- *Basic Research*

Effect Of Mindfulness-Psychoeducational Intervention on Psychotic and Depressive Symptoms Among Patients with Schizophrenia

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Abstract

Background: Mindfulness-psychoeducational interventions has been increasingly attracted attention and interest in the management of patients with schizophrenia and other psychotic disorders **Aim of the study:** The aim of this study was to evaluate the effect of mindfulness-psychoeducational intervention on psychotic and depressive symptoms among patients with schizophrenia. **Research design:** The current study employed a quasi-experimental one group pre-posttest design. **Sample**: Thirty patients diagnosed with schizophrenia were recruited in the current study through purposive sampling. **Setting:** the study was carried out at the Psychiatry and Addiction Prevention Hospital – El Manial Cairo University Hospital –Cairo – Egypt**. Tools:** Socio-demographic and medical data Sheet, Psychotic Symptom Rating Scale, The Beck Depression Inventory, and Scales for the Assessment of Negative Symptoms. **Results**: the results revealed that 40% of the studied sample express normal mood change per intervention as compared to 63.33% post intervention with statistical significance difference was found between pre and post intervention among the studied sample in relation to level of depression. Moreover, 83.33% of the studied sample showed clinical negative symptoms pre-intervention as compared to 60% post intervention with statistical significance difference between pre and post intervention in relation to suffering from negative symptoms. **Conclusion:** The beneficial effect of the program on lowering negative and depressed symptoms of schizophrenia patients was established in this study, adding to the body of knowledge on the impact of mindfulness psychoeducation intervention. Nevertheless, in terms of positive symptoms, there was no apparent difference among the studied sample. **Recommendations:** Implement mindfulness-based interventions in standard schizophrenia management protocols are recommended.

Keywords: Mindfulness, Psychoeducational Program, Psychotic, Depressive Symptoms, Schizophrenia

1. Introduction:

Schizophrenia is a debilitating and persistent mental disorder that hampers cognitive abilities, rational conduct, feelings of connection, and social engagement (Shanko et al., 2023). The condition is distinguished by the presence of positive symptoms, negative symptoms, and impaired cognitive performance. Moreover, persons diagnosed with schizophrenia frequently encounter extensive impairments in their capacity to participate in social relationships, which are considered the essential features of the condition. These deficiencies exist prior to the onset of schizophrenia, continue into adulthood, and can constitute a difficulty for treatment (Fulford et al., 2018).

The incidence of schizophrenia in developed countries is around 3% (National Institute of Mental Health, 2021). Schizophrenia presents a significant problem because of the overlapping clinical symptoms that define each person, the unique nature of these symptoms across individuals, and their changing nature over time. Some individuals may experience a single isolated psychotic episode, whereas others may have them sporadically (such as during periods of stress) or periodically (Cooke, 2017).

The core psychotic symptoms of schizophrenia impede an individual's capacity to see reality properly and have a profound impact on their general well-being, constraining their social interactions and daily personal pursuits (Ben-Zeev et al., 2020). Individuals diagnosed with schizophrenia frequently experience hallucinations and delusions, leading to cognitive a change and distress until they discern that these experiences originate from their own mind rather than external sources (Simonsen et al., 2020).

Interventions combining mindfulness and psychoeducation have demonstrated broad beneficial effects in treating patients suffering from psychosis and other long-term mental illnesses (Pardos-Gascón et al., 2021). These techniques involve accepting thoughts and feelings as passing phenomena rather than as absolute truths and recognizing them or becoming more aware of them. Mindfulness was utilized to teach individuals with schizophrenia how to stay connected with distressing psychotic episodes and respond to them by accepting them rather than avoiding them. Mindfulness-based psychoeducational therapies improve the social functioning and well-being of patients with psychosis while reducing the severity and frequency of negative symptoms (López-Navarro & Al-Halabí, 2021).

