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## The impact of recovery-oriented day clinic treatment on internalized stigma: Preliminary report

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## ABSTRACT

Internalized stigma is a complicating feature in the treatment of schizophrenia spectrum disorders and considerably hinders the recovery process. The empowerment and recovery-oriented program of our day clinic might contribute to a reduction in internalized stigma. The aim of the study was to explore the influence of this day clinic program on internalized stigma and other subjectively important outcome measures such as quality of life and psychopathology. Data from two groups of patients had been collected twice, at baseline and after 5 weeks. The experimental group attended the day clinic treatment ( $N=40$ ) and the control group waited for the day clinic treatment ( $N=40$ ). The following significant differences between the two groups were found: Patients in day clinic treatment showed a reduction in internalized stigma while the control group showed a minimal increase (Cohen's  $d=0.446$ ). The experimental group as compared with the control group also showed a greater improvement in the quality of life domain psychological health (Cohen's  $d=0.6$ ) and in overall psychopathology (Cohen's  $d=0.452$ ). Interestingly, changes in internalized stigma and psychological quality of life were not associated with changes in psychopathology. Results are encouraging but have to be confirmed in a randomized design.

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### 1. Introduction

Stigmatizing attitudes associated with mental illness and toward people diagnosed with a schizophrenia spectrum disorder in particular continue to persist despite public anti-stigma-campaigns and improvements in psychopharmacological and psychosocial therapies (Angermeyer and Matschinger, 2005; Thornicroft, 2006; Schulze, 2007; Gaebel et al., 2008; Norman et al., 2008; Pescosolido et al., 2010). People with a diagnosis of a schizophrenia spectrum disorder are widely considered by both lay and professional people to be incomprehensible, unreliable, unpredictable, unreasonable, incompetent and dangerous, and their condition is often regarded as untreatable and incurable (Crisp et al., 2000; Stuart and Arboleda-Florez, 2001; Angermeyer and Matschinger, 2004; Klin and Lemish, 2008). A detrimental consequence of such beliefs for people identified as mentally ill is the internalization of stigma. That is, the inner subjective experience of stigma resulting from applying negative stereotypes and stigmatizing attitudes to oneself (Ritsher et al., 2003). Internalized

stigma may contribute to self-devaluation, shame, secrecy and social withdrawal. It makes it difficult to overcome existing barriers to enter and sustain positive relationships, employment and housing (Stuart, 2008; Yanos et al., 2010). Internalized stigma may impact negatively on quality of life (Vauth et al., 2007; Norman et al., 2011; Sibitz et al., 2011b), lead to hospitalization (Rüsch et al., 2009), contribute to poor adherence to treatment (Fung et al., 2008; Tsang et al., 2009) and hinder the recovery process (Ritsher and Phelan, 2004; Amering and Schmolke, 2009; Munoz et al., 2011).

Counteracting internalized stigma and promoting a positive self-image are essential therapeutic goals. Day clinic treatment has shown to be effective in reducing psychiatric symptoms (Oka et al., 1999; Cichocki, 2008; Handa et al., 2009) and readmission rates (Yoshimasu et al., 2002), and can lead to improved quality of life (Handa et al., 2009). It might also contribute to a reduction in internalized stigma, especially if the program is orientated toward recovery and empowerment. The day clinic program at the Medical University of Vienna, Department of Psychiatry and Psychotherapy focuses on people's strengths and promotes self-awareness, self-efficacy, self-esteem, choice, autonomy, hope and recovery. The intent is to counteract self-devaluation and to advance the idea that people with mental illness can lead meaningful and satisfying lives with or without the persistence of

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psychiatric symptoms, and thereby reduce internalized stigma. The program also emphasizes the development of social skills and the management of stigma in social situations. The philosophy of the program is congruent with recovery practices and principles such as promoting partnerships with patients, emphasizing patients' choice, focusing on patients strengths and instilling hope (Farkas et al., 2005; Salyers et al., 2007; Amering and Schmolke, 2009). However, the impact of this kind of day clinic treatment on internalized stigma has not been studied. This study examines the effect of recovery-oriented day clinic treatment on internalized stigma and other subjectively important outcome measures such as quality of life and psychopathology over a period of 5 weeks.

