The Impact of Mindful Self-Compassion Intervention on Self-Esteem and Negative Symptoms of Male patients with Schizophrenia

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Abstract

*   **Background:** People with schizophrenia continue to suffer from negative functional outcomes and long-term morbidity despite a legacy of empirical research and development of several types of treatments Negative symptoms and low self-esteem in schizophrenia account for much of the poor ability to cope with every day activities and consequently the quality of life of the person with schizophrenia. Applying mindful self-compassion intervention (MSC) may decrease the negative symptoms and improve the patient self-esteem. **Objective:** Evaluate the impact of mindful-self compassion intervention on self-esteem and negative symptoms in patients with schizophrenia **Settings:** The present study was carried out in the inpatient wards of El-Maamoura Hospital for Psychiatric Medicine in Alexandria. **Subjects:** 68 patients with schizophrenia. **Tools:** four tools were used for data collection. **The first tool** A Socio-demographic and clinical data collection tool: This tool was developed by the researcher. The **second tool** was self-compassion scale to assess the degree of self-compassion of patients with schizophrenia. **The third tool** was Rosenberg self-esteem scale to assess the degree of self-esteem. **The fourth tool** was Scale for Assessment of Negative Symptoms (SANS) to assesses the negative symptoms of patients with schizophrenia   **Results:** Findings of the present study revealed that the improvement of self-compassion percentage of the patients who had high self-esteem pre- intervention (8.8%)was increased in post intervention to (64.7%) **Conclusion:** mindful self-compassion (MSC) can successful in decreasing the severity of overall negative symptoms of patients with schizophrenia and improve their self-esteem and their self-compassion.. **Recommendations:** Psychiatric hospitals may support the application of mindful self-compassion intervention as an integral component in the hospital routine care and rehabilitation program for patients with schizophrenia*

<u>**Keywords:**</u> Mindful Self-Compassion, Negative Symptoms, Schizophrenia, Self-Esteem.

Introduction

Interest in exploring the concept of self-compassion is increasing nowadays Barry, Loflin, & Doucette (2015). Neff (2003a) defined it as "being kind and understanding towards oneself in instances of pain or failure rather than being harshly self-critical". Self-compassion has three main components which mutually influence and engender each other (Kirkpatrick, 2005). First, self-kindness entails being warm and understanding toward the self during suffering, failing and feeling of inadequacy, rather than flagellating self with self-criticism (Giovannoni, 2017). Secondly, awareness of common humanity involves recognizing that the human condition is imperfect and that the person is not alone in suffering and can't always get happiness (Terry & Leary, 2011). Lastly, mindfulness includes paying attention to one's present moment experience as it is happening, and relating to this experience

with a curious, open, accepting stance (Bishop et al., 2004).

Gureje et al. (2004) and Sitanggang et al. (2021) found that patients with schizophrenia have significantly low self-esteem in comparison to other psychiatric disorders. Therefore, they are expected to have a compromised quality of life and poor psychosocial functioning.

Individuals with schizophrenia spectrum disorder frequently exhibit a tendency for negative self-evaluation demonstrated by lack of motivation, asociality, anhedonia, reduced capacity for enjoyment and engagement in everyday activities (Eicher et al., 2013) . Negative symptoms constitute a key element of overall symptoms, weakening the patient's ability to cope with everyday activities, affecting his quality of life and his ability to manage without significant outside help (Mäkinen et al., 2008).

Different treatment modalities exist for patients with schizophrenia, yet these treatments mostly affect positive symptoms and aggressive behavior. While there remain gaps in knowledge about effective treatments for negative symptoms and lower self-esteem. (Barrowclough et al., 2003; Khoury et al., 2013). Gumley and Macbeth (2014) stated that self-compassion approaches are considered as key aspect in psychosis.

In this study, MSC intervention will be used to teach patients with schizophrenia a variety of meditation techniques, combining the skills of mindfulness and self-compassion in an attempt to enhance the patient's capacity for emotional well- being (Leary et al., 2007; Neff & Germer, 2013).

