Acta Psychiatr Scand 2006: 113 (Suppl. 429): 51–59
All rights reserved
DOI: 10.1111/j.1600-0447.2005.00718.x

Copyright © 2006 Blackwell Munksgaard
ACTA PSYCHIATRICA
SCANDINAVICA

Do mental health professionals stigmatize their patients?

Lauber C, Nordt C, Braunschweig C, Rössler W. Do mental health professionals stigmatize their patients?
Acta Psychiatra Scand 2006: 113 (Suppl. 429): 51–59. © 2006 Blackwell Munksgaard.

Objective: Assessing stereotypes towards people with mental illness among mental health professionals, comparing their view to the Swiss general population and analysing the influence of demographic factors, profession and work place variables (type of ward, employment time and professional experience).
Method: Conducting a representative telephone survey ($n = 1073$). Factor analysis was used to achieve one-dimensional scales, which were analysed by regression analysis.
Results: Most positive depictions were regarded as less characterizing people with mental illness, whereas most negative descriptions were viewed as more typifying these people. Compared with the Swiss general population, mental health professionals have not consistently less negative or more positive stereotypes against mentally ill people. Of the 22 stereotypes five factors were detected: 'social disturbance', 'dangerousness', 'normal healthy', 'skills' and 'sympathy'. Stereotypes about people with mental illness are influenced by the professional background and if at all only slightly affected by gender, age, ward type, participation rate of the hospital, weekly working hours or years of professional experience.
Conclusion: Mental health professionals must improve their attitudes towards people with mental illness. Different ways, e.g. improving their professional education or their quality of professional contacts by regular supervision to prevent burn-out, are discussed.

C. Lauber, C. Nordt, C. Braunschweig, W. Rössler
Psychiatric University Hospital, Zurich, Switzerland

Key words: mental disorder; attitude; professional; stereotype; survey

Christoph Lauber, Psychiatric University Hospital, Militärstrasse 8, PO Box 1930, CH-8021 Zurich, Switzerland.
E-mail: christoph.lauber@puk.zh.ch

This paper was read in a preliminary version at the 3rd International Zurich Conference on Clinical and Social Psychiatry, Zurich, 25–27 September 2003. The conference and publication of this supplement were exclusively sponsored by Eli Lilly, Suisse.

Introduction

Stigma because of mental illness is widespread. Different forms of stigmatizing attitudes are known: *stereotypes*, i.e. (mostly negative) judgments that characterize collectively agreed upon qualities of groups or persons (1, 2). They mostly represent the false pairing of person and behaviour, e.g. 'Swiss people eat cheese' or 'people with mental illness are dangerous and unpredictable' (3, 4). Stereotypes have devastating consequences because people quickly generate impressions and expectations of individuals who belong to a stereotyped group (5). *Prejudice* is a consenting *emotional* reaction to a stereotype or a stereotyped person (1): 'Yes, indeed, all people with mental illness are dangerous and unpredictable, thus, I'm afraid of them'. *Discrimination* in turn is *actual behaviour* based on prejudice: 'Yes, as all people with mental illness are dangerous, I'm never going to meet any of them' (1).

These unfavourable views about people with mental illness can be observed in different social contexts and they subsequently affect several life domains of those afflicted (6–11), e.g. in social interactions affected people are met with distance (12). Moreover, the general population argues against mental health services or housing facilities in their neighbourhood (13). Chances to get an employment are limited (14) and the quality of life of people with mental illness is reduced (15). Furthermore, media account for stigmatizing and offensive misuse of mental illness, especially schizophrenia (16, 17). Finally, evidence-based treatment of mental illnesses is viewed with considerable reservation (18–22).

In the last decade, different initiatives to fight against the stigmatization of people because of

mental illness have been launched, e.g. by the World Psychiatric Association WPA or the British Royal College of Psychiatrists (23–25). However, these campaigns focused mostly on assessing the *public's* attitudes towards people with mental illness. The attitudes of those in the immediate environment of the affected with frequent contacts such as *family members* or (mental) *health professionals* has been neglected so far (26). As regards *mental health professionals*, this is surprising in many respects: firstly, contact to people with mental illness is considered as one of the most important factors to influence the attitude towards those afflicted (e.g. 27). To better understand the effect on contact, it is crucial to compare the attitudes of those with regular or even daily contact to mentally ill people to those without contact, e.g. the general population. Secondly, mental health professionals occupy essential positions in the treatment and rehabilitation process of their patients. They are expected to have or develop attitudes that should enable them to competently manage their role and to impartially encounter and treat their patients (28–30). But do mental health professionals meet these expectations? Respective research knowledge is lacking so far. Finally, it is important to understand attitudes and beliefs of professionals as it is well-known that the actual behaviour of psychiatric staff and their respective attitudes towards patients are associated, e.g. as to treatment outcome (31–35). Thus, it is important to know whether negative stereotypical views about people with mental illness really exist among mental health professionals and if so, how they are and to what extent they are present. However, mental health professionals are not a uniform group, but consist of *different professions*, each with a typical professional socialization. Thus, when investigating these professions one has to consider different professional backgrounds. Moreover, the tasks of the different groups are depending on the work setting. Hereby we suppose that working in an acute ward negatively influences attitudes towards people with mental illness as a result of the more burdening work compared with working in outpatient facilities. On an individual level, we assume also a negative effect on stereotypes through more working hours.