## 2. Methods

### 2.1. Study design

An exploratory pilot study comparing day clinic patients with waiting list controls was conducted. The study hypothesis was that the intensive, recovery-oriented day clinic program would contribute to a reduction in internalized stigma. In addition, we expected a positive effect of the program on quality of life and psychiatric symptoms. The protocol and consent form were approved by the Ethics Committee of the Medical University of Vienna. Participants were recruited once a week at the specialized outpatient clinic for integrative treatment of psychosis of the Department of Psychiatry and Psychotherapy of the Medical University of Vienna. Consecutive patients with a referral to the recovery-oriented day clinic program were screened by a clinical psychiatrist for possible study participation. Inclusion criteria included being aged between 18 and 65 years with a diagnosis of an ICD-10 schizophrenia spectrum disorder, and being motivated to attend the day clinic. Exclusion criteria included not being proficient in German or being unable to provide informed consent. Those meeting study inclusion criteria were approached by the researchers (K.P. and M.L.). After detailed explanation of the study, participants provided written informed consent for participation in the study.

Participants were allocated to one of the two groups, the day clinic group (the experimental group) or the waiting list group (the control group). Allocation to groups depended on the expected waiting period until the next possible start of the day clinic treatment. The mean waiting time until day clinic treatment is about 5 weeks. If the start of the day clinic treatment was possible within the next 5 weeks, participants were allocated to the day clinic group. Otherwise they were allocated to the waiting list control group.

Data were collected at baseline (at the beginning of day clinic treatment or the waiting list period) and again after 5 weeks. This short follow-up period was chosen because the mean waiting time until day clinic treatment is 5 weeks. Thus, with a follow-up period of 5 weeks many patients could be included without artificially extending the waiting time in the control group. Two researchers who were not part of the clinical team (K.P. and M.L.) but who were not blind to group assignment carried out the assessments.

### 2.2. Day clinic program

The day clinic at the Department of Psychiatry and Psychotherapy of the Medical University of Vienna routinely offers patients with a diagnosis of a schizophrenia spectrum disorder the opportunity to participate in a recovery-oriented treatment program over a period of 2 months. A group of nine patients attend and ends the program together. Patients attend groups and activities from 8:00 am until 3:30 pm, Monday to Friday, following a structured weekly schedule. The therapeutic program comprises the full spectrum of therapeutic interventions. Therapies are offered by a multidisciplinary team (psychiatrist, nurse, psychotherapist, occupational therapist, physiotherapist, social worker, psychologist, and nutritionist) and most are performed in groups e.g. psychoeducation, daily living skills and social skills training, physiotherapy, cognitive training, and occupational therapy. In addition, individualized therapy sessions are provided by psychiatrists, psychotherapists, nurses and social worker offering a range of psychopharmacological and psychosocial interventions as appropriate. Relatives' groups take place monthly and individual family interventions are conducted as needed. Group sessions follow an empowerment and recovery-oriented psychoeducational approach. The content and process is based on the manual "Knowing-enjoying-living better. A seminar for people with experience in psychosis" (Amering et al., 2002) and covers illness as well as quality of life related topics. The four illness-related topics are "concept of illness", "symptoms and early warning signs", "medication" and "prejudices and discrimination". The four quality of life related topics are "well-being", "healthy diet and fitness", "cultivating friendships" and "active daily life organization". Group work is conducted

following the principle of "Theme Centered Interaction (TCI)" (Richards et al., 1990) and participants are instructed to discover their own knowledge, a technique called "Guided Discovery" (Mayer, 2004). Professional knowledge is conveyed by facilitators and via written material (flip-charts and handouts). For instance within the sessions covering "prejudices and discrimination" participants discuss and are provided handouts about (1) the empirical correction of myths about schizophrenia, (2) the problem of concealing the diagnosis or being open about it and (3) examples of consumer experiences with prejudices and how to confront them. General and individual strategies to confront prejudices, to deal with discrimination and to counteract internalized stigma are developed, e.g. establishing contact with self-help and dialogue groups (Amering et al., 2012) and developing stigma resistance (Sibitz et al., 2011a). Evaluation of this program among outpatients demonstrated positive effects on knowledge, empowerment, attitudes towards medication and overall quality of life (Sibitz et al., 2007a). Results from a qualitative study also indicated a positive impact on internalized stigma (Sibitz et al., 2007b).

