

Resilience Training Based Nursing Intervention: Its effect on Depressive Symptoms, Coping styles and Resilience among Patients with Depression

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Abstract

Background: Patients with depression often experience a feeling of disconnectedness as a consequence of the symptomatology of the disorder. Resilience may offer the link for those with a mental illness to move from disconnectedness to connectedness. **The aim** of this study was to evaluate the effect of resilience training based nursing intervention on depressive symptoms, coping styles, and resilience among patients with depression. **Design:** Quasi-experimental design two groups study and control was used to achieve the aim of this study. **Subjects:** A purposive sample of 64 patients with depression was selected for this study. **Results:** there was a negative significant correlation between the total score of depressive symptoms and with both resilience, and adaptive coping styles respectively, pre-intervention. There was also a statistically significant difference in the reduction of both severe and moderate depressive symptoms post-intervention compared to the control group. There was a statistically significant difference in increasing of the mean total score of resilience and adaptive coping post-intervention compared to the control group. **Conclusion:** Resilience training based nursing intervention was effective in improving depressive symptoms, resilience, and coping styles. **Recommendations:** resilience training-based nursing intervention should be applied for all depressed patients and other psychiatric disorders to improve their resilience and adaptive coping leading to improvement of symptoms severity in return.

Keywords: Depression, resilience, resilience training, coping styles, depressive symptoms, psychiatric nurse.

Introduction

Depression is one of the most common mental illnesses encountered by the mental health professional fundamentally, depression is an emotional state marked by sadness; feeling of helplessness, worthlessness, and guilt; a withdrawal from others; and disturbances in appetite, sexual desire, and sleep. Depression exists on a continuum, and major depression is quite common. Unless properly treated, depression can

cause significant problems in an individual's life. In addition, depression is associated with suicidal ideation (Konradt et al., 2018). However, some subjects can be exposed to stressful life events and not develop psychiatric disorders, this mechanism known as resilience. Thus, resilience is **the** ability to adapt successfully in the face of stress and adversity, maintaining normal psychological and physical functioning (Foureur, Besley, Burton, Yu & Crisp, 2013, Southwick & Charney, 2012).

Resilience has been widely defined as the capacity to successfully maintain or regain mental health and well being in the face of significant adversities, with the allocation of internal and environmental resources. It also refers to the process of effectively adapting to stressful situations such as a chronic illness, and resist maladaptation in the face of health- risky experiences (Ntounloulaki et al., 2017, Seok et al., 2012, O'Dowd et al., 2018). Resilience is considered as a set of characteristics such as coping, self- efficacy, hardiness, optimism and adaptability. It is an innate energy or motivating life force within the individuals that enables them to learn from experience and cope with adversity (Foureur, Bestey, Burton, Yu & Crisp, 2013, Somaiya, Kolpakwar, Faye, & Kamath, 2015).

Coping is a process of handling the external or internal stress that is reflected as difficult or exceeding own resources. Active coping represents protective strategies based on an active pursuit to mitigate or eliminate the stress and is related to lower anxiety, and depressive symptoms. It was proved that using adaptive coping styles is associated with higher levels of positive adaptive coping and lower levels of depression (Somaiya, Kolpakwar, Faye, & Kamath, 2015, Konradt et al., 2018, & Innes, 2016).

Generally speaking, the more the patients with depression use negative coping styles, the more they deepen their sense of frustration and failure to adapt to their stressful situations according to the resilience term. These negative coping styles can hypnotically deepen their depression, and depression may again affect the strength of resilience that would be probably higher without depression (Vanhove et al., 2015).

Different intervention models can decrease the impact of depressive symptoms on individual functions. Psychotherapeutic interventions are recommended in cases of mild or moderate depression. For the most severe forms of depression, the use of pharmacological combined interventions is indicated. The idea of promotion resilience by training is relatively new (Leppin, 2014, (Seok et al. 2012). Resilience training encourages and increases natural resilience to stressors, and enables the depressed patients to increase their ability to respond and manage depression and suggest the promotion of coping with depression and stress (Johnson, Emmons, Rivard, Griffin & Dusek, 2015, Loprinzed, Prasad, Schroeder, & Sood, 2011).

Therefore, the aim of the current study was to evaluate effect of resilience training based nursing intervention on depressive symptoms, coping styles and resilience among patient with depression.