Aim of the study

To tackle the limitation of available data, we conducted a survey among mental health professionals in the German speaking part of Switzerland to assess their attitudes towards people with mental illness. We report to what extent professionals have stereotypical views about their patients and compare these data with results from a representative population survey about attitudes towards people with mental illness.

Material and methods

Sample description and representativity

We chose a three-step procedure to recruit the sample of mental health professionals: firstly, all 32 psychiatric in- and out-patient facilities in the German part of Switzerland were asked to participate in the study called 'health and illness in people with mental disorders – a professional perspective'. Twenty-nine hospitals agreed to participate. The reasons for the three drop-outs were 'no time' and 'no interest'. Secondly, in every participating hospital, we informed the leading staff about aims and contents of the survey in a standardized 30-min presentation. In the nursing departments, participants were ward managers and team leaders. In the medical departments, medical directors and consultants were present as well as the directors of the psychologists, social and vocational workers. Thirdly, we invited the leading staff to motivate their team members to participate in the study and asked them to distribute prepared anonymous letters to every staff member. These letters contained an information handout about the study, an application form and visual aids in order to facilitate the telephone interview and increase data quality. Moreover, we asked the ward managers and the consultants to complete a questionnaire that aims at assessing structural data of the ward, e.g. number of admissions per year, diagnostic distribution of the patients, number of staff employed etc. These data are usually not available from the hospital managers.

We had to choose this stepwise procedure as, because of data protection, neither health authorities nor hospitals did provide us with a list of their employees. We could only indirectly address the potential participants what has substantial consequences on the response rate. This non-accessibility of participants is considered to be the most influential factor for non-response in survey research (36, p. 40). To increase the response rate, we made several attempts: we repeatedly contacted the leading staff of the participating hospitals and reported them the response rate per ward. This totalled in an increase of 1–2% of the response rate, thus, was not as effective as described in the literature (37). Moreover, we gave incentives to participants of certain hospitals, a strategy that is considered to improve response rate

(38). However, it did not affect at all the response rate. A methodological technique to correct for non-response is statistical corrections. However, we felt it more accurate to report data as they are and not biased by statistical procedures. Furthermore, although non-probability or quota sampling, i.e. sampling in predefined population groups, is widely used in marketing research and public or political polls, this technique has the disadvantage that individuals are not designated. Moreover, as the result of a lack of data in Switzerland, we could not define the basic population wherefrom to draw a sample (36, p. 49). Finally, this non-accessibility of participants can be compared with mailing surveys where the response rate is rarely >20% (39, p. 15). Comparable surveys (e.g. 40, 41) reported similar response rates.

In Switzerland, health care is organized on a regional level, i.e. the Cantons (comparable with counties in the UK, States in the USA or 'Länder' in Germany) are responsible for providing health care. A private sector in mental health care does not exist. However, with the exception of the Canton of Zurich, no data characterizing mental health professionals could be obtained from the various health authorities. Because of this non-availability of data, we cannot test the total sample for sampling or non-response biases. To partly test for representativity, we used data about age, gender, amount of part time employment and professional distribution provided by the Ministry of Health in the Canton of Zurich. This Canton comprises with its about 1.2 m people 23.3% of the population within the surveyed area (German-speaking part of Switzerland) and one-sixth of the entire Swiss population. In the participating hospitals in this Canton (four of six), interviewees did not differ to the data provided by the Ministry of Health with respect to the distribution of age, sex and employment status (data not shown, but on request with the authors).

Moreover, we tried to find other indirect parameters that could shed light on participation biases. Thus, we tested whether different hospital settings had an influence on the participation rate, e.g. amount of hospital beds, inpatient vs. outpatient setting or job satisfaction. In addition, we considered to what extent a Canton (considered as one catchment area because the Canton is responsible for the psychiatric service provision of its population) and, thus, its psychiatric hospitals were 'burdened' by psychiatric patients. This factor was calculated based on available hospital beds per 1000 population/canton and rate of inpatient admission per 100 000 population.

