The clinical and psychosocial correlates of self-stigma among people with schizophrenia spectrum disorders across cultures: A systematic review and meta-analysis

Sarraf, L.[1,2], Lepage, M.[2,3], & Sauvé, G.[2,4]*

[1]Department of Psychology, Carleton University, Ottawa, Canada
[2]Douglas Research Centre, Montreal, Canada
[3]Department of Psychiatry, McGill University, Canada
[4]Department of education and pedagogy – career counseling, Université du Québec À Montréal, Montreal, Canada

*Correspondence to: Geneviève Sauvé, Université du Québec À Montréal, Département d'éducation et pédagogie, C.P. 8888, succ. Centre-ville, Montréal (Québec) H3C 3P8 Canada, Phone: 1-514-987-3000 x8946. Email: sauve.genevieve@uqam.ca

This is the accepted manuscript of Sarraf, L., Lepage, M., & Sauvé, G. (2022). The clinical and psychosocial correlates of self-stigma among people with schizophrenia spectrum disorders across cultures: A systematic review and meta-analysis. Schizophrenia research, 248, 64–78. https://doi.org/10.1016/j.schres.2022.08.001

Abstract

Background: Individuals with schizophrenia spectrum disorders (SSD) are at heightened risk of experiencing self-stigma, and some cultures are more stigmatizing toward SSD than others. The first purpose of this review is to provide an estimate of the relationship between self-stigma and clinical and psychosocial outcomes. The second purpose is to examine how these relationships vary across cultures.

Method: Studies reporting correlations between self-stigma and outcome variable(s) were identified through electronic database searches from June 1, 2021, to January 2, 2022. Mean effect sizes were calculated using Fisher's r-to-Z-transformation.

Results: Sixty-three articles (N = 8925, 22 countries) were included in the systematic review and fifty-three articles (N = 7756) were included in the meta-analysis. For the most studied clinical correlates, self-stigma had a moderate, positive correlation with depressive symptoms (r = .49, p < .001), a moderate, negative correlation with functioning (r = -.39, p < .001), and a positive, small correlation with severity of psychotic symptoms (r = .29, p < .001), negative symptoms (r = .18, p < .001) and positive symptoms (r = .13, p = .01). For the most studied psychosocial correlates, self-stigma had a strong, negative correlation with quality of life (r = -.52, p < .001) and self-esteem (r = -.55, p < .001). The correlates of self-stigma were similar across cultures.

Discussion: Self-stigma shows strong to small correlations with clinical and psychosocial variables similarly across cultures. More research is needed to examine underlying mechanisms to develop effective interventions.

Keywords: internalized stigma; psychosis; quality of life; self-esteem; functioning; effect size

1. Introduction

Schizophrenia spectrum disorders (SSD) include schizophrenia, schizotypal personality disorder, and other psychotic disorders (APA, 2013). These disorders are characterized by abnormalities in one or more of the following domains: positive symptoms (e.g., delusions and hallucinations), disorganized thinking, disorganized motor behavior, and negative symptoms (affective flattening, avolition, asociality, alogia, and anhedonia). Moreover, individuals with SSD frequently experience cognitive impairments and various adverse outcomes, including negative psychosocial and occupational functioning, quality of life, and well-being (APA, 2013; Tandon et al., 2009; Yanos and Moos, 2007).

In addition to the burden of the illness, individuals with SSD face stigma, which results in adverse personal, social, and vocational outcomes (Mak and Wu, 2006; Siris, 2001). Stigma is an "attribute that is deeply discrediting" (Goffman, 1963, p. 3); "a mark of shame, disgrace, or disapproval that results in an individual being rejected, discriminated against, and excluded from participating in a number of different areas of society" (World Health Organization [WHO], 2001). Stigma encompasses interactions between the individual, public (e.g., negative stereotypes and prejudices), and structural levels (e.g., discriminatory rules and policies) (Corrigan et al., 2005; Herek et al., 2009). At the individual level, self-stigma or internalized stigma occurs when individuals are aware of the negative stereotypes associated with their illness, agree with them, and apply them to themselves (Corrigan et al., 2009). There is a high prevalence of self-stigma among people with SDD (e.g., Brohan et al., 2010; Gerlinger et al., 2013). Individuals with SSD are at heightened risk of experiencing higher and more intense levels of self-stigma and public stigma compared to individuals with other mental illnesses (Crisp et al., 2000, Dines et al., 2004; Holzinger et al., 2003; Karidi et al., 2015; Wood et al., 2014). These findings are problematic given that self-stigma was associated with adverse clinical and psychosocial outcomes such as lower self-esteem, quality of life, and hope, impaired recovery, poorer social/vocational function and treatment adherence, as well as greater symptom severity, distress, dysfunctional attitudes, depression, and avoidant coping style (Corrigan and Watson, 2002; Dubreucq et al., 2021; Livingston and Boyd, 2010; Lysaker et al., 2007a; Margetić et al., 2010; Park et al., 2013; Schrank et al., 2014; Yanos et al., 2008, 2010). Furthermore, Yanos et al. (2020) found support – across subpopulations, geographic location, and method – for various components of the "Illness Identity" model, which proposed that self-stigma impacts hope and self-esteem and subsequently leads to negative effects on recovery-related outcomes among people with mental illnesses. Specifically, the supported aspects of the model include the relationships between self-stigma and self-esteem, hope, psychiatric symptoms, and social relationships.

Nevertheless, there are differences in the manifestation and severity of public stigma across countries/cultures that could be due to differences in cultural values, beliefs about mental illnesses, and differences in normative behaviors (Thornicroft et al., 2009; Yang et al., 2007). For instance, one survey found that Chinese individuals were more likely than British individuals to report that people with schizophrenia are "*dangerous, uncontrollable, and act abnormally*" (Furnham and Chan, 2004). Also, some research has shown that patients with SSD had a better prognosis and more favorable outcomes in the "developing world," which was attributed to lower stigma, more "supportive and tolerant" families, differences in individual responsibility for illness, and the value placed on autonomy in western cultures (Cooper and Sartorius, 1977; Littlewood, 1998; Warner, 1994).

Regardless of culture, not all individuals with SSD internalize the negative stereotypes and prejudices, suggesting that some factors may reduce or increase the risk of internalizing stigma (Camp et al., 2002; Rüsch et al., 2009a, 2009b). As such, identifying cross-cultural correlates of self-stigma may inform theoretical models of self-stigma and, in turn, allow for the development of targeted psychological and psychosocial interventions. Thus far, five reviews of self-stigma among people with mental illnesses (del Rosal et al., 2021; Dubreucq et al., 2021; Gerlinger et al., 2013; Livingston and Boyd, 2010; Yu et al., 2021), one of which focused on schizophrenia (Gerlinger et al., 2013), summarized the correlations of self-stigma with clinical and psychosocial factors. The reviews by del Rosal et al. (2021), Dubreucq et al. (2021), Gerlinger et al. (2013), and Livingston and Boyd (2010) found that clinical variables (e.g., depressive symptoms, functioning) and psychosocial variables (e.g., self-esteem, quality of life, hope, empowerment) were associated with self-stigma. However, del Rosal et al. (2021) and Gerlinger et al. (2013) found a lack of association between self-stigma and insight. Yu et al. (2021) further found that experienced and perceived stigma had direct effects on well-being and recovery variables, suggesting that both public stigma and self-stigma concurrently affect recovery and well-being among people with mental illness. Collectivism moderated the relationship between experienced/perceived stigma and self-stigma, indicating that the correlation between experienced/perceived stigma and self-stigma is stronger in more collectivistic cultures.

