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Effect of mindfulness based psycho-educational program on internalized stigma among psychiatric patients

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Abstract
Psychiatric patients often accept and internalize the stereotypes and prejudices existing in society about their conditions, which is known as internalized stigma or self-stigma. The creation of mindfulness could be an effective approach in fighting self-stigmatization. This study aimed at evaluating the effect of mindfulness-based psycho-educational program on internalized stigma among psychiatric patients. A quasi-experimental research design (pre and post-test) was utilized in this study. 50 psychiatric inpatients at the New Minia Mental Health and Addiction Treatment Hospital were included. Internalized Stigma of Mental Illness Scale was used in the study. The study results revealed in a marked decrease in internalized stigma levels at post-test and follow-up test than at pre-test with highly statistically significant differences. The study concluded that mindfulness based-psycho-educational program was effective in reducing internalized stigma among psychiatric patients. Continuous provision of psycho-educational programs to increase patients' awareness about the psychiatric disorders which help in reducing stigma was recommended.

Keywords: internalized stigma, mindfulness, psychiatric patients, psycho-education

Introduction
Psychiatric disorders/mental disorders are global health problems that are highly widespread over the world, where there are 970 million individuals are affected by mental health problems worldwide, besides, these psychiatric/mental disorders are like cardiac and blood diseases which are the primary cause of disability along with life [1]. Like other developing countries, Egypt is facing a huge rise in mental disorders; mood disorders, anxiety disorders, mixed anxiety and depressive disorders, cognitive disability, obsessive-compulsive disorder, personality disorder, paranoia, schizophrenia, and catatonia which are the most prevalent mental disorders found by the national survey of adults aged 18-64 years [2-4]. The prevalence of mental health disorders was 6.7% in Minia, Upper Egypt [5].

Stigma is a multidimensional phenomenon which has cognitive, emotional, and behavioral dimensions that include blame, prejudicial attitudes, negative stereotypes, and various other forms of social exclusion and discrimination endorsed by a sizeable group about a subgroup especially with regard to individuals with mental and behavioral disorders a group that experiences stigmatization much more frequently than other groups in society stigmatization has a century-long tradition, occurring cross culturally [6].

In this respect, [7] clarified that, stigma arises when insufficient or incomplete knowledge supports negative stereotypes regarding a marginalized population facilitating discrimination and exclusion. For instance, stigma can be derived from the belief that people with mental illness are responsible for their illness, incompetent, violent, and weak in character and therefore should be socially restricted [8]. Unfortunately, it is observed that once individuals are referred to a psychiatrist and are diagnosed with a mental disorder, they feel stigmatized although they are not exposed to explicit discrimination, these patients experience embarrassment, a sense of insufficiency, an increase in negative automatic thoughts, withdrawal from social relationships and a decrease in their self-esteem [9].

Recent research indicates that mindfulness is psychologically beneficial among stigmatized groups, including those with psychiatric disorders. For example, correlational studies have indicated that mindfulness is negatively related to the self-stigma content and process [10, 11]. These findings are reliable with the probability that patients with mental illness, who have extra mindfulness, believe less self-stigmatizing thoughts, and so experience lower self-stigma levels, consequently, have better social functioning [12]. Additionally, experimental studies have further demonstrated that mindfulness training helps stigmatized individuals lessen the psychological effect of stigma [13].

Interestingly, mindfulness-based interventions integrated into psycho-education, have become increasingly popular in recent years, and provide stronger and more desirable clinical outcomes. Psycho-education empowers patients with the knowledge, skills, strengths, and strategies, to overcome illness and its associated impairments. Mindfulness, on the other hand, engages the participants to accept the experience without explicitly reinforcing illness management and treatment compliance [14]. Accordingly, cultivating mindfulness is the key to disengaging individuals from automatic thoughts, habits, and unhealthy behavior patterns and in buffering the negative effect of rumination on well-being [10, 11].

Significance of the study

Several studies in various countries have shown that approximately 80 to 90 percent of patients with mental illness may face stigma and discrimination; these rates of internalized stigma vary from mild to severe [15]. In a survey of psychiatric outpatients in "Singapore," 43.6 percent of patients had moderate to high levels of internalized stigma [16], and in a Chinese study, 38.3 percent of Hong Kong and 49.5 percent of Guangzhou patients had self-stigma [17]. Furthermore**,** in a descriptive study conducted by [18] in Minia governorate, Upper Egypt, it was reported that more than half (53.6%) of the studied patients had a higher internalized stigma level.