Depressive symptoms in individuals diagnosed with schizophrenia have been found to have a negative impact on their overall well-being. These symptoms are associated with more frequent episodes of psychosis, drug abuse, lower quality of life, and an increased risk of suicide. It has been evident in recent years that persons diagnosed with schizophrenia often have symptoms of depression. Depressive symptoms can manifest at various stages of schizophrenia, and the coexistence of depressive symptoms with schizophrenia may be linked to psychological variables such as stress, feelings of insecurity, hopelessness, and social isolation. Recurrent periods of depression have a negative impact on the effectiveness of therapy for schizophrenia. They also have devastating effects on the lives of individuals with schizophrenia and their caregivers, including increased distress, impairment, and decreased productivity (Mosolov & Yaltonskaya, 2022).

The benefits of mindfulness on psychosis provide encouraging data for the optimization of treatment to promote functioning in patients with psychosis (Jansen et al., 2020). Mindfulness meditation practice allows individuals to carefully observe experiences and their

accompanying responses without making judgments. This approach enables individuals to abandon self-destructive ingrained reactions to difficult life circumstances. According to the cognitive neuropsychiatric model of delusions, the development of delusions can be minimized by reducing cognitive biases through the practice of mindfulness. Subsequent research revealed that paying close attention to auditory hallucinations was associated with a decrease in the pain generated by the voices and a reduction in the amount of reactivity towards the voices (Stephanie et al., 2018).

Mindfulness-psychoeducational intervention is a method that emphasizes the significance of being completely aware of the current moment without making critiques and focusing attention on the general awareness of the situation rather than being emotionally linked to specific details Meta-analyses have shown that mindfulness-based therapies effectively reduce psychotic symptoms and prevent re-hospitalization (Cramer et al., 2016). Examining the effects of implementing a mindfulness psychoeducational intervention on individuals diagnosed with schizophrenia might provide significant implications for enhancing symptom management, fostering self-awareness and adaptive coping skills, and perhaps reducing healthcare costs.

Significance of the study

In recent years, the utilization of mindfulness-based psychoeducational interventions (MPEP) has expanded in clinical settings for the treatment of schizophrenia spectrum disorders (SSDs). The severity of symptoms, extended hospital admissions, and high rates of rehospitalization are indicative of the cost-intensity and severity of these disorders (Böge et al., 2021). Research suggests that mindfulness-based programs have the potential to produce long-term improvements in mental health outcomes for a variety of psychiatric illnesses. The empirical support for the enduring benefits of mindfulness in the management of this persistent disorder can be obtained by examining the influence of mindfulness on psychotic symptoms in individuals diagnosed with schizophrenia. Investigating the effects of mindfulness psychoeducational intervention on individuals diagnosed with schizophrenia may improve the management of symptoms. Hallucinations, delusions, and disorganized thinking are among the symptoms of schizophrenia, a persistent mental disorder. The presence of these symptoms can significantly impede an individual's capacity to engage in their daily activities and have a detrimental effect on their overall well-being and life satisfaction (Keepers et al., 2020).

Mindfulness-based interventions have shown the capacity to improve overall symptom control and reduce the severity of symptoms in patients diagnosed with schizophrenia. Although medicine is the primary treatment for schizophrenia, it may not be sufficient for certain individuals or may result in undesirable adverse effects that reduce its efficacy. Mindfulness psychoeducational interventions offer a non-pharmacological approach that can be employed in conjunction with medications or as an alternative therapy option. A comprehensive understanding of the impact of mindfulness on psychotic symptoms can provide valuable insights into its potential as a supplementary therapy. Mindfulness techniques involve focusing on the present moment without making any judgments. This has the potential to improve the awareness of patients with schizophrenia regarding their thoughts, emotions, and sensory experiences. Patients may develop improved coping mechanisms to effectively manage disconcerting psychotic symptoms, reduce their reaction to these symptoms, and improve their overall psychological well-being by cultivating this awareness. Mindfulness interventions for schizophrenia are frequently accessible and inexpensive in contrast to alternative therapeutic or treatment approaches (Böge et al., 2021).

Nursing research in this area is crucial for improving patient care and outcomes for people with schizophrenia. Examining the impact of mindfulness-based psychoeducational programs on psychotic and depressive symptoms might help nurses strengthen their evidence-based practices. These programs might enhance the management of symptoms among schizophrenia patients. Patients' quality of life, reducing symptoms intensity, and the ability to provide sufficient self-care can all be enhanced by this study.

