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BRIEF REPORT

Involuntary hospitalization, stigma stress and suicidality: a longitudinal study

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Abstract

People with severe mental illness and a history of involuntary hospitalization may experience stigma-related stress and suffer negative consequences as a result. However, the long-term impact of stigma stress on suicidality in this population remains unknown. This longitudinal study therefore examined stigma stress, self-stigma, self-esteem and suicidal ideation among 186 individuals with mental illness and recent involuntary hospitalization. After adjusting for age, gender, diagnoses and symptoms, more stigma stress at baseline predicted suicidal ideation after 2 years, mediated by increased self-stigma and decreased self-esteem after 1 year. Anti-stigma interventions that reduce stigma stress and self-stigma could therefore support suicide prevention.

Keywords Compulsory admission · Coercion · Stigma stress · Self-stigma · Suicidality

Introduction

Involuntary psychiatric hospitalization can be experienced as demoralizing and stigmatizing by people with severe mental illness [1]. According to stress-coping models of stigma [2], stigma stress occurs if stigmatized individuals experience stigma-related harm as exceeding their coping resources. Involuntarily admitted individuals may therefore suffer from stigma stress when they feel they cannot cope with the stigma associated with their mental illness and their involuntary admission. Stigma stress is typically associated with self-stigma (e.g. "I am mentally ill, thus I must be dangerous"), which is in turn associated with low self-esteem, demoralization and failure to pursue one's life goals [3–5]. Recent studies suggest that different aspects of stigma are risk factors for suicidality among people with mental illness [6]. Stigma stress led to social isolation, low self-esteem and hopelessness, which all contributed to suicidality [3, 7]; and self-stigma was associated with increased suicidal ideation, mediated by low self-esteem and lack of self-efficacy [8].

The long-term consequences of stigma may be particularly harmful for people with mental illness who receive involuntary treatment. In a longitudinal study, perceived coercion led to more perceived public stigma, resulting in low self-esteem and poor quality of life over time [1]. Stigma stress was associated with self-stigma, low self-esteem and poor quality of life among individuals with a history of recent compulsory admission in our sample at baseline [9]. However, the longitudinal impact of mental illness stigma on suicidality among this population remains unclear.

This 2-year study therefore examined a model in which stigma-related stress predicted suicidality, mediated by self-stigma and self-esteem (Fig. 1). We expected that more stigma-related stress at baseline would be associated with suicidal ideation at 2-year follow-up, mediated by increased self-stigma and decreased self-esteem at 1-year

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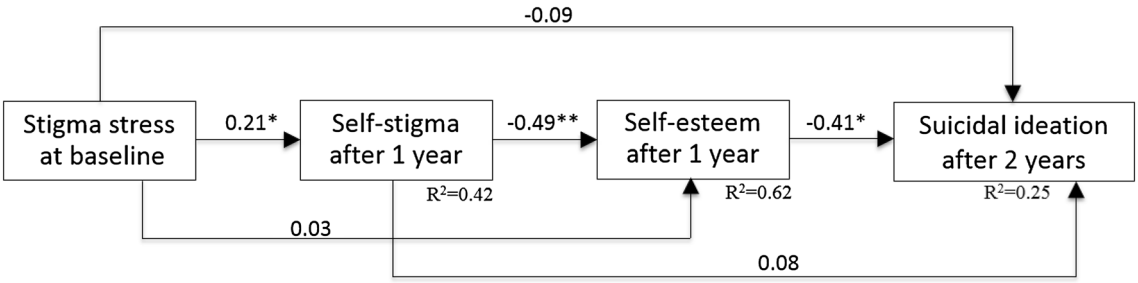

Fig. 1 A three-path mediation model of stigma stress, self-stigma, self-esteem and suicidal ideation, controlling for baseline levels of dependent variables as well as for age, gender, psychiatric symptoms, diagnoses and intervention status. *$p < 0.05$, **$p < 0.01$. Standardized coefficients

follow-up, controlling for age, gender, psychotic symptoms and diagnoses.

