

## Attitudes of Mental Health Professionals Toward People With Schizophrenia and Major Depression

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**Several studies reveal poor knowledge about mental illness in the general population and stigmatizing attitudes toward people with mental illness. However, it is unknown whether mental health professionals hold fewer stigmatizing attitudes than the general population. A survey was conducted of the attitudes of mental health professionals (n = 1073) and members of the public (n = 1737) toward mental illness and their specific reaction toward a person with and without psychiatric symptoms (“non-case” as a reference category). Psychiatrists had more negative stereotypes than the general population. Mental health professionals accepted restrictions toward people with mental illness 3 times less often than the public. Most professionals were able to recognize cases of schizophrenia and depression, but 1 in 4 psychiatrists and psychologists also considered the non-case as mentally ill. The social distance toward both major depression and the non-case was lower than toward schizophrenia. However, in this regard, there was no difference between professionals and the public. The study concludes that the better knowledge of mental health professionals and their support of individual rights neither entail fewer stereotypes nor enhance the willingness to closely interact with mentally ill people.**

*Key words:* stigma/stereotypes/social distance/mental illness

### Introduction

Poor knowledge about mental illness and negative attitudes toward people with mental illness is widespread in the general public.<sup>1–4</sup> While educational interventions can reduce stigma,<sup>5,6</sup> stigmatizing opinions are not closely related to knowledge.<sup>7</sup> Although their “mental health literacy”—defined as the knowledge and beliefs about mental disorders<sup>8</sup>—is not questioned, negative

stereotypes and stigmatizing attitudes of mental health professionals toward people with mental illness are a controversial issue.<sup>9,10</sup>

The few studies that compare mental health professionals and the general public investigate either knowledge<sup>1,3</sup> or attitudes.<sup>11,12</sup> To compare both—attitudes and knowledge—we conducted a survey among mental health professionals and the general public. To assess attitudes we used questions on stereotypes, restrictions, and social distance toward people with mental illness. To measure knowledge, we asked the respondents whether the person who was depicted in a short vignette was suffering from a mental illness.

### Methods

#### *Sampling*

*Professional Sample.* We asked all 32 psychiatric in- and outpatient facilities in the Swiss German part of Switzerland to participate in this study. In the 29 interested hospitals, we informed the executive staff about the aims and objectives of the survey with a standardized 30-minute presentation. We asked the executive staff to inform their staff members about the study and asked them to distribute prepared letters to every staff member. These envelopes contained an information handout about the study, an enrollment form, and visual aids to be used in a subsequent telephone interview in order to understand the questions better and thus to increase data quality. With this 3-step sampling procedure we approached 518 psychiatrists, 2250 nurses, and 320 other professionals who had daily contact with patients with mental illness, like vocational workers, social workers, physiotherapists, and psychologists.

The computer-assisted telephone interviews (CATI) with 1073 of 3088 eligible mental health professionals (response rate: 34.7%) were carried out between April 2003 and April 2004 by specially trained and supervised psychology students. Participation in smaller facilities was higher (n = 15; 46.1%) than in those with more than 100 employees (n = 14; 31.7%). The rate of participation differed between the professional groups (nurses: 30.4%, psychiatrists: 39.4%, other mental health professionals: 57.8%). The ratio between females and

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males (female:male) in all professional groups was similar to the data provided by the Ministry of Health of the Canton Zurich (psychiatrists, 77:127; nurses, 459:225; psychologists, 47:20; other therapists, 80:38). The mean age of the different professional groups was also similar (ranging from 39 to 45 years), and comparable to the public survey (43 years).

*General Population Sample.* As has been stated previously,<sup>13</sup> a household survey was carried out between November 1998 and February 1999 with a representative sample of 1737 Swiss adults aged 16–76. A random sample of households was created based on the telephone number directory of the only telecommunications company in Switzerland, which contains all telephone numbers. A target person within each household was randomly selected using the Kish method, which minimizes noncoverage within sampling units.<sup>14</sup> We sampled more people in the linguistic minority areas to allow a more reliable comparison: 791 of the interviews were conducted in German, 520 in French, and 426 in Italian. The response rate in the survey of the general public was 63%.<sup>13</sup>

#### *Interview*

The interview began with questions about the participant's employment, such as profession, workplace, number of hours worked per week, and the level of professional experience. Then a questionnaire was applied that was already being used in the public attitude survey in Switzerland.<sup>13</sup> It consisted of 3 parts.

