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The paradoxical role of insight in mental illness: The experience of stigma and shame in schizophrenia, mood disorders, and anxiety disorders

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ABSTRACT

This study examined the factor structure of the Hungarian version of the Birchwood Insight Scale (BIS) and analyzed its association with socio-demographics, diagnosis, internalized stigma, and shame using confirmatory factor analysis (CFA) with covariates. Mentally ill patients (N = 200) completed self-report questionnaires. CFA supported a two-factor structure. While previous hospitalizations and diagnosis were associated with insight, insight predicted higher internalized stigma and shame. Efforts to increase insight should be matter of importance in the wider spectrum of mental diagnoses. However, such efforts should be conducted with special care as further research is needed to understand the impact of insight on wellbeing.

Introduction

Having insight, or awareness of having a mental illness diagnosis is a crucial step in successful coping and recovery (Frese, 2000; McEvoy, 2004). Insight has been defined as including three different but overlapping dimensions: (i) individuals' acknowledgment of having a mental illness diagnosis; (ii) the recognition that treatment is necessary to control the illness, and (iii) the ability to re-label the experienced symptoms as abnormal and part of the illness (David, 1990). Unfortunately, individuals with various different mental disorders often possess poor insight (Ghaemi et al., 2000; Pini et al., 2001). Lack of insight has been found to be an important predictor of adverse clinical outcomes, treatment non-compliance, and increased cognitive impairment (Aleman et al., 2006; Mohamed et al., 2009; Yen et al., 2005). However, conflicting findings implying that having insight is not necessarily associated with positive outcomes, contribute much to the complexity of the insight construct, and were consequently coined as the "insight paradox" (Lysaker et al., 2007).

More specifically, it has been found that having high insight is associated with depressive symptoms, low quality of life, low self-esteem, and less meaning in life (Ehrlich-Ben Or et al., 2013; Lysaker et al., 2003; Mintz et al., 2003; Moore et al., 1999; Staring et al., 2009). Recently this paradox was explained with the internalization of stigma, a psychological process that occurs when individuals agree with the stigma that is present in society, internalize the stigma, and adopt a stigmatized identity (Corrigan et al., 2006). According to this assertion, the meaning that is attached to the recognition of having a mental illness is important, and individuals who demonstrate high insight together with high levels of internalized stigma are more prone to experience adverse outcomes (Lysaker et al., 2007; Staring et al., 2009). What makes insightful people adopt a stigmatized identity is a question which was investigated by Hasson-Ohayon et al. (2012), who found that the experience of shame mediated the relationship between insight and internalized stigma. Therefore, shame should be regarded as an important factor which – when accompanied by insight – affects the susceptibility to internalization of stigma.

Over the years, efforts to assess insight have taken different approaches. Among these are the assessment of insight utilizing a one-item measure to detect overall insight level (Lincoln et al., 2007a). However, this is an approach which is not considered to be sensitive enough to the specific and different dimensions of insight (Baier, 2010). Consequently, different scales were developed in order to take into consideration the multi-dimensional nature of insight (Amador et al., 1993; Beck et al., 2004). However, most of the existing scales are based on clinicians' observations (Young et al., 2003) and might also require some training in how to administer the scales (Sanz et al., 1998).

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Furthermore, some instruments are very long, which might be an obstacle for patients with limited mental and/or psychological capacities (Cleary et al., 2014).

The Birchwood Insight Scale (BIS; Birchwood et al., 1994), is an eight-item self-report measure, which was developed to offer an easy and brief alternative to assess the three insight dimensions. The BIS is a reliable and valid tool to assess insight, and is sensitive enough to assess individual differences and changes in insight which might occur over time (Birchwood et al., 1994). Despite being increasingly used in psychiatric research (Cleary et al., 2014), very few studies have examined the scale's psychometric properties and/or factor structure, and their findings are inconsistent. Birchwood et al. (1994) reported on the same three-factor structure which was previously found by David (1990).

However, other researchers have reported that a one-factor structure yielded the best fit among a sample of patients experiencing a first episode of psychosis, and a mixed sample of chronic patients with psychotic and mood disorders (Cleary et al., 2014). Additionally, because studies investigating insight in the psychiatric field have mainly focused on individuals with schizophrenia and psychosis (Ghaemi, 1997), the BIS has mainly been used among these patient groups (Cleary et al., 2014). Consequently, the generalizability of the BIS to other patient populations is unclear. While poor insight is a main symptom of schizophrenia and psychosis in general (Amador et al., 1994; Carpenter et al., 1978; Pini et al., 2001), there is increasing empirical evidence that it also occurs in many other disorders such as bipolar disorder, mood disorders without psychotic symptoms, and anxiety disorders (Amador et al., 1994; Eisen et al., 1998; Ghaemi et al., 2000; Michalakeas et al., 1994; Peralta & Cuesta, 1998; Pini et al., 2001).

The main goal of the present study was to examine the factor structure of the BIS using a relatively large sample of patients experiencing a wide range of mental diagnoses. Moreover, as all the previous studies were conducted among English-speaking populations, the present study examined the functioning of the BIS factor structure among a non-English speaking sample. Furthermore, the secondary goal of the study was to examine the possible predictors of insight including sociodemographic factors, diagnosis, and previous hospitalizations. Given the relationship between insight and internalized stigma and the latter's negative impact on recovery, the ability of insight to predict both internalized stigma and shame was also investigated. It was hypothesized that a high degree of insight would be a significant predictor of high levels of internalized stigma and shame. Due to the high prevalence of poor insight among patients with diverse diagnoses, and its' meaningful implications (both positive and negative) for recovery, insight constitutes a major concern in the mental health field. Consequently, acquiring more precise knowledge regarding the different predictors and outcomes of insight on their different facets can meaningfully contribute to the improvement of the lives of people coping with mental illness and is of high clinical importance.

Methods

Participants

A sample of 200 adults with a mental illness diagnosis was recruited from an outpatient unit of mental health center in the Hungarian capital of Budapest. The inclusion criteria were: (i) having a psychiatric diagnosis according to the ICD-10 (World Health Organization, 1992), (ii) taking psychiatric medications, (iii) being inpatients or outpatients in any type of psychiatric care, (iv) being patients who had not abused illicit substances and alcohol for at least two weeks at the time of the assessment, (v) being aged between 18 and 65 years, and (vi) being able to complete the questionnaire following the judgment of their psychiatrist. The exclusion criteria were (i) having an acute phase of illness, (ii) having a diagnosis of an organic brain disorder, dementia, and/or mental retardation, and (iii) not having the mental competency and/or ability to complete the self-report questionnaire or give informed consent.

Procedure

Patients who met the study inclusion criteria were contacted via their treating psychiatrists. Upon agreement to participate, patients received an information sheet about the study's goals and signed an informed consent form. Participants then completed a self-report questionnaire. All questionnaires were translated from English to Hungarian and back-translated from Hungarian to English using accepted translation protocols (Beaton et al., 2000). The possible discrepancies between the original and back-translated version were resolved. Ethical approval was granted by the ethical board of the regional hospital accountable for the patients' welfare.

