25.1[a] (6.3)	22.1[a] (5.8)	23.5 (5.2)	23.5 (6.2)
Perceived Stigma scale	31.0[a] (6.4)	28.7 (6.4)	26.9[a] (6.6)	29.1 (5.3)	28.9 (6.4)
Total Depression Stigma scale	54.4 (10.9)	53.8 (10.9)	49.0[a] (11.0)	52.5 (8.2)	52.4 (10.5)

[a] $p<.0001$

Table 4
Attitude toward seeking help for psychological problems (% agree for single items; mean scores for subscales and scale).

	Germany	Hungary	Ireland	Portugal	Total
Openness to professional help (% agree)	**68.6**	**55.4**	**69.8**	**83**	**69.3**
If I believed I was having a mental breakdown, my first inclination would be to get professional help	84.2	74.6	77.5	89.1	**81.9**
If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy	78.4	67.8	79.7	83.9	**77.5**
I would want to get psychiatric attention if I was worried or upset for a long period of time	69.9	40.3	82.5	80.6	**68.3**
At some future time I might want to have psychological counseling	30.5	14.5	38.7	77.4	**40.2**
A person with an emotional problem is not likely to solve it alone; he is likely to solve it with professional help	80.1	79.8	70.5	83.8	**78.6**
Value of professional help (% agree)	**48.6**	**62.9**	**40.6**	**48.2**	**50.1**
The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts	29.0	59.4	26.2	35.2	**37.4**
There is something admirable in the attitude of a person who is willing to deal with his conflicts and fears without resorting to professional help	80.9	89.4	57.1	58.8	**71.5**
Considering the time and expense involved in psychotherapy it would have doubtful value for a person like me	43.6	40.4	37.5	53.1	**43.7**
A person should work out his own problems; getting psychological counseling would be a last resort	51.7	79.5	35.9	48.9	**54.0**
Emotional difficulties, like many things, tend to work out by themselves	38.0	46.0	46.5	45.2	**43.9**
Mean and SD					
Openness scale	9.3 (2.8)	8.0[a] (3.1)	9.8 (3.2)	11.9[a] (3.1)	9.8 (3.4)
Value scale	7.9 (2.7)	5.8[a] (2.6)	8.6[a] (3.3)	8.1 (3.9)	7.6 (3.3)
Total ATSPPH-SF scale	17.2 (4.4)	13.9[a] (4.3)	18.4 (5.4)	20.0[a] (5.7)	17.4 (5.5)

[a] $p<.0001$.

not vote for a politician who had depression (32%) and viewed depression as a sign of personal weakness (31%) (Table 3). Only a minority of the respondents believed that it is best to avoid people with depression (17%) and would not employ someone if they knew he or she had been depressed (18%).

Perceived stigma items were more commonly endorsed than personal stigma items. Respondents attained a score of 29 on the Perceived Stigma scale ranging from 5 to 45 and agreed on average in 47% of the cases with these items. Even more, for each separate item, scores were higher when they assessed the respondents' beliefs about attitudes of others toward depression rather than when they assessed personal beliefs. On an item level, descriptive statistics revealed that about half of the respondents agreed with the statements "Most people believe that those people with depression are unpredictable" (53%), "If they had depression, most people would not tell anyone" (53%), "Most people would not vote for a politician if they knew he or she had depression" (51%), and "Most people believe that people with depression could snap out of it if they wanted" (50%).

3.2. Attitudes toward help-seeking

Participants attained a score of 10 on the Openness scale ranging from 0 to 15. Moreover, on average, more than two thirds of the participants (69%) agreed with statements pertaining to openness to seeking professional help in the case of mental health problems (Table 4). In particular, 82% of the respondents tended to get professional help in case they had a mental breakdown. Also, the majority of the respondents (79%) agreed that in the case of emotional problems, people are more likely to solve them with professional help. Although respondents strongly agreed with most items of the openness scale, the degree of agreement was much lower on the item "at future time I might want to have psychological counseling" (40%).

On the Value scale ranging from 0 to 15 participants obtained a score of 8. Additionally, overall 50% of the respondents agreed with the statements of this scale. On an item level, 72% believed that there is something admirable about a person who is willing to deal with his conflicts and fears without resorting to professional help and 54% agreed that people should work out their own problems.

3.3. Relation between attitudes toward depression and help-seeking

Attitudes toward depression appeared to be related to attitudes toward help-seeking. There were significant correlations (partial correlations controlling for age and years of education) between the Personal Stigma scale and the Openness to Treatment ($r=-.21$, $p<.0001$) and Value of Treatment ($r=-.30$, $p<.0001$) scales, with higher personal stigma being related to less openness to and lower perceived value of professional help. Moreover, there were significant associations between the Personal Stigma and the Perceived Stigma scales ($r=.42$, $p<.0001$), and between the Openness to Treatment and Value of Treatment scales ($r=.35$, $p<.0001$). Finally, the Perceived Stigma scale was not significantly related to any of the help-seeking scales.

