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The role of stigma during the course of inpatient psychotherapeutic treatment in a German sample

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Abstract

The current study intends to investigate whether the therapeutic process is impeded by stigma and how stigma develops over the course of cognitive behavioural psychotherapy treatment. Sixty German psychotherapy inpatients were asked on a weekly basis about two facets of stigma: self-stigma and perceived public stigma. That information was linked to additional process as well as outcome variables (therapeutic engagement, working alliance, depressive, and general psychological symptoms). Both facets of stigma decreased over the course of psychotherapy, but only the decrease in self-stigma was significant. In a weekly interval, low (high) self-stigma predicted high (low) levels of working alliance and therapeutic engagement and vice versa. The current study shows that self-stigma is especially subject to change during the course of an inpatient psychotherapeutic treatment. In addition, our results point to the interrelation between self-stigma and other process variables contributing to the effectiveness and success of psychotherapy.

KEYWORDS

cognitive behavioural psychotherapy, inpatients, side effects, therapeutic engagement, working alliance

1 | INTRODUCTION

There is a broad body of research indicating that individuals suffering from psychological problems or being labelled as mentally ill are stigmatized (e.g., Corrigan & Watson, 2002; Levy, Celen-Demirtas, Surguladze, & Sweeney, 2014; Sarkin et al., 2014). Stigma can be discussed in terms of self-stigma and perceived public stigma (Gaudiano & Miller, 2013). Perceived public stigma contains attitudes the public maintains towards a mentally ill person, and these attitudes might, for example, result in landlords or employers who do not rent to or offer jobs to people who suffer from mental illnesses (Corrigan, 2004). Conversely, self-stigma refers to internalized attitudes of the stigmatized person, which are substantially

based on the public stigma this person has experienced and has perceived. As a consequence, a person who self-stigmatizes himself or herself experiences difficulties in reaching important life goals (Luoma, Kohlenberg, Hayes, Bunting, & Rye, 2008).

Although a number of studies point to the fact that stigma is a major burden to entering psychological treatment (e.g., Corrigan, 2004; Rüsch et al., 2009; Vogel, Wade, & Hackler, 2007), research on stigma during individual psychotherapeutic treatment is limited. Kendra, Mohr, and Pollard (2014) investigated perceived public stigma and self-stigma in psychotherapy outpatients over the course of three successive weeks/sessions. Their results indicated a decrease in perceived public stigma (but not self-stigma) over the course of treatment. However, the relations between stigma and process variables

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such as working alliance (WA) and therapeutic engagement (TE) remained somewhat unclear. WA is seen as an indicator of the quality of the therapeutic relationship between therapist and patient, and TE represents the patient's investment and involvement in the process of therapy. Perceived public stigma was unrelated to WA, depression, or TE at the beginning of treatment, whereas at the same time of measurement, self-stigma was negatively associated with WA and positively associated with depression (Kendra et al., 2014). Moreover, initial self-stigma and perceived public stigma levels were unrelated to changes in WA, TE, and depression throughout the process.

The findings described above suggest that self-stigma might be associated with the possibility to build a strong WA at the beginning of the psychotherapeutic process. Various research results suggest the relevance of WA and TE throughout the psychotherapeutic process: WA is known to be crucial to successful psychotherapy (Barber, Connolly, Crits-Christoph, Gladis, & Siqueland, 2000; Flückinger, Del Re, Wampold, & Horvath, 2018) and has shown to be predictive of subsequent change in depression (Barber et al., 2000). Furthermore, research points to the fact that TE—measured by help of the action subscale of the University of Rhode Island Change Assessment Scale (DiClemente, & Hughes, S.O., 1990)—significantly increased throughout a dialectic behavioural group therapy (Soler et al., 2008) as well as after cognitive behavioural therapy in a bulimia nervosa sample (Treasure et al., 1999).

Further evidence concerning the relevance of stigmatization during psychotherapy was found by Sirey et al. (2001). They showed that when elderly outpatients endorsed high levels of stigma towards the mentally ill, they were more likely to discontinue treatment. The authors concluded that stigma affects the process of treatment itself, possibly due to the fact the patients may not be able to tolerate confronting the reality that they are being treated for a mental illness. In an earlier study by Link, Struening, Rahav, Phelan, and Nuttbrock (1997), a male sample suffering from substance abuse and additional mental health problems was assessed before and 1 year after the completion of treatment in a residential treatment facility. The authors found that their threefold concept of stigma, including beliefs about devaluation/discrimination, experiences of rejection and coping strategies, strongly impacted patients' depressive symptoms throughout the course of treatment. The authors drew the conclusion that stigma plays an important role in psychotherapy that does not diminish as patients' symptoms improve, as the effect of stigma remained stable after patients showed improvement due to treatment. In a more recent study conducted by Ociskova et al. (2018), an inpatient psychotherapy sample with anxiety disorders was researched. Results showed that self-stigma negatively impacted the treatment's effectiveness. These findings demonstrate the need to develop an in-depth understanding of stigma processes during psychotherapy, given that stigma might burden patients even when treatment has already started to improve symptoms.