Measures

Socio-demographic questions included those relating to gender, age, previous hospitalizations (yes/no), education (finished high school/did not finish high school), occupation (employed/unemployed), diagnosis, and marital status (married/divorce/widow/single). Patients were divided into six categories according to the ICD-10 codes categorization (World Health Organization, 1992): (i) schizophrenia spectrum disorders (e.g., schizophrenia, schizotypal and delusional disorder), (ii) mood disorders (e.g., major depressive disorder, bipolar and manic disorder), (iii) stress-related disorders (e.g., phobic anxiety disorders, obsessive-compulsive disorders, somatoform disorders), (iv) behavioral syndromes associated with physiological disturbances (e.g., eating disorders), (v) personality disorders (e.g., borderline personality disorder, avoidant personality disorder), and (vi) disorders due to psychoactive substance use.

Insight

The Birchwood Insight Scale (BIS; Birchwood et al., 1994) is an eight-item self-report instrument that assesses three dimensions of insight into mental illness (illness awareness: Items 2 and 7; need for treatment: Items 3,4,5 and 6; and re-labeling of symptoms: Items 1 and 8). Each item contains a statement offering three response options: *agree*, *unsure*, or *disagree*. Each response is scored on the basis of the insight level it reflects, where insightful responses (agree/disagree) are scored 2, unsure responses are scored 1, and responses which reflect poor insight are scored 0. Because the sample of the present study included patients who were not hospitalized, a minor change was made in Item 4 assuming hospitalization ("*My stay in the hospital is necessary*" was adapted to "*The treatment in the institution is necessary*"). The scale has good internal consistency and reliability ($\alpha = 0.75$ and test-retest reliability = 0.90) (Birchwood et al., 1994). In the present study the BIS had moderate internal consistency ($\alpha = 0.64$).

Internalized stigma

The Self-Stigma of Mental Illness Scale (SSMIS; Corrigan et al., 2006) is a self-report instrument that assesses internalization of stigmatic views that exist in society. The scale includes four subscales reflecting the four stages process of stigma internalization as proposed by Corrigan et al. (2006): (i) awareness of the existence of stigmatic views regarding mental illness, (ii) agreement with the stigmatic views, (iii) adopting stigmatic views and projecting them into the self-identity, and (iv) self-esteem reduction. Each subscale contains ten statements to which participants can respond to on a nine-point Likert scale ranging from 1 (*strongly disagree*) to 9 (*strongly agree*). The total score of each subscale ranges between 10 and 90, where higher scores reflect increased adoption of stigma as indicated by the specific subscale. Good internal consistency was found in the present study (stigma awareness:

α = 0.92, stigma agreement: α = 0.90, stigma internalization: α = 0.83 and self-esteem reduction: α = 0.84).

Shame

The Experience of Shame Scale (EES; Andrews et al., 2002) is a 25-item instrument that assesses three aspects of shame: (i) *characterological shame* (experiencing shame because of personal habits, behavior with others, the kind of person, and because of self-capabilities), (ii) *behavioral shame* (experiencing shame when doing and saying something wrong and due to failure in competitive situations), and (iii) *bodily shame* (experiencing shame because an individual considers their body or its parts unacceptable). In the assessment of each aspect, there are three items addressing the following: (i) *experimental component* (with a direct question about feeling shame), (ii) *cognitive component* (such as concerns regarding the opinion of others), and (iii) *behavioral component* (questions regarding efforts to hide or avoid situations). For each item, participants are asked to respond based on their feelings over the past year on a four-point Likert scale ranging from 1 (*not at all*) to 4 (*very much*). Scores are calculated by summing up the items to produce a total score ranging between 25 and 100. The Hungarian validated version of this scale (Vizin et al., 2016) was used in this study, and had excellent reliability (α = 0.97).

Statistical analyses

First, a series of confirmatory factor analyses (CFAs) were used to assess the factor structure and item performance of the Hungarian version of the BIS in the sample. Unlike previous studies, items of the Birchwood Insight Scale were treated as ordinal and used the mean- and variance- adjusted weighted least squares (WLSMV) estimator. In CFA, acceptable degree of fit requires the comparative fit index (CFI) and the Tucker-Lewis Index (TLI) to be close to 0.95, and the model should be rejected when these indices are < 0.90 (Brown, 2006). The next fit index was root mean squared error of approximation (RMSEA). RMSEA below 0.05 indicates excellent fit, a value around 0.08 indicates adequate fit, and a value above 0.10 indicates poor fit (Browne & Cudek, 1993). The measurement invariance of the BIS was also tested in groups having or not having a schizophrenia diagnosis. After establishing measurement invariance, groups with different diagnosis were compared for statistical differences in factor scores. Next, a CFA with covariates was performed to test the association between insight and age, gender and previous hospitalizations, while diagnosis was controlled for. The CFA with covariates technique was chosen for the present study because it can best estimate the effect of indicators and grouping variables or other continuous variables on latent variables simultaneously. Finally, the association between the insight factors, internalized stigma, and shame was investigated. All analyses were performed with MPLUS 8.1 (Muthén & Muthén, 1998).

Results

Descriptive statistics

The percentages, means, and standard deviations (SDs) of the study variables are shown in Table 1. The majority of the sample were women, graduated from high school, and were diagnosed with stress-related disorders. Almost half of the sample had previous hospitalizations. The age range of the sample was wide (32 to 56 years), with a mean of 44.2 years (SD = 11.8).

Confirmatory factor analyses of the Birchwood Insight Scale

As a first step, the one-factor model (Model 1) was tested which yielded excellent fit (see Table 2). However, the inspection of the factor loadings showed that Item 1 ("*Some of my symptoms are made by my mind*") did not load significantly on this factor. The three-factor model was also tested as suggested in previous research. This model also yielded excellent fit (see Table 2). However, the third ("*re-labeling of symptoms*") factor has only one significantly loading item, and Item 1 did not load significantly on this factor either (see Table 3). Because of the large correlation between "*awareness of illness*" and "*re-label of symptoms*", they were merged, and a two-factor model was tested with exclusion of Item 1. This model also yielded an excellent degree of fit (see Table 2). This two-factor model with seven items was also contrasted with the one-factor model with seven items. Since the two-factor model showed superior fit to data, this model was retained in further analysis. The factor loadings in this model ranged between 0.58 and 0.68 in the "*awareness of illness factor*" and between 0.44 and 0.89 in the "*need for treatment*" factor. The correlation between the two factors was strong (r = 0.75).

Because this scale was tested primarily with patients suffering from psychosis, the measurement invariance between patients diagnosed with schizophrenia and not diagnosed with schizophrenia was also checked. Applying the increasing constraints did not worsen the model fit significantly therefore the measurement invariance was supported (see details in Table 2).