Another important aspect which might be effective against internalized stigma relates to the attitude and mindset of the members of the multidisciplinary therapeutic team. Regular supervision and continuing education about empowerment and recovery in mental health including the consumer perspective help professionals to convey a belief that people can get better, that recovery is possible and to act as "holders of hope" in times of crisis (Glove, 2002). The belief in patients' potential for development and growth, a focus on their strengths and capacities and encouragement in activities that challenge them to develop and gain confidence help to empower individuals and facilitate self-efficacy and self-acceptance. The therapeutic relationships are non-hierarchical, partner-like and respectful, and convey an appreciation of the experiences and views of participants. Participants are encouraged to identify and explore individually helpful therapies and activities. This therapeutic approach with an emphasis on patients' autonomy and empowerment contributes to self-acceptance and fosters a hopeful attitude. Experiencing oneself as a capable individual, whose experience and viewpoints are valued by others is likely to counteract internalized stigma and promote well-being and recovery.

### 2.3. Waiting list control group

Participants in the waiting list control group continued to receive their usual mental health services (treatment as usual). All participants received medication and saw their psychiatrist at least once during the waiting time. Other therapies (e.g. psychotherapy, case management and occupational therapy) were used by less than 50% of the participants. These therapies may also contribute to empowerment and recovery, but were not administered regularly and systematically. Almost all waiting list participants received less than 2 h of professional contact per week.

### 2.4. Measures

Demographic and clinical variables including age, gender, education, work situation, housing, social network, age of onset of mental illness, age at the first hospitalization and number of hospitalizations were recorded on the initial self-report questionnaire.

At baseline and 5 weeks later patients were interviewed by trained researchers using the Positive and Negative Syndrome Scale (PANSS) to assess psychopathology. The PANSS is a 30-item scale that uses a seven-point Likert scale to evaluate current severity level on each symptom in patients with psychosis. The PANSS has subscales for positive symptoms (seven items), negative symptoms (seven items) and general pathology (16 items). The PANSS has demonstrated high internal reliability and good construct validity both in its English (Kay et al., 1987) and German version (Müller et al., 1998).

In addition, the following self-report questionnaires were administered at baseline and at 5 week follow-up:

- (a) The Internalized Stigma of Mental Illness (ISMI) scale, developed by Ritscher et al. (2003) in collaboration with people with the experience of mental illnesses, is a 29-item instrument for self-rated assessment of the subjective experience of stigma. The ISMI consists of five subscales: alienation (e.g. "I feel out of place in the world because I have a mental illness"), stereotype endorsement (e.g. "Mentally ill people tend to be violent"), discrimination experience (e.g. "People discriminate against me because I have a mental illness"), social withdrawal (e.g. "I avoid getting close to people who don't have a mental illness to avoid rejection") and stigma resistance (e.g. "I can have a good, fulfilling life, despite my mental illness"). Each item is rated on a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). The five items of the stigma resistance subscale were reverse-coded. All items were included in the ISMI total score with higher scores indicating higher internalized stigma. The German Version of the ISMI had high internal

consistency with  $\alpha=0.92$  and good test–retest reliability with  $r=0.71$  (Sibitz et al., 2013).

- (b) The World Health Organization Quality of Life Scale WHOQOL-BREF is a valid and reliable 26-item scale based on the WHOQOL-100 Quality of Life Assessment (Harper et al., 1998). The instrument measures overall quality of life (QOL) and general health as well as four distinct QOL domains, covering the areas physical health (pain, energy, sleep, mobility, activities, medication, and work), psychological health (positive and negative feelings, concentration, esteem, body image, and spirituality), social relationships (relationships, support, and sex) and the environment (safety, home, finances, services, information, leisure, environment, and transport). Interviewees respond to the items on a five point Likert scale. The mean domain and overall QOL scores are transformed into a WHOQOL-100 comparable value range of 0–100. In this survey the German version (Angermeyer et al., 2000) was used.