*Stereotypes.* The first part of the questionnaire assessed professionals' attitudes toward stereotypes of mental illness or psychiatric institutions. Study participants were asked to rate on a 5-point Likert scale (1 signifies "much less," 3 "equal," and 5 "much more") to what extent people with mental illness differ from the general public with respect to 12 stereotypes. Using 10 (ie, "dangerous," "unpredictable," "stupid," "bedraggled," "abnormal," "unreliable," "weird," "reasonable," "self-controlled," and "healthy") out of the 12 presented items, a negative stereotypes scale with acceptable reliability was calculated (Cronbach's  $\alpha = 0.63$ ).

*Restrictions.* To assess the willingness to restrict the individual rights of people who are mentally ill, we asked if the interviewees approved or disapproved of the following 4 questions<sup>13,15</sup>: (1) "What do you think: should a woman who had suffered severely from a mental illness have an abortion in the case of a pregnancy?"; (2) "Do you approve of the right to vote and to run for office for somebody who had suffered severely from a mental illness?"; (3) "What do you think: should somebody who is severely mentally ill have her/his driver's license revoked?"; and (4) "What do you think: should some-

body be admitted to a psychiatric hospital even against his/her will and if needed retained, or should a person under no circumstances be compulsorily admitted to a psychiatric hospital?"

*Recognition of the Vignettes.* In the second part of the interview, we randomly presented a vignette depicting a person ("Beat," a common Swiss first name) with either major depression or schizophrenia fulfilling the respective DSM-III-R criteria, or a "non-case" vignette describing a person in a changing life situation without any psychiatric symptoms. In order to assess whether the interviewees correctly recognized the presented vignette, we asked all respondents to indicate whether the person described suffers from a "mental illness" or "reacts in a normal way to a difficult life situation." We oversampled the depiction of depression, because we hypothesized this vignette to be the most ambiguous, to thus be able to detect the factors influencing recognition errors.

*Social Distance.* Social distance to the person described in the vignette was assessed by the German version of the Social Distance Scale.<sup>16,17</sup> This scale consists of 7 questions assessing the willingness to interact with the person described in various social situations, eg, "Would you like having your children marry someone like Beat?" Each item is rated on a 5-point Likert scale set by 1 "definitely willing" and 5 "definitely unwilling." We confirmed a good reliability of the scale in our sample of mental health professionals (Cronbach's  $\alpha = 0.82$ ). In the third section of the interview, sociodemographic variables of the respondents were assessed.

*General Population Interview.* The questions in the general population sample were identical to those used with the professionals. However, this interview only consisted of the 3 parts: general questions on mental illness, depiction of a person with either major depression or schizophrenia, and sociodemographic variables of the respondents. The reliability of the scales was comparable to the professional sample: negative stereotypes scale (Cronbach's  $\alpha = 0.55$ ) and Social Distance Scale (Cronbach's  $\alpha = 0.85$ ).

#### *Statistical Analysis*

Data analysis was done using SPSS (version 11.5) for Windows. Analysis of variance was used to estimate the relationship between attitude scores and respondents' characteristics (professional group, gender, and age). To handle the problem of unequal sample size with regard to balancing power and the type I error rate, we used Tukey post-hoc tests to correct for multiple comparison, as an equal error variance in all groups was found (Levene test). Logistic regression was applied if the dependent variable consisted of 2 categories.

## Results

### Stereotypes

The mean value of the stereotypes scale of all professional groups and the general public is near the midpoint of 3 but in all cases on the negative side (Table 1). Psychiatrists had more negative stereotypes than any of the other groups ( $p < .05$ ). Men and women did not differ in any of the 5 groups. Younger people had more stereotypes than older ones; even when controlling for age, psychiatrists had the most stereotypes.

### Restrictions

Two out of 3 people in the public survey favored the notion that the driver's license of mentally ill people should be revoked (Table 2). There was less approval of this legal restriction in the group of mental health professionals: every sixth to every third person agreed to this statement, with exception of the nurses (46%). There were no significant differences between the mental health professionals concerning the 3 other questions. Compared with the mental health professionals, the participants of the public survey endorsed these restrictions more strongly. Approximately 3 times more people supported the withdrawal of the right to vote (19.6%) and recommended an abortion (29%) to women who had previously suffered from a severe mental illness. Almost all mental health professionals (> 98%) had a positive attitude toward compulsory admission, whereas every third person in the public was opposed to it. Gender and age did not influence the attitude toward these 4 types of restriction, except that older people recommended having an abortion in the case of pregnancy more often.

