

## Effectiveness of A Stigma-Directed Interventional Program in Schizophrenia

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### ABSTRACT

**Background:** Stigma is a concern in the lives of patients with schizophrenia and their families. There is growing evidence on its effect on help-seeking and medication adherence behaviors that can affect the outcome of the disorder.

**Objective:** This study gives a preliminary idea about the effectiveness of psychoeducation delivered to caregivers of patients with schizophrenia on the patients' levels of self-stigma.

**Patients and Methods:** To conduct the study, we designed a pilot study to test the effectiveness of the family psychoeducation on self-stigma experienced by the patients. The caregivers participating in the study group received a structured psychoeducation program. Self-stigma was assessed using the Internalized Stigma of Mental Illness Scale (ISMI). After completing the family psychoeducation, patients were reassessed, followed by a three-month follow-up period, culminating in the final assessment.

**Results:** Results of this study show that self-stigma decreased after family psychoeducation, and the reduction was maintained after the follow-up period.

**Conclusion:** Family psychoeducation is a promising and effective intervention for lowering self-stigma in patients with schizophrenia.

**Keywords:** Schizophrenia, Stigma, Psychoeducation.

### INTRODUCTION

Schizophrenia is one of the most severe mental health disorders that has been described throughout history as madness. People suffering from the disorder suffer degradation, and many stereotypes have been linked to the disorder <sup>[1]</sup>.

Patients suffering from schizophrenia suffer from severe impairment in their cognitive functioning, social skills, and coping skills, resulting from the experiences of hallucinations, delusions, and other symptoms, which result in a drastic experience of living with the disorder. On top of that, patients can be marked easily as different or awkward, which makes them more vulnerable to being stigmatized and referred to as others <sup>[2]</sup>.

Patients are also more likely to believe and adopt the negative stereotypes about themselves, which is fundamental to the development of self-stigma. Self-stigma is a social construct that can worsen the outcome of the disorder and increase the burden associated with it <sup>[3]</sup>. Families of patients living with schizophrenia endure a high level of the burden of the disorder and the associated problems <sup>[4]</sup>.

There is a lack of knowledge and, subsequently, a lack of services that can help target the problem of stigmatization of mental health disorders and their impact on the patients and their families. Shedding light on this problem aims at helping patients with schizophrenia live and adapt to the challenging disorder in the first place <sup>[5]</sup>.

The goal of this study was to establish the base for further research to establish family psychoeducation as one of the therapeutic tools that can be used to help patients suffering from schizophrenia.

### PATIENTS AND METHODS

#### Study site and procedure

This study is a pilot study to assess the preliminary effectiveness of the Family Psychoeducation program on the self-stigma experienced by patients and the severity of their symptoms.

To be able to conduct the study, 25 patients diagnosed with schizophrenia were interviewed. Two senior psychiatrists confirmed the diagnosis in two different settings, and the investigator applied the SCAN Schedule for clinical assessment of neuropsychiatric disorders <sup>[6]</sup>.

After verification of diagnosis, initial interviewing, and consent, twenty patients were eligible and willing to participate, and they were included in the study. Sociodemographic data were collected, including the patient's name, age, gender, education, and occupation. Also, the socioeconomic scale for health-related research in Egypt was applied to the participating patients.

Stigma was assessed using the Arabic version of the Internalized Stigma of Mental Illness Scale <sup>[7,8]</sup>. Symptom severity was assessed using PANSS (the Positive and Negative Symptom scale) <sup>[9]</sup>.

After the initial assessment, the family members attended eight structured psychoeducation sessions. Each session lasted 45 minutes. The sessions were arranged to cover the main points about the symptoms of schizophrenia and how to diagnose the disorder. Treatment modalities were explained, with emphasis on the role of family members in supporting and helping their patients. The concept of stigma was introduced, and the

importance of social networking and accepting patients was also emphasized as a helpful method to improve outcomes. After the family psychoeducation, participants went through a post-intervention assessment point where self-stigma and symptom severity were checked one more time.