As mentioned above, the concept of self-stigma comprises the attitude a person adopts, in the case of mental illness, towards his or her own psychological problems. When those attitudes are negative, for example, a person suffering from social anxiety disorder feels like

Key practitioner messages

- Our results imply that stigma is a relevant variable throughout the process of psychotherapy, given that, inter alia, self-stigma is subject to change during inpatient cognitive-behavioural psychotherapy
- As stigma obviously remains relevant during psychotherapy, practitioners should integrate communication about self-stigma and perceived public stigma into their therapeutic work
- Therapists should remain alert to the impact of stigma in psychotherapy, especially the impact on working alliance and therapeutic engagement and keep in mind that stigma is changeable by help of a supportive therapeutic relationship

his or her mental disorder is a sign of personal weakness or insufficiency, it is easily conceivable that such marked self-stigmatization may aggravate and worsen depressive symptomatology. Utilizing mental health services because of this very disorder might even worsen the abovementioned feelings of weakness. This idea can be supported by Kendra et al. (2014), who assumed that self-stigma may burden the therapeutic relationship: Once patients talk about and "admit" their psychological problems as shameful, they might seclude themselves and feel unsafe talking about their problems openly.

Perceived public stigma refers to the individual's perception of how society—both the individual's immediate social circle and society in general—treats mentally ill people. Mental health professionals are often rated by those suffering from mental illnesses to be among the most stigmatizing groups (Arboleda-Florez & Stuart, 2012). For example, Gonzales, Davidoff, Nadal, and Yanos (2015) found that people who received mental health services experienced microaggressions not only from close family and friends but also from professionals during treatment. Examples of those microaggressions were overt discrimination by employees or hospital staff communicating in a way which implied inferiority of those suffering from mental illness. Noticing those behaviors, some patients even decided to discontinue their treatment due to a lack of therapeutic cooperation, pointing to the potentially devastating effects of perceived public stigma.

Given this research, people who perceive greater public stigma may trust their psychotherapist less, which in turn might worsen the WA and the patient's willingness to be open about his/her problems (Kendra et al., 2014). In view of research that showed mental health professionals were just as prejudiced about mentally ill people as the general public (Nordt, Rossler, & Lauber, 2006); the concerns experienced by patients with high perceived public stigma are valid. Moreover, expecting to be stigmatized in a psychotherapeutic setting might impact a patient's cognitive, emotional, and behavioural flexibility

during the process and, therefore, negatively influence progress in psychotherapy. Pachankis (2007) suggested mechanisms such as being preoccupied with or vigilant with regard to the potential stigmatization, which might entail strategies such as trying to hide aspects or focusing on making a good impression.

What might fuel change in psychotherapy patients' self-stigma and perceived public stigma over time? Horsfall, Cleary, and Hunt (2010) recommended that mental health professionals should explicitly address and subsequently challenge their patients' stigma, which would open up a discourse regarding feelings of shame, fear, or aversion and as a consequence, help reduce those negative feelings. As it is generally thought that self-stigma is more closely linked to one's self-concept than is perceived public stigma (Hatzenbuehler, 2009), it is more likely that self-stigma is subject to change during psychotherapy. This notion is supported by research with patients suffering from psychosis disorder (Surmann et al., 2017). In this study, having a low self-concept—especially regarding one's own abilities—strongly predicted high self-stigma.

To this aim, Rüsch, Berger, Finzen, and Angermeyer (2004) suggested that cognitive behavioural therapy might be able to address the topic of stigma and even mitigate it. To do so, therapists could use the same techniques that are used to identify and modify patients' cognitive distortions to address their attitudes towards self-stigma and perceived public stigma. As a consequence, patients might learn to look at their own psychological problems with less devaluation, which would in turn be mirrored in reduced perceived public and self-stigma. With regard to perceived public stigma in particular, the therapeutic setting might serve as an opportunity for patients to experience how their therapist—who could be a source of stigmatization—behaves towards them. Therefore, assuming that a patient has positive experiences in this respect, perceived public stigma might also change during the course of psychotherapy.