**Table 1.** Negative Stereotypes About Mentally Ill People by Professional Groups and the General Public: Mean Values on the Negative Stereotypes Scale (95% CI)

Professional Group	Negative Stereotypes <sup>a</sup>
Psychiatrists (n = 201)	3.49 (3.45–3.54) <sup>b</sup>
Psychologists (n = 66)	3.33 (3.26–3.41)
Nurses (n = 676)	3.41 (3.38–3.43)
Other Therapists <sup>c</sup> (n = 116)	3.39 (3.34–3.45)
General Population (n = 253)	3.38 (3.34–3.42)

<sup>a</sup>Mean value of 7 negative (eg, “dangerous”) and 3 positive (reverse scored, eg, “self-controlled”) items. A value over the midpoint 3 indicates that more negative—and less positive—attributes are ascribed to people with mental illness than to other people.

<sup>b</sup>Psychiatrists significantly held more negative stereotypes than each other group ( $p < .05$ ).

<sup>c</sup>Other therapists include vocational workers, social workers, and physiotherapists.

### Recognition of the Vignettes

More than 94% of participants in each professional group recognized the person in the schizophrenia vignette as having a mental illness, whereas every fourth person in the public sample considered the depiction to be a normal reaction to a difficult life situation (Table 3). The major depression vignette was identified very differently: The vast majority of psychiatrists and psychologists (> 86%) gave a correct answer, whereas one-third of the other professional groups and more than half of the public thought that the person described did not suffer from a mental illness. The person in the non-case vignette—which was not used in the public survey—was seen predominantly as experiencing a “crisis,” yet one-fourth of the psychiatrists and psychologists considered this person “mentally ill.”

### Social Distance

The reaction to the vignettes did not differ between professionals and the public. Both groups reacted with greatest social distance toward the person in the schizophrenia vignette (Table 4), whereas between the depression and the non-case vignettes no difference was found. The social distance score for the schizophrenia vignette was at the midpoint of the scale and about one standard deviation (0.7) above the value of the other 2 vignettes.

## Discussion

To our knowledge, this is the first study to compare mental health professionals and the general public with respect to stereotypes and attitudes about restrictions toward people with mental illness. Furthermore, we compared the two samples regarding their ability to recognize mental illness. To sum up, the general public has as many negative stereotypes about people with mental illness as mental health professionals do. The general public accepted restrictions toward people with mental illness to a much higher degree, with the exception of compulsory admission. Independently of how well mental health professionals recognized the case descriptions of schizophrenia and major depression (as persons having a mental illness), they felt the same social distance toward the described persons as the public. As expected, the description of schizophrenia showed the highest level of social distance, while there was no difference between the depression and the non-case vignette in any of the professional groups.

These results demonstrate that it is too simple to assume that psychiatrists and other mental health professionals, though mental health experts, generally have more positive attitudes toward mentally ill people than the general public. Our findings may allow a deeper understanding of how these attitudes are connected. The empirical results can contribute to the design of antistigma campaigns, eg, by identifying deficits of certain groups or recognizing pragmatic pathways.

**Table 2.** Restrictions on Mentally Ill People by Professional Groups and the General Public: Proportion of Respondents Agreeing (95% CI)

Professional Group	Type of Restriction			
	Revocation of the Driver's License n = 1210	Withdrawal of the Right to Vote n = 1323	Abortion n = 1222	Compulsory Admission n = 1317
Psychiatrists	29.1 (21.8–37.3) <sup>a</sup>	3.0 (0.9–6.9)	8.5 (4.6–14.2)	98.5 (95.2–99.8)
Psychologists	16.4 (6.9–30.6) <sup>a</sup>	1.5 (0.0–9.1)	9.5 (3.1–21.1)	98.5 (90.7–100)
Nurses	46.0 (41.5–50.5)	2.8 (1.6–4.6)	9.8 (7.3–12.7)	98.2 (96.7–99.2)
Other Therapists <sup>d</sup>	32.4 (22.5–43.6) <sup>a</sup>	5.1 (1.6–11.6)	5.4 (1.7–12.2)	98.3 (93.2–99.9)
General Public	65.7 (58.3–72.6) <sup>b</sup>	19.6 (14.3–25.8) <sup>b</sup>	29.0 (22.4–36.4) <sup>b</sup>	67.5 (60.4–74.0) <sup>c</sup>

<sup>a</sup>Psychiatrists, psychologists, and other therapists support significantly less the revocation of the driver's license in severe mental illness than nurses ( $p < .01$ ).