To describe the sample, we considered the distribution of the professional group, the demographic characteristics sex and age, the amount of part time employment and the level of professional experience. We also listed the number of men and women in each ward type, ordered by profession (Table 1). We reached in 29 hospitals a total of 3088 professionals and completed 1073 interviews (response rate: 34.7%). Participation in the 15 smaller facilities (46.1%) was higher than in the 14 bigger facilities (31.7%). The professional groups participated to a different extent (nurses: 30.4%, psychiatrists: 39.4%, others: 57.8%). Participation among professionals working in out-patient compared with those working in inpatient settings was higher (53.9% vs. 31.9%). Within the different inpatient settings no participation difference could be revealed (26.9–35.9%). Participation in hospitals that are more burdened by patients was not higher compared with those with lower burden. Work satisfaction and principles of work organization were comparable among the hospitals and did not influence the participation rate.

Interview

Between April 2003 and April 2004, we did computer-assisted telephone interviewing (CATI). The interviewers were specially trained and supervised during the survey. CATI should particularly reduce potential measurement error associated with questionnaire item wording and ordering, interviewers' verbal behaviour and data processing (42). Moreover, telephone compared with face-to-face interview is considered superior regarding issues of confidentiality and social desirability (43). The duration of the interview was 40 ± 9 min (mean ± SD).

Instruments and assessment of stereotypes

We made use of a questionnaire of a previous opinion survey in a representative sample of the general population in Switzerland (44). The questionnaire was constructed by adapting instruments proven in international research. In this survey, questions about the professional work situation were added. The interview was divided into three consecutive parts. Firstly, questions about *not specified* people with mental illness and psychiatric institutions were asked. Herein, we assessed the professional's attitude to different stereotypes commonly held by the general public. In line with Rössler et al. (45) the mental health professionals were asked to rate on a 5-point Likert scale ('1' signifies much less; '5' means much more), how

Table 1. Sample description

	Psychiatrists	Psychologists	Nurses	Other therapists[1]	Total
Number (N)					
male	127	20	225	38	410
female	77	47	459	80	663
Age (year±SD[2])					
male	39.5 (±7.4)	44.3 (±9.9)	41.2 (±8.5)	44.2 (±7.7)	41.1 (±8.3)
female	38.9 (±7.6)	39.9 (±8.2)	39.3 (±9.9)	45.8 (±8)	40.1 (±9.5)
Employment (%±SD[2])					
male	95.2 (±12.5)	85 (±14.7)	92.3 (±11)	86.8 (±12.9)	92.4 (±12.1)
female	88.1 (±18.6)	74 (±17.4)	81.3 (±19.1)	69.3 (±16.7)	80.1 (±19.3)
Professional experience (year±SD[2])					
male	8.6 (±7)	11 (±8.7)	11.8 (±8.3)	11.1 (±7.8)	10.7 (±8)
female	6.7 (±5.6)	6.7 (±5.3)	9.9 (±7.4)	8.6 (±7.5)	9.2 (±7.2)
Ward types (N)					
Acute ward					
male	43 (21.1%)	3 (4.5%)	112 (16.4%)	7 (5.9%)	165 (15.4%)
female	31 (15.2%)	6 (9%)	178 (26%)	19 (16.1%)	234 (21.8%)
Ward for patients with substance use disorders					
male	7 (3.4%)	2 (3%)	18 (2.6%)	3 (2.5%)	30 (2.8%)
female	7 (3.4%)	1 (1.5%)	29 (4.2%)	1 (0.8%)	38 (3.5%)
Geriatric ward					
male	10 (4.9%)	0 (0%)	29 (4.2%)	1 (0.8%)	40 (3.7%)
female	7 (3.4%)	5 (7.5%)	100 (14.6%)	8 (6.8%)	120 (11.2%)
Other inpatient ward					
male	13 (6.4%)	7 (10.4%)	47 (6.9%)	12 (10.2%)	79 (7.4%)
female	3 (1.5%)	17 (25.4%)	110 (16.1%)	21 (17.8%)	151 (14.1%)
Day hospital					
male	8 (3.9%)	3 (4.5%)	8 (1.2%)	3 (2.5%)	22 (2.1%)
female	3 (1.5%)	6 (9%)	17 (2.5%)	11 (9.3%)	37 (3.4%)
Outpatient hospital					
male	46 (22.5%)	5 (7.5%)	11 (1.6%)	12 (10.2%)	74 (6.9%)
female	26 (12.7%)	12 (17.9%)	25 (3.7%)	20 (16.9%)	83 (7.7%)

[1]Other therapists: physiotherapists, vocational workers, social workers
[2]SD: standard deviation

much people with mental illness differ from the general population with respect to 12 stereotypes (Table 2). For the interview with professionals we added 10 stereotypes. Secondly, a randomly assigned vignette depicting a person with various degrees of psychiatric symptoms was presented. The vignette was followed by questions related to the depicted case, e.g. about the social distance or emotions towards the person described. Thirdly, psychological and sociological variables were assessed.