The goal of this study was to contribute relevant empirical data to an area of interest still in its infancy, stigma during psychotherapy by more clearly understanding how self-stigma and perceived public stigma present in patients at the beginning of inpatient psychotherapy and how they change during the process. Furthermore, the relationships between these two facets of stigma and the psychotherapy process in general and certain process variables in particular, such as TE, were of interest. Studying psychotherapy inpatients with a longitudinal design will add important value to stigma research, as such an approach has not yet been taken to our knowledge.

Given the scarcity of empirical data on this research question, our approach was partly exploratory. In line with the hypotheses generated by Kendra et al. (2014), we assumed that both self-stigma and perceived public stigma decrease over the course of treatment as the patient develops a trusting relationship with the therapist. This assumption can be substantiated by research conducted by Wade, Post, Cornish, Vogel, and Tucker (2011), who found a decrease in self-stigma after only one session of group counselling. However, Kendra et al. (2014) did not find a decrease in self-stigma, which they ascribed to the short period of data collection; contrary to expectations, they found a decrease only in perceived public stigma.

In addition, we were interested in investigating whether and how initial and subsequent levels of self-stigma and perceived public stigma are associated with levels of TE and WA both at baseline and throughout the course of psychotherapy. For WA, research conducted by Wade et al. (2011) substantiates this assumption. They implemented one group session for college students meeting a clinical cutoff for either symptoms/problems, for example, depression, or functioning, for example, close relationships, and found that greater working alliance was associated with a reduction in self-stigma.

2 | METHOD

2.1 | Participants

Participants were psychotherapy inpatients treated by licenced psychotherapists at a psychiatric hospital in Germany. This clinic offers cognitive behavioural psychotherapy, with two sessions (50 min) a day (5 days a week, sessions: M = 55.93, SD = 21.21, range: 20–110) provided by the same psychotherapist as well as visits and group therapy when appropriate (e.g., a "self-esteem group" for patients suffering from depression).

Overall, 60 participants took part in the study, all of which were included in the analysis. The mean age was 36.0 years (SD = 15.0, range: 18-75 years), and 30 participants were male. For 38 out of the overall 60 participants, the evaluated therapeutic treatment was their first in the clinic but not necessarily their first therapeutic treatment ever (previous inpatient treatments [n = 58]: M = 0.98, range from 0 to 5; previous outpatient treatments [n = 58]: M = 1.22, range: 0-3). On average, participants staved in the clinic for 5.4 weeks (SD = 1.7/ days: M = 38.1, SD = 12.12, range: 12-76); all participants terminated treatment regularly, that is, no therapy discontinuation but planned end of therapy. Primary clinical diagnoses (based on symptom severity) were as follows: obsessive-compulsive disorder (n = 29), major depression (n = 11), bulimia (n = 5), posttraumatic stress disorder (n = 4), agoraphobia with panic disorder (n = 3), Asperger's syndrome (n = 2), social anxiety disorder (n = 2), specific phobia (n = 2), hypochondriasis (n = 1), and generalized anxiety disorder (n = 1). Ethical approval for the study was provided by the ethics committee of the University of Münster.

2.2 | Measures

2.2.1 | Stigma

We used a 14-item stigma measure developed by Kendra et al. (2014). The seven self-stigma items (e.g., "I feel ashamed of myself for having psychological problems.") and seven perceived public stigma items (e.g., "In general, others believe that having psychological problems is a sign of personal weakness or inadequacy.") were rated on a scale from 1 (strongly disagree) to 4 (strongly agree). The authors reported both a satisfactory reliability (self-stigma: .85-.87;

perceived public stigma: .71-.85) and a satisfactory validity. The questionnaire was back translated (English–German–English) as described in Brislin (1970).

2.2.2 | Working alliance

WA was measured with the Working Alliance Inventory—Short Revised (Horvath & Greenberg, 1989, German translation (Wilmers et al., 2008)). The 12-item scale extends from 1 (*seldom*) to 5 (*always*). This measurement serves as an indicator of the connection between therapist and patient and investigates the extent to which both patient and therapist agree in terms of the therapy's goals and means. The scale has repeatedly demonstrated acceptable levels of internal consistency (.81–.87; Flückinger et al., 2018).

2.2.3 | Therapeutic engagement

TE was recorded by help of the eight-item action subscale from the University of Rhode Island Change Assessment Scale (DiClemente, & Hughes, S.O., 1990, German translation (Hasler, Klaghofer, & Buddeberg, 2003)). TE was rated on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The action stage is part of the transtheoretical model (consisting of precontemplation, contemplation, action, and maintenance). As part of this framework, the action subscale focusses on whether and to what extent a person is committed to actual change—although dealing with problems—and with which specific means (Soler et al., 2008). Like Kendra et al. (2014), we chose to only use the action subscale (e.g., "I am finally doing some work on my problem."), as the focus of interest was the association between stigmatization and the patient's degree of working actively on his or her problems. In Kendra et al. (2014), the action subscale showed acceptable levels of internal consistency ranging from .88 to .90.