Significance of the study

Statistics suggest that major depression was rated the second highest in incidence of disability, second to heart disease worldwide (Leppin et al., 2014). Research shows that recurrence of major depressive disorder is high in the general population (35% after 15 years) and higher in those treated at psychiatric mental health services (60% after 5 years and 85% after 15 years). (Waugh and Koster, 2015).

Resilience can play a protective role against developing psychopathology such as depression. The importance of resilience to a patient with depression has been increasingly recognized, and research efforts have been directed to the assessment of this construct. Resilience is

positively correlated with adaptive coping and both are negatively correlated with depression. Coping styles are associated with the patient's understanding of his/her disease or symptoms and the way in which her/his manage the illness (**Kasi et al., 2012**). So, the psychiatric nurse must be aware of the patient's resilience, coping styles to help them in management depression, so it provides guiding in treatment, improves their overall quality of life and reduces health-care costs.

However, based on the previous studies, no studies have based evaluated the effects of resilience training based nursing intervention to improve patient's resilience, coping styles and depressive symptoms.

Aim of the study

Evaluate effect of resilience training based nursing intervention on depressive symptoms, coping styles and resilience among patient with depression.

Research Hypotheses:

1- Depressed patient who will attend the resilience based nursing intervention will have lower scores of depressive symptoms compared to the control group.

2. Depressed patient who will attend the resilience based nursing intervention will have higher scores of coping and resilience compared to the control group.

Subjects and Method

Research Design

A quasi experimental research (pretest - posttest) design was utilized to

fulfill the aim of this study (Study and control groups).

Setting:

The study was conducted at a Psychiatric Mental Health Hospital in Menoufia Governorate, Egypt. This hospital is affiliated to Egyptian Ministry of Health.

Sample Size

The sample sizing adopts that the appraised effect size is 5 and the standard deviation of result variable is 10. To accomplish 80% power to detect this difference with significance level of 0.05 by the equation: $n = [(Z\alpha/2 + Z\beta)^2 \times 2 (\sigma)^2] / (\mu_1 - \mu_2)^2$ it is estimated that 32 subjects per group would be required. By means of a withdrawal/non-evaluable subject rate of 10% a total of 32 subjects per group, so that the total sample size of 64 subjects would be included in the present study.

Subjects:

A purposive sample of 64 patients with depression was selected for this study. The study sample was divided into two groups equally by random assignment; 32 patients in study group and 32 patients in control group.

The study group (I) received resilience training based nursing intervention in addition to routine hospital care. Control group (II) received only routine hospital care. The researcher deal with the control group first, to prevent result contamination and bias.

Participants were selected according the following inclusion criteria:

- a) Medically diagnosed depression.
- b) Age was 18 up to 65 years.

- c) Both genders.
- d) Able to cooperate and communicate to participate in the study.

The exclusion criteria were as follows:

- a) Patient who received any other type of psychotherapy.
- b) Patient with psychosis. No delusions and hallucinations
- c) Patient with substance abuse.

Tools of Data Collection

A socio-demographic data sheet was developed to collect the demographic and medical data of the patients. Information collected included age, gender, education, marital status, family income, duration of illness, type of treatment, medication.

Resilience scale (Connor-Davidson (CD-RISC))

Resilience scale (CD-RISC) is a 25-item scale, rated on a 5- point scale each of the items rated on a (0-4) scale, (0=strongly disagree, 4=strongly agree). Scores range from 0 to 100, with higher scores reflecting greater resilience. High score was indicating high resilience. CD-RISC has been evaluated for reliability, validity, and factor structure, and has been shown to have good internal consistency (Cronbach alpha above 0.70) with the ability to distinguish between participants with lesser and greater resilience (Yu & Zhang, 2007, Singh & Yu, 2010). It was translated into Arabic by the researcher and retested for its validity and reliability.