3.4. Socio-demographic characteristics associated with attitudes toward depression and help-seeking

Several socio-demographic characteristics were related to the attitude scales (Table 5). Gender was related to both attitudes toward depression and toward help-seeking, with males having more personal stigma ($F=15.09$, $df=1$, $p<.0001$) and a significantly lower score on the Openness to Treatment scale ($F=33.23$, $df=1$, $p<.0001$) and the total attitude toward treatment scale ($F=30.08$, $df=1$, $p<.0001$). Also, older age was related to more personal stigma ($r=.18$, $p<.0001$), more total stigma ($r=.10$, $p<.0001$), and less value of treatment ($r=-.12$, $p<.0001$). Years of schooling showed the reverse pattern, with more schooling being related to less personal stigma ($r=-.22$, $p<.0001$) and total stigma ($r=-.14$, $p<.0001$) and more value of treatment ($r=.11$, $p<.0001$), but less Openness to Treatment ($r=-.10$, $p<.0001$). With regard to marital status, people living together had a significantly higher score on the Total Attitude toward Treatment scale ($F=14.91$, $df=1$, $p<.0001$) in comparison to people living alone. Moreover, respondents who suffered from depression in the past scored lower on the Personal Stigma ($F=16.32$, $df=1$, $p<.001$) and the Perceived Stigma scales ($F=8.02$, $df=1$, $p<.01$) as well as on the Total Stigma scale ($F=16.7$, $df=1$, $p<.001$). Also, they scored higher on the Openness to Treatment scale ($F=106.52$, $df=1$, $p<.001$) and the Total Attitudes Toward Treatment scales ($F=55.58$, $df=1$, $p<.001$). With regard to experience with mental illness in relatives, those

Table 5
Socio-demographic characteristics associated with attitudes toward depression and toward help-seeking (F-ratios and Pearson's correlation coefficients).

	F	*r*
Personal Stigma scale		
Gender	15.09[c]	
Age		.18[c]
Years of schooling		−.22[c]
Self-experience with depression	16.32[b]	
Experience with mental illness in relatives	90.74[c]	
Experience with deliberate self-harm in relatives	14.84[c]	
Perceived Stigma scale		
Self-experience with depression	8.02[a]	
Total Stigma scale		
Age		.10[c]
Years of schooling		−.14[c]
Self-experience with depression	16.7[b]	
Experience with mental illness in relatives	57.73[c]	
Openness scale		
Gender	33.23[c]	
Years of schooling		−.10[c]
Self-experience with depression	106.52[b]	
Experience with mental illness in relatives	95.96[c]	
Experience with deliberate self-harm in relatives	25.10[c]	
Value scale		
Age		−.12[c]
Years of schooling		.11[c]
Experience with mental illness in relatives	40.84[c]	
Experience with deliberate self-harm in relatives	14.67[c]	
Total ATSPPH-SF scale		
Gender	30.08[c]	
Marital status	14.91[c]	
Self-experience with depression	55.58[b]	
Experience with mental illness in relatives	99.51[c]	
Experience with deliberate self-harm in relatives	29.62[c]	

[a] $p<.01$.
[b] $p<.001$.
[c] $p<.0001$.

who had experience with depression had a significantly lower score on the personal stigma ($F=90.74$, $df=1$, $p<.0001$) and the Total Stigma scale ($F=57.73$, $df=1$, $p<.0001$) and a significantly higher score on the Openness to Treatment ($F=95.96$, $df=1$, $p<.0001$), Value of Treatment ($F=40.84$, $df=1$, $p<.0001$) and the Total Attitude Toward Treatment scales ($F=99.51$, $df=1$, $p<.0001$). Those who had experience with deliberate self-harm in relatives had a significantly lower score on the Personal Stigma scale ($F=14.84$, $df=1$, $p<.0001$) and a significantly higher score on the Openness to Treatment ($F=25.10$, $df=1$, $p<.0001$), Value of Treatment ($F=14.67$, $df=1$, $p<.0001$) and the Total Attitude Toward Treatment scales ($F=29.62$, $df=1$, $p<.0001$). Experience with suicide in relatives and occupational status were not significantly related to any attitude scale.

