Pathways between stigma and suicidal ideation among people at risk of psychosis

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ABSTRACT

Mental illness stigma may contribute to suicidality and is associated with social isolation and low self-esteem among young people at risk of psychosis. However, it is unclear whether mental illness stigma contributes to suicidality in this population. We therefore examined the associations of self-labeling and stigma stress with suicidality among young people at risk. Self-labeling as "mentally ill", stigma stress, social isolation, self-esteem, symptoms and suicidal ideation were assessed in 172 individuals at risk of psychosis. Self-labeling and stigma stress were examined as predictors of suicidality by path analysis. Increased self-labeling as "mentally ill" was associated with suicidality, directly as well as indirectly mediated by social isolation. More stigma stress was related to social isolation which in turn was associated with low self-esteem, depression and suicidal ideation. Social isolation fully mediated the link between stigma stress and suicidal ideation. Interventions to reduce the public stigma associated with risk of psychosis as well as programs to facilitate non-stigmatizing awareness of at-risk mental state and to reduce stigma stress among young people at risk of psychosis might strengthen suicide prevention in this population.

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1. Introduction

Already prior to the onset of psychosis, individuals at risk may suffer from the stigma and discrimination associated with mental illness. Two models help explain how stigma affects young people at risk. First, according to modified labeling theory (Link et al., 1989) the mental illness label exposes labeled individuals to stigma and discrimination. Young people at risk may label themselves as "mentally ill" when they experience early signs of psychosis or access mental health services. They may therefore withdraw from social networks which is associated with impaired self-esteem and negative emotions (Rüsch et al., 2014b, 2014c; Yang et al., 2015). Second, stress-coping models conceptualize stigma as a stressor for stigmatized individuals (Rüsch et al., 2009a, 2009b). Stigma stress occurs if individuals perceive stigma-related harm as exceeding their resources to cope with this threat. In a recent report based on the same sample as the current study, higher stigma stress was associated with transition to schizophrenia after one year (Rüsch et al., 2015). As a consequence of stigma stress, young people

at risk may limit their social interactions, resulting in loss of self-esteem and hopelessness (Rüsch et al., 2014b, 2014c).

Two conceptualizations provide explanatory frameworks for direct and indirect associations between stigma and suicidality in this group (Rüsch et al., 2014d). First, the stress-diathesis model (van Heeringen, 2012) suggests that suicide is a result of stressors and vulnerability. Accordingly, the cognitive appraisal of stigma as a stressor, or stigma stress, may be a risk factor for suicidality in this population. Second, the interpersonal theory of suicide proposes that low belongingness or social alienation as well as a sense of burdensomeness or low self-worth contribute to suicidality (van Orden et al., 2010). These are consistent with the negative effects of stigma among young people at risk, which include social isolation and low self-esteem (Rüsch et al., 2014b, 2014c). Therefore, stigma may contribute to suicidality among young people at risk because consequences of stigma are also predictors of suicidality.

Emerging findings suggest that stigma contributes to suicidality among people with mental illness (Rüsch et al., 2014d). More than half of people with serious mental illness who attempted suicide reported stigma contributed to their feeling at their worst (Eagles et al., 2003). In a population-based study lower public social acceptance of persons with mental illness predicted higher national suicide rates (Schomerus et al., 2015). Perceived public stigma contributed to suicidality among

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individuals who had used mental health services and thus been potentially labeled as 'mentally ill' (Oexle et al., 2016). In a recent study of people with severe mental illness (Farrelly et al., 2015) stigma stress and social isolation predicted suicidality.

For young people at risk the impact of self-labeling and stigma stress may be especially severe. They lack the experience of recovering from previous episodes and are more vulnerable to the fear of 'going mad', anticipated peer rejection and negative self-evaluations (Byrne and Morrison, 2010; Pyle et al., 2015; Rüsch et al., 2014c) which may contribute to depression and suicidality. However, empirical data on the link between stigma and suicidality among individuals at risk of psychosis are lacking. The present study therefore examined self-labeling and stigma stress as predictors of suicidality among young people at risk of psychosis. We both looked at direct effects on suicidality and at indirect effects, mediated by social isolation and reduced self-esteem, controlling for sociodemographic characteristics and psychotic symptoms. We expected that (i) increased self-labeling and stigma stress would be directly associated with suicidal ideation; and (ii) more self-labeling and stigma stress would be indirectly related to suicidal ideation, mediated by social isolation and low self-esteem.

2. Method

2.1. Participants

The current cross-sectional study is based on the ZInEP early recognition project in the region of Zürich, Switzerland (for details of study design, sample characteristics and recruitment see Theodoridou et al., 2014; longitudinal findings on stigma and suicidality are reported in Xu et al., submitted for publication). Eligible participants fulfilled at least one of the following three inclusion criteria: 1) high-risk status of psychosis assessed by the adult (Schultze-Lutter et al., 2007) or children-youth (Schultze-Lutter and Koch, 2010) version of the Schizophrenia Proneness Interview and indicated by having at least one cognitive-perceptive basic symptom or at least two cognitive disturbances; or 2) ultra-high risk criteria, originally developed to detect imminent risk for psychosis (Phillips et al., 2000) and assessed by the well-established Structured Interview for Prodromal Syndromes (version 3.0, McGlashan et al., 2001; Miller et al., 2003), with at least one attenuated (subthreshold) psychotic symptom, or brief, limited intermittent psychotic symptoms, or state–trait criteria (>30% reduction in global assessment of functioning in the past year, plus either schizotypal personality disorder or a first-degree relative with psychosis); or 3) risk of bipolar disorder, defined by a score ≥14 on the Hypomania Checklist, a self-report measure of lifetime hypomanic symptoms (Angst et al., 2005). Exclusion criteria were schizophrenic, substance-induced or organic psychosis, bipolar disorder, current substance or alcohol dependence; age <13 or >35 years; or verbal IQ <80. Verbal IQ was estimated (Metzler et al., 2014) with a German word recognition test for adults (Multiple Choice Vocabulary Intelligence Test; Lehrl, 1999) or a test of receptive vocabulary for adolescents (Peabody Picture Vocabulary Test; Dunn and Dunn, 2003).