2.2.4 | Beck Depression Inventory

Symptoms of depression were measured with the Beck Depression Inventory (BDI-1A, Beck & Steer, 1987; German version by Hautzinger, Bailer, Worall, & Keller, 1994). This is a commonly used 21-item self-report questionnaire asking about the severity of depressive symptoms within the past week. To indicate symptom severity, patients are asked to choose one out of four statements pertaining to one item with regard to the last week. The inventory has demonstrated an acceptable level of internal consistency (α = .89, Beck, Steer, Ball, & Ranieri, 1996)

2.2.5 | Symptom Checklist-90-Revised

The symptom checklist (SCL) is a 90-item questionnaire originally created by Derogatis (1977); German version created by Franke, 1995)

to measure psychological distress on a variety of nine subscales (such as somatization, depression, or anxiety) and three global scores (such as the global severity index [GSI]). The checklist allows for a broad overview about a person's psychopathology within the last 7 days, whereby each item is rated on a scale ranging from 0 (*not at all*) to 4 (*very much*). The GSI is a widely used scale to provide a global score for the overall level of psychological distress. The internal consistency of the German version has been shown to be acceptable for both the subscales (ranging from.75 to.88) as well as the GSI (α = .97; Hessel, Schumacher, Geyer, & Brähler, 2001).

2.3 | Procedure

Between July 2016 and March 2017, every patient starting treatment in the clinic who was at least 18 years of age was asked to take part in the study on the day after arrival. The study coordinator reached out to each patient and fully explained the purpose and procedure of the study. Subsequently, written informed consent was obtained. Afterwards, the patient filled out the five questionnaires (BDI-1A, Symptom Checklist-90-Revised [SCL-90-R], stigma measurement, TE, and WA measurements) for the first time, with the BDI-1A and the SCL-90-R being standard procedure in the clinic at the beginning of treatment. The subsequent surveys (stigma measurement, TE, and WA measurements) were handed out to participants in weekly intervals (every 10th session). Therapists only knew that a study was being conducted; they did not have any knowledge about its content. Participants were informed that data collection would take place outside the therapeutic treatment setting such that their therapist would not see the data, allowing patients to respond openly. Data collection extended over the entirety of inpatient treatment, mostly between 4 and 6 weeks, depending on the individual treatment period.

2.4 | Statistical analysis

To account for the dependency between observations due to repeated measurement of participants and administration of multiple items per time of measurement, multilevel regression models (Gelman & Hill, 2007) were applied throughout. Dependencies between responses by the same person were modelled with varying intercepts as well as with varying slopes for predictors, which were nonconstant within persons across time. Dependencies between responses on the same item were modelled with varying intercepts. Age, gender, primary diagnosis, and the item asking whether the current treatment was the first treatment in this specific clinic (yes vs. no) were included as control variables.

To investigate the potential causal effect of self-stigma and perceived public stigma on WA and TE in a longitudinal manner, we used time series analyses and predicted WA and TE at week t (where t represents any week during the study except for the very first week) by perceived public stigma and self-stigma at week t-1 (i.e., the week directly preceding week t) while controlling for WA and TE at week t

- 1. Essentially, this represents an autoregressive effect of Order 1 (Brockwell & Davis, 2016). The underlying rationale is that if stigma has a causal effect on WA or TE, it should be predictive even if former levels of WA or TE are controlled for. As an inverse causal relationship is conceivable as well, we additionally predicted perceived public stigma and self-stigma at week t by WA and TE at week t-1 while controlling for perceived public stigma and self-stigma at week t-1. This analysis was realized using the same multilevel regression approach as the other analysis but with additional predictors obtained from the directly preceding week. We did not model higher autoregressive effects, that is, effects extending longer than 1 week (after controlling for the directly preceding week) mainly due to the lack of sufficient data points per participant but also because we had no strong theoretical reasoning to assume such effects.

To avoid data loss, all available data were included in the analysis even if participants did not provide data on all time points, for instance, because some left the clinic regularly after 4 weeks, others after 5 or 6 weeks. Data analysis was done in R (R Core Team, 2017) using the package brms (Bürkner, 2017, 2018), which allows for the fitting of Bayesian multilevel models with Stan . All analysis code and results are reported on the open science framework (OSF) website of this project (https://osf.io/czx7t/).