<sup>b</sup>The public significantly accepts this restriction more than each professional group ( $p < .01$ ).

<sup>c</sup>The public significantly disapproves more often compulsory admission than each professional group ( $p < .001$ ).

<sup>d</sup>Other therapists include vocational workers, social workers, and physiotherapists.

### Knowledge

The ability to recognize mental disorders is a central part of “mental health literacy”<sup>8</sup> because it is a prerequisite for appropriate help-seeking. Although health and illness are a continuum and not a simple binary state, the distinction between “health” and “illness” helps us decide in everyday life if somebody needs help and what type is needed. Mental health professionals recognized the depictions of a person suffering from schizophrenia or depression more easily than the general public. However, the “mental health literacy” of professionals seems to be far from perfect: 1 out of 11 psychiatrists or psychologists and every third nurse or therapist considered the depiction of a major depression to be a “crisis,” ie, a normal reaction to a difficult life situation. If one is sensitive to questions of stigma and labeling, one might be reluctant to define a person as “mentally ill.” But if this were the

case, why did every fourth or fifth professional assign this stigmatizing term to the “normal person” in the non-case description? As not all mental health professionals could recognize the presented vignettes correctly, it is not to be expected that laypeople could perform that task better.

### Social Distance

Even though professionals and the general public differ in their ability to recognize depression as a mental illness, they display an equal level of social distance toward the case vignettes of major depression. Accordingly, the social distance toward the person with schizophrenia was equally high in all professional groups as in the public. This comports with a study including psychiatrists in office practice.<sup>11</sup>

**Table 3.** Recognition of the Vignettes by Professional Groups and the General Public: Proportion of Respondents Holding the Person Described in the Case Vignette as Having a “Mental Illness” (95% CI)

Group	Type of Vignette		
	Schizophrenia n = 471	Major Depression n = 639	Non-Case n = 126
Psychiatrists (n = 202)	100 (93.7–100)	92.2 (84.8–96.8) <sup>b</sup>	26.3 (7.7–54.4)
Psychologists (n = 64)	100 (84.5–100)	86.7 (66.7–97.0) <sup>b</sup>	25.0 (2.2–69.4)
Nurses (n = 673)	94.9 (90.8–97.6)	65.1 (59.2–70.8)	17.4 (9.3–28.6)
Other Therapists <sup>d</sup> (n = 115)	97.9 (87.2–100)	63.6 (47.7–77.7)	7.7 (0.1–40.1)
General Public (n = 182)	72.3 (60.7–82.1) <sup>a</sup>	45.4 (33.4–57.9) <sup>c</sup>	— <sup>e</sup>

<sup>a</sup>The public held the described person in the schizophrenia vignette as having a mental illness significantly less often than each professional group ( $p < .01$ ).

<sup>b</sup>Psychiatrists and psychologists recognized the description of a person suffering from major depression as having a mental illness significantly more often than nurses and other therapists ( $p < .05$ ).

<sup>c</sup>The public recognized the major depression description as a mental illness significantly less often than each professional group ( $p < .05$ ).

<sup>d</sup>Other therapists include vocational workers, social workers, and physiotherapists.

<sup>e</sup>The non-case vignette was not presented in the public survey.

**Table 4.** Social Distance Toward the Case Vignette by Professional Groups and the General Public: Mean Values on the Social Distance Scale (95% CI)

Group	Type of Vignette		
	Schizophrenia n = 477	Major Depression n = 652	Non-Case n = 125
Psychiatrists (n=202)	3.33 (3.12–3.54) <sup>a</sup>	2.30 (2.19–2.41)	2.23 (1.88–2.57)
Psychologists (n=67)	3.01 (2.71–3.32) <sup>a</sup>	2.24 (2.03–2.45)	2.36 (2.07–2.64)
Nurses (n=679)	3.09 (2.98–3.19) <sup>a</sup>	2.38 (2.31–2.46)	2.28 (2.11–2.46)
Other therapists <sup>b</sup> (n=117)	2.89 (2.64–3.14) <sup>a</sup>	2.31 (2.16–2.47)	2.19 (1.85–2.54)
General public (n=189)	2.96 (2.81–3.11) <sup>a</sup>	2.48 (2.35–2.62)	— <sup>c</sup>

<sup>a</sup>In all professional groups—and the public—the social distance toward the schizophrenia vignette is significantly higher than toward the depression and the non-case vignette ( $p < .001$ ).

