The role of demoralization
in the relationship between insight and suicidality in schizophrenia

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Abstract

Background: The lifetime risk of suicide is significantly higher in patients with schizophrenia than in the general population. It has been suggested that insight is an important risk factor for suicidality in schizophrenia, but only in the presence of feelings of hopelessness and demoralization more generally.

Methods: This study set out to investigate these assumptions in a sample of patients diagnosed with schizophrenia (n = 81) with the Structured Clinical Interview for DSM-IV Axis I. We hypothesized that there would be a positive association between insight in schizophrenia, measured by the Insight Scale for Psychosis, and suicidality among these patients, measured by the Beck Scale for Suicide Ideation. Furthermore, we expected demoralization, measured by the Demoralization Scale, to mediate the association between insight and suicidality.

Results: With regard to the association between insight and suicidality, only the dimension *awareness of illness* was significantly positively associated with suicidality (r = .34, p ≤ .01**). Demoralization fully mediated the relationship between awareness of illness and suicidality (Sobel test z = 1.93, p < .05).

Limitations: This was a cross-sectional study in a relatively small sample, based on self-report questionnaires only.

Conclusions: This study emphasizes the importance of recognizing and treating demoralization features in schizophrenia.

Key words demoralization; insight; suicidality; schizophrenia.

Introduction

The lifetime risk of suicide is significantly higher in patients with schizophrenia than in the general population. Palmer et al. (2005) and Dutta et al. (2010) estimate the lifetime risk of suicide among patients with psychotic disorders to be 4.9% and 1.9%, respectively.

In order to inform preventive and intervention efforts aimed at lowering the risk of suicidality, knowledge about risk factors is of paramount importance. Hor and Taylor (2010), for instance, in a systematic review of extant research in this area, reported as major risk factors for suicide in patients with schizophrenia being young and male, a higher level of education, depressive symptoms, a history of suicide attempts, active hallucinations and delusions, comorbid chronic physical illness, a family history of suicide, co-existing alcohol and drug misuse and the presence of insight

Following Cavelti et al. (2012b) insight in schizophrenia can be considered as a global construct, encompassing different dimensions such as the awareness of having a mental disorder, of specific symptoms, and their attribution to the disorder, the awareness of social consequences and of need for treatment. Insight into one's disorder has been investigated as a potentially important factor influencing suicidality in schizophrenia. According to Lysaker et al. (2018), good clinical and cognitive insight are associated with heightened suicidality. Lack of insight occurs in almost half of the patients diagnosed with schizophrenia, and may vary depending on the stage of the illness (Belvederi Murri and Amore, 2019). According to recent findings, lack of insight may be multicausal (Lysaker et al., 2018). Lack of insight leads to limited treatment results, with negative consequences in terms of symptomatology and social and professional integration. Psychoeducation attempts to increase patients' insight, but increased insight may lead to depression, feelings of hopelessness, and suicidality. This is the so-called insight paradox (Lysaker et al., 2007).

However, with regard to the relationship between insight and suicidality in patients with schizophrenia, extant research has yielded equivocal findings. Several studies indicate that high levels of insight may increase the risk for suicidal behavior, other studies find no relationships between insight and suicidality, and a few studies report a protective effect of insight, possibly through increasing compliance with treatment (Melle and Barret, 2012). Lopez-Morinigo et al. (2012) systematically examined the role of insight in risk of suicide attempts and completed suicide among patients with schizophrenia and related disorders. Fifteen studies met their

selection criteria; five of these studies demonstrated a positive association between insight and risk for suicide, and ten did not. These authors therefore concluded that *"there is little evidence to support the suggestion that insight may represent a risk factor for suicide in patients with schizophrenia. If there is an association between such risk and insight, it appears to be mediated by other variables such as depression and, above all, hopelessness"* (p. 313).