Moreover, **[16]** recommended that psycho-educational interventions to address and reduce the internalized stigma among patients with mental illness are needed to provide support and empowerment to them which in turn improve the capacity to cope and overcome the stigma. Consequently, [19] documented a positive association between the resistance of stigma and mindfulness among psychiatric patients. So, this psycho-educational program that is the focus of the existing study integrates elements of information about the illness, stigma, and mindfulness techniques that may aid psychiatric patients to overcome the stigma. Moreover, these mindfulness-based psycho-educational programs have not been conducted at Minia governorate before which may be helpful to psychiatric patients in reducing their stigma**.**

Aim of the study

The current study aimed to evaluate the effect of mindfulness-based psycho-educational program on internalized stigma among psychiatric inpatients.

Research hypothesis

H1: The internalized stigmatization score will be lower among the psychiatric patients after the program implementation than before.

Subjects and Method

Research design

A quasi experimental research study (pre-test and post-test) was utilized.

Setting of the study

This study was carried out at Minia Hospital for Mental Health and Addiction Treatment in New Minia City, Upper Egypt.

Study subjects

A convenient sample of 50 male and female hospitalized psychiatric patients admitted to Minia psychiatric health and addiction treatment hospital was included in the study according to statistical equation (15*360/100) in which the sample size ranged between 10% to 30 % from the total population and total number of patients was 360 patients over the past year.

Inclusion criteria

1. Patients' age ranges from 18 to 55 years.
2. Patients who can communicate and interact effectively.

Exclusion criteria

1. Mental retardation (intellectual disability).
2. Comorbid diagnosis of substance dependence.

Data collection tools

The following tools were utilized to collect data:

(I) Interview questionnaire

It was developed by the researcher to assess socio-demographic and clinical data of patients and consisted of two parts:

Part (1) Socio-demographic data: Which include age, gender, marital status, educational level, and occupation.

Part (2) Clinical data: It includes diagnosis, disease duration, duration of hospitalization, frequency of hospitalization, and mode of admission.

(II) Internalized stigma of mental illness scale (ISMIS)

This scale was developed by [20] which includes 29 items that asses internalized stigma. It consists of five subscales that include: Alienation (items 1, 5, 8, 16, 17 and 21), Stereotype Endorsement (items 2, 6, 10, 18, 19, 23 and 29), Discrimination Experience (items 3, 15, 22, 25 and 28), Social Withdrawal (items 4, 9, 11, 12, 13 and 20) and Stigma Resistance (items 7, 14, 24, 26 and 27). The items are rated by using a 4-point Likert scale ranged from (1=strongly disagree to 3=strongly agree). The items of the subscale "Stigma Resistance" are scored in reverse. The total ISMIS score was obtained by adding the scores of five subscales ranging from 29 to 116 points. The higher scores in the ISMI mean that the internalized stigmatization of the person is more severe in the negative sense and the lower scores mean the higher stigma resistance.

Validity and reliability

Five experts in Psychiatric and Mental Health Nursing examined the validity of the data collection tool. Cronbach's alpha for reliability testing was performed. The result was 0.92.

Pilot study

A pilot study (10%) of the total number that equal to 5 patients of the studied patients was performed to test the research process and determine the feasibility and reliability of the tools used in the study. It also helped in the assessment of the necessary time to fill the tools.

Ethical considerations

An initial written agreement was obtained from the “Research Ethical Committee” of the Faculty of Nursing, Minia University. Privacy was provided during data collection, informed oral consent was obtained from the studied patients, as well as written consent was obtained from the patient right committee in the hospital. Privacy and confidentiality were assured through coding the data and giving the studied patients the right to refuse any participation in the study without any rationale.

Field work

The proposed program was conducted through the following phases:

Assessment phase (early phase)

The researcher interviewed each patient to collect the necessary data and filled out the scale after clarifying the meaning of its statements questions to each patient to enable them to understand its meaning. Based on this phase, the researcher prepared the program content and exercises in the form of posters, and videos.