<sup>b</sup>Other therapists include vocational workers, social workers, and physiotherapists.

<sup>c</sup>The non-case vignette was not presented in the public survey.

Social distance is one of the most significant components of stigmatization.<sup>16,17</sup> Various surveys<sup>4,16,18–20</sup> have shown a higher social distance toward people with schizophrenia than people with depression. However, only 2 of these studies applied a non-case vignette as a reference category. Link and colleagues<sup>4</sup> used a “troubled person” with subclinical psychiatric symptoms, whereas Eker<sup>19</sup> described a “normal person” without any troubles. Our non-case vignette lies between both, as we described a person in a changing life situation but without any psychiatric symptoms. It is socially accepted—even a social norm—to be selective in intimate social contacts. Therefore, using a non-case vignette is a methodological prerequisite, as social distance as a relative measure has to be defined by a reference group. Without doing so, it can merely be stated in relative terms that the stigmatization of people with an alcohol addiction is stronger than that of people with schizophrenia, but it remains unclear if the latter psychiatric disorder comes with any stigmatization at all. The other 2 studies using a non-case vignette found a higher degree of social distance toward major depression in the general public<sup>4</sup> and in students.<sup>19</sup> Contrary to this, the mental health professionals in our study demonstrated the same amount of social distance toward a person with manifest psychiatric symptoms of major depression and toward a person without any psychiatric symptoms.

If mental health professionals are used as a reference group of how far the social distance toward persons with mental illness can be reduced in the general public, nothing could be improved. Thus, our findings put the reduction of social distance toward people with manifest psychiatric symptoms as one of the most central aspects of antistigma campaigns into question. It seems difficult to educate the public about psychiatric disorders and treatment aspects on the one hand and on the other hand to push people to be less socially distant toward people with manifest psychiatric symptoms.

### Equal Rights

A more realistic and pragmatic approach would be to acknowledge that people who suffer from mental illness are different from the majority in certain ways but should have equal rights.<sup>7</sup> Our study demonstrates that mental health professionals agree to a much lesser extent than the general public to restrictions of political and individual rights of mentally ill persons. In this regard, it is correct to claim that psychiatrists and other mental health professionals have more positive or “better” attitudes than the public. But mental health professionals more strongly approved of compulsory admission, ie, suspending individual rights in order to help a patient. In the public survey people with a higher educational degree, as well as people with treatment experience and their relatives, are in favor of compulsory admission. This probably represents a certain trust in psychiatry and its treatment possibilities rather than a restrictive attitude toward people who are mentally ill.<sup>15</sup> However, a study using different case reports of patients with schizophrenia found similar attitudes of mental health professionals and laypeople in Germany and England toward involuntary admission and treatment.<sup>12</sup>

### Study Limitations

This study has several limitations. The response rate of mental health professionals was low but was still higher than in other surveys.<sup>eg,21</sup> If we included mental health professionals with rather positive attitudes, a higher response rate would have led to a more dismal picture of professionals’ attitudes. Due to a lack of administrative data we have no detailed information about the professionals who did not take part in the study. By using an identical questionnaire for mental health professionals and the general public, the methodological comparability was maximized. Because the questionnaire was designed for the general public, some of the professionals considered the questions and answer categories to be too

imprecise. The time gap of 5 years between the public and the professional surveys could have influenced the expressed attitudes. For example, a drastic increase in social distance toward an individual suffering from schizophrenia could be attributed to negative reports in the mass media, as has been previously reported in Germany.<sup>16</sup> To the best of our knowledge there were no such reports before or during both surveys. As the proportion of the professional groups in the participating psychiatric facilities was very unequal, this resulted in a strongly unbalanced sample size. This is a serious problem to analysis of variance (ANOVA) concerning balancing power and the type I rate. As the Levene test did not find evidence against equal variances across the professional groups, we consider the application of the Tukey post-hoc test by using a harmonic mean acceptable, although it remains a conservative approach. We conducted the mental health professional study only in the German part of Switzerland; therefore, our conclusion strictly applies only to that area. Furthermore, our findings refer to attitudes that do not necessarily entail a corresponding behavior in real life.

#### *Antistigma Campaigns*

As difficult as it may be, we should continue to fight the stigmatization and discrimination of people suffering from mental illness. But before mental health professionals can inform and teach the general public about mental illness and thus help to reduce its stigma, they should carefully examine their own attitudes.<sup>22</sup> Our results suggest that mental health professionals (ie, psychiatrists and psychologists) are qualified to instruct laypeople about how to recognize and distinguish psychiatric disorders and about the individual rights of mentally ill people, but that they should not assume that they themselves have no negative stereotypes or are more willing to closely interact with the affected than anyone else.

