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Therapeutic intervention for internalized stigma of severe mental illness: A systematic review and meta-analysis

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ABSTRACT

Objective: Internalized stigma can lead to pervasive negative effects among people with severe mental illness (SMI). Although prevalence of internalized stigma is high, there is a dearth of interventions and meanwhile a lack of evidence as to their effectiveness. This study aims at unraveling the existence of different therapeutic interventions and the effectiveness internalized stigma reduction in people with SMI via a systematic review and meta-analysis.

Methods: Five electronic databases were searched. Studies were included if they (1) involved community or hospital based interventions on internalized stigma, (2) included participants who were given a diagnosis of SMI > 50%, and (3) were empirical and quantitative in nature.

Results: Fourteen articles were selected for extensive review and five for meta-analysis. Nine studies showed significant decrease in internalized stigma and two showed sustainable effects. Meta-analysis showed that there was a small to moderate significant effect in therapeutic interventions ($SMD = -0.43$; $p = 0.003$). Among the intervention elements, four studies suggested a favorable effect of psychoeducation. Meta-analysis showed that there was small to moderate significant effect ($SMD = -0.40$; $p = 0.001$).

Conclusion: Most internalized stigma reduction programs appear to be effective. This systematic review cannot make any recommendation on which intervention is more effective although psychoeducation seems most promising. More Randomized Controlled Trials (RCT) on particular intervention components using standard outcome measures are recommended in future studies.

1. Introduction

Internalized stigma, also called self-stigma, is the process of adopting the public's stigmatizing opinions into own thoughts. Its prevalence among people with severe mental illness (SMI) stands at 41.7% (Gerlinger et al., 2013). Meta-analysis (Livingston and Boyd, 2010) found that high levels of internalized stigma were significantly correlated with hopelessness, poorer self-esteem, reduced empowerment/mastery, and reduced self-efficacy. Internalized stigma significantly predicted poor social functioning over time (Fung et al., 2008; Tsang et al., 2010; Yanos et al., 2012a, 2012b). Higher internalized stigma was also associated with poorer quality of life on all the domains of WHOQOL-Brief (Mosanya et al., 2014). In addition, higher levels of internalized stigma were significantly related to more severe psychiatric symptoms, poorer treatment adherence, and lower utilization of mental health services (Rüsch et al., 2009). Up to 20% of people may even discontinue treatment prematurely due to internalized stigma (Corrigan, 2014). Unfortunately, poorer treatment adherence was related to poorer treatment outcomes, more re-hospitalization, and increased health costs (Lacro et al., 2002). All of the above studies suggest that internalized stigma has tremendous negative impact on functional outcomes of people with SMI and increases societal burden in taking care of these individuals.

Given the close negative relationship between internalized stigma and recovery (Yanos et al., 2008), interventions that attempt to reduce it among those with SMI so as to improve their prospect for recovery are important both in psychiatric rehabilitation and community integration.

Although a conceptual framework (Hayward and Bright, 1997) on internalized stigma reduction is available, there is a dearth of interventions and meanwhile a lack of evidence as to their effectiveness. The programs usually consist of a combination of different elements of intervention such as psychoeducation, cognitive behavioral therapy, and social skills training. Currently there are no widely accepted treatment protocols on internalized stigma reduction. Numerous studies on internalized stigma were published in the past few years. There are a few reviews (e.g., Mittal et al., 2012) on this area. But no attempt on meta-analysis has ever been conducted. To fill the knowledge gap, this systematic review and meta-analytical study focuses on studies which

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are randomized control trials, clinical trials, or experimental trials in nature and reported therapeutic interventions to reduce internalized stigma in people with SMI.

2. Methods

The PRISMA Statement Criteria (Liberati et al., 2009) was adopted throughout the review to report our results.

2.1. Data sources

Systematic search was done to locate studies from *PubMed*, *PsychInfo* (1806-Present), *SCI* (1970-Present), *SSCI* (1970-Present), and *Scopus* on October 3rd, 2014. The search terms were generated based on the four types of eligibility criteria mentioned above. They are presented in Supplementary Appendix 1. In addition, emails were sent to a few prominent researchers on mental illness stigma that had close collaborations with the first author. One replied and suggested an in press article that we missed in the systematic search and eventually included in the systematic review.

2.2. Study selection

Studies were included if the following criteria were met: (1) studies: randomized clinical trials, clinical trials, and experimental studies studying internalized stigma reduction in people with SMI which was operationally defined as mental illness having a chronic course and leading to significant social and occupational dysfunction such as Schizophrenia, Psychotic disorder, Psychosis, Delusional disorder, Schizoaffective, Bipolar disorder and Personality disorder; (2) participants: more than 50% studies participants were given a diagnosis of SMI,; (3) intervention: studies that compared community or hospital based therapeutic interventions with conventional treatment; (4) outcome measures: studies that used validated instruments for screening and assessing the severity of internalized stigma. Qualitative studies and literature reviews were excluded.