Planning (preparatory phase)

In this the researcher designed the program strategy time, sessions’ numbers, methods of teaching, and the helpful media used. In addition, the teaching place and the program facilities were checked for appropriateness. A variety of teaching methods will be used in this program such as; lectures, brief notes, group discussion, modeling, sharing experiences of the patients, videos, pictures, PowerPoint, films about psychiatric disorders, as well as role-playing.

Implementation of the program

The researcher divided patients into 10 groups each one included five patients, the same program sessions were implemented for each group of them. A total of nine sessions were conducted for each group. During the beginning of each session, the researcher welcomed the patients and clarified its purpose and content, and then the researcher played the role with any patient of the group after that repeated the same procedure with another patient and selected two patients to perform the same exercises.

At the end of each session, the researcher summarized the content of it and asked patients if anyone had a question, told them about the time of the next one and gave them a session homework assignment. Additionally, the researcher made a summary of the previous session to ascertain the extent of the patients' understanding of the exercises that were discussed and review the content of the session again. The researcher collected data and applied the program over 9 months extending from January 2020 to March 2020 and stopped due to COVID 19 till June in the same year then continued to the end of September 2020.

Evaluation of the program

Evaluation of the patients’ internalized stigma was done three times; firstly, before the program implementation (pretest), secondly, immediately post the implementation of the program (posttest) to test the retention of knowledge and thirdly, 3 months later after program implementation (follow up test) to test the continuation of the effectiveness of the implemented program.

Statistical analysis

The data were collected, coded, classified, tabulated, and analyzed using the “Statistical Package for the Social Science” (SPSS 26.0). For qualitative variables, the data were presented using descriptive statistics in the form of frequencies and percentages and for quantitative variables means & standard deviations were used. The nonparametric statistics “Friedman and Spearman tests” were utilized because of the lack of normality in the current study.

Results

Table 1: Frequency distribution of the studied psychiatric patients according to their socio-demographic data (N = 50)

Socio-demographic data	No = 50	%
Age groups		
18<28	14	28
28<38	17	34
More than 38	19	38
Gender		
Male	30	60
Female	20	40
Marital status		
Single	20	40
Married	19	38
Divorced	10	20
Widow	1	2
Educational level		
Illiterate	7	14
Read and write	7	14
Primary	2	4
Prep	19	38
Secondary	4	8
University & above	11	22
Occupation		
Unemployed/ Housewife	19	38
Employee	4	8
Farmer	8	16
Crafter	14	28
Free work	5	10

Table (1) shows that, 38% of the studied psychiatric patients are in the age group more than 38 years old, while 28% of them are between 18 to 28 years old. 60% of them are males. Also, 40% of them are single and only 2% are widow, 38% have preparatory school, and they are unemployed/housewife meanwhile, 22% are graduated from university.

Table 2: Frequency distribution of the studied psychiatric patients according to their clinical data (N = 50)

Variables	No	%
Diagnosis		
Bipolar disorder	13	26
Borderline personality disorder	2	4
Depression	6	12
OCD (Obsessive Compulsive Disorder)	2	4
Schizoaffective disorder	12	24
Schizophrenia	15	30
Disease duration		
Less than 1 year	7	14
From 1:2 years	11	22
From 2:3 years	4	8
More than 3 years	28	56
Duration of hospitalization		
Less than one month	38	76
From 1:2 months	11	22
From 2:3 months	1	2
Frequency of hospitalization		
Never	17	34
Once	7	14
Twice	3	6
Three times	8	16
More than three times	15	30
Mode of transmission		
Voluntary	31	62
Involuntary	19	38

Table (2) clarifies that, there are 30 % of the studied patients have schizophrenia, and 26% have bipolar disorder. More than half (56 %) of them has the disease for more than three years, while 14% has the disease for less than one year. Meanwhile about three quarters of them (76%) have been hospitalized less than one month and 34% of them have not been hospitalized. Also, 62% of them are admitted voluntarily.