Aims of the Study

This study aims to evaluate the impact of mindful-self compassion intervention on self-esteem and negative symptoms in patients with schizophrenia

Research Hypothesis

MSC will improve self-esteem and negative symptoms in patients with schizophrenia

Materials and Method

Materials

Design: Quasi experimental research design was used in this study.

Settings: The present study was carried out in the inpatient wards of El-Maamoura Hospital for Psychiatric Medicine in Alexandria. The hospital is affiliated to the Ministry of Health and Population. It serves three governorates namely Alexandria, Matrouh, and El-Beheira. It is composed of twenty wards, with a total number of 948 beds.

Subjects:

- The number of inpatients with psychotic disorders in El-Maamoura hospital ranges from 750 to 800 patients. Patients with schizophrenia are about 480 patients i.e. 62% from total number of inpatients with psychotic disorders (250 male patients and 230 female patients) based on the last statistics of the hospital in 2017.

- To estimate the sample size of this study, the Epi info program was used based on 10% acceptable error, 95% confidence coefficient, 50% expected frequency and population size of 250 male. The program revealed a minimum sample size of 68 patients with schizophrenia. They were divided into two equal groups; study group and a control one. The control group included 34 male patients only receiving routine hospital treatments. The study group included 34 patients who received MSC intervention alongside with the routine hospital treatments. The recruited patients in the two groups were matched as much as possible.

Inclusion criteria:

- Male patients diagnosed with schizophrenia with no co-morbidity disorder.

- Patients aged more than 18 years.
- Duration of illness does not exceed 5 years.

Tools: Four tools were used to collect data of the study:

Tool (I): A Socio-demographic and clinical data collection tool: This tool was developed by the researcher to elicit data about the general socio-demographic and clinical characteristics of the studied subjects **Tool (II): self-compassion scale:** The self-compassion scale was originally developed by Neff (2003 to assess the degree of self-compassion. The scale consists of 26 items.

Tool (III): Rosenberg self-esteem scale: The scale was originally developed by Rosenberg (1965) to assess the degree of self-esteem.

Tool (IV): Tool (IV): Scale for Assessment of Negative Symptoms (SANS): The scale was developed by Andreasen (2011). It consists of 25 items.

Method

- An official letter from the Faculty to collect data was obtained from the dean of the Faculty of Nursing, the Director of EL-Maamoura Hospital for Psychiatric Medicine and the official authorities of the General Secretariat of Mental Health.

- Socio-demographic and clinical data collection tool (tool I) was developed by the researcher. Self-compassion scale(tool II) was translated by the researcher into Arabic language then back translation was done by English expert

- A jury composed of five experts in the psychiatric nursing field examined the face validity of the translated tool II.

- A pilot study was carried out on 10 patients to ensure the clarity and applicability of the study tools and identify any obstacles and problems that

may be hinder during data collection. The necessary modification was done accordingly. These patients were excluded from the actual study. The pilot study revealed that the tools were clear, understood and applicable

- Internal consistency and reliability of the study tools II, III and IV was done on 15 male patients with schizophrenia who meet the inclusion criteria using Cronbach's Alpha Coefficient test and test-retest correlations. These patients were excluded from the actual study.

- The study tools II, III and IV proved to be valid and reliable. internal consistency and test-retest correlations were as follows:

- Self-Compassion Scale (overall score): (α=0.872); Kindness subscale: (r=.549, p=0.034); Self-Judgment subscale: (r=0.699, p=0.004); Common Humanity subscale: (r=0.611,p=.016); Isolation subscale: (r=0.760,p=0.001); Mindfulness Subscale: (r=0.579,p=0.024); and Over-Identification subscale: (r=0.729, p=0.002).

- Rosenberg self-esteem scale proved to have good internal consistency (α = 0.856).

- The assessment of negative symptoms SANS scale proved to have good internal consistency (α = 0.941).