The current systematic review and meta-analysis aim to complement these reviews by summarizing the cross-cultural correlates of self-stigma, reporting mean effect sizes for these associations by focusing on SSD only, and reporting mean effect sizes by continent. The first purpose of this systematic review and meta-analysis is to provide a quantitative and statistical estimate of the association strength between self-stigma and clinical (e.g., the severity of psychotic and depressive symptoms, functioning) as well as psychosocial (e.g., quality of life, self-esteem) outcomes among individuals with SSD. The second purpose of this review is to examine the similarities and differences across cultures of these associations. It was hypothesized that self-stigma would be (1) positively correlated with main clinical outcomes (e.g., psychotic, positive, negative, and depressive symptoms), (2) negatively correlated with the clinical outcome functioning, and (3) negatively correlated with main psychosocial outcomes (e.g., quality of life, self-esteem). Further, it was hypothesized that the correlates of self-stigma would be similar across countries and cultures.

2. Method

2.1. Literature Search Strategy

The PRISMA guidelines were used for conducting and reporting systematic literature search and meta-analysis (Page et al., 2020; Moher et al., 2009). This review was registered on the Open Science Framework platform (https://osf.io/jwbu7/). Studies were identified through conducting searches in several electronic databases, including PubMed, PsycINFO, PsycArticles, and Web of Science from June 1, 2021, to January 2, 2022. The main keywords used were schizophrenia OR shiz* OR psychosis OR psychotic OR psychoses AND stig* OR stigma OR self-stigma OR internalized stigma (see Supplementary Material). Retrieved papers were first screened based on the titles and abstracts. The full articles were examined when the titles and abstracts did not provide sufficient information. The search and selection process of articles is illustrated in Figure 1.

To be included for review, the article had to meet the following inclusion criteria: 1) primary research published in English or French in a peer-reviewed journal, 2) focused on the

experience of individuals diagnosed with SSD, and 3) included correlations about the relationships between self-stigma and at least one clinical or psychosocial outcome variable. An article was excluded for review if it: 1) did not examine self-stigma from the perspective of individuals with SSD, 2) focused on interventions only, and 3) was not correlational. There was no exclusion of articles based on the date of the study, the study design, measures of internalized or self-stigma, the context (e.g., inpatient, outpatient, or community settings), the sociodemographic background of participants, and the methods used to identify/recruit participants. To be included in the meta-analysis, two additional inclusion criteria had to be met: (1) at least two studies reported correlational results for each outcome variable, and (2) the measure of each outcome variable was based on the same operational definition. To be included in the meta-analyses that examined the correlates of self-stigma by continent, two additional inclusion criteria had to be met: (1) at least two continents and (2) at least two studies per continent for each outcome measure.

2.2. Data extraction

For each study, data were extracted and coded in a predetermined form containing the following information: authors, publication date, country, sample size, the average age of participants, demographic characteristics, diagnosis, study design, measures, aims, main findings, and limitations. The following scales were used to categorize internalized or self-stigma: the Internalized Stigma of Mental Illness (ISMI; subscales: 1) alienation, 2) stereotype endorsement, 3) discrimination experience, 4) social withdrawal, and 5) stigma resistance; Ritsher et al., 2003), the Self-Stigma of Mental Illness Scale (SSMIS; Corrigan et al., 2006), the Self-Stigma Scale-Short Form (SSS-S; Mak and Cheung, 2010), and the Perceived Devaluation-Discrimination Scale (PDD; Link, 1987; Link et al., 1991). These measures are described in Supplementary Material.

The reported outcome measures were divided into clinical (e.g., the severity of psychotic symptoms, negative symptoms, positive symptoms, depressive symptoms, functioning) and psychosocial (e.g., quality of life, self-esteem) outcomes categories adapted from Livingston and Boyd (2010). The severity of psychotic symptoms refers to the severity of positive, negative, and general psychopathology symptoms.

2.3. Data Analysis

Separate meta-analyses were conducted for each outcome measure using R programming (version 4.1.0), packages *metafor* and *shiny*. When there was more than one correlation for an outcome within a single study (e.g., depression assessed using two different scales), an aggregated effect for that study was estimated and included in the meta-analysis for that outcome. In addition, effect sizes for each study were transformed using Fisher's r-to-Z-transformation prior to mean effect sizes calculations. The inverse variance was used to account for sample size. Following Cohen's (1992) recommendations, correlations were considered small when r = .10-.29, moderate when r = .30-.49, and strong when r = .50 and above. For each outcome, the following methods were used to assess the presence of a publication bias: visual inspection of the funnel plot (Egger et al., 1997), Egger's asymmetry test, and the fail-safe N of Rosenthal (Rosenthal, 1979). When there is no publication bias, the findings should be symmetrical above and below the mean effect size, indicating random sampling error (Borenstein et al., 2009). The fail-safe N of Rosenthal is an indicator of the number of articles needed to refute statistically significant meta-analytic means (Rosenthal, 1979). Publication bias is unlikely when Rosenthal's N exceeds the cutoff estimate of five times the number of studies plus 10 (Fragkos et al., 2014; Rosenthal, 1991). It was expected that there would be

heterogeneity between studies due to methodological differences (e.g., differences in measures and populations). As a result, a random-effects model was used to estimate the mean distribution of effect sizes since it accounts for variation in effect sizes across studies (Lipsey and Wilson, 2001) and, unlike the fixed effects model, allows for statistical inferences about the population of studies not included in the meta-analysis (Berkeljon and Baldwin, 2009; Hedges and Vevea, 1998). Cochran's Q-statistic (Cochran, 1954) and the I^2 index (Higgins, 2003) were used to estimate the heterogeneity of effect sizes. A Q-statistic p-value below 0.1 indicates the presence of heterogeneity (Potvin, 2014). I^2 values of 25, 50, and 75 respectively reflect low, moderate, and strong heterogeneity (Higgins, 2003).

3. Results

3.1. Systematic review by continent and country

Sixty-three articles (N = 8925, 22 countries across six continents: Asia, Africa, Europe, Oceania, North America, and South America) were included in the systematic review. Table 1 summarizes the findings of the systematic review. Table 2 summarizes the similarities and dissimilarities across countries and continents, such that only outcomes assessed by at least two studies were included. The outcome variable insight was examined for each insight scale separately due to differences in operational definitions. Table A.1 (in Supplementary Material) summarizes the characteristics of all studies.

3.2 Meta-analysis results

In total, fifty-three articles (N = 7756) were included in the meta-analysis, some of which reported more than one outcome variable and were therefore included in separate meta-analyses (N = 20 countries: Austria, Australia, Bolivia, Canada, Chile, China, Croatia, Czech Republic, Egypt, France, Germany, India, Israel, Italy, Korea (South), Peru, Spain, Switzerland, Turkey, United States). All meta-analyses results are summarized in Table 3. Table 4 summarizes the meta-analyses results by continent. The forest and funnel plots are shown in Supplementary Material. The meta-analyses results for the most studied outcomes are described below and illustrated in Figure 2.

3.2.1. Severity of psychotic symptoms

Seven studies were included in the meta-analysis examining the correlation between internalized stigma and the severity of the disorder or symptoms. Results of the meta-analysis suggest that internalized stigma had a statistically significant small, positive correlation with severity of the disorder or symptoms (r = .29, 95% CI = [.20; .37], z = 6.07, p < .001). The results suggest that the characteristics of the included studies were moderately heterogeneous (Q = 16.11, df = 6, p = .01; I^2 = 62.8). The funnel plot and Egger's asymmetry test (t = 0.93, df = 5, p = .40) suggest no evidence of funnel plot asymmetry, indicating that a publication bias is unlikely. In addition, Rosenthal's fail-safe N was 254, which is higher than the cut-off of 45, indicating that the presence of a publication bias is unlikely.