After a three-month follow-up period, the final assessment was conducted. Comparison of symptom severity and level of self-stigma before and after the family psychoeducation gave an idea of the effectiveness of the program.

#### Ethical considerations

The study was conducted after obtaining approval from the Institutional Review Board (IRB) of Mansoura University. Written informed consent was obtained from all patients and their caregivers prior to participation. The consent form clearly stated their voluntary agreement to join the study and to allow the use of their anonymized data for scientific publication, ensuring confidentiality and privacy were strictly maintained. All procedures were carried out in accordance with the ethical principles of the World Medical Association's Declaration of Helsinki for research involving human subjects.

#### Statistical Analysis

Data were coded, entered, and analyzed using the Statistical Package for the Social Sciences (SPSS) software, version 26 (IBM Corp., Armonk, NY, USA). Quantitative variables were presented as mean  $\pm$  standard deviation (SD) or median (minimum–maximum) as appropriate, while qualitative variables were expressed as frequencies and percentages. The paired t-test was used to compare mean scores of the Positive and Negative Syndrome Scale (PANSS) and the Internalized Stigma of Mental Illness Scale (ISMI) across the three assessment points (baseline, immediate post-intervention, and three-month follow-up). A p-value of less than 0.05 was considered statistically significant.

## RESULTS

**Table 1** presents the sociodemographic data of the study participants. The sample of this study was mainly composed of males residing in rural areas.

**Table 1: Sociodemographic characteristics of the patients**

Study group N=18	
	Mean $\pm$ SD
<b>Age/Years (Mean<math>\pm</math>SD)</b>	31.11 $\pm$ 8.84
<b>Gender</b>	
Male	13 (72.2)
Female	5 (27.8)
<b>Residence</b>	
Urban	8 (44.4)
Rural	10 (55.6)
<b>Years of education (Mean<math>\pm</math>SD)</b>	13.22 $\pm$ 3.87
<b>Social status</b>	
Single	13 (72.2)
Married	2 (11.1)
Divorced / widow	3 (16.7)
<b>Occupation</b>	
Not working	13 (72.2)
Working	5 (27.8)

**Table 2** shows the clinical correlates of the participants. The median duration of illness was 6.5 years. More participants had family history of psychiatric disorders than not.

**Table 2: Clinical correlates of the patients:**

Study group (N=18)	
<b>Family history</b>	
No	7 (38.9)
Yes	11 (61.1)
<b>Hospitalization</b>	
No	5 (27.8)
Yes	13 (72.2)
<b>Hospitalization number: Median (min-max)</b>	2 (1 to 3)
<b>Duration of illness (years): Median (min-max)</b>	6.5 (< 1 to 30)

**Table 3** demonstrates the socioeconomic characteristics of the caregivers, and the mean score of the SES scale for the sample was 44.89.

**Table 3: Socioeconomic status of the caregivers**

Study group (N=18)	
<b>Caregivers:</b>	
○ Mother	8 (44.4)
○ Father	1 (5.6)
○ Sibling	7 (38.9)
○ Offspring	1 (5.6)
○ Uncle	1 (5.6)
<b>Caregivers age: Mean±SD</b>	39.67 ±8.704
<b>Socioeconomic status: Mean±SD</b>	44.89±14.381

**Table 4** shows that the mean scores of the PANSS significantly decreased after caregivers received psychoeducation.

**Table 4: The mean PANSS score in the patients at the three points of assessment**

Study group (N=18)	
	<b>Mean ±SD</b>
<b>PANSS</b>	<b>Assessment point 1 (Baseline)</b> 59.56 ± 5.628
	<b>Assessment point 2 (Immediate)</b> 58.82 ± 5.411
	<b>Assessment point 3 (After 3 months follow up)</b> 59.27 ± 5.444
<b>Paired t-test</b>	
<b>P1=0.048*</b> <b>P2=0.045*</b> <b>P3=0.384</b>	

p1: the difference between baseline and immediate, p2; difference between baseline and after 3 months follow up, p3: the difference between immediate and after follow-up.