All self-report questionnaires were completed in the presence of a researcher and if necessary, with the assistance of a researcher.

### 2.5. Statistical analysis

Data analysis was performed with PASW Statistics 18 (SPSS). The sample characteristics of patients were analyzed using descriptive statistics. Differences between groups in demographic data and pre-treatment measures were tested using  $\chi^2$  test and *t*-tests. General linear models were employed in the analysis of longitudinal data. *T*-tests were used to calculate effect sizes (Cohen's *d*) for between group data (group  $\times$  time interaction). To test if changes in outcome measures did relate to each other, correlations of mean changes were performed. *P* values of less than 0.05 were considered to be statistically significant; all tests were conducted two-tailed.

## 3. Results

### 3.1. Recruitment

Within the exploratory study it was planned to include 40 people per group. Of the 141 individuals who fulfilled the

inclusion criteria, 44 declined to participate in the study and 97 gave their written informed consent. This initial refusal rate of 31% represents patients who were still interested in and finally attended day clinic treatment. Reasons for declining, among those who provided a reason ( $n=25$ ) were refusing to be a study object in research ( $n=10$ ) and the perceived burden of filling out questionnaires ( $n=15$ ). Of the 46 patients allocated to the experimental group, 40 (87%) were successfully followed up. Of the 51 allocated to the control group, 40 (78%) were successfully followed up. Reasons for dropping out were deterioration of clinical condition with hospitalization ( $n=6$ ), early termination of day clinic treatment ( $n=3$ ) and refusal or unavailability at follow-up ( $n=8$ ). Thus, data for 40 persons per group could be analyzed. No significant differences were found between the baseline variables of those who remained in the study and those who dropped out.

### 3.2. Demographic and clinical variables of study participants

Characteristics of the sample are given in Table 1. Study participants were representative of typical attendees at the day program and of a population of patients with a diagnosis of a schizophrenia spectrum disorder. They showed typical social and vocational impairments. Many were single, did not have a partner, lived alone and only a small minority were in paid employment. The experimental and control groups did not differ significantly on most demographic and clinical variables as well as on most pre-treatment measures. The only significant differences at baseline regarded partnership with more patients in the experimental group having a partner (Table 1), and the ISMI-subscale discrimination experience ( $T=-2.77$ , *d.f.*=78,

**Table 1**  
Demographic and clinical characteristics.

	Experimental group ( <i>n</i> =40)	Control group ( <i>n</i> =40)	Statistical values	<i>d.f.</i>	<i>P</i>
Sex, <i>n</i> (%)			0.205 <sup>a</sup>	1	n.s.
Female	18 (45)	16 (40)			
Male	22 (55)	24 (60)			
Age (years), mean (S.D.)	31.7 (11.3)	32.4 (9.6)	−0.321 <sup>b</sup>	78	n.s.
Family status, <i>n</i> (%)			5.061 <sup>a</sup>	2	n.s.
Single	28 (70)	36 (90)			
Married/living together	7 (17.5)	2 (5)			
Separated	5 (12.5)	2 (5)			
Having a partner, <i>n</i> (%)	11 (27.5)	4 (10)	4.021 <sup>a</sup>	1	< 0.05
Number of friends, mean (S.D.)	4.1 (4.1)	3.2 (2.7)	1.240 <sup>b</sup>	78	n.s.
Social network, <i>n</i> (%)			0.915 <sup>a</sup>	3	n.s.
No or little social contacts	10 (25)	7 (15.5)			
Few acquaintances	5 (12.5)	7 (17.5)			
Few close friends	9 (22.5)	10 (25)			
Sufficient friends	16 (40)	16 (40)			
Living situation, <i>n</i> (%)			4.120 <sup>a</sup>	2	n.s.
With parents	14 (35)	8 (20)			
With partner/children/others	9 (22.5)	6 (15)			
Alone	17 (42.5)	26 (65)			
Education, <i>n</i> (%)			1.093 <sup>a</sup>	1	n.s.
At least high school diploma	14 (35)	19 (47.5)			
Paid work, <i>n</i> (%)	4 (10)	6 (15)	0.457 <sup>a</sup>	1	n.s.
Diagnosis, <i>n</i> (%)			5.933 <sup>a</sup>	2	n.s.
Schizophrenia	23 (57.5)	32 (80)			
Schizoaffective disorder	11 (27.5)	7 (17.5)			
Other F2 disorder	6 (15)	1 (2.5)			
Age of onset of mental illness, mean (S.D.)	23.1 (9.9)	19.7 (8.2)	1.461 <sup>b</sup>	76	n.s.
Age at first admission, mean (S.D.)	26.6 (10.7)	25.2 (7.3)	0.633 <sup>b</sup>	71	n.s.
Years of illness, mean (S.D.)	8.8 (10)	12.8 (10.9)	−1.693 <sup>b</sup>	77	n.s.
Number of hospitalizations, mean (S.D.)	4.2 (4.2)	3.9 (3.8)	0.226 <sup>b</sup>	74	n.s.

