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## Internalized stigma as a barrier to improvement in vocational functioning among people with schizophrenia-spectrum disorders

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### Abstract

We examined the relationship between internalized stigma and changes in vocational function. Persons with schizophrenia or schizoaffective disorder ( $n = 78$ ) were assessed at baseline and 5-months after vocational rehabilitation. Internalized stigma and cognitive-behavioral treatment predicted change in vocational functioning, supporting the view that internalized stigma compromises vocational outcomes.

### Keywords

Internalized Stigma; Vocational Functioning; Social Functioning; Vocational Rehabilitation

## 1. Introduction

Research has increasingly revealed that recovery from severe mental illness involves non-linear changes across semi-independent domains (Roe, 2001). Previously, we proposed a model for how internalized stigma, or the process by which a person comes to apply stigmatizing views to oneself (e.g., that people with mental illness are likely to be violent or incompetent), serves as a barrier to recovery-related outcomes among people with severe mental illness (Yanos et al, In Press). Briefly, we hypothesized that elevated internalized stigma directly impacts hopefulness and self-esteem, which subsequently impact coping, suicidality, vocational functioning, and social interaction. Using path analysis, we demonstrated that many of the links hypothesized by our model were supported (Yanos et al, 2008). However, since all participants in our analyses had begun enrollment in vocational rehabilitation and had equivalent employment status, we were unable to test the hypothesized impact of internalized stigma on employment status, an important construct in our original model. The current study addresses this limitation by examining the relationship

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between baseline scores on measures of internalized stigma, self-esteem, hopelessness and positive/negative symptoms (as control variables) and 5-month changes in vocational and other types of social function of the same participants examined in our path analysis (excluding participants who had dropped out at 5-month post assessment).

## 2. Methods

### 2.1 Participants

Sixty six males and 12 females with SCID confirmed DSM-IV diagnoses of schizophrenia (n = 51) or schizoaffective disorder (n = 27) were recruited from a day hospital at a VA Medical Center (n = 54) or community mental health center (n = 24) (this is a subsample of the sample described in Yanos et al. 2008 for whom 5-month followup data were available; 102 persons participated in the baseline assessments). All participants were receiving ongoing treatment and were in a stable phase of their disorder as defined by no hospitalizations, changes in medication, or housing in the past month. Participants with active substance dependence or history of mental retardation documented in a chart review were excluded. Participants had a mean age of 46.67 (SD = 8.71), a mean educational level of 12.81 (SD = 2.15) and a mean of 7.53 (SD = 9.30) lifetime hospitalizations, with a mean age at first hospitalization of 26.88 (SD = 10.64). Thirty were White, 47 African American, and one Latino.

### 2.2 Instruments

*The Positive and Negative Syndrome Scale* (PANSS; Kay et al., 1997) is a 30-item rating scale completed by clinically trained research staff at the conclusion of chart review and a semi-structured interview. For the purposes of this study, two of the analytically derived PANSS factor component scores were utilized: Positive and Negative symptoms (Bell et al., 1994). Assessment of inter-rater reliability in the current study revealed excellent to good rater agreement with intraclass correlations ranging from .90 to .81 for positive and negative component scores respectively.

*The Internalized Stigma of Mental Illness Scale* (ISMIS; Ritsher et al., 2003) is a 29-item questionnaire designed to assess subjective experiences of stigma. One of the five ISMIS subscales was used in this study: Stereotype Endorsement. Stereotype Endorsement reflects agreement with negative stereotypes of mental illness, and was selected as we have found it to represent the “core” of the internalized stigma construct. There has been evidence of adequate internal consistency, test-retest reliability, factorial and convergent validity reported elsewhere (Ritsher et al., 2003). In the current sample, the coefficient alpha for the stereotype endorsement subscale was .70.

*The Beck Hopelessness Scale* (Beck et al., 1974) is a 20-item questionnaire that asks participants to endorse statements as true or false as applied to them. Individual items are then summed to provide an overall index of hope or its absence. This scale has been used successfully with a wide range of psychiatric, medical and community populations (e.g., Haatainen et al., 2003) and has good internal consistency.

*The Rosenberg Self Esteem Schedule* (Rosenberg, 1965) was used to measure self-esteem. It is a 10-item self-report questionnaire that has previously been successfully used with persons with schizophrenia in a number of studies. Individual items are summed such that higher scores indicate higher self-esteem.

*The Quality of Life Scale* (QLS; Heinrichs et al., 1984) is a 21-item scale completed by clinically trained research staff following a semi-structured interview and chart review. While initially intended as a scale to assess the deficit syndrome among persons with

schizophrenia, it has been widely used a general measure of psychosocial function in this population. This scale contains 4 subscales, 1 of which was used in the present analyses: “Instrumental Functioning,” which taps vocational function. The instrumental functioning subscale consists of four items: “Extent of Occupational Role Functioning,” “Level of Accomplishment,” “Degree of Underemployment,” and “Satisfaction with Occupational Role Functioning.” These items allow for judgments of the extent of the individual’s occupational functioning as well as the degree to which he or she falls short of his or her assessed potential in the occupational realm. For the present study, we examined predictors of the overall QLS score and this subscale. High to excellent inter-rater reliability was found for the QLS factor scores, with intraclass correlations for blind raters observing the same interview ranging from .85 to .93.