There were no limitations in the follow up period. Search was restricted to publications in English but there was no limit to the years of publication.

Two reviewers independently conducted the search in five electronic databases. The results were screened on titles and abstracts by all reviewers independently. Disagreements were resolved via discussion between reviewers with the facilitation of the corresponding author.

2.3. Data extraction and analysis

Data extracted from selected studies included: (1) characteristics of the study (e.g., aims, study design, intervention setting, participants' characteristics, randomization procedures, inclusion and exclusion criteria, etc.); (2) outcome measures (e.g., outcome measure instruments, assessment period, dropout rate, etc.); (3) interventions (e.g., intervention approach, trainers' quality, etc.); and (4) study results (e.g., significant effects, sustainability, etc.). To ensure accuracy, five reviewers assessed two to three studies independently and the data were cross-checked by another reviewer. Also, emails were sent to the authors for clarifying missing or unclear data.

2.4. Assessment of methodological quality

The methodological risk of bias for each trial was evaluated using the risk of bias table (Higgins and Green, 2011). Five reviewers worked independently to determine the adequacy of randomization sequence, blinding of patients and assessors, and the extent of follow up. Disagreements were resolved in discussion.

2.5. Data synthesis and analysis

Review Manager 5.3, developed by the Cochrane Collaboration (2014), was used for meta-analysis of the results of included studies. The outcomes across the trials were expressed in *Cohen's D*. Standardized mean differences (*SMDs*) were calculated for the pooled effects. *SMDs* were interpreted using the "rule of thumb": 0.2 represents a small effect, 0.5 represents a moderate effect, and 0.8 represents a large effect (Cohen, 1988). Heterogeneity was tested with an X^2 test. I^2 was also reported. I^2 statistic >75% was considered to have high degree of heterogeneity while I^2 statistic of 25%–50% was considered to have a low degree of heterogeneity (Higgins et al., 2003). We used random-effects model for heterogeneity ($p < 0.05$) and a fixed effects model for heterogeneity ($p > 0.05$). Sensitivity analyses were conducted with psychoeducation group and professional-led or peer-led intervention. Publication bias was examined using funnel plot. A value of $p < 0.05$ was considered statistically significant.

Since the outcome of internalized stigma reduction program was assessed by more than one tool in a trial, only the primary outcome (i.e., internalized stigma reduction) was included in the meta-analysis. Emails were sent to corresponding authors for clarifying missing data.

3. Results

3.1. Results of literature search

Eight hundred nineteen articles were retrieved. Three hundred eighty duplicated and 421 irrelevant articles were excluded after initial screening of title and abstract. Full reports of 22 studies were acquired and eight were further excluded for the following reasons: (1) not a clinical trial, (2) <50% participants given diagnoses of SMI, (3) exploratory research, and (4) duplicated studies (Fig. 1). (See Figs. 2– 4.)

3.2. Description of included studies

Fourteen studies, including seven RCTs (Corrigan et al., 2015; Çuhadar and Çam, 2014; Fung et al., 2011; McCay et al., 2007; Russinova et al., 2014; Rüsch et al., 2014; Yanos et al., 2012a, 2012b), three controlled clinical trials (Roe et al., 2014; Sibitz et al., 2013; Uchino et al., 2012), and four uncontrolled studies without a control group (Costain et al., 2014; Lucksted et al., 2011; Lysaker et al., 2012; Staring et al., 2013) met inclusion criteria. These studies were originated from nine countries across Americas, Europe, and Asia. Most programs adopted psychoeducation approach with inclusion of a combination of other components such as CBT, social skills training, goal attainment program, and narrative therapy. The duration of these programs ranged from 10 to 40 sessions (Russinova et al., 2014; Sibitz et al., 2013). Other than the above more conventional therapeutic elements, there were two evolving innovative interventions. Both of them were peer led group interventions. One was Coming Out Proud (Corrigan et al., 2015; Rüsch et al., 2014). It consisted of group discussion focusing on topics of secrecy and disclosure of own mental illness. The other was Photovoice (Russinova et al., 2014). In the group, individuals photograph objects or events in their daily lives were used to generate narratives for group discussion. The characteristics of included studies are summarized in Table 1.

Participants were given a diagnosis of schizophrenia, schizophrenia spectrum disorder, bipolar disorder, or major mood disorder. One study included patients with schizophrenia only (Fung et al., 2011) and one included patients with bipolar disorder only (Çuhadar and Çam, 2014). Participants were mostly given a diagnosis by psychiatrists according to DSM IV or ICD-10 (Yanos et al., 2012a, 2012b). Two studies recruited participants according to their self-reported diagnosis. Only one study reported the use of the structured interview procedure in verifying the diagnosis of the research participants (Lysaker et al., 2012).

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