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Stigmatization of psychiatric symptoms and psychiatric service use: a vignette-based representative population survey

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Abstract *Background* There is evidence for two different types and/or sources of mental illness stigma, namely the display of psychiatric symptoms and the use of psychiatric service institutions. However, no current study has compared the two. Furthermore, gaps exist in our knowledge of both types of stigma. Little is known about the perceived stigma of specific psychiatric service treatment environments, for instance forensic settings. In addition, systematic research on stigma attached to symptoms of personality disorders in the general population is scarce, and for borderline personality disorder, nonexistent. *Methods* We conducted a representative survey of the general population ($N = 2207$) in the canton of Basel-Stadt, Switzerland. Participants were asked to read a vignette depicting either the psychiatric symptoms of a fictitious character or a psychiatric service institution to which the character had been admitted, and indicate desired social distance (an indicator for stigma). Type of symptoms, type of psychiatric service, dangerousness, and gender were systematically varied between vignettes. *Findings* Desired social distance was significantly lower in relation to psychiatric service use than to psychiatric symptoms. Overall, symptoms of alcohol dependency, behavior endangering others, and the fictitious character's being male tend to increase stigmatization. Interestingly, the character's being hospitalized in a psychiatric unit at a general hospital and also respondent familiarity with psychiatric services tend to decrease stigmatization. *Interpretation* Familiarity of the general population with psychiatric patients should be increased. Furthermore, treatment in psychiatric units located within general hospitals should be promoted, as such treatment is associated with decreased stigma.

Keywords Mental health care · Stigma · Social distance · Population survey · Psychiatric hospital

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Experiencing stigmatization has multiple negative consequences for mentally ill persons, including increased anxiety and stress, decreased functional outcome, loss of self-esteem and quality of life, and decreased social participation [1, 2]. Furthermore, it can indirectly promote the aggravation of psychiatric symptoms, as it decreases both health care utilization and treatment adherence [3, 4].

The amount of stigmatization that occurs is known to systematically vary with the concrete symptoms or behaviors displayed. This phenomenon has often been studied using bundles of symptoms corresponding to different psychiatric diagnoses [5]. However, research on the relative stigmatization of individuals with symptoms of personality disorders, in particular borderline personality disorder (BPD), is scarce. Markham [6] compared the stigmatization of individuals with BPD, schizophrenia, and depression by mental health nurses in the UK and revealed that it was highest for BPD. Nevertheless, the higher stigmatization of individuals with BPD in mental health professionals might not reflect the picture in the general population.

There is also evidence of differences in levels of stigmatization between different types of psychiatric service institution. It has for instance been argued that psychiatric wards located in general hospitals decrease stigmatization

because they foster the perception that mental illnesses are similar to somatic conditions. On the other hand, specialized mental hospitals are traditionally separated from the community and thus provide relative anonymity and concealability, which might decrease stigmatization [7]. One problem with methodologies employed in previous studies, directly comparing different types of institution, is that they are prone to confounders, as each type of institution can attract patient populations with different profiles. The use of narrative vignettes in which all other characteristics can be held constant can overcome this problem, but to the best of our knowledge, to date only one study has used vignettes to investigate differences in stigma between different psychiatric services [8]. The authors of that study demonstrated that the fictitious persons in the vignettes were increasingly rejected as they were increasingly described as seeking/using psychiatric help (consulting, in order of intensity of help-seeking, no one, a clergyman, a physician, a psychiatrist, and a mental hospital), but they did not test for differences in inpatient settings. Thus, as yet no study has systematically evaluated differences in stigmatization between patients in psychiatric wards in general hospitals and those in mental hospitals using a vignette design. Furthermore, although forensic aspects of a given mental illness usually play a big role in media portrayals stigmatizing that illness, there is no study, of any methodology, investigating the stigma-related consequences of including psychiatric hospital forensic wards in a design.