Furthermore, it underscores the importance of comprehensive approaches in the delivery of mental healthcare, recognizing the interdependence of the psychological, affective, and physiological components of schizophrenia. In addition to facilitating more patient autonomy and recovery, these studies equip nurses to take a more active part in patient education and therapeutic treatments, which has the potential to reduce healthcare costs and readmission rates.

Aim of the study

This study aimed to evaluate the effect of mindfulness-psychoeducational intervention on psychotic and depressive symptoms among patients with schizophrenia.

Operational definitions

Depressive symptoms: The present study examined depressive symptoms by using two scales; (1) Beck Depression Inventory (Beck et al. 1996), and (2). negative symptoms by using Scale of the Assessment of Negative Symptoms (SANS) (Andreasen, 1980).

Hypotheses

H1: Patients with schizophrenia who will get involved in the mindfulness-psychoeducational program will have lower scores in scale that measures delusions and hallucinations post intervention program than preprogram.

H2: Patients with schizophrenia who will get involved in the mindfulness-psychoeducational program will have lower scores in negative symptoms post intervention program than preprogram.

H2: Patients with schizophrenia who will get involved in the mindfulness-psychoeducational program will have lower scores in depression symptoms post intervention program than preprogram.

2. Subjects and methods

2.1. Research design

The current study employed a quasi-experimental one group pre-posttest design.

2.2.Setting

The study was conducted at the In-patient Male Departments of the Psychiatry and Addiction Prevention Hospital – El Manial Cairo University Hospital –Cairo - Egypt.

2.3. Sample

A purposive sample was used in the current study, a sample size of (30) participants were calculated using a G-power version 3.1.1 for power analysis. A Power of .95 (β = 1-.95 = .05) at alpha .05 (one-sided) was used as the significance level, and effect size= (.05) was utilized.

Inclusion criteria:

- The individuals who have been diagnosed with schizophrenia according to the DSM-5 diagnostic classification.
- The age range is between 18 and 50 years.
- The individual is capable of comprehending the objective of the study.
- Consented to engage in the study.

Exclusion criteria:

- Patients with a history of brain injury.
- Patients with neurological disorders such as intellectual incapacity or visual perception issue, as well as those with a history of drug misuse within the previous three years.

2.4. Tools of Data Collection

Data was collected through utilizing the following four tools:

2.4.1 Socio-demographic and medical data: The researchers created a sheet to collect information on the patient's age, educational level, marital status, residency, illness duration, the current episode's duration, and number of previous admissions.

2.4.2. Psychotic Symptom Rating Scale (Haddock et al., 1999): The 17-item scale was used to measure psychotic symptoms, with 11 items for auditory hallucinations (i.e. how many times hearing the voices, when you hear these voices and for how long time, the loud volume of the voices) and six for delusions (i.e. the degree of occupation by these beliefs, the degree of anxiety and irritability caused by these beliefs) . The items are rated using a 5-point Likert scale, with values ranging from 0 to 4.

- **Scoring:** Higher scores indicate more pronounced psychotic symptoms.
- **Reliability**: Haddock et al. (1999) revealed that the hallucinations subscale had a Cronbach's alpha of 0.88, while the delusions subscale had a Cronbach's alpha of 0.94.

2.4.3 The Beck Depression Inventory (BDI) (Beck et al. 1996): The self-report questionnaire is widely employed to evaluate the severity of depression symptoms in individuals aged 13 years and older. psychologist Aaron T. Beck and his associates developed this assessment tool to establish a consistent method for assessing the severity and presence of depressive symptoms. A 21-item self-report questionnaire was utilized to evaluate symptoms of depression, such as worthlessness, sadness, and lack of interest that had been experienced within the previous two weeks. A four-point scale is employed to evaluate each symptom, with a range of 0 (no presence) to 3 (frequent presence).

- **Scoring:** Mild depression is indicated by a score of 14-19, moderate depression by a score of 20-28, and severe depression by a score of ≥29.
- **Reliability:** In the present study, calculated reliability was done, and the estimation of alpha coefficient test = 0.90 which indicates that BDI possess adequate internal reliability for this sample.