3.5. Country differences

Table 3 provides an overview of the % agreement and the mean scores per country on the Depression Stigma scale. Results revealed significant country differences with regard to personal stigma ($F=39.94$, $df=3$, $p<.0001$), with Hungarian people showing the least favorable ($M=25$ and $SD=6.3$) and Irish people the most favorable attitudes toward depression ($M=22$ and $SD=5.8$). After controlling for age and years of education, this difference remained significant. The difference between Hungary and Ireland was most strongly pronounced for the item "People with depression could snap out of it if they wanted", with 60% of the respondents in Hungary versus 19% of the participants in Ireland agreeing with it. Also, in Hungary, 46% agreed with the item "Depression is a sign of personal weakness", whereas in Ireland this was only 19%. Table 3 further reveals that the response patterns of Germany and Ireland strongly resembled each other, as were the response patterns of Hungary and Portugal. More specifically, in Germany and Ireland the statement "I would not vote for a politician if I knew he or she had been depressed" yielded the strongest agreement, whereas the item "It is best to avoid people with depression so you do not become depressed yourself" was agreed on the least. In Hungary and Portugal, people strongly agreed with the items "People with depression could snap out of it if they wanted", "Depression is a sign of weakness", and "People with depression are dangerous". In both countries, only a minority agreed with the statement "I would not employ someone if I knew he or she had been depressed".

Moreover, there were significant country differences in perceived stigma scores as well ($F=72.89$, $df=3$, $p<.0001$), with the highest stigma being registered in Germany ($M=31$ and $SD=6.4$) and the lowest stigma in Ireland ($M=27$ and $SD=6.6$) (Table 3). After controlling for age and years of education, this difference remained significant. The item "Most people would not vote for a politician they knew had been depressed" yielded the most pronounced difference between Germany and Ireland, with 66% of the Germans versus 44% of the Irish agreeing with it. Also, according to 59% of the Germans most people believe that depression is a sign of personal weakness versus 31% in Ireland. The item "If they had depression, most people would not tell anyone" was highly agreed on in all four countries. Table 3 further revealed that for the remaining items, response patterns considerably differed across countries. More specifically, German and Irish people mostly agreed with the statements "Most people would not vote for a politician they knew had been depressed", whereas in Portugal the item "Most people believe that people with depression are unpredictable" was mostly agreed on. In Hungary, the items "Most people believe that people with depression could snap out of it if they wanted" and "Most people believe that depression is a sign of personal weakness" was most frequently agreed on.

In addition, there were significant country differences concerning openness to seeking professional help ($F=283.41$, $df=3$, $p<.0001$), with less openness in Hungary ($M=8$ and $SD=3.1$) and more openness in Portugal ($M=12$ and $SD=3.1$). After controlling for age and years of education, this difference remained significant. Also, perceived value of professional help differed across countries ($F=149.30$, $df=3$, $p<.0001$). In Hungary professional help was judged as least valuable ($M=6$ and $SD=2.6$) and in Ireland as most valuable ($M=9$ and $SD=3.3$). After controlling for age and years of education, this difference remained significant. For the item "A person should work out his own problems; getting psychological counseling would be a last resort" the difference in attitude between Hungary and Ireland was most pronounced, with 80% of the Hungarian respondents versus 36% of the Irish respondents agreeing with it.

4. Discussion

The current general survey provides insight in attitudes toward depression and toward seeking professional help in the population of four European countries. Overall, the results show a moderate degree of personal stigma toward depression, with a large minority of about one third of the respondents agreeing with stigmatizing attitudes such as "Depression is a sign of personal weakness", "People could snap out of it if they wanted", "People with depression are unpredictable", and "I would not vote for a politician if I knew he or she had been depressed". Perceived social stigma was strikingly higher, with about half of the respondents agreeing that most people have stigmatizing ideas. Thus, replicating previous findings (Calear et al., 2011; Griffiths et al., 2004, 2006), the current respondents rated other people's stigma as much higher

than their own stigma. One possible explanation for this finding is the presence of a social desirability bias in which participants are reluctant to report their true attitudes and beliefs toward people with mental health problems but feel free to rate the community's attitude (Griffiths et al., 2006; Peluso and Blay, 2009). The fact that the survey was conducted via telephone interviews might have strengthened this social desirability bias. If a social bias indeed underlies the discordance between personal and perceived stigma, then the reported level of perceived stigma can be assumed to be a more accurate representation of the level of stigma toward depression in the community. An alternative explanation is that our respondents overestimated the extent of stigma in the society perhaps due to improved awareness of depression resulting from earlier public campaigns (Calear et al., 2011; Eisenberg et al., 2009; Griffiths et al., 2008). When answering the perceived stigma items referring to "most people" respondents may have been thinking about society in general rather than about people in their immediate environment like friends and family. Anyhow, the level of perceived stigma is high within the survey group, suggesting that for public campaigns it is important to focus on reducing perceived stigma, which could possibly be achieved by publishing the actual levels of personal stigma (Griffiths et al., 2008).

Earlier research demonstrated that attitudes toward help-seeking as well as treatment preferences and beliefs highly impact upon people's actual help-seeking behavior when they eventually experience depression (Jorm et al., 2003; ten et al., 2010). Despite the rather high level of personal and perceived stigma, there was a relatively large openness to seek professional help, with about 70% of the respondents agreeing with the statements of this scale. This latter figure replicates earlier reports on attitudes toward mental health help-seeking in six European countries (ten Have et al., 2010). Perceived value of professional help, however, was lower with about half of the people believing that depression can be handled by themselves without any treatment. Also, more than 70% of the respondents thought there was something admirable in people who deal with their emotional conflicts by themselves instead of resorting to professional help. The rather low perceived value of professional help might hinder help-seeking behavior. Hence, future public campaigns should pay specific attention to increasing the visibility, credibility and the usefulness of the mental health care sector.