- The implementation of MSC intervention followed the subsequent phases: The researcher was trained on how to conduct MSC intervention. Training on MSC intervention was obtained from Live Online Mindful self-compassion center (LOMSC) conducted by Kristy Arbon, BSW (the center of mindful self-compassion) (CMSC's) Coordinator of LOMSC, a Certified MSC Teacher and a member of the UCSD Center for Mindfulness, Mindfulness-Based Professional Training Institute). She has been working with the developers of the

MSC program, Chris Germer and Kristin Neff, since the inception of CMSC in 2012.

- The researcher was trained on how to conduct MSC intervention for 8 weeks, 2 hour per week.

- Contents of the MSC intervention were prepared by the researcher following online training and guidance from the study supervisors.

- The prepared MSC intervention was applied on 5 technical nursing institute members in the technical nursing institute –faculty of nursing- Alexandria university to ensure the researcher's clinical competence on the developed sessions and its applicability on Egyptian population. This done under supervision of the psychiatric and mental health nursing experts at the Faculty of Nursing, Alexandria University.

Preparation phase

- Each session of the program was developed based on general and specific objectives. (table 1)

- All male psychotic patients' wards were ranked. The ward visited first was selected by simple randomization method.

- All patients' medical charts in the selected wards were reviewed to identify those who meet the inclusion criteria.

- Patients meeting the inclusion criteria from the first two randomly selected wards were assigned for the study group.

- Patients meeting the inclusion criteria from the second two randomly selected wards were assigned for the control group.

- The process was repeated till the required number is obtained

- Each recruited patient in the study group was interviewed individually to establish rapport and explain the purpose of

mindfulness self-compassion intervention.

- The study tools I, II and III were applied on both groups using the interview method (pre-assessment).

- The study tool IV was applied on both groups using the continuous observation method for one hour for at least 2 consecutive days till the completion of the required data (pre-assessment).

Implementation phase:

- The study group was divided into 4 subgroups. Each subgroup is composed of 4-5 patients.

- The MSC was carried out from 8 /2018 until 4/2019 through 8 sessions conducted 3 times/ week for three weeks. Each session take between one hour to one hour and half, which was increased or decreased according to the content of the session and patients' response

- The researcher met the study subjects on a group basis in a quiet room, the seats were arranged in a circular shape.

- Implementation of MSC with series of training exercises along with sessions was done.

- At the beginning the researcher greeted the patients and introduces herself as well as gave the patients chance to introduce themselves.

- The researcher then provided detailed information to the patients in relation to the number of sessions, length and frequency of each session, general goals of MSC model that discussed in the first session and specific objectives of each session, and the importance of homework that should be done between the sessions.

- The researcher used throughout the therapy, different audio-visual materials. Besides, constructive feedback was given by the researcher to the patients in order to make the skills of the sessions more efficient.

- Summary of important steps and concepts of each session were discussed by the researcher at the end of each session and also at the beginning of the next one with the study group patients.

- A closing session at the end of MSC was done to get the patient's feedback and opinions about the therapy.

- Throughout the session's implementation, the researcher was always keen to keep the patients motivated and active participant, this was done through continuous positive reinforcement.

Ethical considerations:

- Informed written consent obtained from each patient after the explanation of the aim and purpose of the study.

- Patient's privacy respected.

- Data confidentiality assured.

- Patients can withdraw at any time

Statistical Analysis

After data were collected, they were coded and transferred into specially designed formats so as to be suitable for computer feeding. Following data entry, checking and verification processes were carried out to avoid any errors during data entry, frequency analysis, cross tabulation and manual revision were all used to detect any errors. The statistical package for social sciences (IBM SPSS version 20) was utilized for both data presentation and statistical analysis of the results. The level of significance selected for this study was P equal to or less than 0.05.

Results

Table 1 shows a comparison between the study and the control groups regarding self-compassion in pre and post intervention.

