Determinanten von Stigmatisierung und der Akzeptanz von Zwangsmassnahmen in der Psychiatrie

Inauguraldissertation

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Abstract

Because they are viewed as violent, unpredictable, and dangerous, psychiatric patients experience a great deal of stigma. People with mental illnesses who are stigmatized may experience undesirable outcomes such social rejection, exclusion, and discrimination. The public's acceptance of coercion in psychiatry and the clinical use of coercion may be affected by this stigmatization, as well as the attitudes of medical professionals.

The thesis sought to compare the extent of case-specific public acceptance of coercive measures in psychiatry and the impact of stigmatization (Steiger et al., 2021, study 1), investigate the relationships between the Big Five personality traits, self-esteem, and stigmatization (Steiger et al., 2022, study 2), and to compare the degree of case-specific approval of coercive measures in psychiatry by the public with the degree of general approval of coercive measures in psychiatry by the public. (Steiger et al., 2022, study 3).

We conducted a representative survey of the general population (N = 2207) in the canton of Basel-City, 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. Regression analyses were employed to examine the associations between approval of coercive measures, desire for social distance, and perceived dangerousness (as indicators for stigmatization) with person - and situation-specific factors that influence stigmatization.

The first study showed that the person in the case vignette exhibiting dangerous behavior, showing symptoms of a psychotic disorder, being perceived as dangerous, and treatment being understood as helpful increased approval of coercion in general, while familiarity of the respondents with mental illness decreased approval.

The second study found associations between personality traits and stigmatization towards mental illness. Those who scored higher on openness to experience and agreeableness showed a lower desire for social distance and lower perceived dangerousness. Neuroticism was inversely associated with perceived dangerousness. Additionally, high self-esteem was positively associated with social distance and perceived dangerousness. Finally, perceived dangerousness partially mediated the association between desire for social distance and openness to experience as well as agreeableness.

Study 3 found that assessment of case vignettes without dangerous behavior was associated with significantly reduced approval of coercion than assessment of a case vignette with dangerousness, while assessment of a psychiatric patient with dangerous behavior in general was

connected with a significantly higher approval of coercion than assessment of a case vignette with dangerousness.

Concluding, the three presented studies suggest that a considerable part of the approval for coercion is predicted by stigmatization. With the increasing severity of coercive measures, the influence of person- and situation-specific factors and of familiarity with mental illness decreased and generalizing and stigmatizing attitudes became stronger predictors for the approval of more severe measures. Furthermore, the current thesis highlights the role of personality traits and self-esteem in areas of stigma. Finally, case-specific assessment seems to reduce approval for coercion, whereas generalized assessment seems to favor approval of coercive measures.

1. Introduction

Stigma as is defined according to the World Health Organization as "a distinguishing mark establishing a demarcation between the stigmatized person and others attributing negative characteristics to this person" [1]. It has three components: stereotypes (negative belief about a group), prejudice (negative emotional reaction) and discrimination (behavioral response to prejudice) [2]. The stigma of mental disorders is characterized by incorrect knowledge or stereotypes, prejudice, and discrimination toward those who have mental disorders [3]. It comprises public stigma (the attitudes and behavior that the general public has towards people with mental illness) and self-stigma (the internalization of stigma among people with mental illness) [4]. The consequences of both forms of stigma include loss of self-esteem, reluctance to seek treatment, reduced adherence to medication, and social isolation [5, 6].

In the classic Labeling Theory of Goffman [7], played the experience of stigma by mentally ill people and their strategies for dealing with it a central role. Link and Phelan [8] suggest in their conceptualization of stigmatization processes within the framework of the Modified Labeling Theory that stigmatization of the mentally ill begins when a person is identified as different from other people (e.g., having symptoms of mental illness) and labelled based on this human difference (e.g., having a mental disorder). Then, the stigmatization continues by associating the labelled persons with negative stereotypes (e.g., that the mentally ill are unpredictable and dangerous) and separated them as a distinct category from nonlabelled people, which culminates in discrimination.

Numerous studies have shown that different factors affect the process of stigmatization. For instance, the type of disorder influences stigmatization. People with schizophrenia suffer much more under stigma and discrimination than depressed people [9]. There is also evidence that different types of psychiatric service institution vary in levels of stigmatization. Psychiatric wards located in general hospitals, for instance, decrease stigmatization [10]. A factor that might contribute to an increased stigmatization might be negative stereotypes by media portrays that link violence and aggression to mentally ill people [11]. This perception of dangerousness influences other component of stigmatization such as desire for social distance from [12] or approval of coercion for mentally ill people [13]. However, there are factors that counteract stigmatization. It is well stablished that familiarity or the personal contact with mental illness is an important modifier of mental health stigma [14].

To sum up, the current thesis aims to examine personal- and situation-specific factors that influence stigmatization using a vignette-based survey. The first study examined the impact of some components of stigma such as dangerousness and desire for social distance on the approval

of coercion by the public. The second study added additional insight in the understanding of Big Five correlates of stigma, as well as the novel examination of the role of self-esteem in the process of stigmatization. The third study explored the influence of stigmatization on the approval of coercion in psychiatric. In this study, the specific difference between a general and a case-specific assessment of this approval of coercion using case vignettes has been examined.