In addition to the factors described above, familiarity with mental illness [9] is known to influence stigmatization of display of psychiatric symptoms. For instance, Angermeyer et al. [10] showed that respondents who reported that they were familiar with psychiatric illness expressed less stigmatization of individuals with various psychiatric symptoms. However, it has never been tested how familiarity with psychiatric illness relates to stigma associated with use of psychiatric services. Furthermore, it is established that perceived dangerousness increases stigmatization of individuals with psychiatric illness [11], yet previous studies investigating this relation did not directly manipulate dangerousness independently of symptoms and did not include self-endangering behavior, leaving a gap in our understanding.

This study aims to advance previous research in several ways. First, we compared the amount of stigmatization related to type of psychiatric symptoms to that related to type of psychiatric service use, using recent data gathered in the general population. Second, we pitted the stigmatization of symptoms of BPD in the general population against the stigmatization of symptoms of alcohol dependency and schizophrenia. Third, we systematically investigated the differences in stigma between various psychiatric inpatient institutions including forensic settings. Fourth,

we examined the relation of different degrees of familiarity with mental illness to stigma associated with psychiatric service use. Fifth, our study systematically manipulated information about dangerousness, including self-endangering behavior, and measured its impact on stigma associated with symptoms and that with service use.

Method

Sample and procedure

Data come from a survey on psychiatric service use and stigmatization that was conducted from autumn 2013 to spring 2014 among citizens of Basel, Switzerland. This study was approved by the local ethics committee (EKNZ 2014-394) and conducted according to the Declaration of Helsinki. A sample of 10,000 individuals was randomly drawn from the cantonal resident register and was mailed study material. To be eligible, participants had to have been registered in a private household in the municipality of Basel, Bettingen, or Riehen for a minimum of 2 years, had to be aged between 18 and 65 years, and had to have sufficient knowledge of the German language. This approach was chosen in a consensus procedure together with the Statistical Office of Basel-Stadt and an external advisory committee to generate a representative study sample.

Study material consisted of written vignettes (examples are available as Supplementary Material) that were varied between participants and of the questionnaires described below.

Vignettes presented a fictitious character and depicted either the psychiatric symptoms of the character (the case vignette) or a clinic the character had been admitted to (the clinic vignette). Within both types of vignette, gender and dangerousness of the fictitious patient were systematically varied. It was explicitly stated that within the last month the main character (case vignette) or the patients at the clinic (clinic vignette) displayed no dangerous behavior, self-endangering behavior, or behavior endangering others.[1] Additionally, between the case vignettes, type of psychiatric symptoms was systematically varied: They either described a case of acute psychotic disorder, a case of

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[1] It is important to note that our manipulation of dangerousness does not deal with perceived dangerousness, which is a commonly used construct in stigma research. Instead, we directly manipulated (fictitious) external dangerousness information, within the vignettes. Perceived dangerousness, in contrast, is defined by internal beliefs people have concerning the dangerousness of a person or group of persons. Perceived dangerousness is commonly measured using self-report measures such as the dangerousness scale [12].

Table 1 Characteristics of the sample

Variable	Percentage
% Female	61.5
Age group	
18–24	10.0
25–39	29.8
40–59	46.0
>60	14.2
Education	
Obligatory schooling	6.2
Secondary education	51.3
University degree	42.0

alcohol dependency, or a case of borderline personality disorder. None of these were labeled directly, but they had symptoms fulfilling the DSM-V criteria [13] for the respective disorder. Case vignettes were constructed based on vignettes used in previous stigma research [14, 15]. Apart from the characteristics that were systematically varied, all other information was kept constant between the case vignettes to eliminate potential confounders. Prior to the main survey, vignettes were submitted to psychiatrists and clinical psychologists ($N = 18$) for blind diagnostic allocation. Supporting the validity of the case vignettes, each diagnosis was labeled correctly by all of the clinical experts.