Brief COPE Inventory:

The Brief COPE developed by Professor Carver (1997). It was used to examine the coping styles employed in the past 1 month by the participants screened as having depression. It is the abridged version of the original COPE Inventory and assesses 14 coping types with 28 questions (2 questions per type). The responses to these questions are measured on a 4- point Likert-type scale with responses ranging from 1 ("I've not done this at all") to 4 ("I've been doing this a lot"). The scores (ranging from 2 to 8 for each type of coping style) and the means for each coping method were then calculated. The results of previous research confirmed the theoretical factor structure of the situational Brief COPE. All the 14 dimensions showed acceptable reliability and relationships with goal commitment and progress, at testing the reliability and usefulness of this measure to evaluate coping responses to specific events". It was translated into Arabic by the researcher and retested for its validity and reliability

Depression scale:

It was developed by Zung (1965) and named as Self Rating Depression scale (SDS). It consists of 20 items and was translated into Arabic by the researcher, four items were removed as they were became 16 items on a three level scale (never, sometimes, always) for scoring (1/ 2/ 3), it covers two subgroups (physical and psychological symptoms of depression). Low scoring indicates low level of depression while higher scoring indicates high level of depression. It was tested for content validity by nine professors in psychology, clinical psychology, psychiatry and mental health.

Validity of the tools

After translating and back translating the resilience scale, depression scale and coping style scale into Arabic language, the validity of the instruments was ascertained by a group of subject areas experts, medical and nursing staff who reviewed the instruments for content validity. They were asked also to judge the items for completeness and clarity. Suggestions were incorporated into the instruments.

Reliability of the tools

Reliability was applied by the researcher for testing the internal consistency of the tool, by administration of the same tools to the same subjects under similar conditions on two or more occasions. Answers from repeated testing were compared (Test-re-test reliability). It was proved that all tools were reliable at 0.70 for the resilience scale, 0.83 for Brief COPD scale and 0.67 for Zung scale.

Field of work

An official permission was granted up on a letter issued from the faculty of Nursing, Menoufia University and after research study aim, content and procedure were discussed with the directors of mental health hospitals before data collection procedure.

A Pilot study was carried out on 5 patients before starting data collection; this was done to test the applicability of the instruments and to estimate the time required for filling out the sheet and also to check the clarity of the tools. The results of the piloting were incorporated in the interview questionnaire. The sample of the pilot study was excluded from the study.

Procedure of data collection:

The questionnaire used in the study was administered by the researchers. The participants were briefed about the purpose of the study, encouraged to participate and motivated to express their feelings. The study group was divided into 5 sub-groups; (3 groups consists of 6 and 2 group consists of 7 patients). The period of implementation was 2 months, whole January and February, 2020.

Implementation of the study passed into three phases (pre assessment phase, implementation phase and post assessment phase).

I. Assessment phase: -

A comfortable meeting room in the psychotherapy department was chosen for the interviewers. Orientation was done about the researcher's code, purpose, significance, the content of the study. Participants of both groups were asked to fill the pre- assessment questionnaires which include (socio demographic data and medical data, The Connor-Davidson, Brief COPE Inventory, and illness perception questionnaire). Each participant was interviewed individually in a semi-structured interview for about 20-30 minutes, the questionnaires were read, explained and choices were recorded by the researchers.

II. Implementation Phase:

For study group: The resiliency program involves depressed patients who meet the inclusion criteria attending a 60-minute group session, and has a set of specific objective once weekly over an eight-week period. Each session included a 10-minutes revision of the previous session, 10 minutes relaxation techniques, 15 -minute presentation (that adhered to a detailed, prewritten manual) by the researchers, who then chaired a 15-

minute group discussion of the issues raised during the session, then the researchers with the participants made summarization and feedback of the main points in the session in 10 minutes. . This was achieved through several teaching methods as brain storming, lecture, and group discussion, data show, picture, posters and booklet were used as media. At the end of each session summary, feedback, further clarification was done for vague items and homework activity for the following session The topics covered in the presentation are: knowledge about depression, the meaning of resilience and its process, building resilience, healthy coping mechanisms, and importance of social support, effective problem solving techniques, and resilience and healthy coping as a lifestyle.