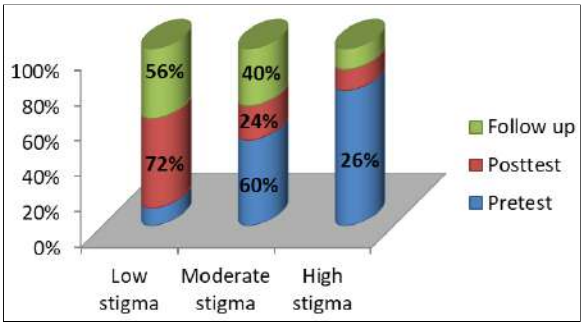

Fig 1: Frequency distribution of studied psychiatric patients' levels of total internalized stigma (ISMI) in the pre, posttest and follow-up (n = 50)

Figure (1): Illustrates that, before the program implementation, 60% of the patients have a moderate level of internalized stigma, and 26% of them have a high level. While, after implementation of the program, the percent of patients with a low level of internalized stigma increased to 72% at post-test and to 56% at the follow-up test. Moreover, those with the moderate level decreased to 24% at post-test and to 40% at the follow-up test.

Table 3: Comparison of the studied psychiatric patients' levels of total internalized stigma (ISMI) in the pre, posttest and follow-up (n = 50)

Levels of stigma	Pretest N0 (50)		Posttest N0 (50)		Follow up N0 (50)		χ2 F°	P value
	No. (50)	%	No. (50)	%	No. (50)	%		
Low stigma	7	14	36	72	28	56	69.09	.000*
Moderate stigma	30	60	12	24	20	40		
High stigma	13	26	2	4	2	4		
Mean ± SD	76.4 ± 16.6		52.6 ± 12.9		58.9 ± 13.1			

Notes: ISMS = Internalized Stigma of Mental Illness Scale.
*Statistically significant difference, ¤ Friedman test.

Table (3) shows that, there is a very high statistically significant difference between the pre, posttests, and follow-up among the patients regarding their level of internalized stigma where the p-value is 0.000*.

Table 4: Comparison of the studied psychiatric patients' ISMI subscales levels at pre, post-test and follow-up (n = 50).

Items	Pretest						Immediate post-test						Follow up						χ2 F¤	P Value
	Low		Moderate		High		Low		Moderate		High		Low		Moderate		High			
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%		
Alienation	15	30	15	30	20	40	41	82	7	14	2	4	28	56	20	40	2	4	206.3	0.000*
	Mean ± SD = 16.7 ± 5.4						Mean ± SD = 10.1 ± 3.6						Mean ± SD = 11.4 ± 4.0							
Stereotyping	11	22	33	66	6	12	40	80	8	16	2	4	33	66	16	32	1	2		
	Mean ± SD = 17.3 ± 4.4						Mean ± SD = 11.6 ± 4.8						Mean ± SD = 12.9 ± 4.5							
Discrimination	10	20	18	36	22	44	31	62	17	34	2	4	22	44	22	44	6	12		

	Mean ± SD = 14 ± 5						Mean ± SD = 9.1 ± 4						Mean ± SD = 10.6 ± 4.3							
Social withdrawal	11	22	18	36	21	42	30	60	16	32	4	8	25	50	20	40	5	10		
	Mean ± SD = 17.2 ± 5						Mean ± SD = 12 ± 4.7						Mean ± SD = 13.2 ± 4.9							
Stigma resistance	24	48	20	40	6	12	28	56	19	38	3	6	21	42	26	52	3	6		
	Mean ± SD = 11 ± 3.2						Mean ± SD = 9.8 ± 2.6						Mean ± SD = 10.8 ± 2.7							

Notes: ISMS = Internalized Stigma of Mental Illness Scale.
* Statistically significant difference, ¤ Friedman test.

Table (4) indicates that, less than half (44%, 42%, and 40%) of the studied patients have a high level of discrimination, social withdrawal, and alienation respectively at pre-test. While 66% have a moderate level of stereotyping and (48%) of them have a low level of stigma resistance as it is reversed. As regarding to immediately post-test, there are, 82%, 80%, 62%, 60%, and 56% have a low level of alienation, stereotyping, discrimination, social withdrawal, and stigma resistance as it is reversed, respectively. While at follow up test, the same table shows that, 56%, 66%, 44%, 50%, and 42% have a low level of alienation, stereotyping, discrimination, social withdrawal, and stigma resistance as it is reversed, respectively. Also, there was a very high statistically significant difference between the pre, posttest, and follow up test among the patients regarding their levels of internalized stigma subscales where the p-value is 0.000*.