Furthermore, we found a significant association between attitudes toward depression and attitudes toward help-seeking. Personal stigma toward depression was related to less openness to as well as to lower perceived value of professional treatment. Previous research on personal stigma also revealed that a personal desire for social distance toward people with depression or seeing depression as a personal weakness is related to a decreased willingness to seek professional help and a preference for dealing with it alone (Griffiths et al., 2011; Mojtabai, 2010; Schomerus et al., 2009). Hence, personal stigma toward depression does not only have a negative impact on patients, it also negatively affects the tendency to seek help. Perceived stigma did not correlate with help-seeking, suggesting that personal stigma is a more prominent barrier to help-seeking. Based on these findings, however, we should not stop focusing on reducing perceived stigma. Personal stigma and perceived stigma correlate strongly with each other. Therefore, initiatives aiming to reduce perceived stigma may have an indirect effect on help-seeking by leading to a reduction in personal stigma, which in turn increases help-seeking. This hypothesis, however, remains to be supported by further research. Also, openness to and perceived value of professional treatment significantly correlated with each other, providing further support for the recommendation that public campaigns should focus on highlighting the value and usefulness of mental health care as this may influence the tendency of people to seek help when they experience depression.

In addition, various socio-demographic characteristics appeared to be associated with attitudes toward depression and professional help. Male gender, older age, lower educational level were all related to more personal stigma and more negative attitudes toward help-seeking, which is in line with earlier findings (Aromaa et al., 2011; Griffiths et al., 2008; ten Have et al., 2010). People self-reporting a history of depression showed less personal as well as perceived stigma. In contrast to previous research (Wang et al., 2007), however, we found that people living alone had a more negative attitude toward help-seeking. This is a worrisome finding as these people are most in need for help and support. Also, men were less open to seek professional help. This gender difference in attitudes toward help-seeking may be related to women having higher mental health literacy (Cook and Wang, 2010) and to gender norms. It has been shown that men score higher on norms with regard to hiding pain and maintaining independence, and that this is related to resolving depression on its own without professional treatment (O'Loughlin et al., 2011). Moreover, older age, lower educational level, and no experience with depression were all associated with lower perceived value of professional help. Consistent to earlier research, the current findings suggest that public campaigns aiming to reduce stigma and to promote the intention to seek help may be most effective if they are targeted and tailored to the attitudes and behaviors of specific population groups. For example, campaigns targeting men should focus in particular on decreasing personal stigma and increasing openness toward professional treatment, whereas campaigns directed to older people should especially emphasize the value and usefulness of treatment.

Finally, we found several significant country differences in attitudes. Most striking, Hungarian people scored highest on personal stigma, were least willing to look for professional help and were most likely to judge professional help as useless. In contrast, Irish people showed the least personal stigma and most frequently judged professional help as valuable. Lastly, German people acquired the highest scores on perceived stigma and Portuguese people were most willing to seek professional help. Also, in each country, some stigmatizing beliefs were more strongly endorsed than others. More specifically, the German and Irish public mainly indicated not to vote for a politician if they knew he or she had been depressed, whereas Hungarians and Portuguese considered people with depression as being weak and dangerous. Also, the latter two populations mainly believed that depressive people could snap out of their situation if they really wanted it. In future research explanations will be sought for these differences in attitudes across countries. Anyhow, the current findings suggest it would be valuable to implement national public media campaigns specifically tailored to the needs of each country. The current baseline findings may point to ways in which the public campaigns are best adapted for each country. For example, in Hungary public campaigns should pay particular attention to combating personal stigmatizing beliefs like "People with depression are weak and dangerous" and increasing perceived helpfulness of and the willingness to seek for professional help, whereas in Germany public campaigns better focus on reducing perceived stigma.

Finally, the current findings suggest that it is important to improve public mental health literacy in Europe in order to enhance the use of depression care. Public campaigns about depression can be a useful means to this end. Results from national campaigns have shown that they can improve attitudes toward mental health (care), although their effects may be limited in size or duration (Dumesnil and Verger, 2009). For instance, public media campaigns in Australia (Jorm et al., 2005a, 2005b), Germany

(Dietrich et al., 2010; Hegerl et al., 2003) and the UK (Paykel et al., 1998) have been able to improve attitudes toward depression, such as weakness as a cause, and to increase perceived helpfulness of and willingness to contact professional interventions for depression (Goldney and Fisher, 2008). In future research, we will report about the results of the OSPI-Europe public media campaign, which is one of the few such studies (Jorm et al., 2005a, 2005b) to be conducted in a controlled design. The multifaceted awareness campaign was rolled-out in the four OSPI-Europe intervention regions in a comparable manner depending on local possibilities and needs. The key message conveyed throughout the campaign was that depression is a disease that can affect anybody, has many faces and is treatable. Core activities included organizing an opening ceremony and public informational events in relation to depression, launching a poster campaign, distributing printed flyers, and intensifying collaboration with the local media. However, except for public health media campaigns, alternative interventions such as educating the public in mental health first aid skills (Jorm et al., 2008) and internet-based depression information programs (Griffiths and Christensen, 2007) might be useful to reduce stigma related to depression.