Table 1
Descriptive statistics of the study sample (N = 200).

Gender (female) *N* (%)	133 (66.5)
Age – mean (SD)	44.2 (11.8)
Education, graduated high school – *N* (%)	157 (78.5)
Previous hospitalizations – *N* (%)	89 (44.5)
Diagnosis	
Schizophrenia spectrum disorders – *N* (%)	53 (26.5)
Mood disorders – *N* (%)	58 (29.0)
Stress-related disorders – *N* (%)	89 (44.5)
Personality disorders – *N* (%)	10 (5.0)
Disorders due to psychoactive substance use – *N* (%)	2 (1.0)
Behavioral syndrome associated with physiological disturbances – *N* (%)	2 (1.0)
Only one diagnosis - *N* (%)	188 (94.0)
Two diagnoses - *N* (%)	10 (5.0)
Three diagnoses - *N* (%)	2 (1.0)

Differences of insight among patients with different diagnoses

After establishing the measurement model of insight, comparison of patients with different diagnosis along the factor scores of two insight dimensions was made. Fig. 1 shows the means and 95% confidence intervals of factor score of awareness of illness and need for treatment factors among patients with schizophrenia spectrum disorders, mood disorders, stress-related disorders, and other disorder diagnosis (such as personality disorders, disorders due to psychoactive substance use, and behavioral syndrome associated with physiological disturbances). A significant main effect was found in the awareness of illness factor ($F(3, 192) = 2.86$, $p < 0.05$). Tukey HSD post-hoc test showed that only schizophrenia spectrum disorders and mood disorders groups differed significantly ($p < 0.03$). The effect size of the difference was medium sized (Cohen d = 0.52). Although the statistical test did not reach the level of significance, the effect size of the group difference is not negligible. For example, the difference between schizophrenia and stress-related groups was also medium sized (Cohen d = 0.40), and that between mood disorders and stress-related disorders group was small (Cohen d = 0.17). In the case of the need for treatment factor, a significant main effect was also found ($F(3,192) = 5.05$ $p < 0.01$). However, only the group with other diagnosis differed significantly from schizophrenia ($p < 0.01$), mood disorders ($p < 0.01$), and stress-related disorders ($p < 0.05$) groups according to Tukey HSD test.

The schizophrenia spectrum disorder patients had the highest score for need for treatment but it differed significantly only from the other

Table 2
Fit indices of the alternative measurement models of the Birchwood Insight Scale.

		χ^2	Df	p	CFI	TLI	RMSEA	Cfit of RMSEA
Model 1	One-factor model (8 items)	30.1	20	0.0675	0.973	0.962	0.050	0.465
Model 2	Three-factor model (8 items)	18.6	17	0.3538	0.996	0.993	0.021	0.794
Model 3	One-factor model (7 items)[a]	25.3	14	0.0320	0.970	0.955	0.063	0.259
Model 4	Two-factor model (7 items)[a]	15.0	13	0.3059	0.995	0.991	0.028	0.709
Multigroup analysis: Invariance testing of the two factor model[b]								
Configural invariance (freely estimated factor loadings and thresholds)		29.3	26	0.2991	0.992	0.987	0.036	0.612
Metric invariance model (equal factor loadings)[c]		30.9	31	0.4702	1.000	1.000	0.000	0.784
Scalar invariance (equal factor loadings, and equal thresholds)[d]		39.7	36	0.3079	0.991	0.989	0.032	0.673

Note: $N = 200$.
[a] Item 1 was removed due to non-significant factor loading. Comparison of model fit of Model 3 and Model 4 was performed with difftest procedure implemented in Mplus 8.1. Model 4 yielded significantly closer fit to the data ($\Delta\chi^2 = 6.73$, $\Delta df = 1$, $p < 0.01$).
[b] The grouping variable was having or not having schizophrenia diagnosis.
[c] The difftest between configural and metric invariance model is nonsignificant ($\Delta\chi^2 = 2.95$, $\Delta df = 5$, $p = 0.7074$).
[d] The difftest between metric and scalar invariance model is nonsignificant ([$\Delta\chi^2 = 10.25$, $\Delta df = 5$, $p = 0.0685$]).

diagnosis group. However, the effect size of difference between schizophrenia and stress-related group was not negligible either (Cohen $d = 0.35$), but it did not reach statistical significance due to the low statistical power because the required sample size would be 260 (if the power was 0.80) in this case. The difference between schizophrenia and mood disorder group was negligible (Cohen $d = 0.09$).

Predictors of insight: Gender, age and hospitalization

Table 4 presents the result of bivariate correlation analyses and the CFA with covariates analysis. Correlation analysis showed that awareness of illness correlated positively with hospitalization and negatively with schizophrenia spectrum diagnosis. Being hospitalized associated with higher awareness of illness. Having a schizophrenia spectrum diagnosis also associated with lower awareness of illness. Age, gender, and other diagnosis were not related with awareness of illness. Need for treatment correlated positively with age, schizophrenia, and mood disorders diagnoses. Therefore, older age, schizophrenia, and mood disorders diagnoses associated with higher recognition of need for treatment. Hospitalization was associated with the recognition of higher need for treatment.

In a multivariate analysis, the predictors of the two insight factors with CFA with covariates model were tested. Covariates were gender, age, and hospitalization. Because previous analysis found associations between insight and diagnosis, here the impact of diagnosis was controlled for. Only hospitalization significantly predicted the awareness of illness (i.e., those patients who were previously hospitalized were more aware of their illness) (unstandardized B = 0.324; SE = 0.142, $\beta = 0.254$ $p < 0.05$).

The impact of insight on shame and stigma

In order to estimate the impact of insight on shame and stigma, the correlation matrix between the two latent factors and four factors of the Self-Stigma of Mental Illness Scale and the shame score were estimated. The awareness of illness factor correlated significantly with the score of internalized stigma in self-identity ($r = 0.34$ $p < 0.001$), the score assessing the self-esteem reduction due to stigma ($r = 0.36$, $p < 0.001$), and the shame score ($r = 0.53$ $p < 0.001$). The awareness of illness factor did not correlate with the awareness of stigmatic views and the agreement with stigmatic views ($r = 0.11$ and 0.04, respectively). The need for treatment factor did not correlate with the four factors of stigma or with the shame score.

A multivariate model within a structural equation modeling framework was tested (see Fig. 2). In this model the paths between the need for treatment and the outcome variables were fixed to zero due to the lack of bivariate correlations. Age and gender were controlled for in the analysis. The awareness of illness factor significantly predicted shame ($\beta = 0.36$, $p < 0.001$), internalized stigma ($\beta = 0.27$, $p < 0.01$), and self-esteem reduction ($\beta = 0.25$, $p < 0.01$), therefore they had unique shared variance with awareness of illness.