Moreover, between the clinic vignettes, the type of psychiatric service institution to which the fictitious character was admitted was also systematically varied. Vignettes either described a general hospital that included a psychiatric unit, or a psychiatric hospital, or a psychiatric hospital that included a forensic unit. Thus, we systematically manipulated characteristics that are by definition specific to the respective type of clinic, as well as gender and dangerousness, whereas all other information (e.g., carrying capacity of the fictitious clinic) was kept constant across the clinic vignettes.

Using the variations described above there were 36 individual vignette conditions, so that each condition was sent to 277 participants.

The respondents' characteristics are described in Table 1. The final sample consisted of 2207 individuals (61.5 % female, 66.5 % Swiss citizens, 44.7 % single), reflecting a response rate of 22.1 %. Mean age of participants was 43.4 years (SD = 13.4). A total of 6.2 % percent had completed only the 9 years of schooling obligatory in Switzerland, 51.3 % had completed secondary education (approximately 12 years), and 42.0 % had a university degree. There were no significant differences in number of respondents per individual vignette condition, neither between the different types of case vignettes (χ^2 (17, $N = 1107$) = 19.00,

$p = .329$) nor between the different types of clinic vignettes (χ^2 (17, $N = 1100$) = 6.84, $p = .986$).

To assess if the goal of acquiring a representative sample had been adequately reached, respondent characteristics were compared to official census data as published in the statistical almanac of Basel-Stadt [16]. However, this comparison has to be interpreted with caution, as the data available from the statistical almanac represent the whole population of Basel-Stadt, without the restrictions posed by our in-/exclusion criteria. At the end of 2013, 191,606 persons were registered as residents in Basel-Stadt; 52.0 % were female, 67.0 % were Swiss citizens, and 45.7 % were single. Mean age was 42.9 years; 17.5 % had completed obligatory schooling, 48.6 secondary education, and 32.5 % university education. The comparison shows that questionnaires were sent out to over 5.2 % of the population; the respondent sample represents more than 1.2 % of the total population and can be assumed to be representative with regard to age, nationality, marital status, and living situation. However, there seems to be an overrepresentation of women and of persons with higher education in our sample.

Measures

Desire for social distance (as an indicator for stigma) was measured using a modification [17] of the Bogardus Social Distance Scale [18]. The German translation [19] of this scale has been used in several studies, and its unidimensionality, construct validity, predictive validity, and sensitivity to change have been repeatedly shown [20]. The scale consists of seven items asking to what degree the respondent would accept each of the following social relationships with the stigmatized person: sublessee, coworker, neighbor, caretaker of one's child, spouse of a family member, and member of the same social circle. Responses were made on a 4-point scale, with lower values indicating greater acceptance of (i.e., a lower desire for social distance from) the person in the vignette. In the present study, alpha reliability was .86.

Familiarity with mental illness was measured with four items, similar to the approach of Angermeyer et al. [10], respectively, asking whether psychiatric treatment had been undergone by (1) the participant, (2) a family member of the participant, or (3) a friend of the participant, or whether (4) none of these applied. If criteria for multiple categories were fulfilled, we chose the one indicating the highest familiarity.

Statistical analysis

All statistical analyses were conducted using SPSS 19 (IBM Corporation, Armonk, NY, USA). We examined differences

Table 2 Linear model of predictors of change in social distance in the case vignettes

	B	β	SE B	p
Constant	17.21 (16.21, 18.29)		0.52	p < .001
Familiarity				
Friends versus none	−1.40 (−2.11, −0.59)	−.15	0.40	p = .001
Family versus none	−1.84 (−2.54, −1.14)	−.22	0.38	p < .001
Self versus none	−2.20 (−2.89, −1.45)	−.26	0.38	p < .001
Diagnosis				
Borderline versus alcohol dependency	−1.40 (−1.90, −0.86)	−.17	0.28	p < .001
Psychosis versus alcohol dependency	−1.84 (−2.39, −1.36)	−.22	0.27	p < .001
Dangerousness				
None versus endangering others	−1.93 (−2.53, −1.40)	−.23	0.28	p < .001
Self-endangering versus endangering others	−1.33 (−1.90, −0.79)	−.16	0.28	p < .001
Gender				
Female versus male	−0.68 (−1.17, −0.23)	−.09	0.23	p = .003