Statistical analyses

We tested the effect of gender and group (general population versus professionals) and the respective interaction between the 12 stereotypes within a factorial ANOVA framework with two factors. We conducted a principal component analysis on 22 stereotypes (i.e. 10 items more than the general population) to achieve one-dimensional scales. Out of the grouped items we build five subscales and a (multidimensional) global scale and tested the internal consistency (Cronbach's α between 0.46 and 0.77). Finally, we used linear regression models to test the influence of profession group, type of ward, age, gender, years of professional experience and the response rate of the clinic on each of these six scales of stereotypes. Statistical analyses were conducted with SPSS 11.5 (Statistical Package for the Social Sciences. Chicago, IL, 2003.).

Results

Table 2 displays how mental health professionals answered the 22 stereotype items about people with mental illness. The ratings range from 3.60 for 'unpredictable' to 2.21 for 'healthy' ('1' signifying much less; '5' meaning much more). Mental health professionals regarded all negative descriptions apart from 'stupid' as more typifying people with mental illness whereas all positive depictions except 'highly skilled' and 'creative' as less characterizing people with mental illness.

We compared these results with the results from a opinion survey in a representative sample of the general population in Switzerland (44). As this public survey included only 12 of the 22 stereotypes, we are only able to report about the commonly investigated stereotypes (Table 3). We tested on a single item basis the influence of gender, mental health profession and the respective inter-

Table 2. Positive and negative stereotypes held by mental health professionals

	N	Mean[1] (±SD[2])
Negative stereotypes		
Unpredictable	1064	3.59 (±0.65)
Bedraggled	1064	3.55 (±0.73)
Mad	1036	3.51 (±0.62)
Distanceless	1058	3.39 (±0.67)
Weird	1066	3.38 (±0.59)
Threatening	1062	3.38 (±0.56)
Unreliable	1063	3.36 (±0.69)
Dangerous	1057	3.26 (±0.56)
Abnormal	1020	3.25 (±0.54)
Delinquent	1056	3.19 (±0.51)
Stupid	1066	2.97 (±0.31)
Positive stereotypes		
Creative	1061	3.49 (±0.76)
Highly skilled	1052	3.12 (±0.53)
Sympathetic	1071	2.99 (±0.39)
Clever	1068	2.91 (±0.50)
Charming	1060	2.84 (±0.60)
Sociable	1061	2.60 (±0.64)
Reasonable	1054	2.55 (±0.59)
Responsible	1056	2.51 (±0.58)
Self-controlled	1058	2.44 (±0.65)
Autonomous	1069	2.22 (±0.55)
Healthy	1055	2.21 (±0.72)

[1]Mental health professionals were asked to rate on a 5-point Likert scale ('1' signifies much less; '3' no difference; '5' means much more) how much people with mental illness differ from the general population with respect to the following stereotypes
[2]SD = standard deviation

Table 3. Comparison of the stereotypes between professionals and general population

	Professionals	General population
Social disturbance		
Abnormal[a]		
male	3.34 (0.58)	3.15 (0.84)
female	3.19 (0.50)	3.10 (0.72)
Bedraggled[a]		
male	3.55 (0.71)	3.28 (0.75)
female	3.55 (0.73)	3.46 (0.77)
Unreliable[a]		
male	3.45 (0.69)	3.06 (0.88)
female	3.31 (0.68)	3.23 (0.91)
Weird		
male	3.43 (0.57)	3.34 (0.79)
female	3.35 (0.60)	3.44 (0.88)
Dangerousness		
Dangerous		
male	3.24 (0.54)	3.25 (0.83)
female	3.28 (0.56)	3.22 (0.82)
Unpredictable[a]		
male	3.60 (0.61)	3.86 (0.77)
female	3.59 (0.68)	3.86 (0.84)
Normal healthy		
Healthy[a]		
male	2.15 (0.76)	2.52 (0.72)
female	2.24 (0.69)	2.56 (0.93)
Self-controlled[a]		
male	2.43 (0.63)	2.27 (0.78)
female	2.45 (0.66)	2.27 (0.73)
Reasonable[a]		
male	2.55 (0.60)	2.48 (0.75)
female	2.55 (0.59)	2.35 (0.65)
Skills		
Creative[b]		
male	3.32 (0.77)	3.44 (0.75)
female	3.59 (0.73)	3.34 (0.80)
Stupid[a]		
male	3.01 (0.28)	2.90 (0.50)
female	2.94 (0.33)	2.86 (0.62)
Highly skilled		
male	3.04 (0.52)	3.15 (0.79)
female	3.17 (0.54)	3.16 (0.85)

a: significant effect between professionals and general population; b: significant interaction term effect; all sig. level set at $p < 0.01$

action. We found no difference between the general population and mental health professionals with respect to the stereotypes 'dangerous', 'highly skilled' and 'weird'. However, the general public thought that people with mental illness are more 'unpredictable' and more 'healthy', but less 'self-controlled', less 'reasonable', less 'abnormal', less 'bedraggled', less 'unreliable' and less 'stupid'. One significant interaction (female compared with male professionals viewed people with mental illness as more 'creative') could be found.