4.1. Strengths and limitations

Important strengths of this study are the standardized methodological approach applied across different European countries; the use of internationally validated instruments and native language interviewers; and the fairly equal gender and age balance across the different countries. Despite these strengths, there are also some methodological limitations. First, the survey was cross-sectional, so no causal inferences can be drawn from it. Second, the response rate was relatively low. It was particularly hard to reach the stratification quota for young males, which augmented the number of refusals. Third, the survey relied on self-report, which may have resulted in recall or report bias, e.g. with regard to experience with mental illness in relatives. Self-report data may also be affected by social desirability bias, in particular when investigating attitudes. Fourth, the regions selected as OSPI-intervention and control regions may not necessarily represent the whole country. Fifth, we investigated depression as perceived by participants. This may be open to the subjective experience of what depression is, in contrast to a more standard vignette description of someone with symptoms of depression. However, it has the advantage of investigating naturalistic attitudes and reactions to depression as people have in daily life, without further specification. Sixth, cultural differences related to these attitudes such as for example the way in which mental health services are organized were not investigated. However, such local differences may account for the cross-cultural differences we found. Further research should consider the role of cultural norms on attitudes toward depression and help-seeking. Moreover, the relation between attitudes toward mental health (care) and actual care use needs further study. Seventh, it would be interesting to conduct prospective research, investigating eventual changes and the malleability of attitudes by public campaigns within the same sample of subjects. Finally, the OSPI-Europe intervention mainly targets adult people and only includes few measures directed toward young people and adolescents. Yet, adolescence is the peak time for the onset of mental health conditions, especially for depression (Bansal et al., 2009; Costello et al., 2005). Furthermore, younger ages at onset of depression are associated with more severe and recurrent forms of depression (Zisook et al., 2007). Also, depression is considered as the most concerning health problem in this age group due to its link with self harm and suicide. In a follow-up large scale European research project named Preventing Depression and Improving Awareness through Networking in the EU (PREDI-NU), a focus is laid specifically on the adolescent target group in addition to adults. The first objective of the project is to construct an internet-based guided self-management tool for young people (age 15–24) and adults (age 25+) with mild to moderate depression. Secondary, the project aims to increase awareness of depression among health professionals and community facilitators working with adolescents and young adults in order to improve early identification of depression and adequate treatment referral for young people with depression.

5. Conclusions

The current population survey conducted in four European countries shows a moderate degree of personal stigma toward depression and a strikingly high degree of perceived social stigma. Although a substantial majority showed openness to seek professional help, only half of the respondents perceived professional help as valuable. Such negative attitudes deserve public health concern, since they not only impact upon the wellbeing of people with mental health disorders, but also affect help-seeking behavior. Thus, public media campaigns aiming to improve mental health literacy are essential to enhance depression care. Such campaigns should pay particular attention to (1) increasing the visibility, credibility and usefulness of the health care sector and (2) communicating the actual level of personal stigma in order to reduce perceived stigma. Overall, important target groups are males, older people and those people with lower educational level and living alone. Finally, the content of each campaign is best tailored to the cultural norms of the county in which it will be launched as well as to the attitudes and beliefs of specific population groups for which it will be intended.

Funding body agreements and policies

Funding for this study was provided by the European Community's Seventh Framework Program (FP7/2007-2013) under grant agreement no. 223138. The funding partner had no role in the design of the study; in the data collection; in the analyses and interpretation of the data; in the writing of the manuscript; or in the decision to submit the manuscript for publication.

Conflict of interest

All authors declare that they have no conflicts of interest.

Acknowledgments

The OSPI-Europe project has received funding from the European Community's Seventh Framework Program (FP7/2007-2013) under grant agreement no. 223138.

The PREDI-NU project has received funding from the European Union in the framework of the Health Program under grant agreement no. 20101214.

References

Anderson, I.M., 2000. Selective serotonin reuptake inhibitors versus tricyclic antidepressants: a meta analysis of efficacy and tolerability. Journal of Affective Disorders 58, 19–36.

Angermeyer, M.C., Dietrich, S., 2006. Public beliefs about and attitudes towards people with mental illness:a review of population studies. Acta Psychiatrica Scandinavica 113, 163–179.