$R^2 = .121$ ($p < .001$); 95 % bias corrected and accelerated confidence intervals (CI) are reported in parentheses. Confidence intervals and standard errors (SE) are based on 1000 bootstrap samples. B = unstandardized regression weight; β = standardized regression weight

in social distance between case and clinic vignettes using an independent t test; then, we conducted two separate multiple regression analyses (using the Enter Method), for the case and clinic vignettes, respectively, with social distance as a dependent variable. Categorical predictors with more than two categories were entered as dummy variables. In the first regression analysis, type of psychiatric symptoms, gender of the fictitious person in the vignette, degree of dangerousness, and respondent's familiarity with psychiatric illness were entered as independent variables, and in the second regression analysis, type of psychiatric service accessed was substituted for type of symptoms, with the others remaining the same. Multiple regression analysis offers a significance test for the difference between the chosen reference category (e.g., alcohol dependency) and each of the chosen comparison groups (e.g., psychosis and BPD); however, it does not allow comparison groups to be statistically compared to one another (e.g., psychosis vs. BPD) in a direct fashion. To do so, we statistically pitted the available standardized regression weights (i.e., alcohol dependency versus acute psychotic disorder and alcohol dependency versus BPD) against each other, using a t test for the difference between regression weights from the same sample (overlapping coefficients). Overall, this resulted in four t tests for each of the case vignette and the clinic vignette. Thus, to control for Type I error, we used a Bonferroni correction (critical alpha = .05/4 = .0125).

As suggested by Cohen et al. [21], the standard error of the difference between two such regression weights (i.e., β_i and β_j) should be of the form:

$$SE_{\beta i - \beta j} = \sqrt{\frac{1 - R_y^2}{n - k - 1}(r^{ii} + r^{jj} + 2r^{ij})} \qquad (1)$$

In this equation, i and j denote the two (dummy) variables, n the number of participants, k the number of independent variables, R^2 the coefficient of determination, and r^{ii}, r^{jj}, and r^{ij} corresponding elements of the inverted correlation matrix.

Results

First, an independent t test showed that social distance was significantly higher ($t = 23.27$, $p < .001$) for the case vignettes ($M = 12.35$, SD = 4.96) than for the clinic vignettes ($M = 8.26$, SD = 4.24).

Second, the regression analysis of prediction of social distance toward the fictitious person in the case vignettes revealed that familiarity, type of psychiatric symptoms, dangerousness, and (the fictitious person's) gender were significant predictors (see Table 2). Concerning familiarity, the desired social distance was significantly lower when the participant, a family member, or a friend had undergone psychiatric treatment, as opposed to none of them. Furthermore, t tests comparing the standardized regression weights showed no significant difference in social distance between a family member's versus a friend's having undergone psychiatric treatment ($t = -0.86$, $p = .194$) and between patient her-/himself's versus a family member's having undergone psychiatric treatment ($t = -0.47$, $p = .319$). Concerning type of psychiatric symptoms, symptoms of an acute psychotic disorder and those of BPD were associated with significantly less social distance than symptoms of alcohol dependency. A t test comparing the standardized regression weights indicated that desired social distance did not significantly differ between BPD and

Table 3 Linear model of predictors of change in social distance in the clinic vignettes

	B	β	SE B	p
Constant	12.42 (11.10, 13.61)		0.61	$p < .001$
Familiarity				
Friends versus none	−2.02 (−3.05, −1.00)	−.20	0.49	$p < .001$
Family versus none	−2.51 (−3.47, −1.51)	−.28	0.47	$p < .001$
Self versus none	−3.01 (−4.00, −1.91)	−.34	0.47	$p < .001$
Clinic				
Psychiatry versus forensic	0.16 (−0.46, 0.79)	.02	0.31	$p = .597$
General hospital versus forensic	−1.29 (−1.91, −0.67)	−.14	0.31	$p < .001$
Dangerousness				
None versus endangering others	−0.75 (−1.34, −0.06)	−.08	0.31	$p = .016$
Self-endangering versus endangering others	−0.22 (−0.81, 0.44)	−.02	0.21	$p = .487$
Gender				
Female versus male	−0.73 (−1.22, −0.23)	−.09	0.25	$p = .003$