The factor analysis of the 22 stereotypes presented to mental health professionals (Table 4) revealed five factors: 'social disturbance', 'dangerousness', 'normal healthy', 'skills' and 'sympathy'. However, the respective explained variance is small, but the respective reliability of the summarized scales ranged from small (Cronbach's $\alpha = 0.46$) to acceptable (Cronbach's $\alpha = 0.77$). Regression analysis was applied to test for the influence of demographic variables, e.g. age and gender, profession, type of ward, weekly working hours and the years of professional experience in psychiatry (Table 5). It must be pointed out that the explained variance as well as the respective influences are small. We found that among the *professional groups* psychiatrists have more stigmatizing attitudes about people with mental illness: psychiatrists compared to psychologists, nurses and other therapists think that people with mental illness are more 'dangerous', less 'skilled' and more 'socially disturbing'.

As regards the *workplace*, professionals from wards for people with substance use disorders compared with those from acute wards regarded people with mental illness as less 'socially disturbing'. Professionals working on a geriatric ward regarded the mentally ill as more 'sympathetic' and less 'socially disturbing' whereas professionals working in inpatient wards considered the mentally ill as less 'skilled'. *Women* compared with men have the impression that people with mental illness are less 'socially disturbing' and more 'skilled'. People with *full time employment* do not differ from those with part-time employment with respect to their

Table 4. Factor loadings of the rotated factor matrix

	Social disturbance	Dangerousness	Normal healthy	Skills	Sympathy
Abnormal	**0.64**	0.07	−0.09	−0.06	−0.05
Bedraggled	**0.61**	−0.02	0.02	−0.10	−0.02
Mad	**0.60**	0.23	−0.17	0.03	−0.06
Weird	**0.55**	0.37	−0.01	0.04	−0.10
Unreliable	**0.53**	0.13	−0.15	−0.04	−0.11
Distanceless	**0.39**	0.25	−0.19	0.15	0.21
Dangerous	0.01	**0.75**	−0.09	−0.12	0.03
Threatening	0.30	**0.62**	−0.19	0.06	−0.12
Delinquent	0.16	**0.62**	−0.08	0.04	−0.11
Unpredictable	0.17	**0.58**	−0.17	−0.04	0.09
Reasonable	−0.01	−0.15	**0.71**	0.02	0.11
Self−controlled	−0.11	−0.20	**0.64**	0.00	0.03
Responsible	−0.05	−0.22	**0.61**	−0.07	0.17
Autonomous	−0.28	0.03	**0.54**	0.00	0.21
Healthy	−0.17	−0.01	**0.43**	0.36	−0.21
Highly skilled	0.04	0.05	0.02	**0.72**	0.14
Creative	0.04	0.01	−0.06	**0.65**	0.17
Stupid	0.12	0.23	0.08	**−0.52**	0.12
Clever	−0.10	0.10	0.34	**0.48**	0.13
Charming	−0.09	0.06	0.15	0.02	**0.75**
Sympathetic	0.04	−0.19	0.03	0.18	**0.64**
Sociable	−0.17	0.03	0.17	0.07	**0.55**
Percent of total variance	10.04%	9.83%	9.55%	7.58%	7.25%

stereotypical attitudes. Older professionals think that people with mental illness are less 'socially disturbing' and less 'dangerous'. People with longer professional experience consider the mentally ill as more 'normal' and 'healthy'. On the global score of (negative) stereotypes, we only find small influence of professional group and a very small effect of the participation rate of the hospital.

Discussion

We studied the stereotypes about people with mental illness in a quasi-representative sample of mental health professionals. The interviewees regarded all positive depictions except 'highly skilled' and 'creative' as less characterizing people with mental illness whereas all negative descriptions apart from 'stupid' were viewed as more typifying people with mental illness. Comparing these results to the results from a public opinion survey in Switzerland we found no difference between the general population and mental health professionals with respect to the stereotype 'dangerous' whereas the general public thought that people with mental illness are more 'unpredictable' and more 'healthy', but less 'self-controlled', less 'reasonable', less 'abnormal', less 'bedraggled' and less 'stupid'. Of the 22 stereotypes, we found five factors: 'social disturbance', 'dangerousness', 'normal healthy', 'skills' and 'sympathy'. Stereotypes about people with mental illness are influ-

Table 5. Regression models of the five different factors and the global score of stereotypes against mentally ill persons