2.4.4. Scales for the Assessment of Negative Symptoms (SANS) (Andreasen, 1980): The Scale for Assessment of Negative Symptoms (SANS) is a commonly employed instrument for assessing the intensity and attributes of negative symptoms in patients diagnosed with schizophrenia. Negative symptoms encompass the lack or decline in regular behaviors or experiences, including impaired emotional expression, social isolation, less drive, and decreased verbal communication. The scale comprises 14 items. The intensity of symptoms is assessed using a 7-point scale that varies from 0 (no symptoms) to 7 (very severe symptoms). Symptoms assessment is determined by evaluating the frequency, severity, and duration of symptoms, as well as their effect on the individual's ability to operate.

-**Scoring:** the higher the score of the scale the more severity of negative symptoms.

-**Reliability of the scale**: the scale was tested for reliability by Andreasen (1991) and it showed good reliability which equals 0.79.

2.5. Procedure:

In order to understand the research topic and establish the program, a review of Arabic and English literature on a variety of aspects of the issue was conducted, including textbooks, essays, journals, and scientific publications. The researchers provided bilingual experts with the same English formats after translating the instruments (English formats) into Arabic. This was done to verify the Arabic translation. (c) Minor content errors were identified and rectified. The researchers were granted formal authority to continue with the study after presenting the established papers and introducing themselves to the director of the Hospital for Psychiatry and Addiction Prevention University Hospital.

Following the recruitment of the study participants and gaining their consent to participate in the current study, the researchers were using the previously mentioned data collection instruments to obtain the baseline assessment. The researchers implemented the mindfulness psycho-educational program's sessions for the selected participants over a period of 10 weeks. Finally, the post-program assessment for the study participants was obtained using all instruments, except for the socio-demographic and medical data sheet.

2.6. Program Description:

The program consisted of four phases:

First: preparatory phase: tools of data collection were prepared**.**

Second assessment phase: collecting the base line from the selected sample by using, socio-demographic and medical data sheet, psychotic symptom rating scale, the beck depression inventory, and scales for the assessment of negative symptoms.

Third implementation phases: conducting the program which consisted of 10 sessions over a period of 10 weeks, with one session taking place each week. Each session lasted for 40 minutes. We divided the study participants into subgroups, each group consisting of five patients. The researchers dedicated the initial 10 minutes to revisiting and examining the knowledge and skills acquired during the prior session. The subsequent 25 minutes focused on acquiring the necessary content and carrying out the corresponding activities. In the final 10 minutes, participants expressed their emotions and thoughts about the session and received instructions on the activities they needed to complete to prepare for the next one. The program covered various contents, including self-introduction, training in attention techniques, analysis of personal experiences and thoughts, distinguishing between worries and reality, managing worries, developing empathy communication skills, avoiding impulsive decisions, understanding external and internal values, and creating a plan for daily practice.

Fourth evaluation phase this phases aims to evaluate the effect of the program on patients by using psychotic symptom rating scale, the beck depression inventory, and scales for the assessment of negative symptoms.

2.7. Ethical Considerations:

The Ethics Committee for Scientific Research at Cairo University's Faculty of Nursing provided formal ethical permission. In addition, the head of the Psychiatry and Addiction Prevention Hospital provided official approval to undertake the planned study. All eligible individuals who volunteered to participate in the study provided their informed consent. Study participants were advised that they could withdraw from the study at any moment without incurring any negative effects. Data confidentiality and patient privacy were protected by keeping patients anonymous and utilizing code numbers instead of their names.

2.8.Statistical Design

The data was analyzed using the Statistical Package for the Social Sciences (SPSS version 20). Descriptive data were reported numerically and as percentages. The Chi square test was used to calculate the difference in pre- and post-intervention program scores for the selected measures. The level of significance had been determined at $p < 0.05$.