Table 5: Correlations between internalized stigma scale and socio-demographic characteristics at pretest, posttest and follow up (n = 50)

		Pretest					Posttest					Follow up test				
		Age	**Gender**	**Marital status**	**Education**	**Occupation**	**Age**	**Gender**	**Marital status**	**Education**	**Occupation**	**Age**	**Gender**	**Marital status**	**Education**	**Occupation**
ISMS	R	.015	-.026	.122	-.312	-.175	.111	.065	.143	.197	-.105	.029	.058	.103	.051	-.065
	P value	.918	.858	.400	.027*	.223	.442	.654	.322	.171	.470	.843	.687	.478	.725	.652

Table (5) clarifies that, at pretest, there is a negative significant correlation between educational level only and internalized stigma as R = -.312 and p value is 0.027 However, there are no significant correlations between all socio-demographic data and internalized stigma at posttest and follow up.

Table 6: Correlations between internalized stigma scale and clinical data at pretest, posttest and follow up (n = 50)

		Pretest					Posttest					Follow up test				
		Mode of admission	**Duration of hospitalization**	**Frequency of hospitalization**	**Previous hospitalization**	**Disease duration**	**Mode of admission**	**Duration of hospitalization**	**Frequency of hospitalization**	**Previous hospitalization**	**Disease duration**	**Mode of admission**	**Duration of hospitalization**	**Frequency of hospitalization**	**Previous hospitalization**	**Disease duration**
ISMS	R	.044	-.305	.068	-.079	.021	.179	.004	.073	.030	.030	.095	.018	.230	-.107	-.107
	P value	.761	.031*	.641	.584	.402	.214	.980	.616	.837	.837	.512	.903	.107	.458	.458

Table (6) shows that, at pretest, there is a negative significant correlation between duration of hospitalization only and internalized stigma as R = -.305 and p value is 0.031.While, there is no significant correlation between all clinical data and internalized stigma at posttest and follow up.

Discussion

The present study revealed that more than half of the studied psychiatric patients were males, this may be explained by that the number of female rooms and beds were less than those for males, where there were three rooms with two beds only for each one for females' section from the total capacity of the hospital. Moreover, in Egyptian and Arab communities as a general, it is highly stigmatized for females to be hospitalized in psychiatric hospitals.

This result was similar to [21] who compare the mental illness internalized stigma between the Egyptian and Saudi Arabian schizophrenic patients; they found the majority of the patients were males. Also, [22] found that more than half of the studied patients were males. In contrast, [20] found that the majority of the Chinese participants were females. This contradiction in the previous study with the current may be due to the cultural differences and different attitudes of various societies regarding mental illness.

As regards to the studied patients' age, this study presented that, more than one-third of the patients, their ages were more than 38 years old. This finding is concordant with the literatures which indicate that the psychiatric disorders in adults appear in the young/or adulthood and interfere with their social and occupational functioning which need hospitalization. Similarly, [21] reported that the inpatients respondents were with a mean age of 39.5 years.

Concerning to clinical data of the studied patients, the current study illustrated that, less than one third of the studied psychiatric patients had schizophrenia and more than half of them had the disease for more than three years. This could be related to that schizophrenia is the most popular chronic psychiatric diagnosis in the world; this finding is supported by the study conducted by [22] in Minia, Upper Egypt who reported that more than half of the studied patients had schizophrenia with the mean duration of the disease 5.2 + 4.8 years.

It is interesting to note that, in the current study, there were statistically significant differences between the pretest, posttest and follow up as regarding to total internalized stigma levels. Also, [23] reported that, there were statistically significant differences between pre- and post-intervention times of the internalized stigma score. In the same line, the results of [24] revealed that there was improvement between pre- and post-treatment only in the study group ($P< 0.009$), with no significant differences in the control group ($p = 0.59$).