	Social disturbance	Dangerousness	Normal healthy	Skills	Sympathy	Global score (neg.) stereotypes
N	1048	1029	1020	1031	1051	1061
Professional groups (reference: psychiatrists)						
Psychologists	−0.13*	−0.16*	0.09*	0.1*	0.01	−0.15*
Nurses	−0.10*	−0.13*	−0.01	0.28*	0.09*	−0.12*
Other Therapists[1]	−0.07	−0.12*	0.06	0.15*	0.05	−0.11*
Ward types (reference: acute wards)						
Wards for patients with substance use disorders	−0.07*	−0.03	−0.05	0.03	−0.02	−0.02
Geriatric wards	−0.08*	0.01	0	0.01	0.07*	−0.05
Other inpatient wards	0.05	−0.02	−0.06	−0.08*	−0.03	0.05
Day hospitals	0.04	−0.03	−0.04	−0.02	−0.05	0.04
Outpatient hospitals	−0.01	−0.04	−0.03	0	−0.06	0.01
Sex (reference: women)	−0.09*	0.04	−0.05	0.17*	−0.04	−0.05
Age (years)	−0.08*	−0.09*	0.02	−0.05	−0.07	−0.05
Full time employment (reference: ≥90%)	−0.04	−0.05	0	0.06	0.02	−0.05
Participation rate of the hospital	−0.06	−0.05	0.04	−0.02	0.07	−0.07*
Professional experience (years)	−0.01	−0.05	0.1*	0.05	−0.02	−0.06
Explained variance (R^2 adj.)	3.7%	3.6%	1.6%	8.8%	2.0%	3.3%
Reliability (Cronbach's Alpha; N items)	0.63 (6)	0.67 (4)	0.6 (5)	0.46 (4)	0.46 (3)	0.77 (20)
Mean (SD)	3.41 (±0.38)	3.36 (±0.34)	2.39 (±0,39)	3.14 (±0.34)	2.81 (±0.37)	3.38 ± (0.25)
Items included in the factor (see Table 4)	Abnormal, mad, weird, bedraggled, distanceless, unreliable	Dangerous, unpredictable, delinquent, threatening	Reasonable, self-controlled, autonomous, responsible, healthy	Highly skilled, creative, stupid, clever	Charming, sympathetic, sociable	All items (apart from: creative and highly skilled)

*p < 0.05
[1]Other therapists: physiotherapists, vocational workers, social workers

enced by the professional background and if at all only slightly affected by gender, age, type of ward, participation rate of the workplace, weekly working hours or years of professional experience.

Strength and weaknesses of this study

Before interpreting these results some methodological limitations of this survey should be acknowledged: firstly, one major limitation of this study is the low response rate of 35%. This has several reasons that we already discussed in details in the methods section. Secondly, the variance explaining the five factors of stereotypes are small, but the reliability of the summarized scales range up to acceptable values. Thirdly, this study highlights the problems research on public attitudes generally deals with, e.g. the tendency to include communicative and cooperative respondents who are responding according to social desirability. Thus, we chose telephone interviews that are considered superior to face-to-face interviews in terms of confidentiality and social desirability (43). Finally, stereotypes should not be mistaken for actual interpersonal behaviour, but can be considered as a 'proxy' measure of social behaviour (46). Nonetheless, some strengths of this analysis can be mentioned: this sample allows us to draw a valid picture of the professionals' attitudes towards mental illness in the German speaking part of Switzerland. To our knowledge, this is the first analysis to study stereotypes on the one side by including this diversity of stereotypical attitudes and on the other side in different professions of mental health care.

Negative stereotypes: psychiatrists at vanguard of mental health professionals

Perceived dangerousness and unpredictability are among the most powerful and most frequent stereotypes regarding people with mental illness (4, 27, 47, 48). The general population relates these stereotypes mostly to severe mental disorders, mainly schizophrenia or substance use disorders. Considering the single item basis mental health professionals in general do not differ consistently in a negative or positive way from the public attitude. Taking into account the regression models, there are significant differences between the professional groups: psychiatrists hold the most pronounced negative attitude whereas psychologists had the most positive ones. These findings challenge the strategy to use psychiatrists as opinion leaders, role models and opinion multipliers in mental health issues, e.g. about attitudes towards mentally ill people (11, 49). This idea must be carefully reconsidered and cannot be realized without accompanying measures. Psychiatrists should particularly be aware that their attitudes do not necessarily differ from those of the general public.

The result that stereotyping is evident in the mental health care system is supporting findings from the UK where ethnic racism, another form of stereotyping, was found: involuntary admissions of young Black men are more common than those of young White men and schizophrenia is more commonly diagnosed in young Black men although the prevalence in the community is not different for Black and White men (50).

Workplace, working hours and professional experience: no influence on stereotypical beliefs

An astonishing finding is that neither the type of ward, the professional experience nor the working hours have an effect on the stereotypical attitudes. We had hypothesized that more burdening work environments, be they working on an acute ward or working more hours per week, would negatively influence attitudes towards mentally ill people. This hypothesis was based on findings that the more the patient's behaviour is disturbed the more negative attitudes towards him or her arise (33). However, this is not the case. One might argue that it is the other way round, i.e. that those with potentially negative attitudes aim at staying away from stressful working conditions, thus, avoiding to much negative influence on their attitudes. Because of the cross-sectional design of this study the direction of the relationship cannot be revealed.