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#### **References**

1. Caldwell TM, Jorm AF. Mental health nurses' beliefs about interventions for schizophrenia and depression: a comparison with psychiatrists and the public. *Aust N Z J Psychiatry*. 2000;34:602–611.
2. Gureje O, Lasebikan VO, Ephraim-Oluwanuga O, Olley BO, Kola L. Community study of knowledge of and attitude

- to mental illness in Nigeria. *Br J Psychiatry*. 2005;186:436–441.
3. Jorm AF, Korten AE, Jacomb PA, et al. Helpfulness of interventions for mental disorders: beliefs of health professionals compared with the general public. *Br J Psychiatry*. 1997;171:233–237.
4. Link BG, Phelan JC, Bresnahan M, Stueve A, Pescosolido BA. Public conceptions of mental illness: labels, causes, dangerousness, and social distance. *Am J Public Health*. 1999;89:1328–1333.
5. Pinfold V, Toulmin H, Thornicroft G, Huxley P, Farmer P, Graham T. Reducing psychiatric stigma and discrimination: evaluation of educational interventions in UK secondary schools. *Br J Psychiatry*. 2003;182:342–346.
6. Wolff G, Pathare S, Craig T, Leff J. Public education for community care: a new approach. *Br J Psychiatry*. 1996;168:441–447.
7. Crisp AH, Gelder MG, Rix S, Meltzer HI, Rowlands OJ. Stigmatisation of people with mental illnesses. *Br J Psychiatry*. 2000;177:4–7.
8. Jorm AF. Mental health literacy: public knowledge and beliefs about mental disorders. *Br J Psychiatry*. 2000;177:396–401.
9. Byrne P. Psychiatric stigma. *Br J Psychiatry*. 2001;178:281–284.
10. Kingdon D, Sharma T, Hart D, and the Schizophrenia Subgroup of the Royal College of Psychiatrists' Changing Minds Campaign. What attitudes do psychiatrists hold towards people with mental illness? *Psychiatr Bull*. 2004;28:401–406.
11. Lauber C, Anthony M, Ajdacic-Gross V, Rössler W. What about psychiatrists' attitude to mentally ill people? *Eur Psychiatry*. 2004;19:423–427.
12. Lepping P, Steinert T, Gebhardt R-P, Röttgers HR. Attitudes of mental health professionals and laypeople towards involuntary admission and treatment in England and Germany: a questionnaire analysis. *Eur Psychiatry*. 2004;19:91–95.
13. Lauber C, Nordt C, Sartorius N, Falcato L, Rössler W. Public acceptance of restrictions on mentally ill people. *Acta Psychiatr Scand Suppl*. 2000;102:26–32.
14. Kish L. A procedure for objective respondent selection within the household. *J Am Stat Assoc*. 1949;44:380–387.
15. Lauber C, Nordt C, Falcato L, Rössler W. Public attitude to compulsory admission of mentally ill people. *Acta Psychiatr Scand*. 2002;105:385–389.
16. Angermeyer MC, Matschinger H. Social distance towards the mentally ill: results of representative surveys in the Federal Republic of Germany. *Psychol Med*. 1997;27:131–141.
17. Link BG, Cullen FT, Frank J, Wozniak JF. The social rejection of former mental patients: understanding why labels matter. *Am J Sociol*. 1987;92:1461–1500.
18. Angermeyer MC, Matschinger H. Causal beliefs and attitudes to people with schizophrenia: trend analysis based on data from two population surveys in Germany. *Br J Psychiatry*. 2005;186:331–334.
19. Eker D. Attitudes toward mental illness: recognition, desired social distance, expected burden, and negative influence on mental health among Turkish freshmen. *Soc Psychiatry Psychiatr Epidemiol*. 1989;24:146–150.
20. Kitchener BA, Jorm AF. Mental health first aid training for the public: evaluation of effects on knowledge, attitudes, and helping behavior. *BMC Psychiatry*. 2002;2:10.
21. Simon AE, Lauber C, Ludwig K, Braun-Scharm H, Umbricht DS. General practitioners and schizophrenia: results from a Swiss survey. *Br J Psychiatry*. 2005;187:274–281.
22. Sartorius N. Stigma: what can psychiatrists do about it? *Lancet*. 1998;352:1058–1059.