<sup>a</sup>  $\chi^2$  test.

<sup>b</sup> *T*-test.

**Table 2**  
Changes in scores of the experimental and control groups from baseline to 5-week follow-up.

	Baseline score	Follow-up score	General linear model ( <i>F</i> values)			Effect size (Cohen's <i>d</i> ) <sup>a</sup>
	Mean (S.D.)	Mean (S.D.)	Time	Group	Group × time	Group × time
<b>ISMI</b>						
<i>Alienation</i>						
<i>Experimental group</i>	2.395 (0.772)	2.116 (0.691)				
<i>Control group</i>	2.500 (0.711)	2.579 (0.715)	3.281	3.497	10.531**	0.725
<i>Stereotype endorsement</i>						
<i>Experimental group</i>	1.883 (0.567)	1.822 (0.478)				
<i>Control group</i>	1.980 (0.480)	2.015 (0.506)	0.081	1.914	1.092	0.234
<i>Discrimination experience</i>						
<i>Experimental group</i>	2.045 (0.659)	1.995 (0.589)				
<i>Control group</i>	2.422 (0.556)	2.450 (0.643)	0.042	10.986**	0.494	0.157
<i>Social withdrawal</i>						
<i>Experimental group</i>	2.096 (0.763)	2.048 (0.604)				
<i>Control group</i>	2.483 (0.666)	2.488 (0.661)	0.134	8.868**	0.190	0.097
<i>Stigma resistance</i>						
<i>Experimental group</i>	2.600 (0.700)	2.660 (0.594)				
<i>Control group</i>	2.525 (0.485)	2.435 (0.448)	0.092	1.661	2.295	−0.338
<i>Total score</i>						
<i>Experimental group</i>	2.151 (0.563)	2.049 (0.465)				
<i>Control group</i>	2.354 (0.436)	2.399 (0.508)	0.604	7.046*	3.985*	0.446
<b>WHOQOL-BREF</b>						
<i>Physical health</i>						
<i>Experimental group</i>	58.482 (17.528)	61.250 (17.581)				
<i>Control group</i>	54.033 (18.145)	57.679 (16.307)	5.092*	1.225	0.095	−0.069
<i>Psychological health</i>						
<i>Experimental group</i>	47.708 (19.542)	57.500 (18.686)				
<i>Control group</i>	43.438 (17.999)	44.375 (20.139)	10.576**	4.869*	7.202**	−0.600
<i>Social relationships</i>						
<i>Experimental group</i>	49.893 (18.357)	55.833 (19.630)				
<i>Control group</i>	40.625 (22.972)	38.125 (20.920)	0.567	11.456**	3.415	−0.413
<i>Environmental aspects</i>						
<i>Experimental group</i>	60.938 (17.014)	64.609 (16.081)				
<i>Control group</i>	62.578 (17.123)	63.359 (16.184)	1.698	0.004	0.716	−0.189
<i>Overall QOL</i>						
<i>Experimental group</i>	46.875 (19.764)	57.188 (22.977)				
<i>Control group</i>	42.188 (23.289)	46.563 (18.986)	10.513**	3.323	1.718	−0.293
<b>PANSS</b>						
<i>Positive</i>						
<i>Experimental group</i>	15.075 (3.675)	13.563 (2.889)				
<i>Control group</i>	15.225 (4.035)	14.225 (3.952)	11.741**	0.307	0.489	0.156
<i>Negative</i>						
<i>Experimental group</i>	19.725 (5.144)	18.325 (5.549)				
<i>Control group</i>	18.775 (4.969)	19.100 (5.027)	1.372	0.007	3.532	0.420
<i>General</i>						
<i>Experimental group</i>	34.925 (6.451)	31.875 (5.721)				
<i>Control group</i>	35.375 (6.384)	34.485 (6.941)	9.948**	1.418	2.990	0.386
<i>Total score</i>						
<i>Experimental group</i>	69.725 (12.874)	63.763 (11.065)				
<i>Control group</i>	69.375 (12.481)	67.810 (13.811)	12.004**	0.506	4.097*	0.452