3.2.2. Positive Symptoms

Fourteen studies were included in the meta-analysis examining the correlation between internalized stigma and positive symptoms. Results of the meta-analysis suggest that internalized stigma had a statistically significant small, positive correlation with positive symptoms (r = .13, 95% CI = [.03; .22], z = 2.53, p =.01). Results suggest that the characteristics of the included studies were strongly heterogeneous (Q = 63.20, df = 13, p < .001; I^2 = 79.4). The funnel plot and the results of Egger's asymmetry test (t = 5.76, df = 12, p < .001) suggest funnel plot asymmetry, indicating a potential publication bias. Moreover, Rosenthal's fail-safe N was 73, which is lower than the cut-off of 80, indicating that the presence of a publication bias is likely.

3.2.3. Negative Symptoms

Fifteen studies were included in the meta-analysis examining the correlation between internalized stigma and negative symptoms. Results of the meta-analysis suggest that internalized stigma had a statistically significant small, positive correlation with negative symptoms (r = .18, 95% CI = [.10; .26], z = 4.43, p < .001). Results suggest that the characteristics of the included studies were moderately heterogeneous (Q = 44.60, df = 14, p < .001; I^2 = 68.6). The funnel plot and Egger's asymmetry test (t = 2.46, df = 13, p = .03) suggest evidence of funnel plot asymmetry, indicating that a publication bias is likely. Moreover, Rosenthal's fail-safe N was 289, which is higher than the cut-off of 85, indicating that the presence of a publication bias is unlikely.

3.2.4. Depressive Symptoms

Fifteen studies were included in the meta-analysis examining the correlation between internalized stigma and depressive symptoms. Results of the meta-analysis suggest that internalized stigma had a statistically significant moderate, positive correlation with depressive symptoms (r = .49, 95% CI = [.40; .57], z = 9.18, p < .001). Results suggest that the characteristics of the included studies were strongly heterogeneous (Q = 109.17, df = 14, p < .001; I^2 = 87.2). The funnel plot and Egger's asymmetry test (t = 1.84, df = 13, p = .09) suggest no evidence of funnel plot asymmetry, indicating that a publication bias is unlikely. In addition, Rosenthal's fail-safe N was 3180, which is higher than the cut-off of 85, indicating that the presence of a publication bias is unlikely.

3.2.5. Functioning

Nine studies were included in the meta-analysis examining the correlation between internalized stigma and functioning (e.g., psychosocial, vocational, and general). Results of the meta-analysis suggest that internalized stigma had a statistically significant moderate, negative correlation with functioning (r = -0.39, 95% CI = [-.56; -.19], z = -3.71, p < .001). Results suggest that the characteristics of the included studies were strongly heterogeneous (Q = 100.07, df = 8, p < .001; I^2 = 92.0). Although the funnel plot suggests the possibility of publication bias, Egger's asymmetry test (t = 0.72, df = 7, p = .49) suggests no evidence of funnel plot asymmetry, indicating that a publication bias is unlikely. In addition, Rosenthal's fail-safe N was 607, which is higher than the cut-off of 55, indicating that the presence of a publication bias is unlikely.

3.2.6. Self-esteem

Thirteen studies were included in the meta-analysis examining the correlation between internalized stigma and self-esteem. Results of the meta-analysis suggest that internalized stigma had a statistically significant strong, negative correlation with self-esteem (r = -.55, 95% CI = [-.61; -.47], z = -12.00, p < .001). Results suggest that the characteristics of the included studies were strongly heterogeneous (Q = 52.69, df = 12, p < .001; I^2 = 77.2). The funnel plot and Egger's asymmetry test (t = -0.85, df = 11, p = .41) suggest no evidence of funnel plot asymmetry, indicating that a publication bias is unlikely. In addition, Rosenthal's fail-safe N was 2961, which is higher than the cut-off of 75, indicating that the presence of a publication bias is unlikely.

3.2.7. Quality of life

Thirteen studies were included in the meta-analysis examining the correlation between internalized stigma and quality of life. Results of the meta-analysis suggest that internalized stigma had a statistically significant strong, negative correlation with quality of life (r = -.52, 95% CI = [-.63; -.38], z = -6.60, p < .001). Results suggest that the characteristics of the included studies were strongly heterogeneous (Q = 156.58, df = 12, p < .001; I^2 = 92.3). The funnel plot

and Egger's asymmetry test (t = -2.04, df = 11, p = .07) suggest no evidence of funnel plot asymmetry, indicating that a publication bias is unlikely. In addition, Rosenthal's fail-safe N was 2287, which is higher than the cut-off of 75, indicating that the presence of a publication bias is unlikely.

4. Discussion

The current systematic review highlights clinical and psychosocial outcomes related to self-stigma in various countries among people with SSD. Although the prevalence and severity of self-stigma differ across countries and geographical regions (Dubreucq et al., 2021), the current findings suggest that the nature of clinical and psychosocial correlates of self-stigma are similar across the countries and continents, indicating that the correlates of self-stigma may be universal. Specifically, for clinical outcomes, the findings revealed that self-stigma had a moderate, positive correlation with depressive symptoms, a moderate, negative correlation with functioning, and a positive, small correlation with severity of psychotic symptoms, negative symptoms, and positive symptoms. In addition, self-stigma had a moderate, positive correlation with negative attitude towards medication and anxiety and a strong, positive correlation with suicide risk. For psychosocial correlates, self-stigma had a strong, negative correlation with quality of life and self-esteem. Moreover, self-stigma had a moderate, positive association with maladaptive coping and a moderate, negative correlation with hope, resilience, and self-efficacy. However, the results were mixed for positive symptoms, negative symptoms, insight, general psychopathology, treatment duration, and treatment participation. Although these mixed findings did not show a specific pattern across cultures, some outcomes (e.g., positive symptoms) appeared to differ between countries but not continents. This could suggest that some within-countries characteristics such as public stigma and the cultural model of mental illness may moderate the relationship between self-stigma and these outcomes.

The current findings further build on the results reported by Dubreucq et al. (2021), Gerlinger et al. (2013), Livingston and Boyd (2010), del Rosal et al. (2021), and Yu et al. (2021). These reviews similarly found that self-stigma was positively correlated with depressive symptoms (del Rosal et al., 2021; Dubreucq et al., 2021), anxiety, maladaptive coping strategies (Dubreucq et al., 2021; Gerlinger et al., 2013), suicidal ideation (Dubreucq et al., 2021), positive symptoms (Gerlinger et al., 2013), and symptom severity (Livingston and Boyd, 2010). On the other hand, self-stigma was negatively correlated with quality of life (del Rosal et al., 2021; Dubreucq et al., 2021; Gerlinger et al., 2013; Livingston and Boyd, 2010), functioning (del Rosal et al., 2021; Dubreucq et al., 2021; Gerlinger et al., 2013), hope, self-esteem (del Rosal et al., 2021; Dubreucq et al., 2021; Livingston and Boyd, 2010), self-efficacy (Dubreucq et al., 2021; Livingston and Boyd, 2010), well-being (Dubreucq et al., 2021), and social support (Livingston and Boyd, 2010). The current results are also in line with Yu et al. (2021), who found that perceived stigma was negatively correlated with well-being, distress, and recovery variables. Similar to Yanos et al. (2020), we found support for various components of the "Illness Identity" model, which proposed that self-stigma impacts hope and self-esteem and subsequently leads to adverse effects on recovery-related outcomes among people with mental illnesses. However, unlike del Rosal et al. (2021) and Gerlinger et al. (2013), this review found an association between self-stigma and insight, although the results were mixed (Yanos et al., 2020). Moreover, our review adds new insights to the findings by Dubreucq et al. (2021) by reporting mean effect sizes for the associations between self-stigma and various outcomes. Moreover, our review adds new insights to those by Dubreucq et al. (2021), Livingston and Boyd (2010), del Rosal et al. (2021), and Yu et al. (2021) by focusing on SSD only from a cross-cultural perspective.