Methods

Participants

Data were collected as part of an RCT to test the efficacy of an intervention including psychoeducation, crisis cards and preventive monitoring to reduce compulsory psychiatric admissions [10]. Altogether 238 adult psychiatric inpatients were recruited to the trial in the Canton of Zürich, Switzerland. Details of study design, sample characteristics and recruitment are described elsewhere [10]. Participants fulfilled the following inclusion criteria: (a) at least one involuntary psychiatric hospitalization in the past 24 months, (b) age between 18 and 65 years, and (c) living in the Canton of Zürich, Switzerland. The study was approved by the regional ethics committee of Zürich, Switzerland, and all participants provided written informed consent. Eligible participants were randomized to the intervention group or to treatment as usual and were assessed at baseline, 1- and 2-year follow-up. At baseline, stigma data were available from 186 participants [9]. According to ICD-10 and available from medical records, the most common psychiatric diagnoses were affective ($n = 80$, 43%), substance-related ($n = 80$, 43%), and psychotic disorders ($n = 50$, 27%). Ninety participants (48%) had more than one psychiatric diagnosis, 23 (12%) only a substance-related disorder, and 57 (31%) a mental disorder and a comorbid substance-related disorder. Questionnaires were completed by 152 (82%) after 1 year and 141 (76%) after 2 years.

Measures

As in previous studies [3, 7, 11], stigma stress was assessed at baseline by the 8-item Stigma Stress Scale [2], adapted from Kaiser et al.'s [12] measure of cognitive appraisal of sexism, with 4 items on the primary appraisal of mental illness stigma as harmful (e.g. "Prejudice against people with mental illness will have harmful or bad consequences for me"; $\alpha = 0.95$) and 4 items on the secondary appraisal of perceived coping resources (e.g. "I have the resources I need to handle problems posed by prejudice against people with mental illness"; $\alpha = 0.86$). Higher item scores from 1 to 7 represented higher agreement. Stigma stress was computed by subtracting perceived coping resources from perceived harmfulness, yielding a difference score from -6 to $+6$ as in previous studies.

Self-stigma was measured by the 29-item Internalized Stigma of Mental Illness Scale [13] (omitting its 5-item stigma resistance subscale due to poor internal consistency in our sample, $\alpha = 0.54$ [9]) with mean scores from 1 to 4 on the remaining 24 items ($\alpha = 0.94$). Self-esteem was assessed with the 10-item Rosenberg Self-Esteem Scale [14], yielding mean scores from 0 to 3 ($\alpha = 0.89$). Self-stigma and self-esteem were assessed at baseline and 1-year follow-up.

Suicidal ideation was measured by one item from the Brief Psychiatric Rating Scale (BPRS [15]) about desire, intent or actions to harm or kill oneself (1 = not present, 2 = very mild, 3 = mild, 4 = moderate, 5 = moderately severe, 6 = severe, 7 = extremely severe) at baseline and 2-year follow-up. Due to skewed data, this item was converted into a binary variable (score = 1/without suicidal ideation; score ≥ 2/with suicidal ideation). Symptoms were assessed by the BPRS, omitting the suicidality item. For all scales, higher scores indicated higher levels of the measured constructs.

Statistical analyses

Data were analyzed using SPSS 21 and MPlus 7.4 [16]. First, independent t-test or Chi square tests were used to compare baseline sociodemographic and clinical variables between dropouts and non-dropouts. Second, a three-path mediation model was tested in a path analysis framework using MPlus and Full Information Maximum Likelihood estimation, controlling for age, gender, intervention status (intervention vs. control group), symptoms and diagnoses as

well as baseline levels of self-stigma, self-esteem and suicidal ideation. Standardized coefficients and 95% confidence intervals were based on 1000 bootstrapped standard errors.

Results

The descriptive statistics of sociodemographic and clinical variables are shown in Online Table 1. There was no significant difference between dropouts and non-dropouts in terms of sociodemographic and baseline clinical characteristics, except for non-dropouts being older than dropouts ($M = 44.5$ vs. $M = 38.9$, $t = 2.8$, $p = 0.005$). At baseline as well as at 1- and 2-year follow-up, 98 (53% of 186), 51 (34% of 152) and 56 participants (40% of 141) reported suicidal ideation, respectively.