1.1 Theoretical background of the first Study

Coercive measures are still common in psychiatric emergencies. Although they restrict patients' autonomy in medical decision making and can have detrimental effects on the affected persons and their health-related outcomes, the use of such measures can be legally and clinically justified in situations where no others measures are available to avoid harm to the patient or others [15, 16]. Numerous studies have found patient-related factors that may contribute to an increased risk for coercion. These include diagnosis [17], level of aggression [18], sociodemographic, and socioeconomic characteristics [19, 20].

In addition to research on the risk factors for coercion, some studies evaluated the adverse effects of coercion on patients. Coercive measures were found to be accompanied by negative emotions such as fear, anger, shame, and helplessness for the patients [21] and can be traumatized [22]. Moreover, involuntary treatment negatively influences patient-therapist relationships [23] and can lead to poor adherence to therapy [24]. Furthermore, studies found that coercion can induce stigma [25]. Stigmatization is associated with negative consequences for individuals with mental illness such as disapproval, social rejection, exclusion, and discrimination [26, 27].

As stigmatization of persons with mental illness is associated with the attribution of dangerousness [28] and coercion is a measure of last resort in psychiatry used to manage dangerousness [29], it is plausible that higher stigmatization may be associated with higher acceptance of compulsory measures in the population. However, the association of stigmatization of persons with mental illness and the approval of coercion is currently underresearched.

1.2 Aims of the first study

The first study aims to measure the extent to which the general population approves the coercion of individuals with mental disorders. It examines whether established indicators of mental illness stigma such as desire for social distance and perceived dangerousness are associated with the approval of coercion. In addition, we investigated whether the approval of coercion varies regarding the type of mental disorder, familiarity with mental illness, the type of dangerous behavior, or the gender of the mentally ill person. Finally, the public's beliefs about the benefits of coercion were examined regarding their association with the approval of coercive measures.

1.3 Theoretical background of the second Study

Despite several attempts to promote destigmatization, mental illness stigma has been relatively stable across the last decades. Perception of dangerousness [30] and desire for social distance [12] are most common areas of research for identifying the correlates of stigmatization that affect the outcomes of persons with mental illness. Moreover, the impact of familiarity with mental disorders towards individuals with mental illness is well established in stigma research [31].

However, only limited research has explored personality traits and individual differences that might be associated with stigmatization of mental illness. Canu et al. explored the social appraisal of adults with attention deficit hyperactivity disorder (ADHD) among college students and revealed that agreeableness, extraversion, and conscientiousness were significantly associated with a desire to engage with people with ADHD [32]. Using the Big Five model of personality [33], Brown showed that openness and agreeableness were negatively associated with stigmatization towards mental illness [34]. In addition, research on the role of self-esteem in the stigmatization process is scarce. For instance, individuals with high self-esteem interact in more antagonistic ways [35]. Yet, it is unclear whether self-esteem is associated with stigmatization towards mental illness.

1.4 Aims of second study

The second study aims to: (1) examine the relationship between Big Five personality traits, self-esteem, and familiarity with stigmatization towards mental illness; and (2) to explore whether perceived dangerousness mediates the relationship between personality traits and stigmatization.

1.5 Theoretical background of the third Study

Involuntary hospitalization, medication, and seclusion are some of the main coercive measures used in psychiatry. Coercive measures are in particular favored when they are expected to be useful for patients [36]. However, there is an ongoing debate about the context in which they should be employed, if they are able to reach their intended goals [37], and if their benefits outweigh the accompanying clinical and ethical problems [38].

Furthermore, psychiatric patients are subjected to considerable stigmatization. This is in particular fostered by the prejudice that they are aggressive, uncontrollable, and dangerous [39], although there is no strong evidence for the association between dangerousness and mental illness in general [40]. Even healthcare professionals may stigmatize patients with mental illness [41]. Some studies found that mental health professionals did not differ from the general public

in their desired social distance from people with mental disorders [42]. This stigmatization may influence their approval of coercive measures and their clinical use of these measures. Previous studies reported that the majority of mental health professionals supported involuntary admission and treatment [43, 44].

It is well established that familiarity with mental disorders may be able to counteract this stigmatization and is associated with less perceived dangerousness [45] and less desire for social distance [46]. Increased stigmatization in the general public was linked with higher approval for coercion in psychiatry and an increased expectation that persons with mental health problems should be subjected to coercive measures to protect them and others and to initiate treatment. [13].

Corresponding to the relevance of the topic for clinical psychiatry, there is already some literature on the acceptance of coercive measures in psychiatry, albeit with differing results [47, 48]. These differences might be the result of local legal regulations, local clinical customs, different degrees of tolerance for challenging behavior, and different prevalence of stigmatization. However, methodological factors might influence the amount of agreement to coercive measures. While some studies present clinical vignettes describing detailed patient cases allowing to empathize with the case and ponder the pros and cons of applying coercive measures, others ask about acceptance of coercive measures in psychiatry in general. To our knowledge, no published study up to now has employed both methods to ask about the acceptance of coercive measures in the general public.