This systematic review and meta-analysis offered a needed contribution to research on SSD by qualitatively and quantitatively synthesizing the more recent relationship between self-stigma and clinical and psychosocial outcomes across various countries and cultures. Moreover, this review identified important gaps in the literature. Notably, some outcome variables were less examined, and there were few studies from Africa and South America. It remains to be explored whether these results generalize to other countries not included in this review. It could be that other factors that vary across countries (e.g., the degree of structural stigma, access to treatment, access to interventions that target self-stigma, GDP) are more important in explaining differences in self-stigma than culture itself.

4.1 Theoretical and Clinical Implications

The current findings highlight that self-stigma is a factor that negatively impacts recovery, well-being, and psychosocial functioning. Nevertheless, the synthesized studies used correlational and mostly cross-sectional designs, limiting claims about causal and long-term relationships among variables. More research is needed to examine the various moderators and mechanisms that explain the relationship between self-stigma and psychosocial and clinical outcomes. For instance, it could be that self-esteem moderates the relationship between self-stigma and functioning. These moderators and mediators would, in turn, inform theoretical models of self-stigma (e.g., the progressive model of self-stigma, which involves four stages of internalizing stigma leading to reduced self-esteem: stereotype awareness, personal agreement, self-concurrence, and self-esteem reduction; see Corrigan et al., 2011) and allow for more targeted and tailored interventions aimed at improving the functioning, mental health, and well-being of individuals with SSD.

These future findings are essential given that the effectiveness of psychosocial interventions on self-stigma among people with SSD has been mixed across studies (e.g., Cognitive Behavior Therapy (CBT), group therapy, psychoeducation, and social skills training; see Wood et al., 2016). On the one hand, some studies suggest that these interventions are effective. For instance, Best et al. (2018) used a group intervention to reduce self-stigma (Be Outspoken and Overcome Stigmatizing Thoughts [BOOST]) which combines CBT, communication skills, and peer support among people experiencing first-episode psychosis. Although the sample size was small and the design was not a randomized controlled trial, participants who completed the BOOST intervention reported improved self-stigma, self-esteem, and life satisfaction. In addition, Roe et al. (2014), who used the Narrative Enhancement Cognitive Therapy (NECT) adapted from CBT, found that self-stigma was reduced after the treatment, while self-esteem, quality of life, and hope/agency increased. Still, a meta-analysis found that interventions that target self-stigma did not lead to improvements in self-stigma that were statistically significant across various studies, although some studies reported statistically significant effects (Wood et al., 2016). These small effects may be the result of small samples and a lack of understanding of key mechanisms underlying self-stigma. Therefore, randomized controlled trials with large sample sizes that target underlying mechanisms are needed to determine the effectiveness of self-stigma interventions.

4.2 Limitations & Future Directions

Despite its contributions, this review has several limitations that deserve mention. First, although a random-effects model was used, self-stigma and its associated outcomes were measured using different instruments, which may have influenced the results. Second, the synthesized studies used correlational and mostly cross-sectional designs, which limits claims

about causal and long-term relationships among variables. There may be third variables and confounds (e.g., population: inpatient, outpatient) that impacted the correlational results. For instance, although some studies calculated the correlations separately for inpatients and outpatients, other studies have not adjusted for subpopulations and confound variables. Third, this study only included peer-reviewed and published studies. This raises the problem known as the "file drawer problem" since many statistically non-significant results are not published, producing publication bias (Rosenthal, 1979). In addition, Rosenthal's fail-safe test suggests the possibility of publication bias for outcomes such as positive symptoms, anxiety, insight into treatment, insight into illness, treatment duration, and treatment participation, and Egger's test suggests the possibility of publication bias for outcomes such as positive symptoms, negative symptoms, and general psychopathology. Fourth, the meta-analysis results indicate that the characteristics of the included studies were heterogeneous since many meta-analyses for specific outcomes showed at least 75 in I^2, which is considered strong heterogeneity. Nevertheless, this heterogeneity was partly accounted for by using a random-effects model.

4.3 Conclusion

In summary, people with SSD are at increased risk of internalizing the negative stereotypes and discrimination associated with their illness, which may result in adverse outcomes and increased mental health problems. Overall, self-stigma was associated with various clinical and psychosocial outcomes, including reduced functioning, quality of life, and self-esteem, as well as greater severity of psychotic symptoms and depressive symptoms. Future research should examine moderating and mediating variables using longitudinal designs. These findings would strengthen theoretical models of self-stigma and allow for more targeted and tailored intervention strategies to reduce self-stigma.

References

American Psychiatric Association, 2013. Diagnostic and Statistical Manual of Mental Disorders: DSM-5. American Psychiatric Publishing, Inc. https://doi.org/10.1176/appi.books.9780890425596

Aukst-Margetić, B., Jakšić, N., Boričević Maršanić, V., Jakovljević, M., 2014. Harm avoidance moderates the relationship between internalized stigma and depressive symptoms in patients with schizophrenia. Psychiatry Research 219, 92–94. https://doi.org/10.1016/j.psychres.2014.05.009

Berkeljon, A., Baldwin, S.A., 2009. An introduction to meta-analysis for psychotherapy outcome research. Psychotherapy Research 19, 511–518. https://doi.org/10.1080/10503300802621172

Best, M.W., Grossman, M., Milanovic, M., Renaud, S., Bowie, C.R., 2018. Be outspoken and overcome stigmatizing thoughts (BOOST): a group treatment for internalized stigma in first-episode psychosis. Psychosis 10, 187–197. https://doi.org/10.1080/17522439.2018.1472630

Borenstein, M., Hedges, L. v, Higgins, J.P.T., Rothstein, H.R., 2009. Introduction to meta-analysis. Wiley & Sons Ltd.