These results have several consequences. Contact to people with mental illness are often burdening and exhausting. However, literature about burn-out is scarce what calls for further research. Finally, the results must influence mental health education and training. Professionals must be aware of their stigmatizing feelings. Avoiding the respective discussion may be because of concerns about labelling and stigmatization, but the contrary is the case: it is hoped that open discussion may lessen these problems, not exacerbate them.

Declaration of interest

None.

Acknowledgements

We are grateful to the study participants, to Luis Falcato for his help in grant application and to Eliza Holy for her help with data collection.

This study was exclusively supported by the Swiss National Research Foundation (grant no. 3200-067259).

References

1. Corrigan PW, Edwards AB, Green A, Diwan SL, Penn DL. Prejudice, social distance, and familiarity with mental illness. Schizophr Bull 2001;**27**:219–225.
2. Corrigan PW, Watson AC, Ottati V. From whence comes mental illness stigma? Int J Soc Psychiatry 2003;**49**:142–157.
3. Hamilton DL, Rose TL. Illusory correlation and the maintenance of stereotypic beliefs. J Pers Soc Psychol 1980;**39**:832–845.
4. Boisvert CM, Faust D. Effects of the label 'schizophrenia' on causal attributions of violence. Schizophr Bull 1999;**25**:479–491.
5. Wyer RS, Srull TK., eds. Handbook of social cognition. Vol. 2. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., 1994.
6. Lauber C, Nordt C, Falcato L, Rossler W. Volunteering in psychiatry: determining factors of attitude and actual commitment. Psychiatr Prax 2000;**27**:347–350.
7. Lauber C, Nordt C, Falcato L, Rossler W. Determinants of attitude to volunteering in psychiatry: results of a public opinion survey in Switzerland. Int J Soc Psychiatry 2002;**48**:209–219.
8. Lauber C, Eichenberger A, Luginbuhl P, Keller C, Rossler W. Determinants of burden in caregivers of patients with exacerbating schizophrenia. Eur Psychiatry 2003;**18**:285–289.
9. Lauber C, Nordt C, Falcato L, Rossler W. Do people recognise mental illness? Factors influencing mental health literacy. Eur Arch Psychiatry Clin Neurosci 2003;**253**:248–251.
10. Lauber C, Falcato L, Nordt C, Rossler W. Lay beliefs about causes of depression. Acta Psychiatr Scand Suppl 2003;**418**:96–99.
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. Lauber C, Nordt C, Falcato L, Rossler W. Factors influencing social distance toward people with mental illness. Community Ment Health J 2004;**40**:265–274.
13. Schulze B. People with mental illness and the public attitude. In: Rössler W. (Ed.): Psychiatrische Rehabilitation 1st edition. Springer-Verlag, Berlin; 2004:849–860.
14. Glozier N. Workplace effects of the stigmatization of depression. J Occup Environ Med 1998;**40**:793–800.
15. Wahl OF. Mental health consumers' experience of stigma. Schizophr Bull 1999;**25**:467–478.
16. Duckworth K, Halpern JH, Schutt RK, Gillespie C. Use of schizophrenia as a metaphor in US newspapers. Psychiatr Serv 2003;**54**:1402–1404.
17. Dickerson FB, Sommerville J, Origoni AE, Ringel NB, Parente F. Experiences of stigma among outpatients with schizophrenia. Schizophr Bull 2002;**28**:143–155.
18. Lauber C, Nordt C, Falcato L, Rossler W. Lay recommendations on how to treat mental disorders. Soc Psychiatry Psychiatr Epidemiol 2001;**36**:553–556.
19. Lauber C, Nordt C, Rossler W. Patients' attitudes toward antidepressants. Psychiatr Serv 2003;**54**:746–747.
20. Lauber C, Falcato L, Rossler W. Attitudes to compulsory admission in psychiatry. Lancet 2000;**355**:2080.
21. Lauber C, Nordt C, Falcato L, Rossler W. Public attitude to compulsory admission of mentally ill people. Acta Psychiatr Scand 2002;**105**:385–389.
22. Lauber C, Nordt C, Falcato L, Rössler W. Can a seizure help? – the public's attitude toward ECT. Psychiatry Res 2005;**134**:205–9.
23. Crisp AH, Gelder MG, Rix S, Meltzer HI, Rowlands OJ. Stigmatisation of people with mental illnesses. Br J Psychiatry 2000;**177**:4–7.
24. Gaebel W, Baumann AE. Interventions to reduce the stigma associated with severe mental illness: experiences from the open the doors program in Germany. Can J Psychiatry 2003;**48**:657–662.
25. Thompson AH, Stuart H, Bland RC et al. Attitudes about schizophrenia from the pilot site of the WPA worldwide campaign against the stigma of schizophrenia. Soc Psychiatry Psychiatr Epidemiol 2002;**37**:475–482.
26. Lauber C, Diebold HS, Rossler W. Attitude of family of psychiatric patients to psychiatric research, especially to early detection of schizophrenic psychoses. Psychiatr Prax 2001;**28**:144–146.
27. Link BG, Cullen FT. Contact with the mentally ill and perceptions of how dangerous they are. J Health Soc Behav 1986;**27**:289–302.
28. Kates N, Cook P, Denson J, Low J. Training residents to care for the mentally ill. Can J Psychiatry 1989;**34**:195–199.
29. Nielsen AC III, Stein LI, Talbott JA, Lamb HR, Osser DN, Glazer WM. Encouraging psychiatrists to work with chronic patients: opportunities and limitations of residency education. Hosp Community Psychiatry 1981;**32**:767–775.
30. Packer S, Prendergast P, Wasylenki D, Toner B, Ali A. Psychiatric residents' attitudes toward patients with chronic mental illness. Hosp Community Psychiatry 1994;**45**:1117–1121.
31. Holmqvist R. Associations between staff feelings toward patients and treatment outcome at psychiatric treatment homes. J Nerv Ment Dis 2000;**188**:366–371.
32. Holmqvist R. Staff feelings and patient diagnosis. Can J Psychiatry 2000;**45**:349–356.
33. Elizur A, Neumann M, Bawer A. Interdependency of attitudes, diagnostic assessments and therapeutic recommendations of medical students towards mental patients. Int J Soc Psychiatry 1986;**32**:31–40.
34. Walz LT, Goldstein LH. The mental impairment and evaluation treatment service: staff attitudes and staff–client interactions. Psychol Med 1992;**22**:503–511.
35. Lauber C, Nordt C, Sartorius N, Falcato L, Rossler W. Public acceptance of restrictions on mentally ill people. Acta Psychiatr Scand Suppl 2000;**102**:26–32.
36. Fowler FJ, JR. Survey research methods. Newbury Park, CA: Sage Publications, 1993:1–156.
37. Dillman D, Carpenter E, Christensen J, Brooks R. Increasing mail questionnaire response: a four state comparison. Am Sociol Rev 2004;**39**:744–756.
38. James J, Bolstein R. The effect of monetary incentives and follow-up mailings on the response rate and the response quality in mail surveys. Public Opin Q 1990;**54**:346–361.
39. Bourque LB, Fielder EP. How to conduct self-administered and mail surveys. Newbury Park, CA: Sage Publications, 1995: The survey kit: 1–224.
40. Mehnert A, Bergelt C, Koch U. Knowledge and attitudes of gynecologists regarding genetic counseling for hereditary breast and ovarian cancer. Patient Educ Couns 2003;**49**:183–188.
41. Passannante MR, French J, Louria DB. How much do health care providers know about AIDS? Am J Prev Med 1993;**9**:6–14.