Discussion

The main goal of the present study was to examine the factor structure of the Birchwood Insight Scale (BIS) among non-English speaking individuals with different psychiatric diagnoses. The study results indicated that the two-factor structure have the best fit and– if not the poor functioning of Item 1 – also validates the factor structure which was reported originally (Birchwood et al., 1994). While the previous validation study of Cleary et al. (2014) also reported on the poor functioning of Item 1 their findings of a one-factor structure are in contrast to the present study's results and the original study of Birchwood et al. (1994). Furthermore, by including different diagnostic groups, the present study confirms the applicability of the BIS not only among patients with psychosis but also among patients with a wider range of diagnoses. This is also supported by the measurement invariance testing between patients having or not having a schizophrenia diagnosis.

Further studies should consider the elimination of Item 1 from the BIS or adding a new item to the 're-labeling symptoms' subscale so the scale will reflect the three known insight dimensions which have been reported in the literature (David, 1990). Cleary et al. (2014) proposed that the poor functioning of Item 1 might be because of the confusing meaning of the words "made by my mind" which can have different meanings in different cultures and can be open to different interpretations by the participants. Other sources for difficulties in interpretation might be related to the words "some of my symptoms" and not "all of my symptoms" (Cleary et al., 2014). As none of these options were tested, studies should consider all these options when using the scale.

As part of examining insight among the wider patient population groups, the present study also compared the different diagnostic groups in terms of their insight levels. The group comparison revealed that schizophrenia spectrum disorder patients had the lowest level of awareness of illness compared to the mood disorders, stress-related disorders, and other disorder group. The effect sizes were medium-sized when schizophrenia spectrum disorders were compared with mood disorders and stress-related disorders. However, the effect size of the difference between patients with mood disorder and stress-related diagnosis were small. The mood disorders group had the highest illness awareness. This finding is in contrast with a study indicating that stress-related disorders patients had higher insight compared to bipolar patients and patients with depression (Ghaemi et al., 2000), and supports the need to examine insight among individuals with different and less severe mental illness diagnoses, especially because such research is lacking. The finding that schizophrenia spectrum disorder patients had

Table 3
Confirmatory factor analyses of Birchwood Insight Scale: Three measurement models.

	One-factor model	Three-factor model			Modified two-factor model	
	Insight	Awareness of illness	Need for treatment	Re-labeling of symptoms	Awareness of illness	Need for treatment
Item 1: Some of my symptoms are made by my mind	0.12ns			0.16ns		
Item 2: I'm mentally well	0.54	0.63			0.62	
Item 3: I do not need medication	0.86		0.89			0.89
Item 4: The treatment in the institution is necessary	0.41		0.43			0.44
Item 5: The doctor is right in prescribing medication for me	0.66		0.68			0.68
Item 6: I do not need to be seen by a doctor or psychiatrist	0.81		0.82			0.82
Item 7: If someone said I have a nervous or mental illness, they would be right	0.59	0.69			0.68	
Item 8: None of the unusual things I am experiencing are due to an illness	0.51			0.66	0.58	
Factor correlations						
Need for treatment	–	0.73			0.75	–
Re-labeling of symptoms	–	0.86	0.66	–	–	–

Note: Standardized factor loadings. ns = non-significant.

the lowest illness awareness levels is in line with other research indicating that schizophrenia patients specifically have poorer awareness of having mental illness compared to other mental disorders (Amador et al., 1994; Braw et al., 2012; Pini et al., 2001; Ramachandran et al., 2016), but in contrast with David et al. (1995) who found that the diagnosis of schizophrenia is not specifically associated with poor insight, and with Arduini et al. (2003) who found no significant differences in illness awareness when comparing schizophrenia and bipolar patients.

The discordant findings across studies regarding the different diagnoses probably depend on how the researchers operationalized the insight measure. A frequently used way of assessing insight is based on expert rating such as the Scale to Assess Unawareness of Mental Disorder (SUMD; Amador et al., 1994). However, the method in the present study was based on patients' self-report. It is important to note that the present study supported the sensitivity to assess lower insight in schizophrenia with self-report, which is a more cost-effective way to assess insight compared to structured diagnostic interviews. Nevertheless, and regardless of group comparisons, schizophrenia spectrum disorders in the present study were found to be significantly associated with low illness awareness, which emphasizes that schizophrenia patients are sensitive and prone to deficiencies in their awareness of having mental illness. This finding supports existing knowledge concerning illness manifestations which describe poor insight as the main illness feature (Cuesta & Peralta, 1994), with 50%–80% of patients experiencing insight deficits to differing degrees (Amador & Gorman, 1998).

In contrast with illness awareness, schizophrenia patients did not differ significantly from mood disorder and stress-related disorder patients in the need for treatment factor which might imply that their awareness in terms of need for treatment is not lower than other diagnoses. In fact, schizophrenia patients had the highest awareness in the need for treatment, a finding which in a larger sample and more powered study might have reached a statistically significant level. This finding is in line with the different manifestations of the disorders and the continuous need for treatment control which exists – especially among schizophrenia spectrum disorders (American Psychiatric Association, 2006) compared to other disorders. Interestingly, while these patients appear to be the most aware of the need for treatment, treatment non-compliance is highest among this patient group (Cramer & Rosenheck, 1998; Sajatovic et al., 2010), which might imply that it is not necessarily the lack of awareness leading them not comply to treatment, but that there might be other underlying factors. However, considering the discordant findings across studies, more research in needed to clarify differences in insight between patients with different diagnoses, especially because studies examining different insight dimensions are lacking.

The present study also examines the possible predictors of insight and its different consequences. From the study results it appears that socio-demographic factors such as age and gender are not significant predictors of insight. These results are in line with previous studies (David et al., 1992; Goldberg et al., 2001; Marková & Berrios, 1992; McEvoy et al., 1981). On the other hand, patients' previous hospitalizations found to be an important factor in the prediction of insight as it significantly predicted illness awareness. This finding is in accord with previous studies which found positive associations between hospitalization and insight (e.g., Tariku et al., 2019) because hospitalization may provide opportunity for the patients to learn about their specific condition and diagnosis. However, the patients included in the present study were stable and already under treatment, therefore this result is not applicable for those patients who are unstable and who are chronically hospitalized (Harvey et al., 2013). However, interesting to note that while the presence of previous hospitalizations predicted insight in terms of awareness into the illness, it did not predict patients' awareness in the need for treatment. It is important to mention that this finding might be the result of multicollinearity among the different variables in the study, because hospitalizations were found to be