Angermeyer, M.C., Holzinger, A., Matschinger, H., 2009. Mental health literacy and attitude towards people with mental illness: a trend analysis based on population surveys in the eastern part of Germany. European Psychiatry 24, 225–232.

Aromaa, E., Tolvanen, A., Tuulari, J., Wahlbeck, K., 2011. Predictors of stigmatizing attitudes towards people with mental disorders in a general population in Finland. Nordic Journal of Psychiatry 65, 125–132.

Bansal, V., Goyal, S., Srivastava, K., 2009. Study of prevalence of depression in adolescent students of a public school. Indian Journal of Psychiatry 18, 43–46.

Barney, L.J., Christensen, H., Jorm, A.F., Griffiths, K.M., 2006. Stigma about depression and its impact on help-seeking intentions. Australian and New Zealand Journal of Psychiatry 40, 51–54.
Baumeister, H., Härter, M., 2007. Prevalence of mental disorders based on general population surveys. Social Psychiatry and Psychiatric Epidemiology 42, 537–546.
Boenisch, S., Kocalevent, R.D., Matschinger, H., Mergl, R., Wimmer-Brunauer, C., Tauscher, M., Kramer, D., Hegerl, U., Bramesfeld, A., 2012. Who receives depression-specific treatment? A secondary data-based analysis of outpatient care received by over 780.000 statutory health-insured individuals diagnosed with depression. Social Psychiatry and Psychiatric Epidemiology 47, 475–486.
Bramesfeld, A., Grobe, T., Schwartz, F.W., 2007. Who is treated, and how, for depression? An analysis of statutory health insurance data in Germany. Social Psychiatry and Psychiatric Epidemiology 42, 740–746.
Calear, A.L., Griffiths, K.M., Christensen, H., 2011. Personal and perceived depression stigma in Australian adolescents: magnitude and predictors. Journal of Affective Disorders 129, 104–108.
Cipriani, A., Furukawa, T.A., Salanti, G., Geddes, J.R., Higgins, J.P.T, Churchill, R., Watanabe, N., Nakagawa, A., Omori, I.M., McGuire, H., Tansella, M., Barbui, C., 2009. Comparative efficacy and acceptability of 12 new-generation antidepressants: a multiple-treatments meta-analysis. Lancet, 37; 746 –58.
Collins, P.Y., Patel, V., Joestl, S.S., March, D., Insel, T.R., Daar, A.S., 2011. Grand Challenges in global mental health. Nature 475, 27–30.
Connery, H., Davidson, K., 2006. A survey of attitudes to depression in the general public: a comparison of age and gender differences. Journal of Mental Health 15, 179–189.
Cook, T.M., Wang, J., 2010. Descriptive epidemiology of stigma against depression in a general population sample in Alberta. BMC Psychiatry 10, 29.
Costello, E.J., Egger, H., Angold, A., 2005. 10-year research update review: The epidemiology of child and adolescent psychiatric disorders: I. Methods and public health burden. Journal of the American Academy of Child and Adolescent Psychiatry 44, 972–986.
Demyttenaere, K., Bruffaerts, R., Posada-Villa, J., Gasquet, I., Kovess, V., Lepine, J.P., Angermeyer, M.C., Bernert, S., de Girolamo, G., Morosini, P., et al., 2004. Prevalence, severity, and unmet need for treatment of mental disorders in the World Health Organization World Mental Health Surveys. Journal of the American Medical Association 291, 2581–2590.
DeRubeis, R.J., Hollon, S.D., Amsterdam, J.D., Shelton, R.C., Young, P.R., Salomon, R. M., O'Reardon, J.P., Lovett, M.L., Gladis, M.M., Brown, L.L., et al., 2005. Cognitive therapy vs medications in the treatment of moderate to severe depression. Archives of General Psychiatry 62, 409–416.
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.
Dumesnil, H., Verger, P., 2009. Public awareness campaigns about depression and suicide: a review. Psychiatric Services 60, 1203–1213.
Eisenberg, D., Downs, M.F., Golberstein, E., Zivin, K., 2009. Stigma and help-seeking for mental health among college students. Medical Care Research and Review 66, 522–541.
Fernandez, A., Haro, J.M., Martinez-Alonso, M., Demyttenaere, K., Brugha, T.S., Autonell, J., de Girolamo, G., Berert, S., Lepine, J-P., Alonso, J., 2007. Treatment adequacy for anxiety and depressive disorders in six European countries. British Journal of Psychiatry 190, 172–173.
Fischer, E.H., Farina, A., 1995. Attitudes towards seeking professional psychological help: a shortened form and considerations for research. Journal of College Student Development 36, 368–373.
Goldman, L., Nielsen, N., Champion, H., 1999. Awareness, diagnosis and treatment of depression. Journal of General Internal Medicine 14, 569–580.
Goldney, R.D., Fisher, L.J., 2008. Have broad-based community and professional education programs influenced mental health literacy and treatment seeking of those with major depression and suicidal ideation? Suicide and Life-Threatening Behavior 37, 308–321.
Goldney, R.D., Fisher, L.J., Dal Grande, E., Taylor, A.W., 2005. Changes in mental health literacy about depression: South Australia, 1998 to 2004. Medical Journal of Australia 183, 134–137.
Goldney, R.D., Fisher, L.J., Wilson, D.H., 2001. Mental health literacy: an impediment to the optimum treatment of major depression in the community. Journal of Affective Disorders 64, 277–284.
Griffiths, K.M., Nakane, Y., Christensen, H., Yoshioka, K., Jorm, A.F., Nakane, H., 2006. Stigma in response to mental disorders: a comparison of Australia and Japan. BMC Psychiatry 6, 21.
Griffiths, K.M., Christensen, H., 2007. Internet-based mental health programs: a powerful tool in the rural medical kit. Australian Journal of Rural Health 15, 81–87.
Griffiths, K.M., Christensen, H., Jorm, A.F., 2008. Predictors of depression stigma. BMC Psychiatry 8, 25.
Griffiths, K.M., Christensen, H., Jorm, A.F., Evans, K., Groves, C., 2004. Effect of web-based depression literacy and cognitive-behavioral therapy interventions on stigmatizing attitudes to depression. British Journal of Psychiatry 185, 342–349.