42. Lavrakas PJ. Telephone survey methods: sampling, selection, and supervision. Newbury Park, CA: Sage, 1993.
43. Frey JH, Mertens Oishi S. How to conduct interviews by telephone and in person. Newbury Park, CA: Sage, 1995.
44. 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.
45. Rössler W, Salize HJ, Trunk V, Voges B. The attitude of medical students to psychiatric patients. German. Nervenarzt 1996;**67**:757–764.
46. Penn DL, Corrigan PW. The effects of stereotype suppression on psychiatric stigma. Schizophr Res 2002;**55**:269–276.
47. Link BG, Stueve A. Psychotic symptoms and the violent/illegal behavior of mental patients compared to community controls. In: Monahan J, Steadman HJ, eds. Violence and mental disorder: developments in risk assessment. Chicago: University of Chicago Press, 1994:137–159.
48. 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.
49. Jorm AF, Christensen H, Medway J, Korten AE, Jacomb PA, Rodgers B. Public belief systems about the helpfulness of interventions for depression: associations with history of depression and professional help-seeking. Soc Psychiatry Psychiatr Epidemiol 2000;**35**:211–219.
50. Minnis H, McMillan A, Gillies M, Smith S. Racial stereotyping: survey of psychiatrists in the United Kingdom. BMJ 2001;**323**:905–906.

Copyright of *Acta Psychiatrica Scandinavica* is the property of Blackwell Publishing Limited and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.

Copyright of *Acta Psychiatrica Scandinavica* is the property of Blackwell Publishing Limited and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.

Copyright of *Acta Psychiatrica Scandinavica* is the property of Blackwell Publishing Limited and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.

Copyright of Acta Psychiatrica Scandinavica. Supplementum is the property of Wiley-Blackwell and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.