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Stigma and suicidal ideation among young people at risk of psychosis after one year

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ABSTRACT

Suicidality is common among individuals at risk of psychosis. Emerging findings suggest that mental illness stigma contributes to suicidality. However, it is unclear whether stigma variables are associated with suicidality among young people at risk of psychosis. This longitudinal study assessed perceived public stigma and the cognitive appraisal of stigma as a stressor (stigma stress) as predictors of suicidal ideation among individuals at risk of psychosis over the period of one year. One hundred and seventy-two participants between 13 and 35 years of age were included who were at high or ultra-high risk of psychosis or at risk of bipolar disorder. At one-year follow-up, data were available from 73 completers. In multiple logistic regressions an increase of stigma stress (but not of perceived stigma) over one year was significantly associated with suicidal ideation at one-year follow-up, controlling for age, gender, symptoms, comorbid depression and suicidal ideation at baseline. Interventions to reduce public stigma and stigma stress could therefore improve suicide prevention among young people at risk of psychosis.

1. Introduction

About 5% of people with schizophrenia die by suicide (Palmer et al., 2005) and before the onset of schizophrenia suicidality is common in individuals at risk of psychosis, with two thirds of at-risk individuals experiencing suicidal ideation in the past two weeks and one in five reporting lifetime suicide attempts (Taylor et al., 2015). Risk factors for suicidality are frequent in this population including previous suicidality (Preti et al., 2009), psychotic symptoms (Gill et al., 2015), and comorbid affective disorder (Fusar-Poli et al., 2014a). More recently, it has been proposed that feelings of isolation and the stigma associated with the psychosis risk syndrome may be associated with suicide risk in this population (Ben-David et al., 2014; Byrne and Morrison, 2010; Pyle et al., 2015).

Persons with mental health problems frequently experience stigma and discrimination. Two aspects of stigma are particularly pertinent here. First, public stigma occurs when members of the general public endorse negative stereotypes and discriminate against people with mental illness. Modified labeling theory (Link, 1987) suggests that individuals with or without mental illness are similarly aware of societal negative stereotypes associated with mental illness. But public stigma becomes personally relevant and threatening only once individuals are labeled as mentally ill. Second, according to stress-coping models of stigma (Lazarus and Folkman, 1984; Major and O'Brien, 2005) public stigma is not necessarily perceived as stressful by all members of the stigmatized group. Whether individuals perceive stigma as stressful depends on their cognitive appraisals of stigma which consist of the primary appraisal of harm resulting from stigma and the secondary appraisal of personal resources to cope with stigma-related harm. Stigma stress occurs if individuals believe that stigma-related harm exceeds their perceived resources for coping with this threat (Rüsch et al., 2009a, 2009b). A higher level of perceived public stigma may be associated with regarding stigma as more harmful, but not necessarily with perceived coping resources (Rüsch et al., 2009b).

The experience of being stigmatized has a wide ranging impact on the lives of people with mental illness in terms of shame, social isolation, avoidance of help-seeking, poor quality of life, feelings of

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burdensomeness, and hopelessness (Corrigan and Watson, 2002; Rüsch et al., 2005, 2014b), many of which are risk factors for suicidality. According to stress-diathesis models of suicidality (van Heeringen, 2012), the coincidence of psychosocial stressors with biological or psychological diatheses can trigger suicidality. Thus, stigma as a stressor may be associated with suicidality among people with mental illness (Farrelly et al., 2015). This is consistent with other findings that mental illness stigma contributes to suicidality (Rüsch et al., 2014c). Almost 50% of persons with severe mental illness and a history of suicide ideation felt stigma contributed to their feeling at their worst (Eagles et al., 2003). Feeling stigmatized was associated with hopelessness and suicide risk in individuals diagnosed with schizophrenia (Acosta et al., 2013; Sharaf et al., 2012). Perceived public stigma was associated with suicidal ideation among community members with a history of mental health service use (Oexle et al., 2016).

The at-risk state for psychosis leads to negative societal reactions (Yang et al., 2013). Individuals at risk of psychosis may be aware of broadly held stereotypes and perceive stigma as personally relevant (Yang et al., 2010, 2015). The early stage of illness is a critical period in which individuals first experience symptoms and may get in contact with mental health services, potentially leading to stigma. A study of 288 individuals at risk of psychosis in the UK reported that endorsement of public stigma was associated with suicidality at baseline, but not at 6-month follow-up (Pyle et al., 2015). However, only baseline levels of stigma endorsement were examined, limiting our understanding of associations between stigma and suicidality over time. We therefore prospectively examined whether perceived stigma and stigma stress contributed to suicidal ideation over a one-year period among young people at risk of psychosis, controlling for sociodemographic characteristics, symptoms, comorbid depression, and suicidal ideation at baseline. We tested the hypotheses that (i) higher baseline levels of perceived stigma and stigma stress as well as (ii) an increase of both stigma variables from baseline to one-year follow-up would be associated with suicidal ideation after one year.