1.6 Aims of the third study

The third study aims to compare the degree of case-specific approval of coercion in psychiatry by the public with the degree of general approval of coercion in psychiatry by the public. As there is evidence that approval for coercion increases with the stigmatization of persons with mental illness, and generalizing assessments are more driven by stigmatization than the assessments of individual cases, we hypothesize that general approval of coercion is higher than case-specific approval.

2. Methods

2.1 Samples and procedures

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.

The final sample consisted of 2,207 individuals, reflecting a response rate of 22.1%. Overall, 61.5% of the participants were female, 66.5% Swiss citizens, 16% dual citizenship (Swiss + others), 19.0% other nationalities. Further, 44.7% were single, 45% married, 9% divorced and 1.3% widowed. The mean age of the participants was 43.4 years (SD = 13.4). A total of 6.2% had completed only 9 years of schooling obligatory in Switzerland, 51.3% had completed secondary education (approximately 12 years), and 42.0% had a university degree.

To assess the representativeness of our sample, respondent characteristics were compared to official census data as published in the statistical Almanac of Basel-City [49]. However, this comparison has to be interpreted with caution, as the data available from the statistical almanac represent the whole population of Basel-City without the restrictions posed by our in- and exclusion criteria. The comparison shows that questionnaires were sent out to over 5.2% of the population. The study sample represents more than 1.2% of the total population and can be assumed to be representative regarding 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 (see Table 1).

2.2 Study material

Study material consisted of written vignettes and questionnaires. Apart from sociodemographic variables, the questionnaires measured desire for social distance and perceived dangerousness as indicators for stigmatization, familiarity with mental illness, approval of coercion, and personality traits. Vignettes presented a fictitious character and depicted either a psychiatric disorder of the character (case vignette) or a clinic where the character had been admitted to (clinic vignette). Within the vignettes, the gender and endangering behavior of the fictitious patient were systematically varied. Between the case vignettes, the type of psychiatric disorder was systematically varied, which either described a case of acute psychotic disorder, a case of alcohol dependency, or a case of borderline personality disorder. None of these were labelled

directly, but they had symptoms fulfilling the DSM-V criteria [50] for the respective disorder Case vignettes were constructed based on vignettes used in previous stigma research [51]. Apart from these characteristics, all other information was kept constant between the vignettes to eliminate potential confounders. 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.

Table 1. Comparing the Characteristics of the sample with the actual population in Basel in 2013

Variable	*N* = 2,207 (Sample)	*N* = 191,606 (Population)
Age	*M* = 43.4	*M* = 42.9
Female	61.5 %	52.0%
Swiss	66.5 %	67.0%
Single	44.7 %	45.7%
Education		
Obligatory schooling	6.2 %	17.5%
Secondary education	51.3 %	48.6 %
University degree	42.0 %	32.5%

Abbreviations*: M,* mean; *SD*, standard division

2.3 Measures

Desire for social distance was measured using a modification [52] of the Bogardus Social Distance Scale [53]. We used the German translation of the scale of social distance [54], which has been used in several studies, and for which unidimensionality, construct validity, predictive validity, and sensitivity to change have been repeatedly shown [55]. 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, co-worker, 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 the person in the vignette (i.e., a lower desire for social distance). In our study, the reliability (Cronbach's alpha) of the seven items was .86.

Perceived dangerousness was measured with the dangerousness scale [56, 57]. The scale consists of eight items that assess individual beliefs about the dangerousness of the fictitious person in the vignette. Responses were made on a 4-point scale and a composite (with higher values

indicating higher perceived dangerousness) was derived by totaling the sum of all items. The reliability (Cronbach's alpha) of the scale in this study was .79.

Personality was assessed using the Big Five Inventory 10 (BFI-10) [58], in which the Big Five Inventory 44 (BFI-44) [59] was abbreviated to a 10-item version, with 2 items measuring each of the Big Five personality traits (i.e., extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience). The mean coefficient alpha of the BFI-44 is high ($\alpha = .83$), as is the 3-month test-retest reliability ($r = .85$). The BFI-10 scales captured 70% of the full BFI variance and retained 85% of the retest reliability [53]. Participants were required to read items such as 'I see myself as someone who is generally trusting', 'I see myself as someone who gets nervous easily', and then rate how accurately each item describes themselves using a 5-point Likert scale, with '1 = very accurate' and '5 = very inaccurate'. An average score was calculated for each personality trait, with a higher score representing a higher endorsement of the personality trait.

Self-esteem was measured with the Single-Item Self-Esteem Scale: "I have high self-esteem." [60], which applies a 5-point Likert scale (agree strongly to disagree strongly).

Familiarity with mental illness was examined with three items, similar to the approach of Angermeyer et al. [31], 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. If the criteria for multiple categories were fulfilled, we chose the one indicating the highest familiarity. In addition, participants were asked if they were healthcare professionals.

The approval of coercive measures was assessed with three items asking whether the participant would accept one of the following coercive measures for the fictitious character in the vignette: (1) involuntary hospitalization, (2) involuntary medication, and (3) seclusion. Responses were made on a 4-point Likert scale (agree strongly, agree a little, disagree strongly, disagree a little). The reliability (Cronbach's alpha) of the three items was .86. Approval of any type of coercion was operationalized if the respondent accepted one of the three measures. We calculated it as a dichotomous variable (yes/ no).