3. Results

The socio-demographic data of the study participants, which consists of 30 patients, reveals that over three-quarters of them are male (76.7%), only one-third have children (33.3%), 70% of the sample hold employment, and over one-third (36.7%) can read and write. Additionally, 20% of the sample have completed a university education. The results also revealed that over one-third of the sample (36.6%) was between the ages of 35 and 45, over one-quarter (26.7%) was between the ages of 18 and 25, and the same percentage was between the ages of 25 and 35. Additionally, the results indicated that over half of the participants (53%) were single. (**Figures 1, 2; table 1)**

As regards medical data of the participants the results reported that more than half of the participants (53.3%) were admitted once, and more than one quarter were admitted three times and more. In relation to duration of illness, nearly half of the study participants (46.7%)

were diagnosed with schizophrenia from three years and more and more than one third of them (36.3%) were diagnosed with schizophrenia from one year. **(Table 2)**

The results of the study showed that after participating in the mindfulness-psychoeducational program, 40% of the participants reported a normal mood change, compared to 63.33% before the intervention. Additionally, the percentage of the participants experiencing very severe depression decreased from 23.33% before the intervention to 16.67% after the intervention. Furthermore, the findings indicated a statistically significant difference between the before and post intervention among the participants in terms of their degree of depression, with a chi-square value of 7.8 at a significance level of p=0.05. **(Table 3)**

The findings indicated that among the participants in the study, 53.33% did not exhibit any psychotic symptoms before the intervention, while this percentage increased to 66.33% after the intervention. Additionally, the results revealed that 16.67% of the participants had a high severity of psychotic symptoms before the intervention, which decreased to 13.33% after the intervention. However, no statistically significant difference was observed between the pre and post intervention in terms of psychotic symptoms**. (Table 4)**

The results of the study indicate that prior to the intervention, 16.67% of the participants did not experience any negative symptoms, whereas after the intervention, this percentage increased to 40%. Additionally, prior to the intervention, 83.33% of the participants exhibited clinical negative symptoms, which decreased to 60% after the intervention. These differences in negative symptom experiences between the pre and post intervention were statistically significant, as evidenced by a chi-square value of 4.1 at a p-value of 0.04. In addition there are statistical significance difference were found between pre and post intervention in relation to depression, and experiencing negative symptoms **(As shown in Table 5 & 6).**

Table (1): Socio-Demographic Data of Study Participants (n=30)

Personal data	**No.**	**%**
Gender		
Male	23	76.7
Female	7	23.3
Children		
Yes	10	33.3
No	20	66.7
Occupation		
Yes	21	70.0
No	9	30.0
Education		
Read and write	11	36.7
Primary	3	10.0
Elementary	3	10.0
Secondary	7	23.3
University	6	20.0

Table (2): Medical Data of Study Participants (n=30)

Medical data	No.	%
Admission times		
One	16	53.3
Two	6	20.0
3+	8	26.7
Duration of illness		
One year	11	36.7
Two years	5	16.7
3+	14	46.7

Figure (1). Distribution of Age among the study participants (n=30)

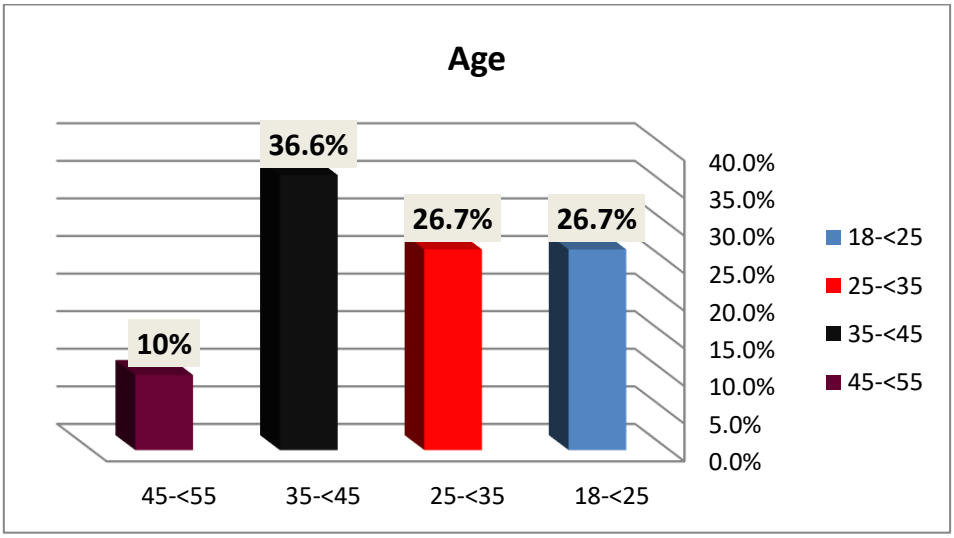

Figure (2). Distribution of marital status among the study participants (n=30)