Research has consistently found a significant positive association between insight and depressive symptomatology in schizophrenia (Pompili et al., 2007; Belvederi Murri et al., 2015; Lysaker et al., 2018), with increases in insight over time resulting in increased levels of depressive symptomatology. In this regard, it has been hypothesized that specific aspects of depressive symptomatology may play a key role, such as appraisals of loss, humiliation, entrapment, shame, and self-blame (Iqbal et al., 2000) or affective and cognitive (rather than somatic) aspects (Restifo et al., 2009), such as lowered mood, feelings of humiliation, shame, low self-esteem, a tendency to ruminate, or chronic demoralization (Belvederi Murri et al., 2015). Cavelti et al. (2012) have argued that *"high levels of insight have been linked to depression, hopelessness and suicidal tendency as well as to lowered self-esteem, well-being, and quality of life […] a cluster of negative outcomes, which may well be subsumed under the concept of 'demoralization'" (p. 462).* Indeed, the question that arises is whether demoralization can be considered as a mediator variable which explains the relationship between insight and suicide.

The present study therefore aimed to investigate whether there is a positive association between insight into schizophrenia and suicidality in a sample of patients with schizophrenia. We specifically expected awareness of one's illness, a central feature of insight into schizophrenia, to be positively associated with suicidality. In addition, we expected demoralization to mediate the relationship between insight and suicidality.

Methods

Procedure

Participants diagnosed with schizophrenia were recruited in local treatment facilities in different regions in the Dutch-speaking part of Belgium. Potential participants were identified by their psychiatrist. The main inclusion criteria comprised being diagnosed with schizophrenia and age between 18 and 65 years. Diagnoses were confirmed by the Structured Clinical Interview for DSM-IV Axis I Disorders (First et al., 1996), administered by one of two co-authors (M.E. and L.V.). Additional inclusion criteria were the capability to complete a battery

of self-report measures and to participate in an interview of at least half an hour. Participants with a history of intellectual disability were excluded, as well as forensic psychiatric patients. After being given an explanation of the study aims and procedures, participants provided written informed consent. Participants received no financial reward or any compensation other than the prospect of providing insight into their perspectives and needs so as to improve psychiatric care. The study protocol received ethical approval from the Medical Ethics Committee of the University Hospitals KU Leuven, Belgium, under approval number B32220084296. Completed questionnaires were obtained from 81 patients.

Participants

The sociodemographic and clinical characteristics of the sample are shown in Table 1.

Measures

Insight was assessed using the Insight Scale for Psychosis (ISP; Birchwood et al., 1994). The ISP is a self-report measure consisting of eight items to be rated on a 3-point Likert scale, ranging from 0 (*disagree*) to 2 (*agree*), and belonging to three subscales: (a) ability to relabel experiences (two items), (b) awareness of illness (two items), and (c) insight into need for treatment (four items). The ISP has been found to have adequate psychometric properties (Birchwood et al., 1994). In the present study, the inter-item correlations of the ability to re-label experiences and the awareness of illness subscales were .14 and .30, respectively, and Cronbach's alpha of the insight into need for treatment subscale was .73.

Suicidality was assessed using the Beck Scale for Suicide Ideation (BSI; Beck & Steer, 1991). The BSI is a self-report measure consisting of 21 items to be rated on a 3-point Likert scale. The BSI has been found to have adequate psychometric properties (Steer, Kumar, & Beck, 1993). In the present study, Cronbach's alpha of the total BSI scale was .74.

Demoralization was assessed using the Demoralization Scale (DS; Kissane et al., 2004). The DS is a self-report measure consisting of 24 items to be rated on a 5-point Likert scale, ranging from 0 (*never*) to 4 (*all the time*), considering one's existential distress state in the preceding 2 weeks. Initial factor analysis revealed five factors: Loss of meaning and purpose, Dysphoria, Disheartenment, Helplessness, and Sense of failure. The validity of these factors has been somewhat equivocal, with some studies replicating the original 5-factor structure and other studies yielding four factors (Robinson et al., 2015). Construct validity of the DS has been demonstrated consistently, and internal reliability for the total scale has been found to be good

to excellent (for reviews, see Robinson et al., 2015; Tecuta et al., 2015). In the present study, Cronbach's alpha of the total demoralization scale was .93.