The course was delivered by the researchers in an interactive style, with participants invited to raise questions and make comments as they saw fit. A particular emphasis was placed on dispelling common myths and they were also invited to take notes if they wished. The content of the sessions was as follow; the first session focused on improving knowledge about depression. **The 1st** session involves the nature of depression, Signs and symptoms of depression, Different available treatment of depression, exploring feelings of fears and stigma of mental illness. The main aim of **the second** session was to improve understanding of the meaning of resilience and its process. It includes definition of resilience, factors affecting on resilience, the process of resilience and the relationship between depression and resilience. **The third** session and **the fourth** session aimed to help patients building resilience as it includes identifying different aspects of resilience, using the power of mind, exploring the

internal resilient yearning and goals in life, expand resilience forces, improve self-understanding, increases positive thinking, and improve awareness of feelings. **The fifth** session aimed to help the participants to use healthy coping mechanisms through, teaching them about the meaning of coping mechanisms, differentiation between healthy and unhealthy coping mechanisms, discover and test more healthy coping mechanisms and recognizing the life changes required for healthy coping. **The sixth** session aimed to increase social support through; decreasing social isolation, focus on social support in times of stress and illness, exploring the role of social support in decreasing feelings of loneliness and depression, identifying sources of available social support, and practicing help seeking in times of needs. **The seventh** session aimed to help participants to build effective problem solving techniques and flexibility training through; teaching the steps of problem solving which include (identifying the current problem, determining all the available solutions, weighing the risk and benefits of each solutions, putting alternatives, then select the best one according to the available resources, and then modifying the life style according to the current situation. **The eighth** session aimed to make resilience and healthy coping as a life style through; using stress management techniques such as “ breathing exercise, walking, listening to music, meditation), increasing positivity, dealing with difficult emotions, decreasing emotional reactivity.

For control group: the patients received routine hospital care only as taking medication according to doctor prescription.

III. Evaluation phase: The post assessment test was done after completion

of the program using the same tools used in the pretest.

Ethical Consideration

The researchers introduced themselves to patients and explained the purpose and nature of the study, and then an informed consent was obtained from participants who accept to participate in the study. The researchers emphasized that participation in the study is entirely voluntary and withdrawal from the study would not affect the care provided; anonymity and confidentiality were assured.

Statistical Data Analysis

Data were entered and analyzed by using SPSS (Statistical Package for Social Science) statistical package version 22. Graphics were done using Excel program; however, graphics with mean \pm SD bars pre and post intervention were done by SPSS program.

Quantitative data were presented by mean (X) and standard deviation (SD). It was analyzed using independent t- test for comparison between two means of study and control groups. Paired data were analyzed by using paired t test for quantitative data, and by McNemar test for qualitative paired data

Qualitative data were presented in the form of frequency distribution tables , number and percentage. It was analyzed by chi-square (χ^2) test. However, if an expected value of any cell in the table was less than 5, Fisher Exact test was used. Pearson correlation coefficient (r) was used for quantitative data. Level of significance was set as P value <0.05 for all significant tests.

Results

Table (1) showed that there were no significant difference between study and control groups of patients regarding mean age, education, gender, mean starting of psychiatric medications, and type of treatment ($P>0.05$ for each). Majority (70.3%) of patients with depression were comply with medication, however, study group showed higher percentage of compliance (87.5%) then control group (53.4%), and this difference was highly significant($P=0.006$).

Table (2) demonstrated the negative significant correlation between total score of depressive symptoms (DS) with resilience (-0.243 , $P=0.04$), and adaptive coping styles ($r=-0.260$, $P=0.03$) respectively, pre-intervention. However, the correlation between DS, and total score of pre maladaptive coping was positive insignificant correlation ($r=0.152$, $P=0.23$).

Table (3) showed a positive insignificant correlation was observed between resilience and adaptive coping styles ($r=0.123$, $P=0.334$). However, a negative non-significant correlation was observed between total score of resilience and maladaptive coping styles ($r=-0.175$, $P=0.166$) pre intervention among patients with depression.

Fig. 1 illustrated effect of resilience training program on study group regarding depressive symptoms post intervention and comparing with the control group.

Among study group, there was a statistically significant difference in reduction of both severe and moderate

depressive symptoms from 12.5% and 87.5% (pre-intervention) to 9.4% and 25% (post- intervention) respectively. In addition, there was a statistically significant increase of mild depressive symptoms where, no patient in study group was of mild DS (pre- intervention) (0%), and this percentage increased to 65.6% (post intervention) ($P<0.001$)

Among control group, there was a statistically significant difference in decreasing of moderate depressive symptoms from 87.5% (pre-intervention) to 68.8% (post- intervention) respectively. In addition, there was a statistically significant increase of mild and severe depressive symptoms. One patient in control group was of mild DS (pre-intervention) (3.1%), and this percentage increased to 15.6% (post intervention). Unfortunately, sever DS among control group was increased from 9.4 % (pre-intervention) to 15.6% (post intervention) ($P<0.01$).