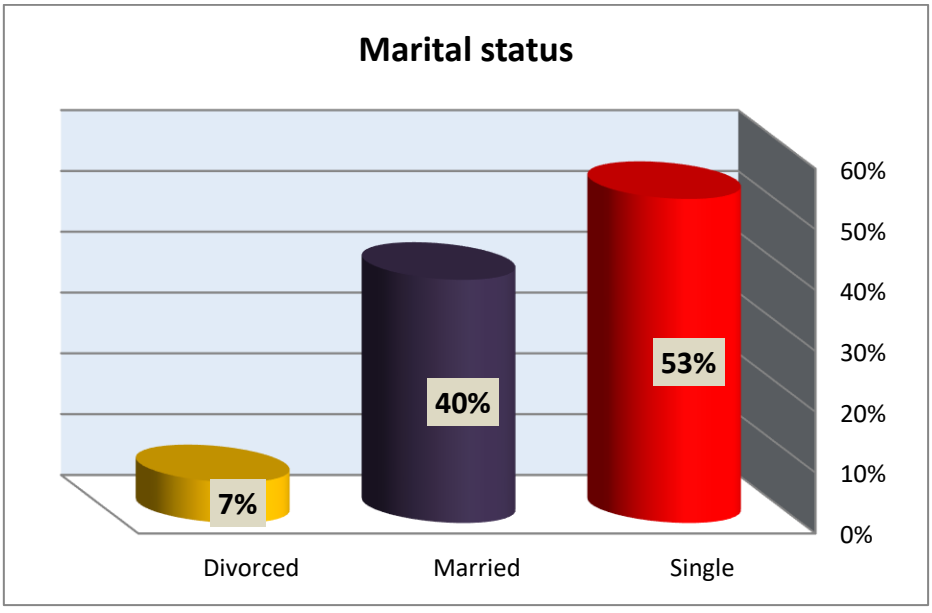

Table (3): Depression Level of study participants Pre and Post intervention (n=30)

Depression level	Pre		Post		X^2	p-value
	No.	%	No.	%		
Normal mood change	12	40.00	19	63.33	7.8*	0.05
Mild mood change	5	16.67	5	16.67		
Mild depression	2	6.67	0	0.00		
Moderate depression	2	6.67	0	0.00		
Severe depression	2	6.67	1	3.33		
Very severe depression	7	23.33	5	16.67		

*Significance level at p≤0.05

Table (4): Psychotic Symptom Level of Study Participants Pre and Post intervention (n=30)

Psychotic symptom level	Pre		Post		X^2	p-value
	No.	%	No.	%		
None	16	53.33	20	66.67	2.48	0.64
Mild	7	23.33	3	10.00		
Moderate	1	3.33	2	6.67		
Severe	1	3.33	1	3.33		
Very severe	5	16.67	4	13.33		

*Significance level at p≤0.05

Table (5): Negative Symptoms of Study Participants Pre and Post Intervention (n=30)

Negative symptoms	Pre		Post		X^2	p-value
	No.	%	No.	%		
No negative symptoms	5	16.67	12	40.00	4.1	0.04*
Clinical symptoms	25	83.33	18	60.00		

*Significant at p-value<0.05

Table (6): The difference between study variables of Studied Sample pre and post Intervention (n=30)

Study variables	Pre		Post		t-test	p-value
	Mean	Standard deviation	Mean	Standard deviation		
Depression scale	12.50	11.72	7.90	10.94	2.572	.021*
Positive symptoms	17.80	27.04	11.70	24.82	2.010	.366
Negative symptoms	41.07	14.50	33.60	11.94	2.177	.034*

*significant at p-value<0.05

4. Discussion

According to the current study, reducing symptoms of schizophrenia was made possible by combining mindfulness training with psychoeducational intervention. This intervention also included a significant amount of practice under the guidance of the researchers. Research has demonstrated that psychoeducation programs that integrate mindfulness intervention are more beneficial for individuals with schizophrenia. Psychoeducation provides patients with

knowledge, skills, and tactics required to overcome the symptoms of their illness. Mindfulness, therefore, promotes individuals to embrace their experiences without placing excessive focus on the management of illnesses and adherence to therapy.