The table illustrates that in the study group the mean percent score in posttest of self-kindness (70.74 ±15.72) and the mean percent score of common humanity (60.66 ±12.64) and that of mindfulness (75.74

±15.06) increased in the post intervention than the mean percent scores of the pre-intervention (55.59±14.55, 57.35±18.37, 50.0±13.15 respectively); while the mean percent scores in pretest of self-judgment (50.15±19.05), that of isolation (51.47±8.57), that of over-identification (50.37±17.13) decreased in the post- intervention than the mean percent scores of the pretests (37.79±22.20, 46.88 ±19.78, 39.71±18.90respectively).

Table 2 represents the comparison between the study and the control groups regarding self-esteem in pre and post intervention. It is noted that in the study group, the percentage of the patients who had high self-esteem pre-intervention (8.8%)was increased in post intervention to (64.7%) also, and the total mean score pre intervention (13.38 ± 5.65) was increased post intervention to 20.79 ± 6.58with a statistically significant difference P <0.001.

Table 3 represents the relationship between the study and the control groups according to the assessment of negative symptoms in pre and post intervention. Alogia, Anhedonia/asociality, attention and overall negative symptoms improved with statistically significant difference in the post test of the study groups than in the pretest where the mean percent scores in the pretest decreased for alogia, Anhedonia/asociality, and overall negative symptoms from (27.18±25.14, 41.18±21.65, 37.44±13.97) respectively to (10.59±12.83, 30.8 2±11.34, 30.49±9.49) respectively. While the mean percent for attention increased from (27.06±19.89) to 48.24±22.08 in the pretest with statistically significant

Discussion

Negative symptoms in schizophrenia account for much of the poor ability to cope with every day activities and consequently the quality of life of the person with schizophrenia (Barabassy et al., 2018; Correll & Schooler, 2020). Simultaneously, self-esteem disturbance in people with schizophrenia affect the way the person copes

with failure or success. This hinders the effectiveness of medical treatment and rehabilitation (Benavides et al., 2018).

Recently, self-compassion has received attention in the terms of effect on mental health and patients with severe mental illness. The Mindful Self-Compassion (MSC) intervention was developed as a special training program, uniting facets of mindfulness, self-kindness and common humanity to enhance self-compassion (Neff & Germer, 2013). (Neff & Germer, 2021). In MSC, the patient learns to practice mindfulness and self-compassion in daily life, and handle difficult emotions with greater ease.

The results of the present study show an improvement in self-esteem. These results may be attributed to the effect of MSC interventions, which focus on fostering the attitude of self-care, promoting the ability of patients' self-control and motivating them forward in their life. This in turn improves the sense of life satisfaction as evidenced by the patients' reports that they now possess qualities which will enable them to go through life disappointments.

The present study results also revealed that Alogia, Anhedonia/asociality, inattention and overall negative symptoms improved in the post test of the study groups than in the pretest and negative symptoms among the study group after implementation of MSC. As In the present study, Participants significantly reduced negative symptoms through a combination of intrapersonal practices with interpersonal ones using MSC exercises that increase the patient's ability to focus on the present moment without pre judging the situation.

Conclusion

Based upon the findings of the current study, it could be concluded that mindful self-compassion (MSC) can successful in decreasing the severity of overall negative symptoms of patients with schizophrenia

and improve their self-esteem and their self-compassion.

Recommendations

In line with the findings of the study, the following recommendations are made:

1. Application of MSC should be integrated into theoretical and practical education programs in psychiatric nursing and medicine.
2. Assessment of self-esteem, self-compassion and negative symptoms of patients with schizophrenia should be integrated in routine nursing care plan of patients with schizophrenia.
3. Application of mindful self-compassion intervention in psychiatric clinical settings may be helpful in improving negative symptoms, low self-esteem and poor self-compassion among patients with schizophrenia.

4. Application of MSC should be integrated into theoretical and practical education programs in psychiatric nursing and medicine as one of the treatment modalities that may improve negative symptoms, low self-esteem and poor self-compassion in patients with schizophrenia.