Fig. 2 demonstrated effect of resilience training based nursing intervention on patients' resilience.

Among study group , there was increasing of mean total score of resilience from 18.75 ± 2.0 pre intervention to 21.84 ± 6.1 post intervention , the difference was significant statistically ($P<0.01$). This pattern was differed among controls where non-significant difference was observed, with $P>0.05$.

Fig. 3: showed effect of resilience training nursing intervention on patients adaptive coping styles Among study group , there was increasing of mean total score of adaptive coping styles from 21.72 ± 2.0 pre intervention to 23.97 post intervention , the difference was significant statistically ($P<0.01$).

Fig. 4: clarified effect of resilience training based nursing intervention on patients maladaptive coping styles Among study group , there was decreasing of mean total score of maladaptive coping styles from 23.19 ± 2.0 pre intervention to 21.91 post intervention , the difference was significant statistically ($P<0.01$).

Table 1: Socio-demographic characteristics of the studied groups of patients with depression(N=64)

Socio-demographic characteristics		Groups				Total		Test of Significant	P value
		Study No	%	Control No	%	No	%		
Age (years):	Mean ± SD	39.8±5.4		42.3±8.9				t=1.2	P=0.19 Not significant
Education									
Read & Write		6	18.8	3	8.4	9	14.1	X ² = 5.0	P=0.08 Not significant
Secondary Education		6	18.8	14	43.8	20	31.3		
University		20	62.4	15	46.8	35	54.7		
Sex:	Male	10	31.2	13	40.6	23	35.9	X ² =0.61	P=0.43 Not significant
	Female	22	68.8	19	59.4	41	64.1		
Starting of psychiatric medication (month):									P=0.62 Not significant
X ± SD		10.8±5.0		9.2±2.0				t= 0.48	
Type of medication' compliant:								X ² = 5.3	P<0.03 significant
Not compliant		4	12.5	15	46.6	19	29.7		
Compliant on medication		28	87.5	17	53.4	45	70.3		
Total		32	100	32	100	64	100		

Table 2: Correlation between depressive symptoms with each of resilience, adaptive coping styles, maladaptive coping styles, and grand coping score, pre intervention among patients with depression (N=64)

		Total score of Resilience	Total score of pre adaptive coping styles	Total score of pre maladaptive coping styles
Total score of	r	-.243	-.260	.152
Depressive symptoms	P	.04	.03	.23

Table 3: Correlation between resilience and each of, adaptive coping, and maladaptive coping score, pre intervention among patients with depression (N=64)

		Total score of pre adaptive coping styles	Total score of pre maladaptive coping styles
Pre total score of resilience	r	0.123	- 0.175
	P	0.334	0.166