For the main analyses, stigma, WA, and TE were modelled as normally distributed. However, as they were measured on a 5-point Likert scale, assuming them to be ordinal might actually be more appropriate (Bürkner & Vuorre, 2018). Thus, ordinal multilevel models were performed as a sensitivity analysis. As the results of the ordinal models were qualitatively equivalent to those based on the normal models, the ordinal model results are not reported in the present paper for reasons of brevity but are reported on OSF.

3 | RESULTS

3.1 | Descriptive statistics

Descriptive statistics of the process variables as well as of BDI and SCL total scores measured at baseline are depicted in Table 1. At

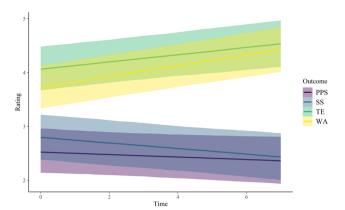


FIGURE 1 Change of self-stigma, perceived public stigma, WA, and TE over the course of psychotherapy. Shaded areas depict 95% credible intervals. PPS, perceived public stigma; SS, self-stigma; WA, working alliance; TE, therapeutic engagement

baseline, we obtained a strong correlation between self-stigma and perceived public stigma (r = .47), although they had a small and non-significant relationship to WA or TE. All measured constructs demonstrated sufficient reliability at baseline (Cronbach's $\alpha \ge 0.8$).

3.2 | Change of self-stigma, perceived public stigma, working alliance, and therapeutic engagement during psychotherapy

As visualized in Figure 1 and detailed in Table 2, perceived public stigma decreased only minimally over time (b = -0.02, 95% CI [-0.04, 0.01]), whereas the change in self-stigma was more pronounced (b = -0.08, 95% CI [-0.12, -0.05]). Both WA and TE increased during psychotherapy (WA: b = 0.10, 95% CI [0.05, 0.15]; TE: b = 0.09, 95% CI [0.04, 0.13]). No relevant average quadratic changes over time were found suggesting that, on average, changes are approximately linear within the investigated time span of 6 weeks (see OSF for results of the quadratic models).

TABLE 1 Descriptive statistics of process variables, Beck Depression Inventory and symptom checklist at baseline

Variable	М	SD	α	SS	WA	TE	BDI	SCL
PPS	2.69	0.57	0.85	.47***	.09	.10	.17	.17
SS	3.00	0.56	0.80		.00	11	.19	.14
WA	3.88	0.77	0.95			.36	.24	.20
TE	4.15	0.64	0.83				08	.00
BDI	21.56	9.41	0.84					.69***
SCL	64.26	8.09	0.96					

Note. The last five columns indicate product-moment correlations.

Abbreviations: BDI, Beck Depression Inventory total score; M, mean; PPS, perceived public stigma; SCL, symptom checklist—global severity index; SD = standard deviation; SS, self-stigma; TE, therapeutic engagement; WA, working alliance; α = Cronbach's alpha.

^{****}p < .001.

TABLE 2 Change of SS, PPS, TE, and WA over the course of psychotherapy

	Coefficient	b	95% CI	SD_b	95% CI	COR_b	95% CI
SS	Intercept	3.28	[2.62, 3.96]	0.51	[0.41, 0.64]	-	-
	Time	-0.08	[-0.12, -0.05]	0.10	[0.07, 0.14]	.01	[36, .42]
PPS	Intercept	2.97	[2.36, 3.62]	0.51	[0.41, 0.63]	-	-
	Time	-0.02	[-0.04, 0.01]	0.05	[0.03, 0.08]	.14	[36, .66]
WA	Intercept	3.25	[2.51, 3.91]	0.69	[0.56, 0.85]	-	-
	Time	0.10	[0.05, 0.15]	0.16	[0.13, 0.20]	36	[61,06]
TE	Intercept	3.70	[3.10, 4.26]	0.58	[0.47, 0.72]	-	-
	Time	0.09	[0.04, 0.13]	0.15	[0.10, 0.20]	59	[76,34]

Note. Coefficients are considered significant if the corresponding 95% CI does not overlap zero.

Abbreviations: b, multilevel regression coefficient; CI, credible interval; COR_b , correlation of the varying intercepts and slopes across persons; PPS, perceived public stigma; SD_b , standard deviation of the varying coefficients across persons; SS, self-stigma; TE, therapeutic engagement; WA, working alliance.