Table (1): **Comparison between the study and the control groups regarding self-compassion in pre and post intervention.**

Self-Compassion Scale	Study (n = 34)			Control (n = 34)				
	Pre intervention	Post intervention	$tp(p_0)$	Pre intervention	Post intervention	$tp(p_0)$	$t(p_1)$	$t(p_2)$
	Mean ±SD.	Mean ±SD.		Mean ±SD.	Mean ±SD.			
Self-Kindness								
Total score	16.12 ± 2.91	19.15 ± 3.14	4.072*	15.74 ± 4.49	16.56 ± 4.67	2.028	0.417	2.680*
% score	55.59±14.55	70.74 ±15.72	(<0.001*)	53.68 ±22.44	57.79 ±23.36	(0.051)	(0.678)	(0.010*)
Mean difference	↑15.15 ± 21.69			↑4.12 ± 11.84				2.603*(0.012*)
Self-Judgment								
Total score	15.03±3.81	12.56±4.44	2.409*	15.53±4.22	14.71±3.86	0.965	0.513	2.129*
% score	50.15±19.05	37.79±22.20	(0.022*)	52.65±21.11	48.53±19.29	(0.342)	(0.610)	(0.037*)
Mean difference	↓12.35 ± 29.90			↓4.12 ± 24.88				1.234 (0.222)
Common Humanity								
Total score	13.18 ± 2.94	13.71 ± 2.02	0.947	12.65 ± 2.71	12.53 ± 2.60	0.274	0.773	2.084*
% score	57.35±18.37	60.66±12.64	(0.350)	54.04±16.92	53.31 ±16.23	(0.786)	(0.442)	(0.041*)
Mean difference	↑3.31 ±20.37			↓0.74 ±15.67				0.918(0.362)
Isolation								
Total score	12.24 ± 1.37	11.50 ± 3.16	1.319	12.85 ± 3.69	12.41 ± 3.0	0.744	0.916	1.220
% score	51.47±8.57	46.88 ±19.78	(0.196)	55.33 ±23.04	52.57 ±18.73	(0.462)	(0.365)	(0.227)
Mean difference	↓4.60 ±20.31			↓2.76 ±21.61				0.361(0.719)
Mindfulness								
Total score	12.00 ± 2.10	16.12 ± 2.41	7.485*	12.44± 2.13	12.85±2.48	1.436	0.858	5.511*
% score	50.0±13.15	75.74 ±15.06	(<0.001*)	52.76±13.34	55.33±15.47	(0.160)	(0.394)	(<0.001*)
Mean difference	↑25.74 ±20.05			↑2.57±10.45				5.974*(<0.001*)
Over-identified								
Total score	12.06 ± 2.74	10.35±3.02	2.553*	12.91 ± 3.55	12.68 ± 3.25	0.563	1.110	3.050*
% score	50.37±17.13	39.71±18.90	(0.015*)	55.70±22.16	52.57 ±18.73	(0.577)	(0.271)	(0.003*)
Mean difference	↓10.66± 24.35			↓1.47 ±15.24				1.866 (0.067)

t: Student t-test tp: Paired t-test p_1: p value for comparing between the studied groups in pre intervention p_2: p value for comparing between the studied groups in post intervention p_0: p value for comparing between pre and post in each group *: Statistically significant at $p \leq 0.05$

Table (2): **The comparison between the study and the control groups regarding self-esteem in pre and post intervention**

Rosenberg Self-Esteem Scale	Study (n = 34)				Control (n = 34)				Test of Sig.(p_1)	Test of Sig.(p_2)
	Pre intervention		Post intervention		Pre intervention		Post intervention			
	No.	%	No.	%	No.	%	No.	%		
Low ≥10	18	52.9	5	14.7	17	50.0	14	41.2	χ^2=1.182 MCp=0.636	χ^2=13.822* (0.001*)
Moderate (11-20)	13	38.2	7	20.6	11	32.4	13	38.2		
High (21-30)	3	8.8	22	64.7	6	17.6	7	20.6		
MHp0	<0.001*				0.414					
Total score										