**Table 5** shows that the mean score of the Internalized Stigma of Mental Illness Scale has statistically significantly declined after the psychoeducation of the caregivers. The mean score

remained nearly unchanged at the end of the follow-up period.

**Table 5: The mean of the Internalized Stigma of Mental Illness Scale (ISMI) in the patients at the three points of assessment**

Study group (N=18)	
	<b>Mean ±SD</b>
<b>ISMI</b>	<b>Assessment Point 1 (Baseline)</b> 2.39±0.45
	<b>Assessment Point 2 (Immediate)</b> 1.86 ± 0.46
	<b>Assessment Point 3 (After 3 months follow up)</b> 1.86 ± 0.28
<b>Paired t-test</b>	
<b>P1=0.003*</b> <b>P2=0.002*</b> <b>P3=0.984</b>	

p1: difference between baseline and immediate, p2; difference between baseline and after 3 months follow up, p3: difference between immediate and after 3 months follow up.

## DISCUSSION

These preliminary results are suggestive of the promising effect of family psychoeducation on the level of self-stigma in patients with schizophrenia. This aligns with findings that indicate the importance of family psychoeducation, as demonstrated by a study in Uttarakhand, India, which shows that family psychoeducation has a positive impact on patients' medication adherence and self-esteem [10].

Another study supporting the impact of psychoeducation on self-stigma and self-esteem in patients with schizophrenia was conducted by **Jagan et al.** and found that psychoeducation was effective in reducing stigma and elevating self-esteem. The difference from our study is that psychoeducation in this study was delivered to the patients themselves, not their families [11].

Research on family psychoeducation for schizophrenia has shown mixed results regarding its effectiveness in reducing self-stigma. While some studies found positive outcomes, others failed to detect significant effects. **Vaghee et al.** reported that psychoeducation reduced stigma in family caregivers of patients with schizophrenia [12].

Similarly, **Ivezić et al.** observed decreased self-stigma levels in patients following group psychoeducation [13]. **Mohanty and Kumar** also found that psychoeducation reduced stigma in caregivers [14]. However, **Palli et al.** did not specifically measure self-stigma, focusing instead on family cohesion, caregiver burden, and depressive symptoms, which all improved after psychoeducation [15]. Also, **Yasuma** did not

specifically address self-stigma, focusing instead on caregiver burden and family cohesion, which failed to prove the effectiveness of the brief psychoeducation program on the measured parameters [16].

The interventions varied in format, duration, and target population across studies, potentially contributing to the inconsistent findings. While psychoeducation shows promise in addressing stigma and other family-related outcomes, more research is needed to establish its effectiveness specifically for self-stigma reduction in both patients and caregivers.

## LIMITATIONS

This study has several limitations. First, the small sample size and single-center pilot design limit the generalizability of the findings. Second, the absence of a control group prevents establishing causality between the intervention and the observed reduction in self-stigma. Third, reliance on self-reported measures may introduce response bias. Finally, the relatively short follow-up period restricts conclusions regarding the long-term sustainability of the intervention's effects.

## RECOMMENDATION

Further research is warranted to confirm or refute these preliminary findings with larger sample sizes of participants and more structured study designs that can control for the effects of any confounding variables.

## CONCLUSION

This pilot study demonstrates that family psychoeducation is a feasible and effective intervention to reduce self-stigma in patients with schizophrenia, with benefits persisting over a three-month period. Although clinical symptoms remained largely unchanged, targeting caregivers through psychoeducation may represent a valuable strategy to improve psychosocial outcomes. Larger controlled trials are needed to validate these findings and explore long-term impacts.

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