*P<0.05

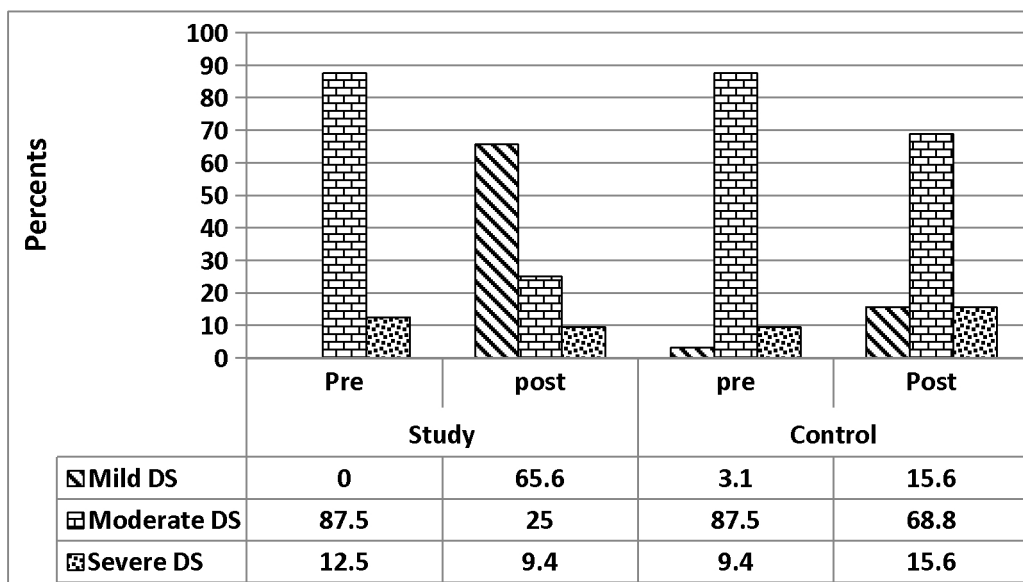


Fig.1: Effect of Resilience Training Based Nursing Intervention among study and control groups, pre and post intervention regarding levels of depressive symptoms.

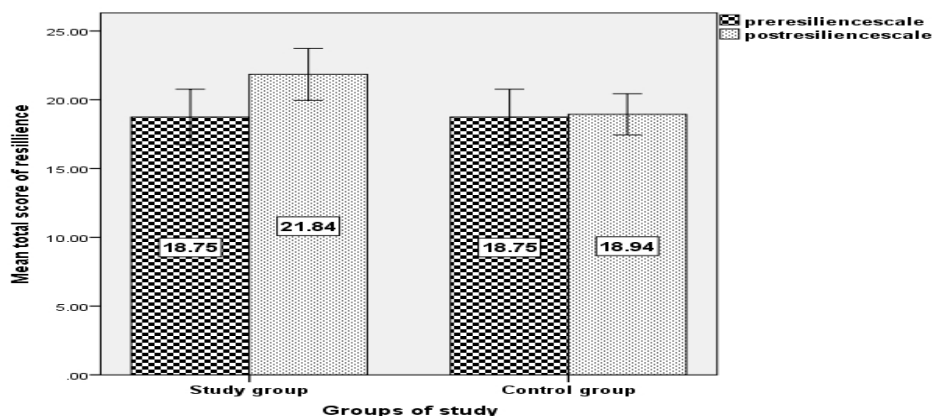


Fig.2: Effect of Resilience Training Based Nursing Intervention on patients with depression regarding their resilience among study and control groups.

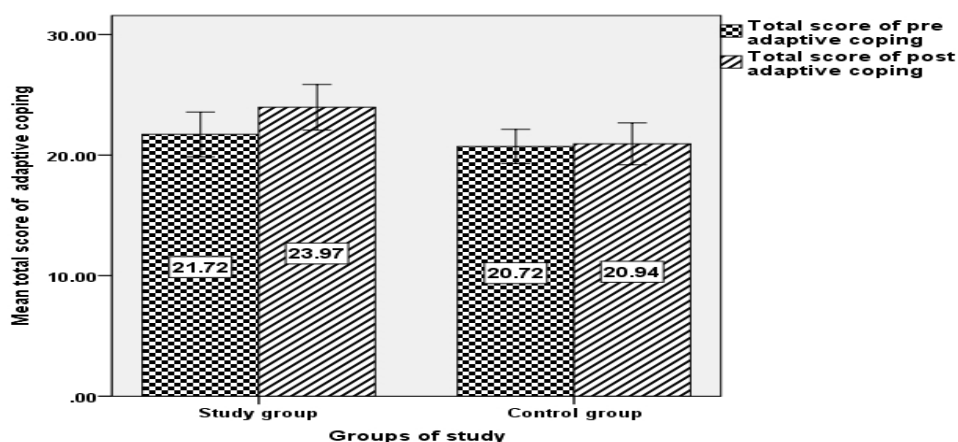


Fig. 3: Effect of Resilience Training Based Nursing Intervention on patients with depression regarding adaptive coping style among study and control groups.