Notably, baseline levels of self-stigma, perceived public stigma, TE, and WA at the start of psychotherapy as well as their change over time varied substantially across participants as indicated by the large standard deviations of the varying coefficients (see fifth column of Table 2). For WA and TE, the baseline levels were negatively correlated with their change over time, presumably because persons starting with high values of WA and TE reached the ceiling of the scale earlier and more often (see seventh column of Table 2)

3.3 | Predicting changes in working alliance and therapeutic engagement by former stigma levels and vice versa

As shown in Table 3, initial stigma levels were not significantly related to changes in WA or TE over the course of therapy. As summarized in Table 4, self-stigma and perceived public stigma at week t-1 were predictive of WA and TE at week t. However, there was substantial variation across patients in these effects as indicated by the corresponding standard deviations of the varying coefficients (see fifth column of Table 4). As summarized in Table 5, WA and TE at week t-1 were predictive of self-stigma at week t but not predictive of perceived public stigma. The negative coefficients point to the

inverse relationship between WA and TE on the one hand and self-stigma and perceived public stigma on the other hand. Although these coefficients varied over patients, the variation was somewhat less pronounced than when predicting WA or TE (compare the fifth column of Table 4 with the fifth column of Table 5). Together, this provides some evidence for the existence of a causal relationship between stigma, WA, and TE, whereby both possible causal directions are conceivable.

4 | DISCUSSION

The aim of this study was to examine how self-stigma and perceived public stigma influence the psychotherapeutic process as experienced by inpatients at the beginning and over the course of treatment.

A substantial correlation (*r* = .47) between self-stigma and perceived public stigma at baseline indicated that both stigma concepts overlap. Both self-stigma and perceived public stigma were unrelated to TE and WA at baseline. Kondrat (2008) also did not find a significant association between stigma (measured with the stigma withdrawal scale and the devaluation and discrimination scale constructed by Link, Struening, Neese-Todd, Asmussen, & Phelan, 2002) and WA. His results were based on interviews with patients suffering from

 TABLE 3
 Initial stigma levels predicting working alliance and therapeutic engagement

		Working alliance		Therapeutic engagement		
Model	Predictor	b	95% CI	b	95% CI	
Time * SS0	Time	0.22	[-0.04, 0.47]	0.09	[-0.17, 0.35]	
	SS0	0.01	[-0.34, 0.35]	-0.03	[-0.34, 0.28]	
	Time * SSO	-0.04	[-0.12, 0.04]	0.00	[-0.08. 0.08]	
Time * PPS0	Time	0.16	[-0.08, 0.40]	0.11	[-0.11, 0.35]	
	PPS0	0.18	[-0.15, 0.51]	0.23	[-0.04, 0.50]	
	Time * PPS0	-0.02	[-0.11, 0.06]	-0.01	[-0.09, 0.07]	

Note. Coefficients are considered significant if the corresponding 95% CI does not overlap zero.

Abbreviations: b, multilevel regression coefficient; CI, credible interval; PPSO, initial level of perceived public stigma; SSO, initial level of self-stigma.

TABLE 4 Stigma levels at time t-1 predicting working alliance and therapeutic engagement at time t

Model	Predictor (t – 1)	b	95% CI	SD_b	95% CI
$SS \to WA$	WA	0.18	[0.10, 0.27]	0.28	[0.22, 0.36]
	SS	-0.15	[-0.25, -0.04]	0.32	[0.23, 0.43]
$PPS \to WA$	WA	0.19	[0.09, 0.29]	0.29	[0.22, 0.38]
	PPS	-0.19	[-0.34, -0.05]	0.40	[0.29, 0.52]
$SS \to TE$	TE	0.17	[0.10, 0.24]	0.13	[0.05, 0.21]
	SS	-0.15	[-0.26, -0.04]	0.22	[0.13, 0.33]
$PPS \to TE$	TE	0.12	[0.04, 0.20]	0.18	[0.07, 0.28]
	PPS	-0.09	[-0.22, 0.05]	0.25	[0.11, 0.40]

Note. Coefficients are considered significant if the corresponding 95% CI does not overlap zero.

Abbreviations: b, multilevel regression coefficient; CI, credible interval; PPS, perceived public stigma; SD_b = standard deviation of the varying coefficients across persons; SS, self-stigma; TE, therapeutic engagement; WA, working alliance.

TABLE 5 Working alliance and therapeutic engagement at time t-1 predicting stigma levels at time t

Model	Predictor (t - 1)	b	95% CI	SD_b	95% CI
$WA \to SS$	SS	0.15	[0.04, 0.26]	0.18	[0.02, 0.32]
	WA	-0.15	[-0.23, -0.08]	0.13	[0.01, 0.24]
$TE \to SS$	SS	0.23	[0.12, 0.35]	0.12	[0.01, 0.28]
	TE	-0.20	[-0.28, -0.13]	0.09	[0.01, 0.19]
$\text{WA} \to \text{PPS}$	PPS	0.06	[-0.02, 0.14]	0.04	[0.00, 0.13]
	WA	-0.05	[-0.11, 0.00]	0.06	[0.02, 0.12]
$T\toPPS$	PPS	0.05	[-0.05, 0.16]	0.04	[0.00, 0.11]
	TE	-0.05	[-0.12, 0.02]	0.05	[0.01, 0.09]

Note. Coefficients are considered significant if the corresponding 95% CI does not overlap zero.