Therefore, the current study aimed at evaluating the effect of Mindfulness Psycho-Educational Intervention Program (MPEP) on psychotic and depressive symptoms among patients with schizophrenia. Using a pretest-posttest quasi-experimental design, the study examined whether the studied sample had a decrease in psychotic, negative and depressive symptoms. The finding indicates that schizophrenia patients who received MPEP demonstrated significant improvement in negative symptoms compared to pre-intervention. There are several possible explanations for the notable impact of the program on negative symptoms. (1) It was noted that social withdrawal among the studied sample was reduced as they practiced the intervention in a group context which enables them to openly communicate their internal emotions without judgment; (2) The mindfulness intervention in the current study utilized behavioral techniques such as relaxation techniques, breathing exercises that are important in alleviating stress and negative mood.

In their systematic review and meta-analysis, Jansen et al. (2020) found similar outcomes when examining acceptance- and mindfulness-based treatments for persons diagnosed with schizophrenia spectrum illness. Their study revealed that mindfulness exerted an influence on negative symptoms. Furthermore, Lee (2019) introduced a mindfulness intervention for individuals with persistent schizophrenia. The program included eight sessions, with each session lasting 1.5 hours. Qualified therapists conducted the sessions on a weekly basis. It was shown that the practice of mindfulness decreased the intensity of negative symptoms. In a study conducted by Sabé and colleagues (2024), it was shown that mindfulness had beneficial effects in reducing negative symptoms in individuals diagnosed with schizophrenia.

In a similar vein, Hodann-Caudevilla et al. (2020) performed a systematic review and meta-analysis that encompassed ten studies and a total of 1094 individuals. Their findings revealed statistically significant improvement in negative symptoms during the posttest assessment. However, another study has shown that a 24-week mindfulness intervention, consisting of a monthly 2-hour program directed by therapists, effectively decreased negative symptoms in outpatients diagnosed with schizophrenia (Chien et al. 2019). Besides, a notable alleviation in negative symptoms in individuals with schizophrenia was observed following the implementation of a mindfulness intervention (Böge, et al. 2021; El-Monshed, Amr, &Zoromba, 2022). In accord, a controlled, single-blind, randomized, 6-week trial that involved 100 patients with schizophrenia showed a noteworthy improvement in negative symptoms (Shen et al. 2023). Likewise, a meta-analysis of randomized controlled study found that Mindfulness-Based Interventions had a moderate impact on reducing negative symptoms, both immediately after the intervention and during short-term follow-up (Liu, Li, & Hsiao, 2021).

The results of the present study indicated that individuals with schizophrenia who were administered MPEP exhibited a noteworthy reduction in depressive symptoms as compared to their pre-intervention status. The studied sample was trained to practice activities such as posture relaxation, body scan, and mindful stretching and deep breathing exercises which alleviate negative affect. Besides, teaching problem solving skills within a group helped the studied sample to adapt to difficult situations, enhance their cooperations and social interaction. Additionally, mindfulness is a state of awareness that arises from attentively observing the present moment without making judgments. It gently redirects the mind away from negative emotions and allows for focused attention on one's thoughts and experiences, thereby reducing tendencies for self-blame, future worries, or past regrets.

Consistent with this finding, numerous studies reported that mindfulness was effective in reducing the symptoms of depressive symptoms among schizophrenic patients (Jansen, et al. 2020; Yip, Karatzias, &Chien, 2022). However, Shen et al. 2023 showed no significant effect of mindfulness intervention on depression symptoms.

While the present study showed promising results for depressive and negative symptoms, it did not alleviate positive symptoms of schizophrenia. This may be due to several reasons. To start, it's possible that ten weeks is not long enough to make a difference for patients' hallucinations and delusions. Second, while it has been demonstrated that psychotic persons may benefit from mindfulness training, there is ongoing disagreement among professionals about the likelihood that mindfulness may exacerbate psychotic symptoms. This deterioration is assumed to be caused by increased awareness of internal states and the concentration on body sensations and psychotic thoughts.