Bouvet, C., Bouchoux, A., 2015. Études des liens entre la stigmatisation intériorisée, l'insight et la dépression chez des personnes souffrant de schizophrénie. L'Encéphale 41, 435–443. https://doi.org/10.1016/j.encep.2014.07.006

Brohan, E., Elgie, R., Sartorius, N., Thornicroft, G., GAMIAN-Europe Study Group, 2010. Self-stigma, empowerment and perceived discrimination among people with schizophrenia in 14 European countries: The GAMIAN-Europe study. Schizophrenia Research 122, 232–238. https://doi.org/10.1016/j.schres.2010.02.1065

Camp, D.L., Finlay, W.M.L., Lyons, E., 2002. Is low self-esteem an inevitable consequence of stigma? An example from women with chronic mental health problems. Social Science & Medicine 55, 823–834. https://doi.org/10.1016/S0277-9536(01)00205-2

Campellone, T.R., Caponigro, J.M., Kring, A.M., 2014. The power to resist: The relationship between power, stigma, and negative symptoms in schizophrenia. Psychiatry Research 215, 280–285. https://doi.org/10.1016/j.psychres.2013.11.020

Çapar, M., Kavak, F., 2019. Effect of internalized stigma on functional recovery in patients with schizophrenia. Perspectives in Psychiatric Care 55, 103–111. https://doi.org/10.1111/ppc.12309

Caqueo-Urízar, A., Urzúa, A., Habib, J., Loundou, A., Boucekine, M., Boyer, L., Fond, G., 2020. Relationships between social stigma, stigma experience and self-stigma and impaired quality of life in schizophrenia across three Latin-American countries. European Archives of Psychiatry and Clinical Neuroscience 270, 513–520. https://doi.org/10.1007/s00406-019-01035-8

Cavelti, M., Kvrgic, S., Beck, E.-M., Rüsch, N., Vauth, R., 2012. Self-stigma and its relationship with insight, demoralization, and clinical outcome among people with schizophrenia spectrum disorders. Comprehensive Psychiatry 53, 468–479. https://doi.org/10.1016/j.comppsych.2011.08.001

Chan, K.K.S., Mak, W.W.S., 2014. The mediating role of self-stigma and unmet needs on the recovery of people with schizophrenia living in the community. Quality of Life Research 23, 2559–2568. https://doi.org/10.1007/s11136-014-0695-7

Chan, S.K.W., Kao, S.Y.S., Leung, S.L., Hui, C.L.M., Lee, E.H.M., Chang, W.C., Chen, E.Y.H., 2019. Relationship between neurocognitive function and clinical symptoms with self-stigma in patients with schizophrenia-spectrum disorders. Journal of Mental Health 28, 583–588. https://doi.org/10.1080/09638237.2017.1340599

Cochran, W.G., 1954. The combination of estimates from different experiments. Biometrics 10, 101–129. https://doi.org/10.2307/3001666

Cohen, J., 1992. A power primer. Psychological Bulletin 112, 155–159. https://doi.org/10.1037/0033-2909.112.1.155

Cooper, J.E., Sartorius, N., 1977. Cultural and temporal variations in schizophrenia: a speculation on the importance of industrialization. British Journal of Psychiatry 130, 50–55. https://doi.org/10.1192/bjp.130.1.50

Corrigan, P.W., Kerr, A., Knudsen, L., 2005. The stigma of mental illness: Explanatory models and methods for change. Applied and Preventive Psychology 11, 179–190. https://doi.org/10.1016/j.appsy.2005.07.001

Corrigan, P.W., Larson, J.E., Rüsch, N., 2009. Self-stigma and the “why try” effect: impact on life goals and evidence-based practices. World Psychiatry 8, 75–81. https://doi.org/10.1002/j.2051-5545.2009.tb00218.x

Corrigan, P.W., Rafacz, J., Rüsch, N., 2011. Examining a progressive model of self-stigma and its impact on people with serious mental illness. Psychiatry Research 189, 339–343. https://doi.org/10.1016/j.psychres.2011.05.024

Corrigan, P.W., Watson, A.C., 2002. The paradox of self-stigma and mental illness. Clinical Psychology: Science and Practice 9, 35–53. https://doi.org/10.1093/clipsy.9.1.35

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, 875–884. https://doi.org/10.1521/jscp.2006.25.8.875

Crisp, A.H., Gelder, M.G., Rix, S., Meltzer, H.I., Rowlands, O.J., 2000. Stigmatisation of people with mental illnesses. British Journal of Psychiatry 177, 4–7. https://doi.org/10.1192/bjp.177.1.4

del Rosal, E., González-Sanguino, C., Bestea, S., Boyd, J., Muñoz, M., 2021. Correlates and consequences of internalized stigma assessed through the Internalized Stigma of Mental

Illness Scale for people living with mental illness: A scoping review and meta-analysis from 2010. Stigma and Health 6, 324–334. https://doi.org/10.1037/SAH0000267

Dinos, S., Stevens, S., Serfaty, M., Weich, S., King, M., 2004. Stigma: the feelings and experiences of 46 people with mental illness. British Journal of Psychiatry 184, 176–181. https://doi.org/10.1192/bjp.184.2.176

Dubreucq, J., Plasse, J., Franck, N., 2021. Self-stigma in serious mental illness: A systematic review of frequency, correlates, and consequences. Schizophrenia Bulletin 47, 1261–1287. https://doi.org/10.1093/schbul/sbaa181

Egger, M., Smith, G.D., Schneider, M., Minder, C., 1997. Bias in meta-analysis detected by a simple, graphical test. BMJ 315, 629–634. https://doi.org/10.1136/bmj.315.7109.629

Feldhaus, T., Falke, S., von Gruchalla, L., Maisch, B., Uhlmann, C., Bock, E., Lencer, R., 2018. The impact of self-stigmatization on medication attitude in schizophrenia patients. Psychiatry Research 261, 391–399. https://doi.org/10.1016/j.psychres.2018.01.012

Fragkos, K.C., Tsagris, M., Frangos, C.C., 2014. Publication bias in meta-analysis: Confidence intervals for Rosenthal's fail-safe number. International Scholarly Research Notices 2014, 1–17. https://doi.org/10.1155/2014/825383

Fung, K.M.T., Tsang, H.W.H., Corrigan, P.W., 2008. Self-stigma of people with schizophrenia as predictor of their adherence to psychosocial treatment. Psychiatric rehabilitation journal 32, 95–104. https://doi.org/10.2975/32.2.2008.95.104

Furnham, A., Chan, E., 2004. Lay theories of schizophrenia. A cross-cultural comparison of British and Hong Kong Chinese attitudes, attributions and beliefs. Social Psychiatry and Psychiatric Epidemiology 39, 543–552. https://doi.org/10.1007/s00127-004-0787-8

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, 155–164. https://doi.org/10.1002/wps.20040

Goffman, E., 1963. Stigma: notes on the management of spoiled identity. Simon & Schuster, New York, New York.

Grover, S., Avasthi, A., Singh, A., Dan, A., Neogi, R., Kaur, D., Lakdawala, B., Rozatkar, A.R., Nebhinani, N., Patra, S., Sivashankar, P., Subramanyam, A.A., Tripathi, A., Gania, A.M., Singh, G.P., Behere, P., 2017. Stigma experienced by patients with severe mental disorders: A nationwide multicentric study from India. Psychiatry Research 257, 550–558. https://doi.org/10.1016/j.psychres.2017.08.027

Grover, S., Sahoo, S., Chakrabarti, S., Avasthi, A., 2018. Association of internalized stigma and insight in patients with schizophrenia. International Journal of Culture and Mental Health 11, 338–350. https://doi.org/10.1080/17542863.2017.1381750

Hasson-Ohayon, I., Mashiach-Eizenberg, M., Elhasid, N., Yanos, P.T., Lysaker, P.H., Roe, D., 2014. Between self-clarity and recovery in schizophrenia: reducing the self-stigma and finding meaning. Comprehensive Psychiatry 55, 675–680. https://doi.org/10.1016/j.comppsych.2013.11.009

Hedges, L. v, Vevea, J.L., 1998. Fixed- and random-effects models in meta-analysis. Psychological Methods 3, 486–504. https://doi.org/10.1037/1082-989X.3.4.486

Herek, G.M., Gillis, J.R., Cogan, J.C., 2009. Internalized stigma among sexual minority adults: Insights from a social psychological perspective. Journal of Counseling Psychology 56, 32–43. https://doi.org/10.1037/a0014672