<sup>a</sup> *d* = 0.2 indicates a small effect, *d* = 0.5 indicates a moderate effect and *d* = 0.8 indicates a large effect.

\* *P* < 0.05.

\*\* *P* < 0.01.

*p* = 0.007) and social withdrawal (*T* = −2.42, *d.f.* = 78, *p* = 0.018) with higher internalized stigma levels within the control group.

### 3.3. Outcome measures

Table 2 shows the changes in scores of the experimental and control groups from baseline to 5-week follow-up. There were moderate and significant change differences between groups on measures of internalized stigma (ISMI total score and subscale alienation), the quality of life domain psychological health and psychopathology (PANSS total score). For the ISMI total score and the ISMI subscale alienation there was a significant group by time interaction indicating a difference between both groups concerning the change over time. In the experimental group internalized stigma, especially the subscale alienation decreased

while it slightly increased within the control group. Significant group effects for the ISMI subscales discrimination experience and social withdrawal refer to higher internalized stigma within the control group at both time points and for the ISMI total score at follow-up.

For the quality of life domain psychological health there was a significant group effect, a significant time effect and a significant group by time interaction. This indicates that the experimental and control group differed in their psychological health at follow-up with higher values within the experimental group. It also indicates that psychological health improved over time in both groups and that it improved to a greater extent for the experimental group than it improved for the control group. For the quality of life domain social relationships there was a significant group effect indicating a difference between the experimental and

the control group at follow-up with higher values within the experimental group. Significant time effects regarding physical health and overall quality of life demonstrated improvements over time in both groups with no significant difference between groups.

For the PANSS total score there was a significant time effect and a significant group by time interaction which indicate a significant reduction in psychopathology over time in both groups and a significant difference between groups with a greater reduction in psychopathology within the experimental group. Significant time effects were found for the PANSS positive and the PANSS general subscales indicating a reduction of symptoms over time in both groups with no significant difference between groups.

#### 3.4. Correlations between changes in internalized stigma, quality of life and psychiatric symptomatology in the experimental and control group

To test if significant group by time interactions were associated with each other, correlations between mean changes in internalized stigma (ISMI total score), mean changes in quality of life (psychological quality of life) and mean changes in psychopathology (PANSS total score) were performed for both the experimental and the control group. In the experimental group changes did not correlate significantly: Changes in Internalized stigma with changes in psychological quality of life  $r = -0.258$ ,  $p = 0.107$ ; changes in internalized stigma with changes in psychopathology  $r = 0.154$ ,  $p = 0.343$  and changes in psychological quality of life with psychopathology  $r = -0.073$ ,  $p = 0.653$ . In the control group changes in internalized stigma were significantly associated with changes in psychological quality of life ( $r = -0.397$ ,  $p < 0.05$ ) while changes in internalized stigma were not associated with changes in psychopathology ( $r = 0.011$ ,  $p = 0.946$ ). No significant association was found between changes in psychological quality of life and psychopathology ( $r = 0.175$ ;  $p = 0.280$ ).