Griffiths, K.M., Crisp, D.A., Jorm, A.F., Christensen, H., 2011. Does stigma predict a belief in dealing with depression alone? Journal of Affective Disorders 132, 413–417.
Harman, J.S., Edlund, M.J., Fortney, J.C., 2004. Disparities in the adequacy of depression treatment in the United States. Psychiatric Services 55, 1379–1385.
Hegerl, U., Althaus, D., Stefanek, J., 2003. Public attitudes towards treatment of depression: effects of an information campaign. Pharmacopsychiatry 36, 288–291.
Hegerl, U., Wittenburg, L., Arensman, E., Van Audenhove, C., Coyne, J.C., McDaid, D., van der Feltz-Cornelis, C.M., Gusmão, R., Kopp, M., Maxwell, M., Meise, U., Roskar, S., Sarchiapone, M., Schmidtke, A., Värnik, A., Bramesfeld, A., 2009. Optimizing suicide prevention programs and their implementation in Europe (OSPI-Europe): an evidence-based multi-level approach. BMC Public Health 9, 428.
Hernan, A., Philpot, B., Edmonds, A., Reddy, P., 2010. Healthy minds for country youth: help-seeking for depression among rural adolescents. Australian Journal of Rural Health 18, 118–124.
Highet, N., Hickie, I., Davenport, T., 2002. Monitoring awareness of and attitudes to depression in Australia. Medical Journal of Australia 176, S63–68.
Holzinger, A., Matschinger, H., Schomerus, G., Carta, M.G., Angermeyer, M.C., 2011. The loss of sadness: the public's view. Acta Psychiatrica Scandinavica 123, 307–313.
Jorm, A.F., 2000. Mental health literacy: public knowledge and beliefs about mental disorders. British Journal of Psychiatry 177, 396–401.
Jorm, A.F., Barney, L.J., Christensen, H., Highet, N.J., Kelly, C.M., Kitchener, B.A., 2006. Research on mental health literacy: what we know and what we still need to know. Australian and New Zealand Journal of Psychiatry 40, 3–5.
Jorm, A.F., Christensen, H., Griffiths, K.M., 2005a. The impact of beyond blue: 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.
Jorm, A.F., Griffiths, K.M., Christensen, H., Korten, A.E., Parslow, R.A., Rodgers, B., 2003. Providing information about the effectiveness of treatment options to depressed people in the community: a randomized controlled trial of effects on mental health literacy, help-seeking and symptoms. Psychological Medicine 33, 1071–1079.
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., Mackinnon, A., Christensen, H., Griffiths, K.M., 2005b. Structure of beliefs about the helpfulness of interventions for depression and schizophrenia: results from a national survey of the Australian public. Social Psychiatry and Psychiatric Epidemiology 40, 877–883.
Jorm, A.F., Morgan, A.J., Wright, A., 2008. First aid strategies that are helpful to young people developing a mental health disorder: beliefs of health professionals compared to young people and parents. BMC Psychiatry 8, 42.
Lasalvia, A., Zoppei, S., van Bortel, T., Bonetto, C., Cristofalo, D., Wahlbeck, K., Bacle, S.V., vanAudenhove, C., van Weeghel, J., Reneses, B., et al., 2012. Global pattern of experienced and anticipated discrimination reported by people with major depressive disorder: a cross-sectional survey. Lancet , http://dx.doi.org/10.1016/S0140-6736(12)61379-8.
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.
Lauber, C., Nordt, C., Falcato, L., Rössler, W., 2003. Do people recognize mental illness? Factors influencing mental health literacy. European Archives of Psychiatry and Clinical Neuroscience 253, 248–251.
Lauber, C., Nordt, C., Rössler, W., 2005. Recommendations of mental health professionals and the general population on how to treat mental disorders. Social Psychiatry and Psychiatric Epidemiology 40, 835–843.
Mann, C., Himelein, M., 2004. Factors associated with stigmatization of persons with mental illness. Psychiatric Services 55, 185–187.
Mehta, N., Kassam, A., Leese, M., Butler, G., Thornicroft, G., 2009. Public attitudes towards people with mental illness in England and Scotland, 1994-2003. British Journal of Psychiatry 194, 278–284.
Mojtabai, R., 2007. Americans' attitudes towards mental health treatment seeking: 1990-2003. Psychiatric Services 58, 642–651.
Mojtabai, R., 2010. Mental illness stigma and willingness to seek mental health care in the European Union. Social Psychiatry and Psychiatric Epidemiology 45, 705–712.
Moussavi, S., Chatterji, S., Verdes, E., Tandon, A., Patel, V., Ustun, B., 2007. Depression, chronic diseases, and decrements in health: results from the World Health Surveys. Lancet 370, 851–858.
NICE, 2009. Depression: NICE clinical guideline 90. London: National Institute for health and Clinical Excellence.
Oh, E., Jorm, A.F., Wright, M., 2009. Perceived helpfulness of websites for mental health information. Social Psychiatry and Psychiatric Epidemiology 44, 293–299.
O'Loughlin, R.E., Duberstein, P.R., Veazie, P.J., Bell, R.A., Rochlen, A.B., Fernandez y Garcia, E., Kravitz, R.L., 2011. Role of gender-linked norm of toughness in the decision to engage in treatment for depression. Psychiatric Services 62, 740–746.
Paykel, E.S., Hart, D., Priest, R.G., 1998. Changes in public attitudes to depression during the Defeat Depression Campaign. British Journal of Psychiatry 173, 519–522.
Peluso, E.T.P., Blay, S.L., 2009. Public stigma in relation to individuals with depression. Journal of Affective Disorders 115, 201–206.
Priest, R., Vize, C., Roberts, A., Roberts, M., Tylee, A., 1996. Lay people's attitudes to treatment of depression: results of opinion poll for Defeat Depression Campaign just before its launch. British Medical Journal 313, 858–859.
Prins, M.A., Verhaak, P.F.M., Smolders, M., Laurant, M.G.H., van der Meer, K., Spreeuwenberg, P., van Marwijk, H.W.J., Penninx, B.W.J.H., Bensing, J.M., 2010.