2.4 Statistical analysis

All statistical analyses were conducted using the SPSS 24 statistical package for Windows (IBM Corporation, Armonk, NY, USA). Descriptive analysis was performed for socio-demographics and other variables. Categorical predictors with more than two categories (i.e., type of mental disorders, degree of familiarity with psychiatric illness, and endangering behavior) were entered as

dummy variables. To compare the dummy variables (e.g., alcohol dependency vs. BPD), we conducted post hoc tests with Bonferroni correction to prevent type I error inflation. For all other analyses, the level of significance was set at $p \leq 0.05$.

2.4.1 The first study: Approval of coercion in psychiatry in public perception

Approval of any type of coercion was defined as the main outcome. Approval of involuntary hospitalization, involuntary medication, and seclusion were chosen as secondary outcomes. We therefore conducted logistic regression analyses with any type of compulsory measure, or with involuntary hospitalization, involuntary medication, and seclusion as dependent binary variables. In the regression analyses, the type of mental disorder, endangering behavior of the fictitious person in the vignette, perceived dangerousness, desire for social distance, respondent's, familiarity with psychiatric illness, gender of the fictitious person, the respondent's gender and whether the respondents believe that treatment would be useful were entered as independent variables.

2.4.2 The second study: Personality, self-esteem, familiarity, and stigmatization

First, we examined the bivariate associations between socio-demographics including age, gender, and education level with social distance and perceived dangerousness using a linear regression analysis. Second, multiple regression analyses with desire for social distance and perceived dangerousness as dependent variables were conducted. BFI personality traits (extraversion, neuroticism, openness, conscientiousness, agreeableness), self-esteem, familiarity, respondent being a healthcare professional, and the significant socio-demographics from the first analysis were entered as independent variables. As a third step, we conducted a mediation analysis with perceived dangerousness as a mediator, desire for social distance as a dependent variable, and the significant BFI traits from the first analysis as independent variables. The mediation analyses were performed using the PROCESS macro by Hayes [61], which uses ordinary least squares regression, yielding unstandardized path coefficients for total, direct, and indirect effects. Effects were deemed significant when the confidence interval did not include zero.

2.4.3 The third study: General and case-specific approval of coercion in psychiatry

First, descriptive analyses were performed. Mean and standard deviation (*SD*) were calculated for continuous variables, while for categorical variables frequencies and percentage were presented. Moreover, analyses of variance (Anova) were employed to test differences between

the tree groups (Vignette ND, Vignette D, General D) regarding age, gender, education level, marital status and nationality. Second, Pearson chi-square tests followed by post hoc tests with Bonferroni correction were carried out to provide an estimate on group differences for the variables "usefulness of treatment", "approval of involuntary hospitalization", "approval of involuntary medication", "approval of seclusion" and "approval of any type of involuntary measure".

The main research question was if there were statistically significant differences between the approval for any involuntary measure in the scenarios Vignette D, Vignette ND, and General D. To examine this issue, a logistic regression analysis was conducted. Approval of any type of involuntary measures was entered as the dependent variable, and the three different scenarios Vignette D, Vignette ND, and General D as independent variables. To control for variables, know to influence approval of coercive measures in psychiatry, namely familiarity with mental illness, the respondent being a healthcare professional, and whether the respondents believed that treatment would be useful, these variables were included into the model as covariates. Categorical predictors with more than two categories (i.e., degree of familiarity and different types of the vignettes) were entered as dummy variables. Finally, the dummy variables were compared using post hoc tests with Bonferroni correction.

3. Summary of the Results

3.1 The first study

Table 2. Logistic regression model for approval of any type of coercion

					CI	
	B	**SE**	**p**	**OR**	**Lower**	**Upper**
Endangering behavior						
None vs. self-endangering	.748	.198	< .001	2.112	1.433	3.115
None vs. endangering others	.477	.207	.021	1.611	1.074	2.418
Diagnosis						
Psychosis vs. alcohol dependency	-.726	.193	< .001	.484	.332	.706
Psychosis vs. BPD	-.516	.187	.006	.597	.413	.862
Familiarity						
Friends vs. none	-.730	.269	.007	.482	.285	.816
Family vs. none	-.467	.256	.068	.627	.379	1.035
Self vs. none	-.386	.256	.132	.680	.411	1.123
Desire for social distance	.038	.026	.144	1.038	.987	1.092
Perceived dangerousness	.137	.024	< .001	1.146	1.094	1.201
Treatment useful	1.543	.330	< .001	4.680	2.453	8.928
Gender (vignette)	.169	.156	.279	1.184	.872	1.609
Gender (respondent)	.189	.153	.216	1.208	.895	1.631
Constant	-4.649	.614	.000	.010		

Abbreviations: *B,* unstandardized regression weight; *SE,* standard error; *CI,* Confidence interval;
p, p-value; *OR,* odds ratio; *BPD,* borderline personality disorder; *vs.,* versus. R^2 = .196 (*p* < .001).