### 2.3 Procedures

Following written informed consent, baseline assessments were conducted by a trained research assistant. Following the completion of baseline assessment, participants were randomized to receive either cognitive-behavioral therapy or support services. These services included weekly group and individual counseling meetings and have been described in detail elsewhere (Lysaker et al., 2009). All participants were next offered a 26-week job placement in entry-level medical center positions supervised by the regular job site supervisors. While all participants were guaranteed a placement, placements could be terminated for failure to follow work rules or substandard performance. Participants received paid work placements which were considered work therapy and not competitive employment. The mean number of weeks worked was 16.58 (SD = 9.99); 50 participants, or 49% of the original sample, were still working at week 26. The QLS interviews were performed again 5 months after baseline by a rater blind to treatment assignment.

### 2.4 Analyses

We computed change scores for the QLS and its subscales by subtracting the baseline score from the 5-month follow-up score. Thus, a positive change score indicates improvement while a negative change score indicates that scores decreased between baseline and 5-month follow-up. We then examined associations between the baseline variables and the QLS change scores, first with bivariate correlations, and next with simultaneous multivariate linear regression.

## 3. Results

The mean change in overall QLS score was 4.28 (Range -29 to 49; SD = 14.99); the mean change in instrumental functioning was 7.91 (Range -11 to 18; SD = 7.61), indicating that, on average, participants improved substantially in vocational functioning between baseline and 5 months. An examination of correlations between baseline stereotype agreement, hopelessness, self-esteem and positive/negative symptoms, treatment group assignment, and change in the QLS revealed that only stereotype agreement significantly predicting change in overall QLS score ( $r = -.248, p < .01$ ) as well as change in the instrumental functioning subscale ( $r = -.256, p < .01$ ). Other variables did not predict change at the .05 level, and there was no evidence of trend relationships, except in the case of treatment group assignment, which was related to change in overall QLS score and change in instrumental functioning at the .1 level. Since bivariate correlations indicated that there was no significant relationship between the hypothesized mediators (hope and self-esteem) and the outcome variable (change in QLS score), we did not conduct additional analyses to assess for mediation, as a relationship between the mediator and the outcome variable is a necessary precondition for mediation (Holmbeck, 1997).

We then examined the relationships suggested by the correlations further in multivariate analyses. Table 1 presents findings from a simultaneous linear regression predicting change in instrumental (vocational) functioning from all the baseline variables. As can be seen in table 1, internalized stigma and assignment to the treatment group significantly predicted change in instrumental functioning controlling for all the other baseline variables. None of the other variables were significantly related to change in functioning in either multivariate model, although there was suggestion of a trend relationship between self-esteem and change in instrumental functioning. We also explored the possibility of moderation between internalized stigma and group assignment, but found no evidence for moderation (analyses not shown).

#### 4. Discussion

Findings from the current analyses support the view, articulated in our original model (Yanos et al., In Press), that internalized stigma impacts vocational outcomes among persons diagnosed with severe mental illness. Specifically, we found that persons with higher scores on the stereotype endorsement subscale of the ISMIS at baseline demonstrated lower levels of improvement in vocational functioning 5 months later. The effect on the degree of improvement was independent of the effects of a treatment program geared toward enhancing vocational functioning, which we nevertheless found had a significant effect on vocational functioning in our multivariate model and in other analyses reported elsewhere (Lysaker et al., 2009). Furthermore, this effect was found when baseline severity of positive and negative symptoms was statistically controlled.

While findings did support the importance of internalized stigma in predicting social functioning outcomes, they did not support the view, espoused in our model (Yanos et al., In Press), that the effect of internalized stigma would be mediated by its effects on hopelessness and self-esteem. Although cross-sectional findings with the baseline data from the same sample examined in the current study supported this view (Yanos et al., 2008), findings with prospective data here reported did not support this. Lack of statistical power to detect an effect may have been a factor here, as there was suggestion of a trend relationship between baseline self-esteem and change in vocational functioning. Future research with larger samples is needed to tease out how well other aspects of our model are supported in longitudinal analyses.

Some limitations of the current study should be noted. While the data used were prospective and rule-out the interpretation of reciprocal relationship between the outcome and predictor variables, it is possible that an additional, unexamined variable or set of variables explain the relationships observed. Furthermore, participants were mostly men in their 40's, all of whom were involved in treatment, and vocational rehabilitation in particular. Findings on the impact of internalized stigma on employment outcomes may not generalize to persons who lack access to the types of work opportunities available to persons enrolled in vocational rehabilitation. Furthermore, it may well be that a different relationship exists between the variables we measured among younger persons with schizophrenia, in a predominantly female sample, or in particularly among persons who decline treatment or involvement in vocational rehabilitation.

Together, the current study as well as previous research (Yanos et al., 2008), provides empirical support for our model (Yanos et al., In Press) of the impact of internalized stigma on recovery from severe mental illness. More specifically, key functional outcomes appear to be influenced by the degree to which a person internalizes common negative stereotypes. While several evidence-based psychosocial treatments exist for people with severe mental illness (Kern et al., 2009), rarely do these focus directly on helping people develop a

positive identity, suggesting the need for the development of treatments specifically focusing on this arena.

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**Table 1**

Simultaneous Linear Regression Predicting Change in Instrumental Functioning

Variable	Beta	p
Internalized Stigma (Stereotype Agreement)	-.341	.007
Treatment (0 = control, 1 = experimental)	.246	.031
Self-Esteem	-.231	.102
Hopelessness	.083	.581
Positive Symptoms	-.046	.697
Negative Symptoms	.129	.269

$R^2 = .182$ ,  $F = 2.62$  (6,71)