Possible mediating variables were measured as follows: gender (male or female), previous suicide attempts (number: 0, 1, 2 or more), substance abuse (presence or absence); the severity of schizophrenia was measured using the SCID-I/P 2.0 (First et al., 1996) with the following dimensions: severe, moderate, mild, partial remission, full remission.

Data analyses

All data were analyzed using SPSS version 24.0. To investigate the association between insight in general and awareness of illness in particular on the one hand, and suicidality on the other, Pearson correlations were calculated. To investigate the mediating role of demoralization in the relationship between insight and suicidality, hierarchical multiple regression analyses were run and the Sobel test was used to investigate whether criteria for mediation were satisfied. In addition, we also tested whether conditions for mediation were fulfilled using the SPSS Macro developed by Hayes (2017). In each of these analyses we controlled for gender, previous suicide attempts, substance abuse and severity of schizophrenia.

Results

With regard to the association between insight and suicidality, only awareness of illness was significantly positively associated with suicidality (r = .34, p ≤ .01**) (see Table 2). This association persisted after adjustment for possible covariates of suicidality such as gender and severity of illness. There were no significant correlations between suicidality and the two other dimensions of insight (all r's < 0.10, *ns*) (see Table 2). Furthermore, as awareness of illness was significantly positively associated with demoralization (r = .38, p ≤ .01**) and demoralization was significantly positively associated with suicidality (r = .41, p ≤ .01**), statistical conditions were met to further test a mediation model.

Hierarchical multiple regression analyses were conducted, with previous suicide attempts and suicidal ideation as covariates in the first block, awareness of illness in the second block, and demoralization in the third block, to investigate the mediating role of demoralization in the relationship between awareness of illness and suicidality. As Figure 1 shows, demoralization fully mediated the relationship between illness awareness and suicidality (Sobel test z = 1.93, p

< .05). In addition, we tested the significance of this indirect effect using bootstrapping procedures. Unstandardized indirect effects were computed for each of 5,000 bootstrapped samples, and the 95% confidence interval was computed. The bootstrapped unstandardized indirect effect was .55, and the 95% confidence interval ranged from .09, 1.18. Thus, the indirect effect was statistically significant.

Discussion and conclusion

This study sought to investigate the potential mediating role of demoralization in the association between insight into schizophrenia and suicidality. Previous studies have suggested that suicidality in the context of schizophrenia may be related not so much to depression, but rather to feelings of demoralization (Pompili et al., 2007). However, this assumption remains largely untested. This study is the first to provide empirical support for this assumption.

The demoralization concept, first introduced by Frank (1974), was described in depth by Clarke and Kissane (2002). How can we understand the mediating role of demoralization between insight and suicidality? First, the existing literature indicates that in schizophrenia insight can lead to demoralization. Several authors have pointed to the important role played by subjective illness beliefs, subjective self-beliefs, and the cultural or individual stigmatization of mental illness in the emergence of depressive symptomatology, hopelessness, and demoralization from insight (Melle and Barret, 2012; Cavelti et al., 2012a; Cavelti et al., 2012b; Belvederi Murri et al., 2015; Lysaker et al., 2018; Belvederi Murri and Amore, 2019). Furthermore, it is known that demoralization can lead to suicidality. Clarke and Kissane (2002) described the strong link between demoralization and suicidality. According to these authors the common factor in people expressing the wish to die is demoralization with its ultimate features of hopelessness and giving-up. Robinson et al. (2015) improved the criteria in order to identify demoralization. Besides three other criteria, their fourth and last criterium for demoralization is feelings of failure and pointlessness. These feelings lead to an increasing urge to stop trying, give up, or consider ending life because of its lack of a worthwhile future. It can thus be concluded from the existing literature that their exists a link between insight and demoralization, and also a link between demoralization and suicidality.

The results of this study confirm both of these links. More specifically, we found that awareness of illness was significantly positively associated with demoralization, which in turn was significantly positively associated with suicidality. Moreover, even when controlling for previous suicide attempts and other possible confounding variables such as gender, substance

abuse, and severity of schizophrenia, demoralization fully mediated the association between awareness of illness and suicidality.