Higgins, J.P.T., 2003. Measuring inconsistency in meta-analyses. BMJ 327, 557–560. https://doi.org/10.1136/bmj.327.7414.557

Hill, K., Startup, M., 2013. The relationship between internalized stigma, negative symptoms and social functioning in schizophrenia: The mediating role of self-efficacy. Psychiatry Research 206, 151–157. https://doi.org/10.1016/j.psychres.2012.09.056

Hofer, A., Post, F., Pardeller, S., Frajo-Apor, B., Hoertnagl, C.M., Kemmler, G., Fleischhacker, W.W., 2019. Self-stigma versus stigma resistance in schizophrenia: Associations with resilience, premorbid adjustment, and clinical symptoms. Psychiatry Research 271, 396–401. https://doi.org/10.1016/j.psychres.2018.12.029

Holubova, M., Prasko, J., Hruby, R., Latalova, K., Kamaradova, D., Marackova, M., Slepecky, M., Gubova, T., 2016a. Coping strategies and self-stigma in patients with schizophrenia-spectrum disorders. Patient Preference and Adherence 10, 1151–1158. https://doi.org/10.2147/PPA.S106437

Holubova, M., Latalova, K., Ociskova, M., Grambal, A., Kamaradova, D., Vrbova, K., Hruby, R., Prasko, J., 2016b. Are self-stigma, quality of life, and clinical data interrelated in schizophrenia spectrum patients? A cross-sectional outpatient study. Patient Preference and Adherence 10, 265–274. https://doi.org/10.2147/PPA.S96201

Holzinger, A., Beck, M., Munk, I., Weithaas, S., Angermeyer, M.C., 2003. Stigma as perceived by schizophrenics and depressives. Psychiatrische Praxis 30, 395–401. https://doi.org/10.1055/s-2003-43251

Karakaş, S.A., Okanlı, A., Yılmaz, E., 2016. The effect of internalized stigma on the self-esteem in patients with schizophrenia. Archives of Psychiatric Nursing 30, 648–652. https://doi.org/10.1016/j.apnu.2016.02.006

Karidi, M.V., Vassilopoulou, D., Savvidou, E., Vitoratou, S., Maillis, A., Rabavilas, A., Stefanis, C.N., 2015. Bipolar disorder and self-stigma: A comparison with schizophrenia. Journal of Affective Disorders 184, 209–215. https://doi.org/10.1016/j.jad.2015.05.038

Kim, E.Y., Jang, M.H., 2019. The mediating effects of self-esteem and resilience on the relationship between internalized stigma and quality of life in people with schizophrenia. Asian Nursing Research 13, 257–263. https://doi.org/10.1016/j.anr.2019.09.004

Komatsu, H., Ono, T., Maita, Y., Ishida, Y., Kikuchi, T., Maki, T., Hase, S., Sakurai, H., Oba, A., Teshirogi, O., Suzuki, A., Mori, Y., Shoji, C., Fujita, A., Takahashi, S., Ebina, T., Ozaki, S., Honma, R., Tomita, H., Kakuto, Y., 2020. Association between autistic symptoms and self-stigma in patients with schizophrenia spectrum disorders. Neuropsychiatric Disease and Treatment 16, 2553–2561. https://doi.org/10.2147/NDT.S280485

Lee, J.W., Park, H.S., 2017. Impact of internalized stigma, anger expression style, and mental health service satisfaction on self-esteem in inpatients with schizophrenia. Journal of Korean Academy of Psychiatric and Mental Health Nursing 26, 143–150. https://doi.org/10.12934/jkpmhn.2017.26.2.143

Li, J., Guo, Y.-B., Huang, Y.-G., Liu, J.-W., Chen, W., Zhang, X.-Y., Evans-Lacko, S., Thornicroft, G., 2017. Stigma and discrimination experienced by people with schizophrenia living in the community in Guangzhou, China. Psychiatry Research 255, 225–231. https://doi.org/10.1016/j.psychres.2017.05.040

Lien, Y.-J., Chang, H.-A., Kao, Y.-C., Tzeng, N.-S., Lu, C.-W., Loh, C.-H., 2018a. Insight, self-stigma and psychosocial outcomes in schizophrenia: A structural equation modelling approach. Epidemiology and Psychiatric Sciences 27, 176–185. https://doi.org/10.1017/S2045796016000950

Lien, Yin-Ju, Chang, H.-A., Kao, Y.-C., Tzeng, N.-S., Lu, C.-W., Loh, C.-H., 2018b. The impact of cognitive insight, self-stigma, and medication compliance on the quality of life in patients with schizophrenia. European Archives of Psychiatry and Clinical Neuroscience 268, 27–38. https://doi.org/10.1007/s00406-017-0829-3

Link, B.G., 1987. Understanding labeling effects in the area of mental disorders: an assessment of the effects of expectations of rejection. American Sociological Review 52, 96–112. https://doi.org/10.2307/2095395

Link, B.G., Mirotznik, J., Cullen, F.T., 1991. The effectiveness of stigma coping orientations: Can negative consequences of mental illness labeling be avoided? Journal of Health and Social Behavior 32, 302–320. https://doi.org/10.2307/2136810

Lipsey, M.W., Wilson, D.B., 2001. Practical meta-analysis. Sage Publications, Inc.

Littlewood, R., 1998. Cultural variation in the stigmatisation of mental illness. The Lancet 352, 1056–1057. https://doi.org/10.1016/S0140-6736(98)07471-6

Livingston, J.D., Boyd, J.E., 2010. Correlates and consequences of internalized stigma for people living with mental illness: A systematic review and meta-analysis. Social Science & Medicine 71, 2150–2161. https://doi.org/10.1016/j.socscimed.2010.09.030

Lysaker, P.H., Davis, L.W., Warman, D.M., Strasburger, A., Beattie, N., 2007a. Stigma, social function and symptoms in schizophrenia and schizoaffective disorder: Associations across 6 months. Psychiatry Research 149, 89–95. https://doi.org/10.1016/j.psychres.2006.03.007

Lysaker, P.H., Roe, D., Yanos, P.T., 2007b. 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, 192–199. https://doi.org/10.1093/schbul/sbl016

Lysaker, P.H., Tsai, J., Yanos, P., Roe, D., 2008. Associations of multiple domains of self-esteem with four dimensions of stigma in schizophrenia. Schizophrenia Research 98, 194–200. https://doi.org/10.1016/j.schres.2007.09.035

Lysaker, P., Yanos, P., Outcalt, J., Roe, D., 2010. Association of stigma, self-esteem, and symptoms with concurrent and prospective assessment of social anxiety in schizophrenia. Clinical Schizophrenia & Related Psychoses 4, 41–48. https://doi.org/10.3371/CSRP.4.1.3

Mak, W.W.S., Cheung, R.Y.M., 2010. Self-stigma among concealable minorities in Hong Kong: Conceptualization and unified measurement. American Journal of Orthopsychiatry 80, 267–281. https://doi.org/10.1111/j.1939-0025.2010.01030.x

Mak, W.W.S., Wu, C.F.M., 2006. Cognitive insight and causal attribution in the development of self-stigma among individuals with schizophrenia. Psychiatric Services 57, 1800–1802. https://doi.org/10.1176/ps.2006.57.12.1800

Margetić, B.A., Jakovljević, M., Ivanec, D., Margetić, B., Tošić, G., 2010. Relations of internalized stigma with temperament and character in patients with schizophrenia. Comprehensive Psychiatry 51, 603–606. https://doi.org/10.1016/j.comppsych.2010.02.010