2. Methods

2.1. Subjects

The current analyses are based on the baseline and one-year follow-up data of the ZInEP early recognition project in Zürich, Switzerland. For details of study design, sample characteristics and recruitment see Theodoridou et al. (2014) and www.zinep.ch. The field of assessment instruments for evaluating risk of psychosis is currently dominated by basic symptoms and ultra-high risk approaches (Fusar-Poli et al., 2014b). The former focuses on self-perceived disturbance, while the latter focuses on attenuated psychotic symptoms and reduced functioning. In this study two complementary instruments were used to reflect both approaches. In addition, there is substantial genetic and phenotypic overlap between risk states for psychosis and for bipolar disorder (International Schizophrenia Consortium et al., 2009). Therefore all participants had to fulfill 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 status of psychosis rated by the Structured Interview for Prodromal Syndromes (Miller et al., 2003) and indicated by having at least one attenuated psychotic symptom or brief, limited intermittent psychotic symptom or by meeting 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 (Angst et al., 2005). Exclusion criteria were life-time schizophrenic, substance-induced or organic psychosis, bipolar disorder, or current substance/alcohol dependence; age <13 or >35 years; or an IQ <80.

All participants provided written informed consent, in case of minors including parental written consent. The study was approved by the regional ethics committee of the canton of Zürich. At baseline, data were available from 172 individuals of whom 150 (87%) fulfilled either high or ultra-high risk of psychosis, 73 (42%) fulfilled criteria for both high and ultra-high risk of psychosis, 40 (23%) fulfilled high and ultra-high risk criteria of psychosis as well as risk criteria for bipolar disorder. Eight participants (5%) met only high risk and one (0.6%) only ultra-high risk criteria. Twenty-two participants (13%) fulfilled only risk criteria for bipolar disorder. At baseline 95 participants (55%) had comorbid major depression as assessed by the Mini International Neuropsychiatric Interview based on DSM-IV criteria (Sheehan et al., 1997).

We defined completers as participants who responded to questionnaires at baseline and one-year follow-up. After one year data were available from 73 completers, of whom at baseline 68 (93%) had fulfilled criteria for either high or ultra-high risk of psychosis, 33 (45%) for both; five (7%) had fulfilled only bipolar risk criteria. Non-completers could not be contacted or interviewed ($n=53$, 31%; one had died of unknown causes), provided incomplete data ($n=23$, 13%) or had decided to discontinue the study ($n=23$, 13%). Among the 73 completers, after one year seven participants had converted to schizophrenia and four developed bipolar disorder (see Rüsch et al., 2015, for a broader discussion of transition to schizophrenia in this study).

2.2. Measures

Perceived stigma was measured by the 12-item Perceived Devaluation-Discrimination Questionnaire (Link, 1987; baseline/follow-up: M=3.6, SD=1.0/M=3.5, SD=1.0; Cronbach's alphas baseline/follow-up: 0.92/0.88), higher mean scores from 1 to 6 representing more perceived stigma. Stigma stress was assessed by the 8-item Stigma Stress Scale (Rüsch et al., 2009a, 2009b) which includes two 4-item subscales, one on primary appraisal of anticipated harmful consequences of stigma (e.g. "Prejudice against people with mental illness will have harmful or bad consequences for me"; Cronbach's alphas baseline/follow-up: 0.92/0.93) and the other on secondary appraisal of perceived resources to cope with these consequences (e.g. "I have the resources I need to handle problems posed by prejudice against people with mental illness"; Cronbach's alphas baseline/follow-up: 0.77/0.89). As in previous studies (Farrelly et al., 2015; Rüsch et al., 2009a, 2009b, 2014b), a single stress score was computed by subtracting perceived coping resources from perceived stigma-related harm, with higher difference scores from -6 to $+6$ indicating more stigma stress (baseline/follow-up: M=-1.5, SD=2.2/M=-1.7, SD=2.5).

Suicidal ideation was rated by one item of the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960; 0=absent, 1=feels life is not worth living, 2=wishes he or she were dead or any thoughts of possible death to self, 3=suicidal ideas/gesture, or 4=attempts at suicide). We converted this item into a binary variable (score=0/without suicidal ideation; score ≥ 1/with suicidal ideation). At baseline 86 participants (50% of 172) and at one-year follow-up 22 completers (30% of 73) scored 1 or above.

Depressive symptoms were measured by the HRSD, omitting the suicidality item (baseline/follow-up: M=13.8, SD=6.9/M=9.4, SD=5.9). The Positive and Negative Syndrome Scale (Kay et al.,