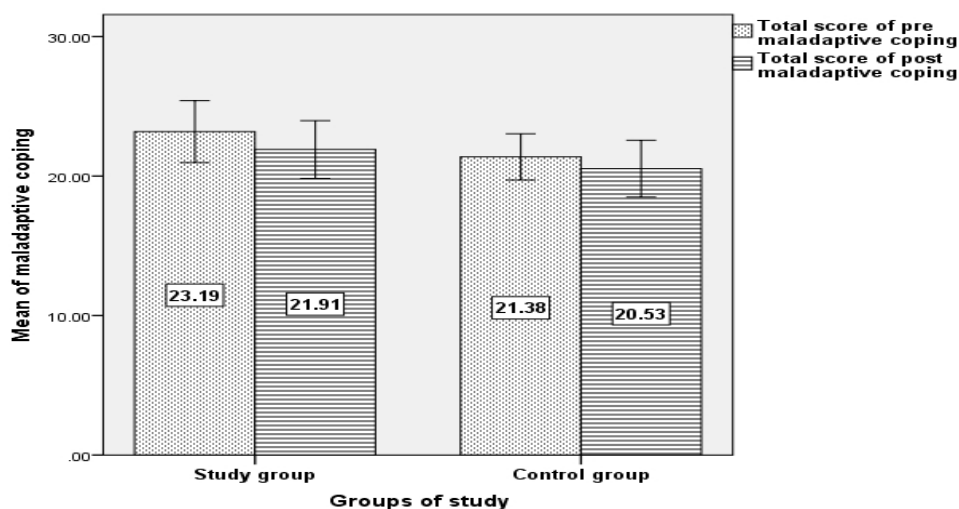


Fig. 4: Effect of Resilience Training Based Nursing Intervention on patients with depression regarding the maladaptive coping styles among study and control groups.

Discussion

Previous researches indicated that resilience plays a protective role against psychopathology as depression and positive and negative coping styles can affect resilience (**Chen, Yang, & Chiang, 2018**) and (**Herrero et al., 2019**). Resilience correlates with positive mental and physical health in several studies.

The sample of current study was 64 patients with depression. They were divided equally to study and control groups. The mean age was (39.8 ± 5.4 and 42.3 ± 8.9) of study and control respectively. This result in the same line with **Johnson, Emmons, Rivard, Griffin, & Dusek (2015)** who illustrated that, the mean age was 45.3 and 49.30 years socio age for the study and control groups respectively. Most participants were female and married. There were no statistically significant differences between the two groups regarding age, gender and education.

In this study, the majority of sample was females. That is because the female was more emotional than the male and depression is more common in female than male. This result was in the same context of **Leppin et al., (2014)** and **Ziaian et al., (2012)** who reported that women are more likely to develop depression as are men. However, **Min et al., (2013)** have suggested that demographic variables as education, income, employment status and clinical characteristics including medical condition, may influence resilience.

The present study revealed that, there was a negative correlation between increasing depressive symptoms and decreasing resilience ($r = -.24$) pre intervention. This result was congruent

with **Seok et al., (2012)** and **Hjemdal et al., (2011)** who reported that depressive symptoms severity was negatively significantly associated with resilience ($p = 0.005$).

On the same line, **Shrivastava & Desousa (2016)** reported that high level of resilience works as a protector factor against psychiatric disorders as depression and suicide, and lower level resilience increases vulnerability for developing pathological consequences as mental disorders or maximize the severity. However, depressive symptoms are also decreased or not developed in patients who can accept the circumstances and focus on a positive something attitude, concentrate on planning and who have expectation of good things in their lives (**Holubova et al., 2018, Cuijpers, Zeeman, Walters, & Petrea, 2014**).

As regarding to the correlation between the depressive symptoms and adaptive coping, the present study showed that, there was a negative correlation between depressive symptoms and adaptive coping styles pre intervention ($r = -.26$) and a positive correlation with maladaptive coping ($r = .15$) pre intervention (Tab. 2). This result was consistent with **Barata et al., (2016)** and **Kasi et al., (2012)** who found that depression was positively associated with coping styles such as avoidance, resignation, and emotional discharge and negatively with problem solving. **Holubova et al., (2018)** reported that, the depressive symptoms were positively related to using negative coping styles and concerning the use of positive coping styles, the depressive symptoms use these styles not too much.

Concerning the correlation between resilience and coping styles, the current study indicated that there was a

positive correlation between resilience and adaptive coping styles ($r = .123$) and a negative correlation with maladaptive coping styles ($r = -.175$) pre intervention. This result was consistent with **Ntountoulaki (2017) et al., Shrivastave & Desousa (2016)** who reported that, resilience is positively correlate with adaptive coping, self- efficacy, optimism, emotional and physical wellness, and to negatively correlate with depression Tab.3. However, active coping is considered as a form of resilience and they are regarded as two interrelated types as individual difference (**Shrivastare & Desousa, 2016, Chen, 2016**). On the same line, the study of **Chen, Yang, and &Chiang (2018) and Kess & Rosenbulm, (2015)** showed that adaptive coping was the most significant positive factor for predicting resilience (coefficient= 0.60, $p < 0.000$), and by contrast, maladaptive coping was a significantly negative factor for predicting resilience (coefficient= -0.31, $p < 0.001$).