Table 3. Logistic regression model for approval of involuntary hospitalization

					CI	
	B	**SE**	**p**	**OR**	**Lower**	**Upper**
Endangering behavior						
None vs. self-endangering	.554	.210	.008	1.740	1.153	2.627
None vs. endangering others	.169	.222	.445	1.185	.767	1.829
Diagnosis						
Psychosis vs. alcohol dependency	-.780	.208	< .001	.458	.305	.689
Psychosis vs. BPD	-.583	.202	.004	.558	.376	.829
Familiarity						
Friends vs. none	-.784	.281	.005	.457	.263	.793
Family vs. none	-.546	.266	.040	.579	.344	.976
Self vs. none	-.601	.269	.026	.548	.324	.929
Desire for social distance	.043	.028	.122	1.044	.989	1.103
Perceived dangerousness	.130	.026	< .001	1.139	1.083	1.197
Treatment useful	1.840	.412	< .001	6.299	2.809	14.126
Gender (vignette)	.160	.168	.343	1.173	.843	1.632
Gender (respondent)	.201	.164	.220	1.223	.886	1.688
Constant	-4.942	.686	.000	.007		

Abbreviations: *B,* unstandardized regression weight; *SE,* standard error; *CI,* Confidence interval;
p, p-value; *OR,* odds ratio; *BPD,* borderline personality disorder; *vs.,* versus. R^2 = .182 (*p* < .001).

Table4. Logistic regression model for approval of involuntary medication

	B	SE	p	OR	CI Lower	Upper
Endangering behavior						
None vs. self-endangering	.696	.240	.004	2.007	1.253	3.213
None vs. endangering others	.417	.249	.095	1.517	.930	2.472
Diagnosis						
Psychosis vs. alcohol dependency	-.996	.233	< .001	.369	.234	.583
Psychosis vs. BPD	-.621	.218	.004	.537	.350	.824
Familiarity						
Friends vs. none	-.301	.313	.337	.740	.401	1.367
Family vs. none	-.165	.301	.584	.848	.470	1.529
Self vs. none	-.006	.299	.984	1.006	.560	1.808
Desire for social distance	.086	.031	.006	1.090	1.026	1.158
Perceived dangerousness	.107	.028	< .001	1.113	1.054	1.175
Treatment useful	.938	.356	.008	2.555	1.271	5.138
Gender (vignette)	.124	.185	.501	1.132	.788	1.626
Gender (respondent)	.043	.182	.812	1.044	.730	1.493
Constant	-4.987	.713	.000	.007		

Abbreviations: *B,* unstandardized regression weight; *SE,* standard error; *CI,* Confidence interval; *p,* p-value; *OR,* odds ratio; *BPD,* borderline personality disorder; *vs.,* versus. R^2 = .151 (p < .001).

Table 5. Logistic regression model for approval of seclusion

	B	SE	p	OR	CI Lower	Upper
Endangering behavior						
None vs. self-endangering	.642	.420	.126	1.900	.835	4.324
None vs. endangering others	.721	.410	.079	2.055	.920	4.590
Diagnosis						
Psychosis vs. alcohol dependency	-.392	.364	.282	.676	.331	1.380
Psychosis vs. BPD	.080	.341	.815	1.083	.555	2.113
Familiarity						
Friends vs. none	-.502	.444	.259	.605	.254	1.446
Family vs. none	-.291	.427	.497	.748	.324	1.728
Self vs. none	-.349	.432	.418	.705	.303	1.643
Desire for social distance	.145	.051	.004	1.156	1.046	1.278
Perceived dangerousness	.117	.043	.007	1.124	1.033	1.223
Treatment useful	1.723	.744	.021	5.599	1.304	24.046
Gender (vignette)	.131	.287	.647	1.140	.650	2.000
Gender (respondent)	.271	.278	.329	1.311	.761	2.258
Constant	-8.556	1.259	.000	.000		

Abbreviations: *B,* unstandardized regression weight; *SE,* standard error; *CI,* Confidence interval; *p,* p-value; *OR,* odds ratio; *BPD,* borderline personality disorder; *vs.,* versus. R^2 = .174 (p < .001)

3.2 The second study

Table 6. Multiple regression analyses for social distance

	Social Distance			
	B	*SE*	*β*	*p*
Personality trait				
Extraversion	-.125	.107	-.027	.243
Neuroticism	.145	.120	.030	.227
Openness	-.636	.112	-.126	<.001
Conscientiousness	.225	.131	.038	.086
Agreeableness	-.879	.128	-.148	<.001
Self esteem	.436	.117	.093	<.001
Familiarity				
Self	-2.055	.367	-.215	<.001
Family	-1.588	.363	-.164	<.001
Friends	-1.280	.376	-.120	<.001
Healthcare professional	.326	.222	.032	.142
Gender				
male vs. female	-.419	.210	-.045	.046
Education Level	-.111	.054	-.044	.042
Constant	15.578	1.086		< .001

Abbreviations: *B,* unstandardized regression weight; *β,* standardized regression weight; *SE*, standard error; *p*, *p*-Value.