Morgades-Bamba, C.I., Fuster-Ruizdeapodaca, M.J., Molero, F., 2019a. Internalized stigma and its impact on schizophrenia quality of life. Psychology, Health & Medicine 24, 992–1004. https://doi.org/10.1080/13548506.2019.1612076

Morgades-Bamba, C.I., Fuster-Ruizdeapodaca, M.J., Molero, F., 2019b. The impact of internalized stigma on the well-being of people with schizophrenia. Psychiatry Research 271, 621–627. https://doi.org/10.1016/j.psychres.2018.12.060

Moriarty, A., Jolley, S., Callanan, M.M., Garety, P., 2012. Understanding reduced activity in psychosis: the roles of stigma and illness appraisals. Social Psychiatry and Psychiatric Epidemiology 47, 1685–1693. https://doi.org/10.1007/s00127-012-0475-z

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, 3–7. https://doi.org/10.1016/j.schres.2011.09.002

Olçun, Z., Şahin Altun, Ö., 2017. The correlation between schizophrenic patients' level of internalized stigma and their level of hope. Archives of Psychiatric Nursing 31, 332–337. https://doi.org/10.1016/j.apnu.2017.03.001

Park, S.G., Bennett, M.E., Couture, S.M., Blanchard, J.J., 2013. Internalized stigma in schizophrenia: Relations with dysfunctional attitudes, symptoms, and quality of life. Psychiatry Research 205, 43–47. https://doi.org/10.1016/j.psychres.2012.08.040

Potvin, S., 2014. La méta-analyse: Illustration pour déterminer si la toxicomanie aggrave les déficits cognitifs chez les personnes avec une schizophrénie, in: Corbière, M., Larivière, N. (Eds.), Méthodes Qualitatives, Quantitatives et Mixtes Dans La Recherche En Sciences Humaines, Sociales et de La Santé . Presses de l'Université du Québec, pp. 166–188.

Pruß, L., Wiedl, K.H., Waldorf, M., 2012. Stigma as a predictor of insight in schizophrenia. Psychiatry Research 198, 187–193. https://doi.org/10.1016/j.psychres.2011.12.012

Ramadan, E.S., el Dod, W.A., 2010. Relation between insight and quality of life in patients with schizophrenia: Role of internalized stigma and depression. Current Psychiatry 17, 43–48.

Ritsher, J.B., Otilingam, P.G., Grajales, M., 2003. Internalized stigma of mental illness: psychometric properties of a new measure. Psychiatry Research 121, 31–49. https://doi.org/10.1016/j.psychres.2003.08.008

Roe, D., Hasson-Ohayon, I., Mashiach-Eizenberg, M., Derhy, O., Lysaker, P.H., Yanos, P.T., 2014. Narrative Enhancement and Cognitive Therapy (NECT) Effectiveness: A quasi-experimental study. Journal of Clinical Psychology 70, 303–312. https://doi.org/10.1002/jclp.22050

Rosenthal, R., 1991. Meta-analysis: a review. Psychosomatic Medicine 53, 247–271. https://doi.org/10.1097/00006842-199105000-00001

Rosenthal, R., 1979. The file drawer problem and tolerance for null results. Psychological Bulletin 86, 638–641. https://doi.org/10.1037/0033-2909.86.3.638

Rossi, A., Galderisi, S., Rocca, P., Bertolino, A., Rucci, P., Gibertoni, D., Stratta, P., Bucci, P., Mucci, A., Aguglia, E., Amodeo, G., Amore, M., Bellomo, A., Brugnoli, R., Caforio, G., Carpiniello, B., Dell'Osso, L., di Fabio, F., di Giannantonio, M., Marchesi, C., Monteleone, P., Montemagni, C., Oldani, L., Roncone, R., Sacchetti, E., Santonastaso, P., Siracusano, A., Zeppegno, P., Maj, M., 2017. Personal resources and depression in schizophrenia: The role of self-esteem, resilience and internalized stigma. Psychiatry Research 256, 359–364. https://doi.org/10.1016/j.psychres.2017.06.079

Rüsch, N., Corrigan, P.W., Powell, K., Rajah, A., Olschewski, M., Wilkniss, S., Batia, K., 2009a. A stress-coping model of mental illness stigma: II. Emotional stress responses, coping behavior and outcome. Schizophrenia Research 110, 65–71. https://doi.org/10.1016/j.schres.2009.01.005

Rüsch, N., Corrigan, P.W., Wassel, A., Michaels, P., Olschewski, M., Wilkniss, S., Batia, K., 2009b. A stress-coping model of mental illness stigma: I. Predictors of cognitive stress appraisal. Schizophrenia Research 110, 59–64. https://doi.org/10.1016/j.schres.2009.01.006

Schrank, B., Amering, M., Hay, A.G., Weber, M., Sibitz, I., 2014. Insight, positive and negative symptoms, hope, depression and self-stigma: a comprehensive model of mutual influences in schizophrenia spectrum disorders. Epidemiology and Psychiatric Sciences 23, 271–279. https://doi.org/10.1017/S2045796013000322

Segalovich, J., Doron, A., Behrbalk, P., Kurs, R., Romem, P., 2013. Internalization of stigma and self-esteem as it affects the capacity for intimacy among patients with schizophrenia. Archives of Psychiatric Nursing 27, 231–234. https://doi.org/10.1016/j.apnu.2013.05.002

Sharaf, A.Y., Ossman, L.H., Lachine, O.A., 2012. A cross-sectional study of the relationships between illness insight, internalized stigma, and suicide risk in individuals with schizophrenia. International Journal of Nursing Studies 49, 1512–1520. https://doi.org/10.1016/j.ijnurstu.2012.08.006

Shin, Y.-J., Joo, Y.-H., Kim, J.-H., 2016. Self-perceived cognitive deficits and their relationship with internalized stigma and quality of life in patients with schizophrenia. Neuropsychiatric Disease and Treatment 12, 1411–1417. https://doi.org/10.2147/NDT.S108537

Sibitz, I., Unger, A., Woppmann, A., Zidek, T., Amering, M., 2011. Stigma resistance in patients with schizophrenia. Schizophrenia Bulletin 37, 316–323. https://doi.org/10.1093/schbul/sbp048

Singh, A., Mattoo, S., Grover, S., 2016. Stigma and its correlates in patients with schizophrenia attending a general hospital psychiatric unit. Indian Journal of Psychiatry 58, 291–300. https://doi.org/10.4103/0019-5545.192024

Siris, S.G., 2001. Suicide and schizophrenia. Journal of Psychopharmacology 15, 127–135. https://doi.org/10.1177/026988110101500209

Sum, M.Y., Chan, S.K.W., Tse, S., Bola, J.R., Ng, R.M.K., Hui, C.L.M., Lee, E.H.M., Chang, W.C., Chen, E.Y.H., 2020. Elucidating the relationship between internalized stigma, cognitive insight, illness severity, and functioning in patients with schizophrenia using a path analysis approach. Journal of Mental Health 1–10. https://doi.org/10.1080/09638237.2020.1836553

Tandon, R., Nasrallah, H.A., Keshavan, M.S., 2009. Schizophrenia, “just the facts” 4. Clinical features and conceptualization. Schizophrenia Research 110, 1–23. https://doi.org/10.1016/j.schres.2009.03.005

Tang, I.-C., Wu, H.-C., 2012. Quality of life and self-stigma in individuals with schizophrenia. Psychiatric Quarterly 83, 497–507. https://doi.org/10.1007/s11126-012-9218-2