## 4. Discussion

Since internalized stigma may have a negative impact on adherence to treatment, quality of life and recovery, it is crucial to counteract it. The findings from this study support the idea that a day clinic program focusing on empowerment, recovery and stigma reduction made a positive contribution to reducing internalized stigma and promoting well-being in a clinical population diagnosed with a schizophrenia spectrum disorder. This is in accord with other studies which reported a decline in self-stigma among patients participating in a vocational rehabilitation program (Lysaker et al., 2012) or in specialized self-stigma reduction programs (Fung et al., 2011; Lucksted et al., 2011).

In contrast to a small study by Yanos et al. (2012) who did not find superior effects of a group-based treatment for internalized stigma over treatment as usual consisting of comprehensive evidence-based psychosocial services we found that internalized stigma decreased in the group with intensive day clinic treatment while it slightly increased within the waiting list control group. The most pronounced change was on the ISMI subscale alienation, or feeling out of place in the world. The control group received little contact with health professionals (less than 2 h/week) and may have been socially isolated in contrast to the intensive contact in the treatment group. This may account for some of the variance in the change in alienation. In addition, elements of the recovery-oriented day clinic program such as an explicit focus on issues to do with quality of life, self-determination and growth

(Farkas et al., 2005), the attempt to alter stigmatizing beliefs and to develop strategies for stigma management and the emphasis on group participation, acceptance and belonging might be responsible for this positive effect. Both, confronting prejudices and improving self-esteem and empowerment are established strategies to reduce internalized stigma (Mittal et al., 2012).

Another factor which might contribute to a reduction of internalized stigma is the closed group setting (a group of people starts and ends the therapy together and most therapies are offered via group mode). Coming together with other people with a diagnosis of a schizophrenia spectrum disorder, and getting to know their strengths, skills and potentials helps to dismantle one's own prejudices toward schizophrenia spectrum disorders (Sibitz et al., 2007b). In addition, the exchange with people with similar symptoms contributes to the experience of not being the only one affected by the disorder. Experiencing universality, i.e. the feeling of having problems similar to others, is an essential therapeutic factor of group participation (Yalom, 1995). Group identification and social support might help to counteract the feeling of alienation. Another favorable condition might be that the day clinic treatment does not entirely remove participants from their usual social milieu and supportive networks. Through skills development and intensive therapeutic work participants gain new insights and fresh strategies which they can immediately apply to their life and social relationships outside of the clinic. This is supported by a recent study by Verhaeghe et al. (2008) which showed that part-time hospitalized patients reported less social rejection compared with full-time hospitalized patients.

The day clinic group showed significant improvements in the quality of life domain psychological health, an essential aspect of subjective well-being. The positive impact of the day clinic program on internalized stigma could be one possible explanation for the improved well-being since internalized stigma is related to poor quality of life (Lysaker et al., 2007; Vauth et al., 2007; Yanos and Moos, 2007; Ho et al., 2010; Corrigan et al., 2011; Norman et al., 2011; Sibitz et al., 2011b). However, in our study significant associations of changes in internalized stigma with changes in quality of life were found only for the control group and not for the experimental group. This has not been expected and might change in future studies with a bigger sample size. However, the weak correlations of changes in internalized stigma with changes in quality of life found in our study might also point to the difference between constructs and indicate that associations of internalized stigma with other variables established by cross-sectional studies (Livingston and Boyd, 2010) does not allow drawing conclusions about the causality between variables. Another aspect responsible for the increase in psychological quality of life might be the use of the quality of life oriented psycho-educational program, a program with documented positive effects on well-being (Sibitz et al., 2007a). Positive effects of health promotion in schizophrenia spectrum disorders, especially on psychological well-being, have been reported previously (McCay et al., 2006; Gretchen-Doorly et al., 2009). Participants at the day clinic also receive individual counseling sessions and intensive group therapy. A recent study examining the effect of services on quality of life demonstrated that the use of counseling services contributed to increases in quality of life while inpatient services contributed to decreases in quality of life (Marcussen et al., 2010).