Regarding the effect of resilience training program on depressive symptoms, the current study showed that there was a statistical significant difference between study and control groups regarding the depressive symptoms. There was an improvement in depressive symptoms in which the moderate depressive cases changed from pre intervention to post intervention.

This result could be due to the effect of resilience training as leaning the patients problem solving techniques and adaptive coping styles. However, depressive disorder has been linked with lower resilience and increasing the resilience leads to improving in depressive symptom after using the resilience training program. In the same context, **Hofer et al., (2017), Smith**

(2009) and Jansen et al., (2014) revealed that less than half of patients with depression complete their medical follow-up after resilience training and patients with high resilience tend to follow treatment correctly and seek for health care and it is possible after that intervention, there is an improvement of mental state of the severity of depressive symptoms (**Holubova et al., 2018**). Likewise, **Johnson, Emmons, Rivard, Griffin, & Dusek (2015)** studied "Resilience training: A pilot study of a mindfulness- based program with depressed health care professionals" and they found that depression scores decreased 63% from 15.8 to 5.8 in study group (RT), and there was a non-significant 18% reduction in control group from 18.3 to 15.01.

On the same line, **Lorizi et al (2011) and Helmreich et al (2017)** reported that individual resilience can be increased by training and that this might have a positive effect on clinically meaningful outcomes. Resilience training thus offers a feasible and potentially useful intervention to promote patient well- being. **Seok (2011) et al, Kess & Rosenbulm (2015), Chen, Yang, & Chiang (2018), and Waugh & koster, (2015)** reported that increasing resilience reduces the developing depression and significantly reduces health- care costs after resilience intervention. In the same context, **Leppinet al (2014)** found that there was a significant reduction in depression after implementing a resiliency training program and it has an improving mental health and well-being.

Psychological resilience intervention is defined as an intervention that focused on enhancing resilience or the related concepts can be learned (**Leppin et al., 2014**). The present study revealed that there was increasing of

mean total score of resilience from 18.75 ± 2.0 pre intervention to 21.84 ± 6.1 post intervention, the difference was significant statistically ($P < 0.01$). This pattern was differed among controls where non-significant difference was observed, with $P > 0.05$. This indicate the effectiveness of the training session on the study group. This result was congruent with **Loprinzi, Prasad, Schroeder, & Sood (2011)** who declared that resilience (CD-RISC) increased from 73.6 ± 10.1 at baseline to 81.3 ± 9.1 at the end of the 12 week period. **Herrero et al (2019)** studied "An internet based intervention for improving resilience and coping strategies among university students" and concluded that depression is more prevalent among students and the internet –delivered interventions promotes resilience and coping strategies among them.

In addition, **Williams, Parks, Cormier, Stafford, & Whillans (2019)** and **Konradt et al (2018)** reported increasing in optimism, social support, self-efficacy and goal in life than those who did not receive resilience training.

This improvement was supported by **Holubova et al (2018)** and **Pakalnisvkiene, Viliuniene, & Hibig (2016)** who stated that coping style will be improved after intervention and the use of positive coping styles may have a positive association with resilience. On the same line, **Bastounis, Callaghan, Banerjee, & Michail (2016)** illustrated that Penn resiliency programme (PRP) was effective in improving coping styles and reducing depressive symptoms. However, resilient behaviors can be learned and modifiable with contextual life experiences and this opens up possibility for novel therapeutic interventions (**Shrivastave & Desousa, 2016, Innes, 2016**).

Conclusion

It was concluded that the resilience training based nursing intervention was effective in reducing depressive symptoms, improving resilience and coping styles.

Recommendations:

- Resilience training based nursing intervention should be applied for all depressed patients and other psychiatric disorders to improve their resilience and adaptive coping leading to improvement of symptoms severity in return.
- Expansion in carrying out educational programs for psychiatric nursing staff about resilience training based nursing intervention.
- Expansion in teaching of resilience in under and post psychiatric nursing courses.

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Conflict of interest:

There is no conflict of interest.

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