Abbreviations: *b*, multilevel regression coefficient; CI, credible interval; PPS, perceived public stigma; *SD_b*, standard deviation of the varying coefficients across persons; SS, self-stigma; WA, working alliance; TE, therapeutic engagement.

different severe psychological disorders (e.g., schizophrenia or bipolar disorder) who all took part in community-based treatment with varying duration of participation. Furthermore, the lack of association primarily corresponds to the findings reported by Kendra et al. (2014). However, in contrast to our results, these authors found a significant negative correlation between self-stigma and WA.

It is possible that we did not find an association between both facets of stigma and therapy-related measurements at baseline because of the wording of the stigma questionnaire: The questionnaire focuses on general stigma-related aspects rather than specifically asking about stigma beliefs with regard to treatment. A possibly resulting implication has been suggested by Alvidrez, Snowden, and Patel (2010), who stated that when studying stigma throughout psychotherapy, stigma concerns specifically about treatment should be studied more thoroughly than general concerns about stigma. It seems likely that participants did not see a strong connection between their general, nontreatment-related stigma beliefs, and the psychotherapy process variables of TE and WA.

Furthermore, there were also no significant correlations between self-stigma or perceived public stigma and the BDI and SCL-90-R scores at baseline. The nonsignificant correlation between both stigma measurements and the BDI total score is in contrast to both

Kendra et al. (2014)—who found a positive association between self-stigma and depression at baseline—and Manos, Rusch, Kanter, and Clifford (2009), who found increased levels of depression in individuals experiencing self-stigma. Discrepancies between our results and those of Manos and her colleagues may be due to differences in sampling and measurements: Manos, Rusch, Kanter, and Clifford (2009) investigated a sample of participants with exclusively depressive symptoms and furthermore only used questionnaires with items blending self-stigma and depression (e.g. "People tend to like less those who are receiving professional help for depression."). By contrast, our current study included participants with different diagnoses (only 11 participants with a diagnosis of depression) and used measurements that clearly separated aspects of stigma and depressive symptoms.

In line with our predictions, both self-stigma and perceived public stigma decreased over the course of treatment. The decrease in self-stigma was more pronounced than the decrease in perceived public stigma. These results are consistent with Hatzenbuehler (2009) who stated that self-stigma is more closely linked to one's self-concept than perceived public stigma. Specifically, reflecting on one's own perception of the self in psychotherapy seems crucial, promoted by a therapist–patient relationship, which allows for critical questions, new

perspectives, and repeated confrontation with self-related topics. Wade et al. (2011) also found a decrease in self-stigma in a group counselling setting. It seems likely that the patient's reflection on his or her mental disorder through, for example, the knowledge gained during psychoeducation or by learning about internal cognitive processes, positively impacts the view on his or her problems, which in turn translates into reduced self-stigma. In line with the assumption expressed by Kendra et al. (2014), a longer period of data collection allowed for changes in self-stigma to appear. The alliance between patient and therapist might have led to experiential disconfirmation of the patient's fears of being judged or rejected which in turn might have improved the patient's own perspective on his or her mental illness. The therapeutic content focusing on discourse about beliefs concerning both the self and others presumably has been another factor.

Another aspect of the current study is noteworthy: Because the study sample consisted of therapy-experienced inpatients, the participants might have strongly identified as mentally ill, which presumably grew stronger throughout the weeks of inpatient treatment. This group identification again might have led patients to develop a pronounced sense of empowerment (Corrigan & Watson, 2002; Rüsch et al., 2009), entailing reduced self-stigma.

Although perceived public stigma decreased as well, this change was not significant. Perhaps perceived public stigma did not change that much because it was an inpatient setting, meaning that patients were rarely confronted with work, insurance companies, or other contacts outside the therapeutic setting and therefore lacked the opportunity to gain corrective experiences with regard to the public's view on their mental illness. Other studies support the current findings by showing that perceived public stigma is persistent throughout and/or after treatment (Link et al., 2002; Luoma et al., 2008).

As expected, WA and TE increased over the course of psychotherapy. However, this increase was not that pronounced, which might be due to the fact that initial levels were already high.

No evidence was found to support the idea that initial self-stigma and perceived public stigma levels were related to changes in TE and WA over the course of psychotherapy, which is in line with the results reported by Kendra et al. (2014).