$R^2 = .07$ ($p < .001$); 95 % bias corrected and accelerated confidence intervals (CI) are reported in parentheses. Confidence intervals and standard errors (SE) are based on 1000 bootstrap samples. "Psychiatry" abbreviates a psychiatric hospital without forensic unit; "forensic" abbreviates a psychiatric hospital with forensic unit. B = unstandardized regression weight; β = standardized regression weight

acute psychotic disorder ($t = -0.86$, $p = .195$). Concerning dangerousness, information that the fictitious person endangers others was associated with significantly more social distance than information that the fictitious person endangers herself/himself or endangers no one at all; and information that an individual endangers herself/himself did not provoke significantly more desired social distance than information that an individual endangers no one at all ($t = -1.18$, $p = .118$). Finally, the description of a female fictitious person provokes significantly less social rejection than the description of a male fictitious person, across case vignettes.

Third, the regression analysis for social distance toward the fictitious person in the clinic vignettes revealed that familiarity, type of psychiatric symptoms, dangerousness, and gender of the fictitious person were significant predictors (see Table 3). Concerning familiarity, the pattern of the first regression analysis was replicated; more precisely, if participant herself/himself, a family member, or a friend had been in psychiatric treatment, there was significantly lower desired social distance. However, there were no significant differences in social distance between degrees of familiarity (patient herself/himself versus family member: $t = .59$, $p = .278$; family member vs. friend: $t = -.88$, $p = .191$). Concerning type of psychiatric service, patients of a general hospital with a psychiatric unit were the objects of less desire for social distance than patients of a psychiatric hospital either with or without a forensic unit, who provoked similar desired social distance to one another (with or without a forensic unit). A t test comparing the standardized regression weights further revealed that patients of a general hospital with a

psychiatric unit elicit significantly less social distance than patients of a psychiatric hospital without a forensic unit ($t = -2.65$, $p < .01$). Concerning dangerousness, the information that an individual is inpatient at a hospital some of whose patients endanger other people was associated with significantly more social distance than the information that none of the other patients endangers anyone. However, and in contrast to the previous analyses, the amount of stigmatization did not differ for patients showing behavior endangering others versus those showing self-endangering behavior. Furthermore, information that some of the patients endanger themselves does not provoke significantly more social distance than information that the patients endanger no one at all ($t = -0.99$, $p = .160$). Last, and as in the previous analysis, male fictitious persons yielded higher ratings of desired social distance than female fictitious persons, across clinic vignettes.

Discussion

This vignette-based study compared for the first time the amount of stigmatization related to psychiatric symptoms and that related to psychiatric service use. Regarding service use, the study examined stigmatization stemming from the use of a general hospital that includes a psychiatric unit and that from a psychiatric hospital with or without a forensic unit. Familiarity with mental illness and dangerousness were examined as additional factors. Besides these novel features, further strengths of this study include the use of data from a representative population survey as well as the high response rate and sample size.

Our findings demonstrate that individuals are stigmatized to a greater extent for displaying psychiatric symptoms than for using psychiatric institutions. This seems to add up to existing evidence for psychiatric symptoms and psychiatric service use giving rise to two unique and distinct forms of stigma, both of which need to be addressed in anti-stigma initiatives. However, an alternative explanation for this systematic difference in stigma might be differences in concreteness between the vignettes. This would mimic real-world differences: In everyday life, the mere information that a person has been in psychiatric treatment is a sufficient cue for her/his stigmatization.