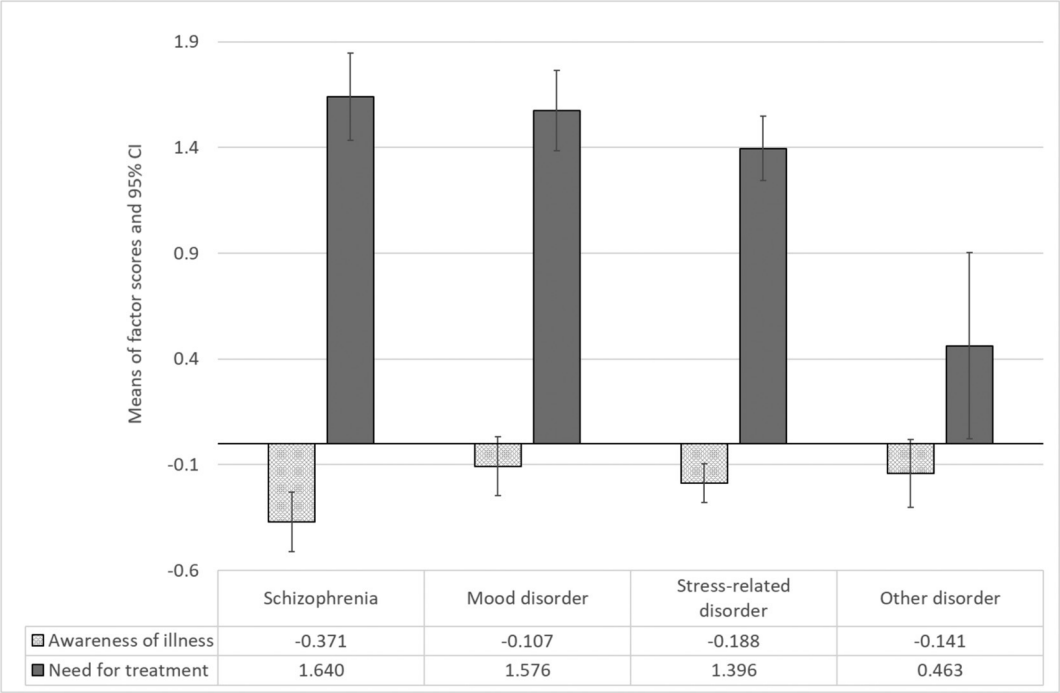

Fig. 1. Comparison of two insight factors across mental conditions.
Note: Factor scores are estimated from the CFA model. CI = confidence interval.

Table 4
Predictors of the two factors of insight: CFA with covariates analysis.

	Awareness of illness		Need for treatment	
	r	*β*	*r*	*β*
Age	−0.076	−0.099	**0.175***	0.104
Gender	−0.047	−0.069	−0.020	−0.020
Hospitalization	**0.199****	**0.254***	**0.208****	0.135
R^2		8.7%		10.7%

Note: $N = 191$. r = bivariate correlations between factor scores and the explanatory variables. Hospitalization coding: 1 = hospitalized and 0 = non-hospitalized. Diagnoses were controlled for in the model. β = standardized regression coefficients. Boldfaced coefficients are significant at $p < 0.05$.
* $p < 0.05$.
** $p < 0.01$.

positively associated with awareness for the need for treatment, an association which disappeared in the multivariate analysis. However, this association was weak to moderate in size. Still, this finding is important to consider for further research, because it implies the opposite to the commonsense perception of being hospitalized in order to receive a treatment, and thus might mean that hospitalizations in the context of mental health might be more meaningful to patients' self-definition and to an illness identity, rather than to their perception of receiving necessary treatment.

This possibility is in line with findings from stigma research, stating that the acknowledgement of having a mental illness is associated with negative self-definition such as perceiving the whole self and one's identity as ill and ruined (Yanos et al., 2010), rather than, for instance, perceiving the disorder as separate from the self, as a health condition that might be controlled by proper treatment. Williams (2008) claims that having the awareness that one has mental illness often initiates a process which changes the way individuals perceive themselves, leading them to adopt a new identity. Unfortunately, this new identity, in many instances, appears to be affected by mental illness stigma, incorporating negative stereotypes which exist in the society.

The results of the present study regarding the consequences of insight further support the possibility that illness awareness is accompanied by negative interpretations, because the only insight aspect which predicted negative outcomes was the awareness of having a mental illness, and not the recognition of the need for treatment. In fact, the awareness of having a mental illness was found to have a negative impact most specifically on self-related aspects, and predicted higher internalized stigma and lower self-esteem. This was not associated with the other lesser self-related stigma aspects, such as awareness to social stigma and agreement with the stigma. Similarly, having a higher awareness of the illness also predicted higher experience of shame. These findings reinforce the accumulating studies reporting on an "insight paradox", meaning that having insight into one's illness is not always positive, and in the context of mental illness, it might even be detrimental. It might be present in particularly societies where especially high stigma is present, such as Hungary, because high and persistent stigmatization has been reported in Hungarian society towards mental patients (Buchman-Wildbaum et al., 2018).

Among the insight aspects, the present study targeted the "awareness of having mental illness", because this insight aspect is potentially hurtful having negative aspects. These findings reinforce previous studies reporting the same conclusion. Using the BIS Norman et al. (2011) found the illness awareness aspect to be the only insight aspect which was consistently associated with depression, anxiety, anger, hostility, and engulfment (a process describing one's acceptance of the patient role as their main self-definition). Similarly, Hasson-Ohayon et al. (2012) found illness awareness was the only insight aspect to be related to higher feelings of shame. Staring et al. (2009) reported more specific differentiation between the insight aspects in terms of their individual contribution to different negative outcomes. In their sample, among individuals with high internalized stigma, the awareness of having mental illness was found to have the most influential impact on negative self-esteem, while the need for treatment aspect was found to have the largest negative impact on depressed mood and quality of life.

Because treatment for mental illness mainly includes medication, which often has an element of chronicity, involves limitations, and requires adaptations, it is plausible to speculate that awareness to the need for treatment will mainly influence individual's mood and quality

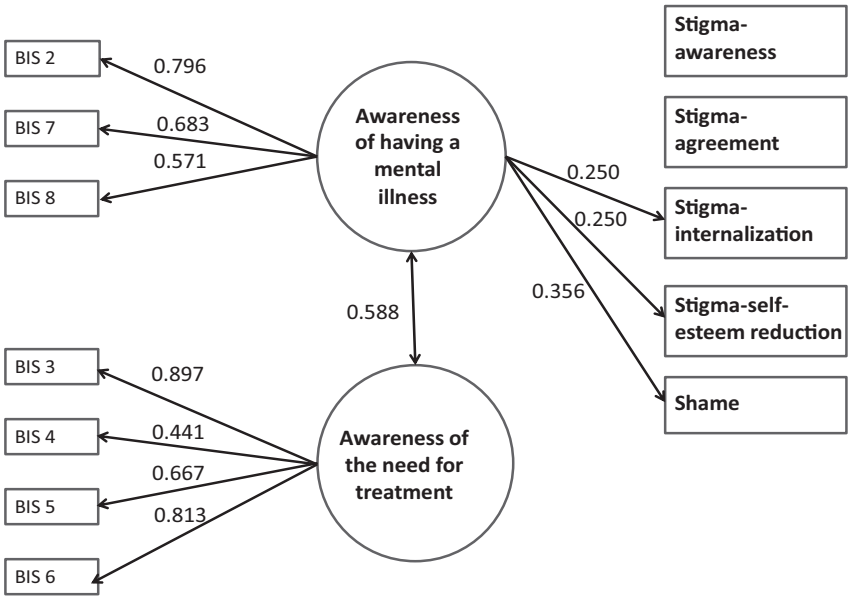

Fig. 2. Structural equation modeling of insight, internalized stigma and shame.
Note: Only the significant ($p < 0.05$) paths are presented. The path coefficients and factor loadings are standardized.

of life, and will be less related to stable beliefs of self-worth, self-definition, or self-esteem per se. However, further study is needed in order to shed light on the complexity of the insight construct and to draw more solid conclusions, especially as studies focusing on its specific aspects are limited.