Although there did not appear to be an association between the stigma and process measurements investigated in this study at first, taking a longitudinal perspective yielded noteworthy results: Self-stigma and perceived public stigma were able to predict WA and TE from one week to another. Interestingly, the same was shown vice versa for WA and TE being predictive of self-stigma. Hence, there obviously is a negative interrelationship between self-stigma and the process variables of TE/WA at weekly intervals in our study. As an example, a patient evaluating himself high on self-stigma in one week can serve as a predicting variable of low TE and working alliance in the following week. But the same is true the other way around, with—for instance—high TE in one week being predictive of low self-stigma the following week.

These results are in line with Wade et al. (2011) who found that greater WA was associated with a reduction in self-stigma in a one

group session for college students. The authors ascribed this finding to the fact that a strong WA allows patients to develop trust and hope. Higher WA and TE in the previous week might enable a patient to be more open towards the therapist, allowing for a fruitful dialogue that might permit conversation about and strengthening of self-esteem. As self-esteem and self-stigma are closely related (Hatzenbuehler, 2009), a reduction of self-stigma the following week seems likely.

Seen from a different angle, higher self-stigma in one week might impede the patient's willingness and courage to open up to the therapist, perhaps because of shame or low self-esteem, and thereby interfere with the development of WA and TE measured the following week.

The results for perceived public stigma and its interrelations with WA and TE deserve closer consideration. Although perceived public stigma in one week was able to predict WA and TE in the following week-WA and TE did not predict perceived public stigma. Apparently, in our group of participants, higher perceived public stigma impacted on the process of building a trustful therapeutic relationship and the patient's investment and involvement in the process the following week. This is in line with Kendra et al. (2014), assuming people with greater perceived public stigma to trust their psychotherapist less. The expectation to be stigmatized in the psychotherapeutic setting might have reduced the patient's cognitive, emotional, and behavioural flexibility. Perhaps processes suggested by Pachankis (2007) took place, such as a patient scoring high on perceived public stigma being preoccupied or vigilant with regard to the potential stigmatization in the therapeutic setting, causing behaviour such as trying to hide aspects or focusing on making a good impression. A lack of positive growth with regard to TE and WA a week later seems consistent.

The fact that WA and TE did not predict perceived public stigma in the weekly interval shows that the experience of the therapist as a nonstigmatizing person did not suffice to reduce perceived public stigma. This result further emphasizes that perceived public stigma is less close to the processes taking place during psychotherapy than self-stigma is.

4.1 | Limitations and implications for future research

The generalizability of the results is limited given that data collection took place in a specialized setting of inpatient psychotherapeutic treatment. On the one hand, this allows for studying a clinical group with more severe psychopathology compared with an outpatient group. On the other hand, the very intense and high-frequent treatment programme might have affected changes in both self-stigma and perceived public stigma and the other process variables. As a consequence, replicating our findings in an outpatient psychotherapy setting is needed.

Moreover, when interpreting our results, it should be kept in mind that the brief adjustment period to hospitalization could have affected

participants' responses to the questionnaires in the early phase of treatment.

Another shortcoming of the current study was the stigma measurement, which was established and utilized for the first time by Kendra et al. (2014) and therefore is not a commonly used questionnaire with clear evidence concerning validity and reliability. Nonetheless, it suited the purpose of our study, as it allowed for participants with different types of disorders to identify with the items for self-stigma and perceived public stigma in a short, participant-friendly format.

Furthermore, collection of data on the outcomes of treatment would have been very insightful. Hopefully, future research will include such data in order to be able to inform about patients' improvements and scrutinize whether, for instance, stigma was predictive of outcome or whether changes in stigma mediated outcomes.

Finally, we only assessed stigma from the patient's point of view. Future research could benefit from including data such as the therapists' demographics or therapists' ratings on WA and TE. Furthermore, including and questioning families and significant others might offer very interesting and relevant data, a suggestion that will hopefully be taken up by future research.

4.2 | Practical implications

For the practitioner, the current research suggests that an open discourse about stigmatization in general as well as about the individual experiences made by the patient with regard to that topic is indicated. As soon as the therapist allows the topic of stigma into the therapy room, patients are invited to talk and reflect about it, which most likely reduces stigma itself as well as strengthens the therapeutic relationship. In addition, the therapist should be constantly aware that he-being a member of a stigmatizing society himself-serves as an example of how a person approaches a mentally ill patient. Finally, concerning possible public stigmatization, the therapist should ask for the patient's life circumstances and suggest to develop common strategies on how to cope with earlier stigmatization experiences and handle such experiences in the future. In this way, mental health professionals can play an important role as supporters in the fight against mental illness stigmatization (Arboleda-Florez & Stuart, 2012).

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