Table 7. Multiple regression analyses for perceived dangerousness.

|	Perceived Dangerousness			
	B	*SE*	*β*	*p*
Personality trait				
Extraversion	-0.043	0.105	-0.009	.683
Neuroticism	-0.309	0.123	-0.061	.012
Openness	-0.742	0.114	-0.142	< .001
Conscientiousness	0.097	.0132	0.016	.464
Agreeableness	-0.761	.132	-0.124	< .001
Self esteem	0.355	0.119	0.074	.003
Familiarity				
Self	-2.854	0.374	-0.287	< .001
Family	-2.217	0.369	-0.221	< .001
Friends	-1.597	0.384	-0.144	< .001
Healthcare professional	0.462	0.225	0.044	.040
Constant	14.072	0.789		< .001

Abbreviations: *B,* unstandardized regression weight; *β,* standardized regression weight; *SE*, standard error; *p*, *p*-Value.

Table 8. Total effect, direct effect, and indirect effect of personality on the desire for social distance.

	Total effect	*p*	Direct effect	*p*	Indirect effect	*CI*
Openness	-.777	< .001	-.207	.012	-.569	-.713, -.429
Agreeableness	-.962	< .001	-.395	< .001	-.567	-.735, -.394

Indirect effect was deemed significant when the confidence interval did not include zero.

Figure 1. Mediating effect of perceived dangerousness on the relationship between personality and desire for social distance.
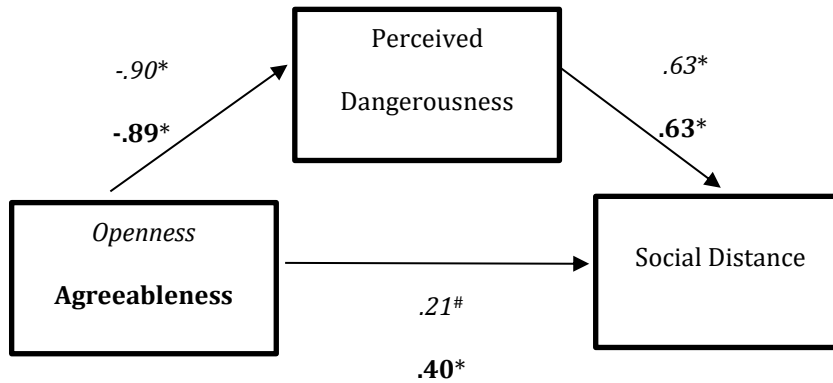
Indices in bold represent agreeableness; those in italics represent openness. *$p <$ 0.001, #$p =$ 0.012

3.3 The third study

Table 9. The characteristics of the sample for Vignette ND, Vignette D, General D

Variable	Vignette ND	Vignette D	General D
	$N = 348$	$N = 722$	$N = 1066$
Age	$M = 43.9$	$M = 43.4$	$M = 43.6$
	($SD = 13.46$)	($SD = 13.55$)	($SD = 13.51$)
Female	62%	57.8%	62.5%
Swiss	63.5%	65.5%	68%
Single	38.7%	43.8%	42.6%
Education			
Obligatory schooling	6.7%	6.1%	6%
Secondary education	10.8%	11.6%	11.3%
University degree	41%	40.1%	41.9%
Others	41.5	42.2%	40.8%
Healthcare worker	27.5%	24.8%	28.4%

Note: vignette ND, participant had assessed the case vignette without n dangerousness; vignette D, participant had assessed the case vignette with n dangerousness; General D, participant had not received a case vignette and had assessed psychiatric patients in general.

Table 10. Usefulness of psychiatric treatment and approval of involuntary measures

	Vignette ND	Vignette D	General D		Vignette ND vs. Vignette D	General D vs. Vignette D	Vignette ND vs. General D
	n (%)	n (%)	n (%)	χ2	Post hoc tests		
Treatment is deemed useful	308 (85.3)	631 (86.2)	1046 (94.9)	51.7*	n. s.	p < .001	p < .001
Involuntary hospitalization	50 (13.9)	162 (22.3)	1003 (90.9)	1136.5*	p = .001	p < .001	p < .001
Involuntary medication	35 (9.7)	130 (17.8)	813 (73.6)	767.9*	p = .005	p < .001	p < .001
Seclusion	9 (2.5)	49 (6.7)	787 (71.5)	1012.9*	n. s.	p < .001	p < .001
Any type of involuntary measure	58 (16.2)	211 (29.1)	1042 (94.6)	1126.4*	p < .001	p < .001	p < .001

* $p < .001$; n. s., not significant; vignette, participant had assessed the case vignette; general, participant had not received a case vignette and had assessed psychiatric patients in general; ND, no dangerousness; D, dangerousness

Table 11. Logistic regression model for approval of any type of involuntary measure

	B	SE	p	OR	CI lower	CI upper
Dangerousness						
Vignette ND vs. Vignette D	-1.669	.161	<.001	.188	.137	.258
Gerneral D vs. Vignette D	3.062	.197	<.001	21.367	14.518	31.449
Familiarity						
Friends vs. none	-.507	.207	.014	.602	.402	.903
Family vs. none	-.555	.225	.015	.574	.370	.892
Self vs. none	-.406	.199	.041	.667	.452	.984
Healthcare professional	-.016	.126	.896	.984	.768	1.260
Treatment is deemed useful	1.545	.212	<.001	4.687	3.091	7.106
Constant	-.978	.343	.004	.376		

Abbreviations: *B,* unstandardized regression weight; *SE,* standard error; *CI,* Confidence interval; *p,* p-value; *OR,* odds ratio; vs., versus; vignette, participant had assessed the case vignette; general, participant had not received a case vignette and had assessed psychiatric patients in general; ND, no dangerousness; D, dangerousness. R^2 = .452 ($p < .001$).