The path analysis showed good model fit ($\chi^2 = 10.57$, $df = 10$, $\chi^2/df = 1.06$, $p = 0.39$; RMSEA = 0.02, CFI = 0.992, TLI = 0.970, WRMR = 0.489). Figure 1 describes the model with all pathways and standardized path coefficients. While stigma stress at baseline had no significant direct effect on suicidal ideation after 2 years, a significant three-path mediation effect of self-stigma and self-esteem at 1-year follow-up was found ($\beta = 0.04$, 95% CI 0.003 to 0.123). Stigma stress at baseline was positively associated with self-stigma at 1-year follow-up which was negatively related to self-esteem after 1 year. Lower self-esteem at 1-year follow-up predicted suicidal ideation after 2 years. More stigma stress at baseline had a negative effect on self-esteem after 1 year, mediated by increased self-stigma at 1-year follow-up ($\beta = -0.10$, 95% CI −0.217 to −0.012). The link between self-stigma at 1-year follow-up and suicidal ideation after 2 years was mediated by decreased self-esteem at 1-year follow-up ($\beta = 0.20$, 95% CI 0.030 to 0.377). The path model explained 25% of the total variance in suicidal ideation.

Discussion

Supporting our hypothesis, increased stigma stress at baseline predicted suicidality after 2 years, mediated by increased self-stigma and decreased self-esteem after 1 year and adjusted for age, gender, diagnoses, symptoms and intervention. The findings add to previous research on mental illness stigma contributing to suicidality [6, 17] and offer insight into possible mechanisms among people with mental illness and a history of involuntary hospitalization. The findings are also consistent with the "why try" effect [4] that due to self-stigma individuals feel unable or unworthy to pursue their life goals.

Recent research indicates that stigma contributes to suicidality among people with severe mental illness, individuals at risk of psychosis, and among people with a history of mental health service use who had potentially been labeled as mentally ill [3, 7, 8]. Future research should compare effects of stigma stress on suicidality between people with and without a history of involuntary hospitalization, to further investigate whether our findings are specific for people with experience of compulsory admission.

Limitations of our study need to be taken into account. The longitudinal design of the current study provides initial evidence for the impact of stigma stress on suicidality among people with mental illness and a history of involuntary hospitalization, but it does not prove causality. One-fourth of the participants had dropped out after 2 years and on average dropouts were younger. Suicidal ideation was measured by only one item. Some potential mediator variables, e.g. hopelessness and social isolation, were not examined.

Despite these limitations, our findings suggest that efforts to reduce stigma stress may support suicide prevention. For example, the peer-led Honest, Open, Proud program, developed by Corrigan and colleagues in the US and previously known as Coming Out Proud, supports individuals with mental illness in their disclosure decisions and reduces stigma stress and self-stigma; its impact on suicidality has not been examined so far [18–20]. Interventions targeting self-stigmatizing cognitions and enhancing one's abilities to cope with self-stigma could improve the sense of self-worth and thus decrease suicide risk. Efforts to address the public stigma associated with mental illness are also likely to improve social inclusion and reduce stigma stress as well as self-stigma [21]. Future research should test anti-stigma interventions and their effects on suicidality for people with mental illness and a history of involuntary hospitalization. Future studies should also investigate whether interventions that reduce compulsory admissions and its consequences may improve suicide prevention.

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Compliance with ethical standards

Conflict of interest The authors have no conflicts of interest.

References

1. Link B, Castille DM, Stuber J (2008) Stigma and coercion in the context of outpatient treatment for people with mental illnesses. Soc Sci Med 67:409–419
2. Rüsch N, Corrigan PW, Wassel A, Michaels P, Olschewski M, Wilkniss S, Batia K (2009) A stress-coping model of mental illness stigma: I. Predictors of cognitive stress appraisal. Schizophr Res 110:59–64
3. Farrelly S, Jeffery D, Rüsch N, Williams P, Thornicroft G, Clement S (2015) The link between mental health-related