With regard to type of symptoms, alcohol dependency was stigmatized the most, which is in line with previous studies [5]. A possible explanation might be that the lay public perceives alcohol dependency as a voluntary behavior, whereas it perceives other conditions such as psychosis as psychiatric illnesses, with low voluntary control and thus low personal responsibility [5]. Our study revealed no significant difference in stigma between acute psychotic disorder and BPD, which contrasts the findings of Markham [6] taken from a sample of mental health professionals, which showed more stigma for BPD. Thus, amount of stigma might be determined not only by dangerousness but also by interpersonal difficulties. Future studies should thus evaluate whether perceived interpersonal difficulties impact stigmatization and whether personal contact with individuals with BPD leads to a perception of stronger interpersonal difficulties.

With regard to type of psychiatric service use, our study showed that using a general hospital with a psychiatric unit is stigmatized less than using a psychiatric hospital. One reason might be that psychiatric hospitals (might) evoke associations of confinement, whereas general hospitals might rather evoke associations of treatability of psychiatric illnesses [22]. Furthermore, general hospitals might foster the concealability of a psychiatric illness, because multiple health services are offered. Last, the geographical closeness of general hospitals to human settlements and urban areas might literally reduce the distance between patients and their social environment and promote their reintegration (the familiarity hypothesis; see below) and thereby reducing stigma [7]. It is important in this regard to note that the geographical remoteness of psychiatric hospitals is a historical consequence of stigmatization. As these possible explanations show, various differing characteristics between general hospitals and psychiatric hospitals may be influential here; future research should determine which of these account for the difference in levels of stigma. Such empirical information can yield practical knowledge on what modifications to psychiatric hospitals may destigmatize their use.

Another surprising result with regard to psychiatric services was that using a psychiatric hospital with a forensic unit was no more stigmatized than using a psychiatric hospital without a forensic unit. This suggests that the general population may not differentiate between these two types of psychiatric service institutions. Lay people might even use one common label for general and forensic psychiatric hospitals. Such a perspective might also be fostered through selective reporting by news media, which tends to focus heavily on reporting forensic cases of mental illness [23]. Thus, education about the dangerousness (or lack thereof) of psychiatric patients should be an integral part of anti-stigma initiatives.

Finally, our study suggests that familiarity with mental illness decreases stigmatization. However, there was no ordinal relationship such that greater closeness to a person in psychiatric treatment would predict less stigmatization. It mattered only whether the participant had had contact with a person in psychiatric treatment or not. Our study thus replicates the findings of Angermeyer et al. [10], and supports an optimistic perspective on the potential effectiveness of anti-stigma initiatives involving efforts to increase the public's familiarity with psychiatric illness. Clearly, the general public should have frequent opportunities to contact and interact with individuals with mental illness.

Limitations

A first limitation requiring mention consists of possible threats to external validity. The response rate of 22.1 % might account for selection and non-response biases (e.g., reflecting increased participation of women and of persons with higher education). Participation of persons with a relatively high level of education may have been facilitated due to the questionnaire-based method. Moreover, although participation was limited to inhabitants of the Swiss canton of Basel-Stadt, different countries differ culturally and politically, which might also be reflected in differences in levels and features of stigmatization of psychiatry. A second limitation is the ecological validity of our study: Vignettes display hypothetical, constructed situations that cannot fully represent the real world [10]. However, one important advantage of our vignette design is that in contrast to real-world situations, possible confounders are controlled, and internal validity is therefore increased. As a third potential limitation, stigmatization is operationalized in this study by an attitudinal measure (the social distance scale), and it is not fully clear to what extent social distance scale responses will translate into real-world behavior (however, previous research has revealed considerable correspondence between attitudes and actual behavior [24]).

Conclusion

Our results indicate that based on our sample, stigmatization associated with psychiatric symptoms and stigmatization associated with psychiatric service use are still present to a problematic extent. Thus, effective anti-stigma initiatives are strongly needed. The present study concludes by suggesting that such destigmatization efforts should proceed by fostering familiarity with mental illness and promoting treatment in psychiatric units in general hospitals as opposed to specialized psychiatric hospitals.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical standards The manuscript does not contain clinical studies or patient data.

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