4. General Discussion

The overarching aim of this thesis was to explore person- and situation-specific factors of stigma towards individuals with mental illness to enhance current knowledge about correlates and their underlying mechanisms which contribute decisively to stigmatization process. To the authors' best knowledge, study 1 is the first to examine approval of coercion in the canton of Basel-Stadt, Switzerland, in a representative sample of the general population. Further strengths include the quasi-experimental vignette design, allowing to examine the role of a fictitious person's psychiatric diagnosis, dangerousness to her- /himself or others, and gender for the approval of compulsory measures. Furthermore, to the best of our knowledge, study 2 is the first study that examined the association between self-esteem and stigmatization towards individuals with mental illness and the mediating role of perceived dangerousness on the relationship between personality traits and stigmatization. Finally, study 3 adds to the scientific literature regarding the approval of coercion in psychiatry by the general public and is – to the authors' knowledge – the first study to compare general and case-specific approval

4.1 The first study

This study examined the association between approval of coercion and different facets of mental health stigmatization such as desire for social distance and perceived dangerousness. Self-endangering behavior and behavior endangering others were significantly associated with the public's approval of involuntary measures. However, when specifically examining the different coercive measures explored in the current study, only self-endangering behavior was linked to the approval of involuntary hospitalization and involuntary medication. Yet, endangering behavior was not associated with the approval of seclusion. Moreover, perceived dangerousness, which represents the general attitude that a mentally ill person is unreliable, unpredictable, cannot be trusted, and might be dangerous, was significantly associated with an increased approval of coercion in general and all three individual compulsory measures examined.

In this study, the desire for social distance was not associated with an approval of coercive measures in general and involuntary hospitalization. However, social distance was positively associated with the approval of involuntary medication and seclusion. An interpretation of these findings could be that with higher severity of coercion, person- and situation-specific aspects become less important for the approval of coercive measures by the public, and more generalized

attitudes become more prominent predictors of approval. In addition, familiarity with mental illness was significantly associated with less approval for coercion in general and for involuntary hospitalization, but did not predict acceptance of involuntary medication or seclusion.

Regarding mental disorders, coercive measures in general, involuntary hospitalization, and involuntary medication were approved more when the fictitious person in the case vignette displayed symptoms of a psychotic disorder than when symptoms of BPD or alcohol dependency were displayed. Interestingly, this estimation of the general population is highly in line with current treatment recommendations, where coercive measures are not recommended in patients with BPD and substance use disorders [62, 63]. Similarly, as seen for endangering behavior, approval of seclusion was not significantly associated with the type of psychiatric diagnosis. Again, a possible explanation for this finding might be that with higher risk for the environment and other persons' integrity, a generalized attitude becomes more prominent by the public. Finally, our study revealed no significant difference in approval of coercion regarding the gender of the fictitious person or participants.

4.2 The second study

This study investigated the role of personality and self-esteem on stigmatization towards individuals with mental illness. The results showed that patients indicated that agreeableness and openness to experience are negatively associated with mental illness stigmatization. People scoring higher on agreeableness are generally well-natured, cooperative, and concerned for others [33]. Additionally, agreeable people are empathetic, altruistic, and show great kindness and gentleness [64]. This may indicate that they treat people with mental disorders with consideration, compassion, trust, and are less likely to perceive them as dangerous or to exhibit a desire for social distance. Openness to experience implies creativity, curiosity, as well as self-determination [65]. Individuals who score highly on openness to experience tend to be open-minded, unconventional, and imaginative [33]. These features can help them to express greater social comfort and more understanding in interactions with mentally ill individuals.

In addition, neuroticism was negatively associated with perceived dangerousness. Individuals with a high degree of neuroticism tend to be anxious, moody, and insecure [33]. A meta-analysis demonstrated that higher levels of neuroticism are related to a broad range of clinical mental disorders such as depression and anxiety [66]. We speculate that persons with high neuroticism might increasingly attribute themselves as being affected by mental health conditions, or that they might be reluctant to attribute dangerousness to persons with mental illness as this opinion is less socially desirable. The results highlighted the association between high self-esteem and increased mental illness stigmatization, which warrants further research.

Our findings also emphasized the significant role of familiarity in reducing mental illness stigmatization, which is well established in stigma research [31]. All categories of familiarity were associated with less desire for social distance and less perceived dangerousness. However, the context of familiarity and the selection of encountered persons seem to play an important role: other than having contact with persons with mental illness in a private context, being a health care professional was associated with exhibiting more stigma towards mentally ill people. In line with this finding, a previous study in a large sample of Swiss mental health professionals found that health care professionals, compared with the general population, hold negative stereotypes and stigmatizing attitudes towards people with mental illness [41].