Moreover, psychiatric patients were suffering from higher internalized stigma level before the program implementation, than which is reported after program implementation and at follow up as the mean score significantly decreased immediately and 3 months later after program implementation from 76.4 ± 16.6 to 52.6 ± 12.9 and 58.9 ± 13.1, respectively. Therefore, this mindfulness-based psycho-educational program led to significant reduction and positive effect on the internalized stigma scores among psychiatric patients. This opinion is supported by [15], who reported that mindfulness may help individuals with psychiatric disorders build resilience against stigma. Also, this result is supported by [25] who concluded that the majority of the stigma reduction interventions were having satisfied results in reducing the internalized stigma among psychiatric patients.

This finding is similar to the result of [26] who showed that large number of the participants' internalized stigma had decreased from the pre-assessment to post program intervention. However, in the study conducted by [27] in where they considered these interventions impact as untrustworthy and immeasurable in reducing stigma because of the great possibility of bias as a result of the small size of the studied samples.

When looking at the internalized stigma subscales, the current study revealed that, the mean scores of the subscales (alienation, stereotyping, discrimination, social withdrawal subscales) obviously decreased immediately after program implementation and 3 months later which indicated a notable improvement after the implementation of the mindfulness-based psycho-educational program than before. This result reflects the patients' proper understanding as well as continuing application of the strategies used during the sessions e.g., relaxation techniques, meditation, besides emphasizing on some concepts as; "letting go", "acceptance" and "here and now' in combating the internalized stigma. This finding is like [9] who stated that psycho-education reduces the 'alienation", "stereotype endorsement", and social withdrawal level of patients with psychiatric disorders. Also, [26] hypothesized that psycho-educational intervention reduced stereotype agreement and self-confirmation of internalized stigma in 268 adults with schizophrenia and other severe mental illnesses.

However, the present study revealed no observable improvement in the stigma resistance subscale. This can be justified by; this domain of internalized stigma scale is closely associated with societal and governmental actions which require community understanding rather than personal decision making to overcome the stigma, besides that, this program of the current study did not emphasize on those aspects, so it is expected to achieve the change in this sub-dimension through long term intervention which includes both personal and structural efforts. This finding is similar to that of [28] who observed no significant difference in the stigma resistance's mean score after mindfulness-based psycho-education. They explained this by that this subscale was designed to measure the "experience of resisting or being unaffected" by stigmatizing attitudes from the others [29]. A qualitative investigation of stigma resistance from the perspective of people with lived experience pointed to stigma resistance as being an active, ongoing process of using one's skills, knowledge, and experiences to fight stigma at the personal, peer, and public levels [30]. Causative factors might be cultural stereotypes, negative opinions about psychiatric diseases, and the negative portrayal of psychiatric patients in the national media.

However, this finding is unlike the results of [31] who discovered that the greatest improvement for the "anti-stigma photo-voice" was in the stigma resistance subscale. They illustrated that this significant improvement of this domain was possibly explained by that "the creation of photo-voice methodology regarding the individual's experience with stigma, combined with teaching behavioral strategies for addressing negative stereotypes about mental illness, led to more strong changes in patients' ability to handle social stigma than if the intervention had focused only on self-stigma alone". Additionally, [32] showed that patients shared in the "Coming Out Proud" (COP) program exhibit significant enhancements in the "stigma resistance domain" compared to the non-shared group through learning decision making styles for disclosure and practicing it in various situations, this resulted in better resilience to stigma, rather than being victimized by it. Furthermore, COP program might build individual strength and flexibility through developing and sharing the own life experiences' understandings rather than letting others define them. \

Conclusion

Results of the current study concluded that the majority of the studied psychiatric patients were having moderate to severe level of the internalized stigma before the implantation of the mindfulness-based psycho-educational program which decreased greatly at post-test and to somewhat at follow up test after 3 months later of the program implementation. These results indicate that mindfulness based-psycho-educational program is effective in reducing internalized stigma among psychiatric patients.

Recommendations

Considering the findings of the current study, the following recommendations were suggested:

1. Continuous provision of such psycho-educational programs to increase patients' awareness about psychiatric disorders will help in internalized stigma reduction.
2. Further research to investigate the interactions between social discrimination and self-stigma and provide various interventions to reduce public or structural stigma. If societal attitudes became more positive, self-stigma is probable to decrease.

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