Thornicroft, G., Brohan, E., Rose, D., Sartorius, N., Leese, M., 2009. Global pattern of experienced and anticipated discrimination against people with schizophrenia: a cross-sectional survey. The Lancet 373, 408–415. https://doi.org/10.1016/S0140-6736(08)61817-6

Tsang, H.W., Fung, K.M., Chung, R.C., 2010. Self-stigma and stages of change as predictors of treatment adherence of individuals with schizophrenia. Psychiatry Research 180, 10–15. https://doi.org/10.1016/j.psychres.2009.09.001

Valiente, C., Provencio, M., Espinosa, R., Duque, A., Everts, F., 2015. Insight in paranoia: The role of experiential avoidance and internalized stigma. Schizophrenia Research 164, 214–220. https://doi.org/10.1016/j.schres.2015.03.010

Vauth, R., Kleim, B., Wirtz, M., Corrigan, P.W., 2007. Self-efficacy and empowerment as outcomes of self-stigmatizing and coping in schizophrenia. Psychiatry Research 150, 71–80. https://doi.org/10.1016/j.psychres.2006.07.005

Vidović, D., 2016. Insight and self-stigma in patients with schizophrenia. Acta Clinica Croatica 55, 23–28. https://doi.org/10.20471/acc.2016.55.01.4

Violeau, L., Dudilot, A., Roux, S., Prouteau, A., 2020. How internalised stigma reduces self-esteem in schizophrenia: the crucial role of off-line metacognition. Cognitive Neuropsychiatry 25, 154–161. https://doi.org/10.1080/13546805.2020.1714570

Vrbová, K., Kamarádová, D., Látalová, K., Ocisková, M., Praško, J., Mainerová, B., Cinculová, A., Kubínek, R., Ticháčková, A., 2014. Self-stigma and adherence to medication in patients with psychotic disorders – cross-sectional study. Neuro endocrinology letters 35, 645–652.

Vrbova, K., Prasko, J., Holubova, M., Kamaradova, D., Ociskova, M., Marackova, M., Latalova, K., Grambal, A., Slepecky, M., Zatkova, M., 2016. Self-stigma and schizophrenia: a cross-sectional study. Neuropsychiatric Disease and Treatment 12, 3011–3020. https://doi.org/10.2147/NDT.S120298

Vrbova, K., Prasko, J., Holubova, M., Slepecky, M., Ociskova, M., 2018a. Positive and negative symptoms in schizophrenia and their relation to depression, anxiety, hope, self-stigma and personality traits - a cross-sectional study. Neuro endocrinology letters 39, 9–18.

Vrbova, K., Prasko, J., Ociskova, M., Holubova, M., Kantor, K., Kolek, A., Grambal, A., Slepecky, M., 2018b. Suicidality, self-stigma, social anxiety and personality traits in stabilized schizophrenia patients – a cross-sectional study. Neuropsychiatric Disease and Treatment 14, 1415–1424. https://doi.org/10.2147/NDT.S162070

Vrbova, K., Prasko, J., Ociskova, M., Kamaradova, D., Marackova, M., Holubova, M., Grambal, A., Slepecky, M., Latalova, K., 2017. Quality of life, self-stigma, and hope in schizophrenia spectrum disorders: a cross-sectional study. Neuropsychiatric Disease and Treatment 13, 567–576. https://doi.org/10.2147/NDT.S122483

Warner, R., 1994. Recovery from schizophrenia: Psychiatry and political economy, 2nd ed. Taylor & Frances/Routledge.

Werner, P., Aviv, A., Barak, Y., 2008. Self-stigma, self-esteem and age in persons with schizophrenia. International Psychogeriatrics 20, 174–187. https://doi.org/10.1017/S1041610207005340

Wood, L., Birtel, M., Alsawy, S., Pyle, M., Morrison, A., 2014. Public perceptions of stigma towards people with schizophrenia, depression, and anxiety. Psychiatry Research 220, 604–608. https://doi.org/10.1016/j.psychres.2014.07.012

Wood, L., Byrne, R., Varese, F., Morrison, A.P., 2016. Psychosocial interventions for internalised stigma in people with a schizophrenia-spectrum diagnosis: A systematic narrative synthesis and meta-analysis. Schizophrenia Research 176, 291–303. https://doi.org/10.1016/j.schres.2016.05.001

World Health Organization (WHO), 2001. The world health report: Mental health: new understanding.

Yang, L.H., Kleinman, A., Link, B.G., Phelan, J.C., Lee, S., Good, B., 2007. Culture and stigma: Adding moral experience to stigma theory. Social Science & Medicine 64, 1524–1535. https://doi.org/10.1016/j.socscimed.2006.11.013

Yanos, P.T., DeLuca, J.S., Roe, D., Lysaker, P.H., 2020. The impact of illness identity on recovery from severe mental illness: A review of the evidence. Psychiatry Research 288. https://doi.org/10.1016/J.PSYCHRES.2020.112950

Yanos, P.T., Lysaker, P.H., Roe, D., 2010. Internalized stigma as a barrier to improvement in vocational functioning among people with schizophrenia-spectrum disorders. Psychiatry Research 178, 211–213. https://doi.org/10.1016/j.psychres.2010.01.003

Yanos, P.T., Moos, R., 2007. Determinants of functioning and well-being among individuals with schizophrenia: An integrated model. Clinical Psychology Review 27, 58–77. https://doi.org/10.1016/j.cpr.2005.12.008

Yanos, P.T., Roe, D., Markus, K., Lysaker, P.H., 2008. Pathways between internalized stigma and outcomes related to recovery in schizophrenia spectrum disorders. Psychiatric Services 59, 1437–1442. https://doi.org/10.1176/appi.ps.59.12.1437

Yildirim, T., Kavak Budak, F., 2020. The relationship between internalized stigma and loneliness in patients with schizophrenia. Perspectives in Psychiatric Care 56, 168–174. https://doi.org/10.1111/ppc.12399

Yılmaz, E., Okanlı, A., 2015. The effect of internalized stigma on the adherence to treatment in patients with schizophrenia. Archives of Psychiatric Nursing 29, 297–301. https://doi.org/10.1016/j.apnu.2015.05.006

Yoo, T., Kim, S.-W., Kim, S.-Y., Lee, J.-Y., Kang, H.-J., Bae, K.-Y., Kim, J.-M., Shin, I.-S., Yoon, J.-S., 2015. Relationship between suicidality and low self-esteem in patients with schizophrenia. Clinical Psychopharmacology and Neuroscience 13, 296–301. https://doi.org/10.9758/cpn.2015.13.3.296

Yu, B.C.L., Chio, F.H.N., Mak, W.W.S., Corrigan, P.W., Chan, K.K.Y., 2021. Internalization process of stigma of people with mental illness across cultures: A meta-analytic structural

equation modeling approach. Clinical Psychology Review 87, 102029. https://doi.org/10.1016/J.CPR.2021.102029

Zhang, T.-M., Wong, I.Y.-L., Yu, Y.-H., Ni, S.-G., He, X.-S., Bacon-Shone, J., Gong, K., Huang, C.-H., Hu, Y., Tang, M.-M., Cao, W., Chan, C.L.-W., Ran, M.-S., CMHP Study Group, 2019. An integrative model of internalized stigma and recovery-related outcomes among people diagnosed with schizophrenia in rural China. Social Psychiatry and Psychiatric Epidemiology 54, 911–918. https://doi.org/10.1007/s00127-018-1646-3