discrimination and suicidality: service user perspectives. Psychol Med 45:2013–2022
4. Corrigan PW, Larson JE, Rüsch N (2009) Self-stigma and the "why try" effect: impact on life goals and evidence-based practices. World Psychiatry 8:75–81
5. Katsakou C, Rose D, Amos T, Bowers L, McCabe R, Oliver D, Wykes T, Priebe S (2012) Psychiatric patients' views on why their involuntary hospitalisation was right or wrong: a qualitative study. Soc Psychiatry Psychiatr Epidemiol 47:1169–1179
6. Carpiniello B, Pinna F (2017) The reciprocal relationship between suicidality and stigma. Front Psychiatry 8:35
7. Xu Z, Müller M, Heekeren K, Theodoridou A, Metzler S, Dvorsky D, Oexle N, Walitza S, Rössler W, Rüsch N (2016) Pathways between stigma and suicidal ideation among people at risk of psychosis. Schizophr Res 172:184–188
8. Oexle N, Rüsch N, Viering S, Wyss C, Seifritz E, Xu Z, Kawohl W (2017) Self-stigma and suicidality: a longitudinal study. Eur Arch Psychiatry Clin Neurosci 267:359–361
9. Rüsch N, Müller M, Lay B, Corrigan PW, Zahn R, Schönenberger T, Bleiker M, Lengler S, Blank C, Rössler W (2014) Emotional reactions to involuntary psychiatric hospitalization and stigma-related stress among people with mental illness. Eur Arch Psychiatry Clin Neurosci 264:35–43
10. Lay B, Salize HJ, Dressing H, Rüsch N, Schönenberger T, Bühlmann M, Bleiker M, Lengler S, Korinth L, Rössler W (2012) Preventing compulsory admission to psychiatric inpatient care through psycho-education and crisis focused monitoring. BMC Psychiatry 12:136
11. Rüsch N, Heekeren K, Theodoridou A, Müller M, Corrigan PW, Mayer B, Metzler S, Dvorsky D, Walitza S, Rössler W (2015) Stigma as a stressor and transition to schizophrenia after one year among young people at risk of psychosis. Schizophr Res 166:43–48
12. Kaiser CR, Major B, McCoy SK (2004) Expectations about the future and the emotional consequences of perceiving prejudice. Pers Soc Psychol Bull 30:173–184
13. Ritsher JB, Otilingam PG, Grajales M (2003) Internalized stigma of mental illness: psychometric properties of a new measure. Psychiatry Res 121:31–49
14. Rosenberg M (1965) Society and the adolescent self-image. Princeton University Press, Princeton
15. Lukoff D, Liberman RP, Nuechterlein KH (1986) Symptom monitoring in the rehabilitation of schizophrenic patients. Schizophr Bull 12:578–602
16. Muthén L, Muthén B (1998–2002) Mplus user's guide, 7th edn. Los Angeles
17. Oexle N, Rüsch N (2018) Stigma-risk factor and consequence of suicidal behavior [Stigma - Risikofaktor und Konsequenz suizidalen Verhaltens]. Nervenarzt. https://doi.org/10.1007/s00115-017-0450-8 **(publ online)**
18. Rüsch N, Abbruzzese E, Hagedorn E, Hartenhauer D, Kaufmann I, Curschellas J, Ventling S, Zuaboni G, Bridler R, Olschewski M, Kawohl W, Rössler W, Kleim B, Corrigan PW (2014) Efficacy of Coming Out Proud to reduce stigma's impact among people with mental illness: pilot randomised controlled trial. Br J Psychiatry 204:391–397
19. Corrigan P, Larson J, Michaels P, Buchholz B, Del Rossi R, Fontecchio M, Castro D, Gause M, Krzyzanowski R, Rüsch N (2015) Diminishing the self-stigma of mental illness by Coming Out Proud. Psychiatry Res 229:148–154
20. Mulfinger N, Müller S, Böge I, Sakar V, Corrigan PW, Evans-Lacko S, Nehf L, Djamali J, Samarelli A, Kempter M, Ruckes C, Libal G, Oexle N, Noterdaeme M, Rüsch N (2018) Honest, Open, Proud for adolescents with mental illness: pilot randomized controlled trial. J Child Psychol Psychiatry. https://doi.org/10.1111/jcpp.12853 **(publ online)**
21. Evans-Lacko S, Brohan E, Mojtabai R, Thornicroft G (2012) Association between public views of mental illness and self-stigma among individuals with mental illness in 14 European countries. Psychol Med 42:1741–1752