					t (p1)	t (p2)
Min. – Max.	8.0 – 27.0	8.0 – 29.0	7.0 – 25.0	5.0 – 26.0		
Mean ± SD.	13.38 ± 5.65	20.79 ± 6.58	12.21 ± 6.35	14.65 ± 6.95		
% score					t=0.807 (0.422)	t=3.745* (<0.001*)
Min. – Max.	26.67 – 90.0	26.67 – 96.67	23.33 – 83.33	16.67 – 86.67		
Mean ± SD.	44.61 ± 18.82	69.31 ± 21.92	40.69 ± 21.17	48.82 ± 23.18		
Mean difference	**24.71 ± 25.47**		**8.14 ± 25.93**		t=2.658*(0.010*)	
tpp0	<0.001*		0.076			

χ^2: **Chi square test**   MC: **Monte Carlo**   **t: Student t-test**   **MH: Marginal Homogeneity Test tp: Paired t-test** p_1: p value for comparing between the studied groups in pre intervention p_2: p value for comparing between the studied groups in post intervention p_0: p value for comparing between pre and post in each group *: Statistically significant at $p \leq 0.05$

Table (3): The relationship between the study and the control groups according to the assessment of negative symptoms in pre and post intervention.

The assessment of negative symptoms SANS scale	Study (n = 34)		tpp0	Control (n = 34)		tpp0	t (p1)	t (p2)
	Pre intervention Mean ±SD.	Post intervention Mean ±SD.		Pre intervention Mean ±SD.	Post intervention Mean ±SD.			
Affective flattening or blunting								
Total score	15.62± 8.17	13.06± 8.78		13.91± 7.86	12.35± 7.69			
% score	39.04±20.42	34.85±22.85	0.397	34.78±19.64	29.49±18.80	0.044*	0.878(0.383)	1.058(0.294)
Mean difference	**↓6.35±27.47**			**↓3.90±15.94**				
Alogia								
Total score	6.79± 6.29	2.65±3.21		9.06± 7.15	7.18±4.63			
% score	27.18±25.14	10.59±12.83	0.003*	36.24± 28.61	28.71± 18.54	0.107	3.139*(0.003*)	1.950(0.055)
Mean difference	**↓16.59±30.18**			**↓7.53±26.51**				
Avolition/apathy								
Total score	7.35± 4.10	7.26±4.71		8.03± 5.26	7.91±4.73			
% score	36.76±20.52	36.32±23.53	0.937	40.15±26.30	39.56±23.66	0.880	0.591 (0.556)	2.458* (0.017*)
Mean difference	**↓0.44±32.34**			**↓0.59±22.45**				
Anhedonia/asociality								
Total score	10.29± 5.41	7.71±2.83		10.94± 7.87	10.85±4.45			
% score	41.18±21.65	30.82±11.34	0.025*	43.76±31.48	43.41±17.81	0.930	0.395 (0.694)	3.477* (0.001*)
Mean difference	**↓10.35±25.66**			**↓0.35±23.29**				
Attention								
Total score	4.06± 2.98	7.24±3.31		4.79± 3.58	5.56±2.70			
% score	27.06±19.89	48.24±22.08	<0.001*	31.96±23.88	37.06±17.99	0.089	0.920 (0.361)	2.288* (0.025*)
Mean difference	**↑21.18±14.80**			**↑5.10±16.98**				
Overall negative symptoms								
Total score	46.79± 17.47	38.12±11.86		46.74± 20.40	45.94±11.36			
% score	37.44±13.97	30.49±9.49	0.026*	37.39±16.32	36.75±9.09	0.786	0.013(0.990)	2.779* (0.007*)
Mean difference	**↓6.91±17.43**			**↓0.64±13.55**				

t: Student t-test
tp: Paired t-test
p_1: p value for comparing between the studied groups in pre intervention
p_2: p value for comparing between the studied groups in post intervention

p_0: p value for comparing between pre and post in each group
*: Statistically significant at p ≤ 0.05

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