In the same context, the finding of the present study was supported by Jansen, et al. (2020) who found no significant effects for mindfulness intervention on positive symptoms. Nevertheless, the current study result was inconsistent with previous studies which demonstrated that mindfulness practice helped schizophrenia improve their positive symptoms specifically delusion and hallucination (Chien et al. 2019; Sheng et al. 2019; Chien et al. 2020; Hodann-Caudevilla et al. 2020; Böge et al. 2021; El-Monshed et al. 2021; Liu et al., 2021; Shen et al., 2021; Yip et al. 2022).

In general, the study's findings showed considerable potential for reducing negative and depressive symptoms in schizophrenia patients. Moreover, the strength of the present study comes in its focus on the contribution of psychiatric nurses as members of the treatment team in the recovery of patients with schizophrenia. This is of particular significance because the optimal outcome for this population necessitates the participation of all mental health professionals.

5. Conclusion.

This study confirmed the program's beneficial impact on the reduction of depressive and negative symptoms in schizophrenia patients, thereby contributing to the existing corpus of knowledge regarding the effects of mindfulness psychoeducation intervention. Nevertheless, in terms of positive symptoms, there was no apparent difference among the study participants.

6. Recommendations

- Provide training for psychiatric nurses in delivering mindfulness psycho-educational programs
- Implement mindfulness-based interventions in standard schizophrenia management protocols.
- The concept of mindfulness psych-educational program must be endorsed in the psychiatric nursing students' curricula and training
- Study the effects of mindfulness interventions on specific subgroups of schizophrenia patients (e.g., first-episode psychosis, treatment-resistant cases).

- Further research using large sample size of individuals with schizophrenia to generalize the results

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الملخص العربى

تأثير برنامج يقظة ذهنية نفسي-تعليمي على الأعراض الذهانية والاكتئابية لدى المرضى المصابين بالفصام

المقدمة : لقد أسفرت برامج اليقظة الذهنية عن نتائج إيجابية واسعة النطاق لدى الأفراد المصابين بالذهان واضطرابات عقلية مزمنة أخرى.

هدف الدراسة: هدف هذه الدراسة تقييم تأثير برنامج يقظة ذهنية نفسى-تعليمى على الأعراض الذهانية و الاكتئابية بين مرضى الفصام.

تصميم البحث: اعتمدت الدراسة الحالية تصميم شبه تجريبي لمجموعة واحدة مع اختبار قبلي وبعدي.

العينة: شاركت فى هذه الدراسة عينة هادفه مكونة من ثلاثين مريضًا تم تشخيصهم بالفصام.

المكان: أجريت الدراسة في مستشفى الطب النفسي والوقاية من الإدمان - مستشفى قصر العيني جامعة القاهرة - القاهرة - مصر.

الأدوات: تم تجميع البيانات باستخدام استمارة البيانات الاجتماعية والديموغرافية والطبية، مقياس تقييم الأعراض الذهانية، مقياس بيك للاكتئاب، ومقاييس تقييم الأعراض السلبية.

النتائج: كشفت النتائج أن 40% من العينة المدروسة كان لديها تغير مزاجي طبيعي قبل البرنامج مقارنة بـ 63.33% بعد االبرنامج مع وجود فرق ذو دلالة إحصائية بين قبل وبعد البرنامج فيما يتعلق بمستوى الاكتئاب. علاوة على ذلك، أظهرت 83.33% من العينة المدروسة أعراضًا سلبية سريرية قبل البرنامج مقارنة بـ 60% بعده مع وجود فرق ذو دلالة إحصائية بين قبل وبعد االبرنامج فيما يتعلق بالمعاناة من الأعراض السلبية.

الخلاصة: تم تأكيد التأثير المفيد للبرنامج في خفض الأعراض السلبية والاكتئابية لدى مرضى الفصام في هذه الدراسة، مما يعزز الاهمية حول تأثير برامج اليقظة الذهنية ومع ذلك، فيما يتعلق بالأعراض الإيجابية، لم يكن هناك فرق ظاهر بين العينة المدروسة.

التوصيات: يوصى بتنفيذ البرامج العلاجية المعتمدة على اليقظة الذهنية في بروتوكول علاج مرضى الفصام

الكلمات الرئيسية: اليقظة الذهنية، البرنامج النفسي التربوي، الذهانية، الأعراض الاكتئابية، الفصام