Patient factors associated with guideline-concordant treatment of anxiety and depression in primary care. Journal of General Internal Medicine 25, 648–655.
Schomerus, G., Matschinger, H., Angermeyer, M.C., 2006. Public beliefs about the cause of mental disorders revisited. Psychiatric Research 144, 233–236.
Schomerus, G., Matschinger, H., Angermeyer, M.C., 2009. The stigma of psychiatric treatment and help-seeking intentions for depression. European Archives of Psychiatry and Clinical Neuroscience 259, 298–306.
Stewart, W., Ricci, J., Chee, E., Hahn, S., Morganstein, D., 2003. Cost of lost productive work time among US workers with depression. Journal of the American Medical Association 289, 3135–3144.
ten Have, M., de Graaf, R., Ormel, J., Vilagut, G., Kovess, V., Alonso, J., 2010. Investigators. 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.
Thornicroft, G., 2006. Shunned. Discrimination Against People with Mental Illness. Oxford: University Press.
Thornicroft, G., Brohan, E., Rose, D., Sartorius, N., Leese, M., 2009. Global pattern of experienced and anticipated discrimination against people with schizophrenia: a cross-sectional survey. Lancet 373, 408–415.
Wang, P.S., Aguilar-Gaxiola, S., Alonso, J., Angermeyer, M.C., Borges, G., Bromet, E.J., Bruffaerts, R., de Girolamo, G., de Graaf, R., Gureje, O., Haro, J.M., Karam, E.G., Kessler, R.C., Kovess, V., Lane, M.C., Lee, S., Levinson, D., Ono, Y., Petukhova, M., Posada-Villa, J., Seedat, S., Wells, J.E., 2007. Use of mental health services for anxiety, mood, and substance disorders in 17 countries in the WHO world mental health surveys. Lancet 370, 841–850.
Wang, J., Lai, D., 2008. The relationship between mental health literacy, personal contacts and personal stigma against depression. Journal of Affective Disorders 110, 191–196.
Zisook, S., Lesser, I., Stewart, J.W., Wisniewski, S.R., Balasubramani, G.K., Fava, M., Gilmer, W.S., Dresselhaus, G.K., Thase, M.E., Nierenberg, A.A., Trivedi, M.H., Rush, A.J., 2007. Effect of age onset on the course of major depressive disorder. American Journal of Psychiatry 164, 1539–1546.