The results of the present study have several clinical implications. Firstly, the study results, consistent with other findings, might imply that in the mental health field, insight and internalized stigma might be two intertwined factors that together produce negative consequences. Besides the aforementioned negative effects on individual's self-perception, internalized stigma has also been related to treatment non-compliance (Gerlinger et al., 2013; Kamaradova et al., 2016), a widespread problem within the mental health field, which can have severe consequences (Lacro et al., 2002; Sajatovic et al., 2004). Therefore, paradoxically, it might be that in some cases, having high awareness into the illness, will interfere with patients' willingness to ask for help and engage in treatment, although they might be aware of the need for treatment.

Consequently, although not examined in this study, rather than assuming full responsibility to lack of insight, internalized stigma should be taken into consideration when facing difficulties with treatment compliance. The experience of shame should also be addressed, especially as it might make individuals more vulnerable to the internalization of stigma (Hasson-Ohayon et al., 2012). As such, this mainly implies that there is a need to formulate intervention programs which will aspire to improve insight while empowering patients simultaneously, in a way that their awareness of having a mental illness will not be accompanied with negative self-definition.

Psychoeducation programs which supply knowledge concerning mental illness, the treatment, and focus on refuting stereotypes might be helpful. However, the impact of such programs on insight remains unclear. There is evidence that these programs increase knowledge (Lincoln et al., 2007b) but it is not clear if the patients use such knowledge in their everyday life and struggles (Kemp & David, 1995; Sevy et al., 2004). A promising intervention which was found to increase insight (Yanos et al., 2012) and reduce internalized stigma (Hansson et al., 2017) is Narrative Enhancement and Cognitive Therapy (NECT) (Yanos et al., 2011). Intervention programs aiming to increase insight should keep in mind that although having awareness to any life struggle is an important step in recovery, in the mental health field, not only might this not be enough, but it might also be contaminated with stigmatic and self-devaluing beliefs. Therefore, internalized stigma and shameful feelings should be an inseparable part of any intervention or treatment plan offered to individuals coping with mental illness.

Secondly, the study results may also stress the need to examine and address insight among patients with different diagnoses instead of focusing solely on those with schizophrenia. While the BIS in this study was found to be applicable to patients with different diagnoses, future research might benefit from the development of insight scales which are tailored to specific diagnoses. A promising step in this direction is the Mood Disorders Insight Scale (MDIS), a modified version of the BIS, that is suitable specifically for mood disorders (Sturman & Sproule, 2003).

Third, the present study stresses the complexity of insight and the need to differentiate between different aspects of insight. As such, efforts to increase awareness of the illness itself without taking special care, might not always be the best practice, especially among individuals who are affected by stigma. On the other hand, the fact that awareness concerning the need for treatment was not associated with stigma or shame, might be highly informative for clinicians and for the development of intervention programs aimed at improving treatment compliance. However, as previous studies (i.e., Staring et al., 2009) reported that awareness concerning the need for treatment can be associated with other negative consequences (which were not examined in this study), additional research is needed, especially because studies examining the different aspects of insight and their outcomes are lacking.

The present study also has several limitations. First, since a wide range of diagnoses were included in the study for simplification purposes, patients with different diagnoses were grouped together into a larger diagnostic category. This compromised the ability of this study to identify differences which might exist between patients in the same groups. Future studies should examine insight in more specific diagnostic groups, and among a larger sample. Second, a convenience sample used in the present study which also compromises the generalization of the results to the wider population. Third, because the study was cross-sectional, causality between variables cannot be inferred. Moreover, because insight can fluctuate over time (Wiffen et al., 2010), longitudinal studies are especially needed. Finally, as cultural differences exist in stigma towards mental illness (Abdullah & Brown, 2011), cross-cultural studies would be valuable in shedding more light

on the impact of insight and its relatedness to internalized stigma and negative outcomes.

Conclusions

Despite the limitations, the present study contributes important knowledge concerning the study of insight in the psychiatric field. The results support the construct of insight and also the use of the BIS among non-English speaking patients with different diagnoses. In clinical practice, practitioners should keep in mind that poor insight might be commonplace among patients with different psychiatric diagnoses, and is not just limited to patients with schizophrenia. Therefore, efforts to increase insight should be directed towards different patient populations, including schizophrenia patients. However, these efforts should be implemented cautiously, with careful consideration of stigma, and the negative meaning it has for individuals coping with mental illnesses. Further research is needed to better understand the complexity of insight and how its promotion can be directed towards individual growth and recovery.

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Declaration of competing interest

None.