Together with evidence suggesting that demoralization and depression are related, yet distinct, in schizophrenia (Robinson et al., 2015), this study further emphasizes the importance of recognizing features of demoralization in patients with schizophrenia. In terms of clinical implications, our findings suggest that it is important to focus on issues related to demoralization in the clinical management of patients with schizophrenia (Cavelti et al., 2012b; Lysaker et al., 2018).

Several limitations of the study should be mentioned: it was a cross-sectional study, based solely on self-report questionnaires, with a relatively small sample size. Future research should study demoralization using other methods, such as interviews. Qualitative research in particular may shed further light on this phenomenon. Moreover, more prospective research is needed to disentangle the relationships among schizophrenia, depression, demoralization, and hopelessness in relation to suicidality over time. Despite these limitations, this study further emphasizes the potential importance of studying demoralization in schizophrenia.

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Table 1
Sample Characteristics

Sociodemographic characteristics	*n* (%)
Male gender	61 (75.0)
Age (years)[a]	42.22 (10.73)
Single	80 (98.8)
Divorced	11 (13.8)
Widowed	3 (3.7)
No children	72 (88.9)
Living status	
Alone	32 (39.5)
Sheltered housing	24 (29.6)
With family	16 (19.8)
Hospital	9 (11.1)
Highest level of education	
Higher education or university	22 (27.5)
High school	42 (52.5)
Primary school	16 (20.0)
Employment status	
No current employment	75 (93.8)
Employment in the past	40 (50.0)
Currently receiving government assistance	75 (92.6)
Clinical characteristics	***n*** **(%)**
Schizophrenia severity according to SCID	
Severe	3 (3.7)
Moderate	17 (21.0)
Mild	15 (18.5)
Partial remission	19 (23.5)
Full remission	27 (33.3)
Treatment	
Full hospitalization	30 (37.0)
Semi-residential hospitalization	33 (40.7)
Outpatient	18 (22.2)
Duration of illness (years)[a]	17.11 (10.35)

[a] *M* (*SD*)
SCID, Structured Clinical Interview for DSM-IV Axis I Disorders

Table 2

Variables	1	2	3	4	5
1. Relabel experiences	1				
2. Illness awareness	,304**	1			
3. Treatment need	,219	,311**	1		
4. Demoralization	-,043	,383**	-,093	1	
5. Suicidality	,068	,344**	-,083	,407**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Overview of all correlations between the subscales of the Insight Scale for Psychosis (Relabel experiences = ability to relabel experiences; Illness awareness = awareness of illness; Treatment need = insight into need for treatment), the Demoralization Scale (Demoralization) and the Beck Scale for Suicide Ideation (Suicidality).

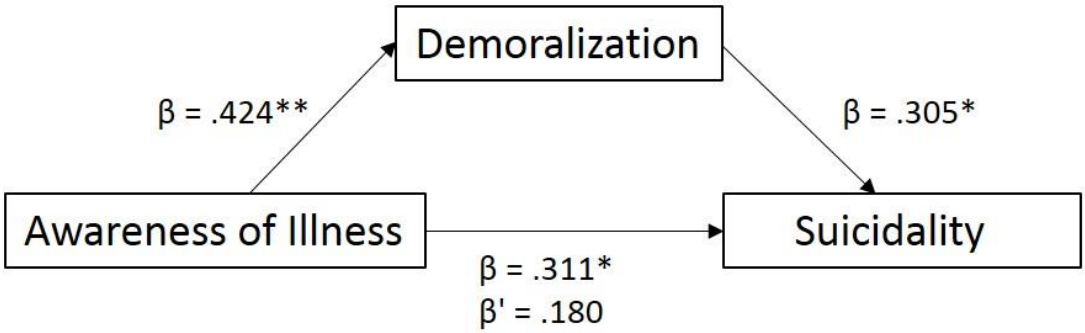

Figure 1. Mediation model of the relationship between Awareness of Illness, Demoralization and Suicidality. *p<.05, **p<,001