All participants provided written informed consent. In case of minors, parental written informed consent was required. The study was approved by the regional ethics committee of the canton of Zürich. As reported elsewhere (Rüsch et al., 2013, 2014b), data were available from a total of 172 individuals of whom 70 were female. The mean age of participants was 21.4 years (SD 5.8). In total, 138 (80%) fulfilled high-risk criteria for psychosis, 85 (49%) fulfilled ultra-high risk criteria for psychosis, and 150 participants (87%) met criteria for either high or ultra-high risk of psychosis. A total of 135 (79%) fulfilled risk criteria for bipolar disorder. Eight participants (5%) met only criteria for high risk psychosis and one (0.6%) only for ultra-high risk psychosis criteria. Twenty-two participants (13%) fulfilled only risk criteria for bipolar disorder.

2.2. Measures

Suicidal ideation was rated by the suicidality item of the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960), scored from 0 to 4 (0 = absent, 1 = feels life is not worth living, 2 = wishes he or she were dead, 3 = suicidal ideas/gesture, or 4 = attempts at suicide). Due to a skewed distribution, we converted this item into a binary variable (score = 0/without suicidal ideation; score ≥1/with suicidal ideation; Heisel et al., 2010) with 86 participants (50%) having suicidal ideation. Self-labeling as 'mentally ill' was measured as how participants perceived their mental health, from 1 ("I am perfectly mentally healthy") to 9 ("I am severely mentally ill") (M = 5.1, SD = 1.8). The cognitive appraisal of mental illness stigma as a stressor was assessed by the 8-item Stigma Stress Scale (Rüsch et al., 2009a, 2009b). Four items assess 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"; M = 3.4, SD = 1.6; Cronbach's alpha = 0.92 in this study). Four items assess the secondary appraisal of perceived resources to cope with stigma (e.g. "I have the resources I need to handle problems posed by prejudice against people with mental illness"; M = 4.9, SD = 1.2; Cronbach's alpha = 0.77 in this study). The stigma stress score was computed by subtracting perceived resources from perceived harmfulness, higher difference scores between −6 and +6 indicating more stigma stress. Social isolation was assessed by the respective 5-item subscale (e.g. "social isolation", "social rejection", or "being ignored") of the Survey of Recent Life Experiences (Kohn and Macdonald, 1992) and rated on a 4-point scale (0 = not at all part of my life, 1 = only slightly part of my life, 2 = distinctly part of my life, and 3 = very much part of my life), higher mean scores indicating more social isolation in the past month (M = 1.0, SD = 0.7; Cronbach's alpha = 0.80). Self-esteem was assessed using the 10-item Rosenberg Self-Esteem Scale with higher mean scores from 0 to 3 indicating higher self-esteem (M = 1.6, SD = 0.7; Cronbach's alpha = 0.90). Depressive symptoms were assessed by the HRSD, omitting the suicidality item and yielding a depressive symptom sum score in the past week (M = 13.8, SD = 6.9). Positive and negative symptoms were assessed by the Positive and Negative Syndrome Scale (Kay et al., 1987) and yielding a sum score of positive (M = 12.5, SD = 4.2) and negative symptoms (M = 13.5, SD = 5.4), respectively.

2.3. Analyses

Data were analyzed using the Statistical Program for Social Sciences (SPSS 21) and MPlus 7.11 (Muthén and Muthén, 1998–2002). Analyses were performed in two steps. First, we examined bivariate correlations between suicidal ideation as well as predictor and mediator variables with a two-tailed significance of p < 0.05 (Table 1). Second, we tested the model of self-labeling and stigma stress as predictors of suicidal ideation (see Fig. 1) in a path analysis using MPlus and Maximum Likelihood estimation, controlling for age, gender, positive and negative symptoms (Gill et al., 2015). The following fit indices were determined: chi-square test, weighted root mean square residual (WRMR), comparative fit index (CFI), Tucker–Lewis Index (TLI), and root mean square error of approximation (RMSEA). Good model fit is indicated by a

Table 1
Correlations between self-labeling, stigma stress, social isolation, self-esteem, depression and suicidal ideation (n = 172).

	Self-labeling	Stigma stress	Social isolation	Self-esteem	Depression
Stigma stress	0.29**				
Social isolation	0.24**	0.37**			
Self-esteem	−0.55**	−0.37**	−0.41**		
Depression	0.31**	0.26**	0.27**	−0.43**	
Suicidal ideation	0.32**	0.14	0.26**	−0.31**	0.36**

** p < 0.01.