References

Abdullah, T., & Brown, T. L. (2011). Mental illness stigma and ethnocultural beliefs, values, and norms: An integrative review. *Clinical Psychology Review, 31*(6), 934–948.
Aleman, A., Agrawal, N., Morgan, K. D., & David, A. S. (2006). Insight in psychosis and neuropsychological function: Meta-analysis. *British Journal of Psychiatry, 189*, 204–212.
Amador, X. F., Flaum, M., Andreasen, N. C., Strauss, D. H., Yale, S. A., Clark, S. C., & Gorman, J. M. (1994). Awareness of illness in schizophrenia and schizoaffective and mood disorders. *Archives of General Psychiatry, 51*(10), 826–836.
Amador, X. F., & Gorman, J. M. (1998). Psychopathologic domains and insight in schizophrenia. *Psychiatric Clinics of North America, 21*(1), 27–42.
Amador, X. F., Strauss, D. H., Yale, S. A., Flaum, M. M., Endicott, J., & Gorman, J. M. (1993). Assessment of insight in psychosis. *The American Journal of Psychiatry, 150*(6), 873–879.
American Psychiatric Association (2006). *Evidence based treatment for schizophrenia: Information for families and other supporters.* Arlington, VA: American Psychiatric Association.
Andrews, B., Qian, M., & Valentine, J. D. (2002). Predicting depressive symptoms with a new measure of shame: The Experience of Shame Scale. *British Journal of Clinical Psychology, 41*(1), 29–42.
Arduini, L., Kalyvoka, A., Stratta, P., Rinaldi, O., Daneluzzo, E., & Rossi, A. (2003). Insight and neuropsychological function in patients with schizophrenia and bipolar disorder with psychotic features. *Canadian Journal of Psychiatry, 48*(5), 338–341.
Baier, M. (2010). Insight in schizophrenia: A review. *Current Psychiatry Reports, 12*(4), 356–361.
Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine, 25*(24), 3186–3191.
Beck, A. T., Baruch, E., Balter, J. M., Steer, R. A., & Warman, D. M. (2004). A new instrument for measuring insight: The Beck Cognitive Insight Scale. *Schizophrenia Research, 68*(2–3), 319–329.
Birchwood, M., Smith, J., Drury, V., Healy, J., Macmillan, F., & Slade, M. (1994). A self-report insight scale for psychosis: Reliability, validity and sensitivity to change. *Acta Psychiatrica Scandinavica, 89*(1), 62–67.
Braw, Y., Sitman, R., Sela, T., Erez, G., Bloch, Y., & Levkovitz, Y. (2012). Comparison of insight among schizophrenia and bipolar disorder patients in remission of affective and positive symptoms: Analysis and critique. *European Psychiatry, 27*(8), 612–618.
Brown, T. (2006). *Confirmatory factor analysis for applied research.* New York, NY: Guilford Press.
Browne, M., & Cudek, R. (1993). Alternative ways of assessing model fit. In K. Bollen, & S. Long (Eds.). *Testing structural equation models* (pp. 136–162). Newbury Park: Sage Publications.
Buchman-Wildbaum, T., Paksi, B., Sebestyén, E., Kun, B., Felvinczi, K., Schmelowszky, Á., ... Urbán, R. (2018). Social rejection towards mentally ill people in Hungary between 2001 and 2015: Has there been any change? *Psychiatry Research, 267*, 73–79.
Carpenter, W. T., Bartko, J. J., Strauss, J. S., & Hawk, A. B. (1978). Signs and symptoms as predictors of outcome: A report from the international pilot study of schizophrenia. *American Journal of Psychiatry, 135*(8), 940–944.
Cleary, S. D., Bhatty, S., Broussard, B., Cristofaro, S. L., Wan, C. R., & Compton, M. T. (2014). Measuring insight through patient self-report: An in-depth analysis of the factor structure of the Birchwood Insight Scale. *Psychiatry Research, 216*(2), 263–268.
Corrigan, P. W., Watson, A. C., & Barr, L. (2006). The self–stigma of mental illness: Implications for self–esteem and self–efficacy. *Journal of Social and Clinical Psychology, 25*(8), 875–884.
Cramer, J. A., & Rosenheck, R. (1998). Compliance with medication regimens for mental and physical disorders. *Psychiatric Services, 49*(2), 196–201.
Cuesta, M. J., & Peralta, V. (1994). Lack of insight in schizophrenia. *Schizophrenia Bulletin, 20*(2), 359–366.
David, A., Buchanan, A., Reed, A., & Almeida, O. (1992). The assessment of insight in psychosis. *British Journal of Psychiatry, 161*, 599–602.
David, A. S. (1990). Insight and psychosis. *British Journal of Psychiatry, 156*, 798–808.
David, A. S., van Os, J., Jones, P., Harvey, I., Foerster, A., & Fahy, T. (1995). Insight and psychotic illness. *British Journal of Psychiatry, 167*(05), 621–628.
Ehrlich-Ben Or, S., Hasson-Ohayon, I., Feingold, D., Vahab, K., Amiaz, R., Weiser, M., & Lysaker, P. H. (2013). Meaning in life, insight and self-stigma among people with severe mental illness. *Comprehensive Psychiatry, 54*(2), 195–200.
Eisen, J. L., Phillips, K. A., Baer, L., Beer, D. A., Atala, K. D., & Rasmussen, S. A. (1998). The brown assessment of beliefs scale: Reliability and validity. *American Journal of Psychiatry, 155*(1), 102–108.
Frese, F. J. (2000). Psychology practitioners and schizophrenia: A view from both sides. *Journal of Clinical Psychology, 56*(11), 1413–1426.
Gerlinger, G., Hauser, M., De Hert, M., Lacluyse, K., Wampers, M., & Correll, C. U. (2013). Personal stigma in schizophrenia spectrum disorders: A systematic review of prevalence rates, correlates, impact and interventions. *World Psychiatry, 12*(2), 155–164.
Ghaemi, S. N. (1997). Insight and psychiatric disorders: A review of the literature, with a focus on its clinical relevance for bpolar disorder. *Psychiatric Annals, 27*(12), 782–790.
Ghaemi, S. N., Boiman, E., & Goodwin, F. K. (2000). Insight and outcome in bipolar, unipolar, and anxiety disorders. *Comprehensive Psychiatry, 41*(3), 167–171.
Goldberg, R. W., Green-Paden, L. D., Lehman, A. F., & Gold, J. M. (2001). Correlates of insight in serious mental illness. *Journal of Nervous and Mental Disease, 189*(3), 137–145.
Hansson, L., Lexén, A., & Holmén, J. (2017). The effectiveness of narrative enhancement and cognitive therapy: A randomized controlled study of a self-stigma intervention. *Social Psychiatry and Psychiatric Epidemiology, 52*(11), 1415–1423.
Harvey, P. D., Loewenstein, D. A., & Czaja, S. J. (2013). Hospitalization and psychosis: Influences on the course of cognition and everyday functioning in people with schizophrenia. *Neurobiology of Disease, 53*, 18–25.
Hasson-Ohayon, I., Ehrlich-Ben Or, S., Vahab, K., Amiaz, R., Weiser, M., & Roe, D. (2012). Insight into mental illness and self-stigma: The mediating role of shame proneness. *Psychiatry Research, 200*(2–3), 802–806.
Kamaradova, D., Latalova, K., Prasko, J., Kubinek, R., Vrbova, K., Mainerova, B., ... Tichackova, A. (2016). Connection between self-stigma, adherence to treatment, and discontinuation of medication. *Patient Preference and Adherence, 10*, 1289–1298.
Kemp, R. A., & David, A. S. (1995). Insight and adherence to treatment in psychotic disorders. *British Journal of Hospital Medicine, 54*(5), 222–227.
Lacro, J. P., Dunn, L. B., Dolder, C. R., Leckband, S. G., & Jeste, D. V. (2002). Prevalence of and risk factors for medication nonadherence in patients with schizophrenia: A comprehensive review of recent literature. *Journal of Clinical Psychiatry, 63*(10), 892–909.
Lincoln, T. M., Lüllmann, E., & Rief, W. (2007a). Correlates and long-term consequences of poor insight in patients with schizophrenia. A systematic review. *Schizophrenia Bulletin, 33*(6), 1324–1342.
Lincoln, T. M., Wilhelm, K., & Nestoriuc, Y. (2007b). Effectiveness of psychoeducation for relapse, symptoms, knowledge, adherence and functioning in psychotic disorders: A meta-analysis. *Schizophrenia Research, 96*(1–3), 232–245.
Lysaker, P. H., Lancaster, R. S., Davis, L. W., & Clements, C. A. (2003). Patterns of neurocognitive deficits and unawareness of illness in schizophrenia. *Journal of Nervous and Mental Disease, 191*(1), 38–44.
Lysaker, P. H., Roe, D., & Yanos, P. T. (2007). Toward understanding the insight paradox: Internalized stigma moderates the association between insight and social functioning, hope, and self-esteem among people with schizophrenia spectrum disorders. *Schizophrenia Bulletin, 33*(1), 192–199.
Marková, I. S., & Berrios, G. E. (1992). The assessment of insight in clinical psychiatry: A new scale. *Acta Psychiatrica Scandinavica, 86*(2), 159–164.
McEvoy, J. P. (2004). The relationship between insight in psychosis and compliance with medications. In X. Amador, & A. David (Eds.). *Insight in psychosis* (pp. 291–305). (2nd ed.). New York: Oxford University Press.
McEvoy, J. P., Aland, J., Wilson, W. H., Guy, W., & Hawkins, L. (1981). Measuring chronic schizophrenic patients attitudes toward their illness and treatment. *Hospital & Community Psychiatry, 32*(12), 856–858.
Michalakeas, A., Skoutas, C., Charalambous, A., Peristeris, A., Marinos, V., Keramari, E., & Theologou, A. (1994). Insight in schizophrenia and mood disorders and its relation to psychopathology. *Acta Psychiatrica Scandinavica, 90*(1), 46–49.
Mintz, A. R., Dobson, K. S., & Romney, D. M. (2003). Insight in schizophrenia: A meta-analysis. *Schizophrenia Research, 61*(1), 75–88.
Mohamed, S., Rosenheck, R., McEvoy, J., Swartz, M., Stroup, S., & Lieberman, J. A. (2009). Cross-sectional and longitudinal relationships between insight and attitudes toward medication and clinical outcomes in chronic schizophrenia. *Schizophrenia*