The intensive treatment in the day clinic is likely to have contributed to improvements in overall psychopathology in the experimental group. Interestingly, changes in symptoms were not associated with changes in internalized stigma or in quality of life. This is in accordance with findings from psychoeducational interventions showing that quality of life could be improved even

if psychopathology did not change significantly (Atkinson et al., 1996; Pekkala and Merinder, 2000) and the same may be true for stigma. The superiority of day clinic treatment compared to care as usual on symptom severity found in our study has been reported previously (Oka et al., 1999; Cichocki, 2008). However a Cochrane review comparing day clinic care versus outpatient care for people with a diagnosis of a schizophrenia spectrum disorder suggested that there is insufficient evidence of the superiority of day clinic over outpatient care (Marshall et al., 2001; Shek et al., 2009).

The small sample size and limited statistical power in this study might have contributed to fewer significant differences being found between groups. In particular, changes within the quality of life domain social relationships and the PANSS negative symptoms subscale were more favorable in the experimental group and might have reached statistical significance with a larger number of study participants. For pragmatic and equity reasons participants were not randomised to treatment. A possible consequence of the lack of randomization is that patients in the control group had higher baseline levels of internalized stigma which might have had an influence on the results. However, in general worse baseline measures imply more potential for improvement. Another selection bias refers to the fact that patients who were able to show up for an introductory talk and who after a waiting period attended the day clinic program might be less severely ill. More intensive home care, e.g. assertive community treatment (Drukker et al., 2011) would be necessary to reach those severely ill and social recursive people and to motivate them for participation in the day clinic program. Another point is that level of internalized stigma has not been included as an inclusion criterion. Therefore, people with a relatively low level of internalized stigma did also participate in the study, which might have contributed to smaller effects on internalized stigma. However, from our qualitative study on stigma resistance (Sibitz et al., 2011a) we know that the stigma attached to people with a diagnosis of a schizophrenia spectrum disorder is omnipresent and people have to deal with it on an everyday basis. Thus, small changes in internalized stigma might be relevant.

Another limitation is the relatively short period of observation. Further research should include longer periods of observation and follow-up assessments to investigate how stable changes are and they should include other important variables such as adherence to treatment and recovery. Also, using a waiting list design it is not possible to answer the question about the specific effectiveness of our recovery-oriented day clinic program. Compared to the control group who had little weekly professional contact and were more socially isolated, people in day clinic treatment might have experienced a sense of relief at finding a place where they felt welcome and accepted. This might have contributed to the observed changes, especially to the most pronounced change of a decline in alienation. Thus, whether the observed changes were produced by the intensity of the therapeutic interventions, by the fact that a group of people came together on a regular basis or by the recovery orientation of the program should be examined further. Future studies might compare the day clinic program with other intensive therapeutic approaches (e.g. hospital admission, another day clinic program) or with a control group engaged in some form of non-therapeutic group activity (e.g. discussing the daily news). Also, the comparison of the complex and holistic approach of the recovery-oriented day clinic program with specialized stigma reduction programs would be interesting. These studies should also include a measurement of the recovery orientation of the services under study (O'Connell et al., 2005).

In conclusion intensive recovery focused day clinic treatment appears promising in reducing not only psychopathology but also

levels of internalized stigma. Quality of life and measures of internalized stigma appear to be useful and meaningful outcome measures congruent with recovery focused service provision. This study addresses some of the criticisms by Shek et al. (2009) regarding the Cochrane review about day clinic care versus outpatient care for people with a diagnosis of a schizophrenia spectrum disorder that "day hospital care may help avoid inpatient care but data are lacking or missing on a raft of outcomes that are now considered important, such as quality of life, satisfaction, healthy days, and cost". The present exploratory study furthers the evidence that day clinic treatment might contribute to well-being and for the first time it has been shown that it might reduce internalized stigma. These results should be confirmed within a randomized controlled trial representing the next phase in a phased approach to the evaluation of a complex program of interventions (Campbell et al., 2000). In addition, future studies are necessary to explore the specific effectiveness of the day clinic treatment and to assess the stability of the outcomes achieved over time.

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