Finally, personality may influence the desire for social distance not only directly but also indirectly by reducing perceived dangerousness. Perceived dangerousness conveys only part of the effect of personality on the desire for social distance. This finding should be further explored in future studies to improve insight in the mechanisms underlying the effect of personality on the stigmatization process.

4.3 The third study

The study adds to the scientific literature regarding the approval of coercive measures in psychiatry by the general public and is – to the authors' knowledge – the first study to compare general and case-specific approval.

Psychiatric treatment was considered useful by the majority of participants who were presented with case vignettes without and with dangerous behavior as well as with psychiatric patients with dangerous behavior in general. This indicates that most participants have adopted a positive view of psychiatry as a helpful form of treatment in contrast to seeing psychiatry mainly as a protective and regulating institution. This is in line with Angermeye et al. [67], which found in a systematic review that public attitudes towards psychiatry and psychiatric treatment have improved over the last twenty-five years. In addition, approval for involuntary hospitalization was higher than for involuntary medication, with approval for seclusion being the lowest. This may indicate that seclusion is indeed seen as the most severe coercive measure examined in this study.

Concerning the descriptive analyses of the main outcome, approval for at least one type of involuntary measure was 16% in case vignettes without dangerous behavior. Approval in case vignettes with dangerous behavior was 29%, indicating that self-endangering behavior or behavior endangering others is also seen as a reason to conduct coercive measures by the general public. However, the approval of coercive measures for patients with dangerous behavior in general was

quite high with 95% indicating that generalization may favor a more undifferentiated and stigmatizing opinion. In agreement with these results, the main logistic regression analysis showed significantly lower approval of coercive measures in case vignettes without dangerousness than in case vignettes with dangerousness (OR 0.2) and significantly higher general approval of coercive measures in patients with dangerous behavior than in the case vignette with dangerous behavior (OR 21.4). Thus, and in line with our a priori hypothesis, the main analysis showed that approval of coercive measures in psychiatry by the general public indeed seems to be far greater when asking about the general opinion than when asking about specific, detailed cases presented in clinical vignettes. This phenomenon may therefore contribute to the diverging findings on the acceptance of coercive measures reported in the literature and should be controlled for in future studies. According to Yang et al. [68] case-vignettes present a more concrete stimulus to respondents than simply asking about their opinion on mental illness or mentally ill persons. Our results suggest that it matters whether a case-vignette is used or a general quotation when examining public attitudes towards applying coercive measures and this may contribute in differences in the acceptance.

In this study, being a healthcare professional was no significant association with approval of coercive measures. However, there is evidence that mental health professionals stigmatize persons with mental illness. For instance, Hugo [69] found that the general public had more optimistic expectations for individuals with mental illness than mental health professionals did. Other studies found that mental health providers endorse stereotypes about mental illness, such as the perceptions of dangerousness [70]. However, Eksteen et al. [71] compared stigmatizing attitudes towards persons with mental disorders between psychiatrists, pre-clinical and post-clinical medical students and found that stigma decreased as level of education increased, with pre-clinical medical students scoring the highest, followed by post-clinical medical students. Psychiatrists reported the lowest stigma attitudes towards patients with mental illness. It must be mentioned that our study did not differentiate between the different types of mental health professionals.

4.4 Limitations

(1) a first limitation consists in possible threats to external validity, i.e., the low response rate of 22.1 % might account for selection and nonresponse 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. (2) the study is based on data from the years 2013/2014. Since then, the public's perception of psychiatry has

changed significantly due to intensified media reporting. (3) participation was limited to inhabitants of the Swiss canton of Basel-Stadt, which might limit the generalizability of the results. (4) the measurement of desire for social distance and perceived dangerousness is based on hypothetical scenarios, and therefore might be different from the respondents' real-life behavior. (5) familiarity was measured with three single items, which might threaten the internal validity of the domain meant to be measured. (6) personality traits were measured in this study with short scales (two items). This could indicate that the personality dimensions might not be accurately represented. Thus, this research should be replicated in future studies that use full-length Big Five measures.

4.5 Conclusion

- The public attitude regarding the approval of coercion in psychiatry is highly differentiated and largely follows the current legal framework and medical treatment guidelines

- Considerable part of the approval for coercion is predicted by stigmatization

- With increasing severity of coercive measures, the approval of coercion decreased

- Higher approval occurred in situations of self-harm or harm to others, in case of psychotic symptoms and when coercive measures were thought to have a beneficial effect for the affected persons.

- This thesis supports the hypothesis of a relationship between personality, self-esteem, and stigmatization towards mental illness

- Whereas case-specific assessment seems to reduce approval for coercive measures, generalized assessment seems to favor approval of coercive measures

- Anti-stigma programs need to focus on clarifying the overestimation of dangerous behavior, on counteracting generalization, and on facilitating contact with people with mental illness

- The attitude of mental health professionals toward people with mental illness is an important concern and whether they endorse stigmatizing attitudes or behaviors and their role in destigmatizing processes need to be clarified in future research

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