Bulletin, 35(2), 336–346.
Moore, O., Cassidy, E., Carr, A., & O'Callaghan, E. (1999). Unawareness of illness and its relationship with depression and self-deception in schizophrenia. *European Psychiatry, 14*(5), 264–269.
Muthén, L., & Muthén, B. (1998). *Mplus user's guide* (8th ed.). Los Angeles, CA: Muthén & Muthén.
Norman, R. M. G., Windell, D., Lynch, J., & Manchanda, R. (2011). Parsing the relationship of stigma and insight to psychological well-being in psychotic disorders. *Schizophrenia Research, 133*(1–3), 3–7.
Peralta, V., & Cuesta, M. J. (1998). Lack of insight in mood disorders. *Journal of Affective Disorders, 49*(1), 55–58.
Pini, S., Cassano, G. B., Dell'Osso, L., & Amador, X. F. (2001). Insight into illness in schizophrenia, schizoaffective disorder, and mood disorders with psychotic features. *American Journal of Psychiatry, 158*(1), 122–125.
Ramachandran, A. S., Ramanathan, R., Praharaj, S. K., Kanradi, H., & Sharma, P. S. V. N. (2016). A cross-sectional, comparative study of insight in schizophrenia and bipolar patients in remission. *Indian Journal of Psychological Medicine, 38*(3), 207–212.
Sajatovic, M., Davies, M., & Hrouda, D. R. (2004). Enhancement of treatment adherence among patients with bipolar disorder. *Psychiatric Services, 55*(3), 264–269.
Sajatovic, M., Velligan, D. I., Weiden, P. J., Valenstein, M. A., & Ogedegbe, G. (2010). Measurement of psychiatric treatment adherence. *Journal of Psychosomatic Research, 69*(6), 591–599.
Sanz, M., Constable, G., Lopez-Ibor, I., Kemp, R., & David, A. S. (1998). A comparative study of insight scales and their relationship to psychopathological and clinical variables. *Psychological Medicine, 28*(2), 437–446.
Sevy, S., Nathanson, K., Visweswaraiah, H., & Amador, X. (2004). The relationship between insight and symptoms in schizophrenia. *Comprehensive Psychiatry, 45*(1), 16–19.
Staring, A. B. P., Van der Gaag, M., Van den Berge, M., Duivenvoorden, H. J., & Mulder, C. L. (2009). Stigma moderates the associations of insight with depressed mood, low self-esteem, and low quality of life in patients with schizophrenia spectrum disorders. *Schizophrenia Research, 115*(2–3), 363–369.
Sturman, E. D., & Sproule, B. A. (2003). Toward the development of a mood disorders insight scale: Modification of Birchwood's psychosis insight scale. *Journal of Affective Disorders, 77*(1), 21–30.
Tariku, M., Demilew, D., Fanta, T., Mekonnen, M., & Abebaw Angaw, D. (2019). Insight and associated factors among patients with schizophrenia in mental specialized Hospital, Ethiopia, 2018. *Psychiatry Journal, 2019*, 1–5.
Vizin, G., Urbán, R., & Unoka, Z. (2016). Shame, trauma, temperament and psychopathology: Construct validity of the Experience of Shame Scale. *Psychiatry Research, 246*, 62–69.
Wiffen, B. D. R., Rabinowitz, J., Lex, A., & David, A. S. (2010). Correlates, change and "state or trait" properties of insight in schizophrenia. *Schizophrenia Research, 122*(1–3), 94–103.
Williams, C. C. (2008). Insight, stigma, and post–diagnosis identities in schizophrenia. *Psychiatry: Interpersonal and Biological Processes, 71*(3), 246–256.
World Health Organization (1992). *ICD-10 classifications of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines.* Geneva: World Health Organisation.
Yanos, P. T., Roe, D., & Lysaker, P. H. (2010). The impact of illness identity on recovery from severe mental illness. *American Journal of Psychiatric Rehabilitation, 13*(2), 73–93.
Yanos, P. T., Roe, D., & Lysaker, P. H. (2011). Narrative enhancement and cognitive therapy: A new group-based treatment for internalized stigma among persons with severe mental illness. *International Journal of Group Psychotherapy, 61*(4), 576–595.
Yanos, P. T., Roe, D., West, M. L., Smith, S. M., & Lysaker, P. H. (2012). Group-based treatment for internalized stigma among persons with severe mental illness: Findings from a randomized controlled trial. *Psychological Services, 9*(3), 248–258.
Yen, C. F., Chen, C. S., Ko, C. H., Yeh, M. L., Yang, S. J., Yen, J. Y., ... Wu, C. C. (2005). Relationships between insight and medication adherence in outpatients with schizophrenia and bipolar disorder: Prospective study. *Psychiatry and Clinical Neurosciences, 59*(4), 403–409.
Young, D. A., Campbell, Z., Zakzanis, K. K., & Weinstein, E. (2003). A comparison between an interview and a self-report method of insight assessment in chronic schizophrenia. *Schizophrenia Research, 63*(1–2), 103–109.