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Effectiveness of psychoeducation interventions on the quality of life among patients with depression

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Abstract
Background: Psychoeducation is one of the most significant non-pharmacological treatments for bipolar disorder**.** The study aimed to determine the effectiveness of psychoeducation interventions on the quality of life of patients with depression**.** ***Design:*** A quasi-experimental research design was used.
Subjects and method: the studied sample include 70 patients with depression.
Tools: Included structured interview questionnaire, Beck depression inventory scale, Quality of Life Scale, and Impairment function scale.
Results: There was a highly statistically significant difference in the quality of life and function impairment Pre, Post, and Follow up program regarding the studied group, and there was no statistically significant difference regarding the control group in pre and follow-up for the quality of life and function impairment.
Conclusion: The psychoeducation program was effective to improve the psychosocial functioning and quality of life of depressed patients.
R**commendation**: Psychiatric nurses should be providing brief psychoeducation for patients to enhance their quality of life.

Keywords: depression, quality of life, psychoeducation.

Introduction

Depression is a common and serious mental disorder that negatively affects how the individual feels, thinks, and acts [1]. Depression is a very painful and difficult human experience; it affects about one in ten people at some time in their lives. It might happen only once for some people and pass quite quickly without any outside help. For others, depression may be more of a problem it may last longer or come back multiple times in these cases, it needed to be treated [2]. Depression can be so severe it requires admission to the hospital [World Health Organization] [3]. Major depression (MD) is a public health problem that is associated with grave consequences in terms of excessive mortality, disability, and secondary morbidity. Indeed, it ranked fourth burden among all psychiatric disorders in 1990 and it could rise to second by 2020 [4].

The physical, cognitive, and emotional symptom dimensions of depression lead to considerable impairment in psychosocial functioning. Psychosocial functioning reflects a person's ability to perform the activities of daily living and to engage in relationships with other people in ways that are gratifying to him and others, and that meet the demands of the community in which the individual lives. The relationship between physical depressive symptoms and impaired physical activity can be attributed to the fact that depressive episodes are defined by three symptoms relevant to physical activity these symptoms are decreased interest or pleasure in almost all activities throughout the day, psychomotor agitation or retardation, and fatigue or loss of energy nearly every day [5].

Many studies on the QOL in depression have demonstrated that depressed patients present with deficits in many areas of social functioning (e.g., leisure, work, interpersonal relations, health status, and academic performance), which constitute the global pare of quality of life [4]. For major depression, psychotherapy may not be enough. Studies have indicated that a combination of medication and psychotherapy may be the most effective approach to treating major depression and reducing the likelihood of recurrence [6]. There is growing evidence that psychological and psychosocial therapies can help people recover from depression in the longer term [7]. People with depression often prefer psychological and psychosocial treatments to medication [8] as their symptoms decrease and return to usual functioning [9].

A considerable amount of the current literature pays particular attention to the importance of psycho-educational intervention, for depression, and one of the major roles of the nurses in dealing with depression is to maximize the patient level of social functioning, so nurses are the key persons in giving care to depressed patients and have an important role to play in the psychosocial intervention [4].

Therefore, our study attempts to provide psychosocial intervention for depressed patients to enhance their functioning.

Significance of the study

Many patients do not respond to medication, have residual symptoms, or frequently relapse. The combination of psychosocial intervention and antidepressants is effective in managing severe or chronic depression.

Operational Definitions

Functional impairment

Functional impairment mean reduced ability of the individuals to perform self-care routine; social functioning; thinking, concentration and judgment; and adaptation to stress tasks in an independent manner.

Psychosocial functioning

The psychosocial function can be defined on a micro level as our day-to-day ability to contend with environmental and social tasks (e.g., maintaining work and relationships), and on a macro level as the pursuit of significant life outcomes (e.g., self-actualization).

Aim of the study

This study aimed to determine the effectiveness of psychoeducation interventions on the quality of life among patients with depression.

Research hypothesis

A depressed patient who is exposed to a psychoeducation intervention program gets improvement in their life functioning and quality of life.

Materials and method

A. Research design

A quasi-experimental research design was used in this study.

B. Setting of the study

The study was carried out in ***a*** neuropsychiatric and neurosurgery hospital in the psychiatric department and emergency psychiatric unit at Assiut University Hospital is a hospital in Assiut, Egypt. It is Upper Egypt's largest hospital, serving Assiut city as well as most of the surrounding governorates. (Assiut, Sohage, Qena, and Aswan). The hospital contains a psychiatric department's emergency, psychiatric in-patient male and female, addiction department, and outpatients' psychiatric clinics. The total number of beds in a psychiatric hospital are 94 beds, 12 beds in the emergency department, 30-beds in the females' psychiatry unit, 36 beds in the male psychiatry department, and 16 beds in the addiction unit.

C. Subjects

Subjects of the study were included 70 convenient patients with a diagnosis of depression, the number of subjects was divided 35 for the study group and 35 for the control group. These subjects were enrolled in the previous inpatient unit for the period from the first of January 2019 to the end of August 2019 with the following criteria:

- Definite diagnosis of depression for at least 6 months.
- No comorbidity, intellectual disabilities, drug/ alcohol abuse, or other psychiatric mental disorders.
- Able to communicate in a coherent and relevant answer.

D. Tools: Four tools were used to collect data for this study.

Tool I*:* Self-administer questionnaire (Demographic and clinical data).

This tool developed by the researcher consists of questions related to demographic characteristics of patients, including name, age, sex, working status, level of education, and marital status. Clinical data includes the date of admission, number of hospitalization, parental consanguinity, and the presence of family history.

Tool II: Beck depression inventory scale (BDI).

This scale was created in the English language by Beck, [10] and was translated to Arabic by Abdel- Khalek, [12] and back-translated into English to check validity and reliability, and was updated by Basher [13], in the English language. It was first published in 1961 and later revised in 1969 and copyrighted in 1979 by Polgar & Michael [11]. Internal consistency was strong, with a value of 0.92 for standardized alpha (Cronbach's). This scale features 21 questions concerning how the individual is feeling; each question has at least four alternative answers, ranging from 0 to 3, and the intensity of the symptom is stated. The BDI scale assesses mood, negativity, sense of failure, self-dissatisfaction, remorse, punishment, self-dislike, self-accusation, suicidal thinking, weeping, irritability, social withdrawal, body image, work difficulties, insomnia, lethargy, appetite, weight loss, bodily preoccupation, and loss of libido through a series of questions. Items 1 to 13 deal with psychological problems, while items 14 to 21 deal with physical ones [11]. The depression levels were classified as follows:

- Minimal depressive symptoms range from zero to13.
- Mild depression ranges from 14 to 19.
- Moderate depression ranges from 20 to 28.
- Severe depression ranges from 29 to 63.

Tool III: Quality of Life Scale (QoL)

This scale was developed by Baxter *et al.*, [14]: in the English language for the assessment of patients' levels of functioning, wellness, and disability. The response scale for the QoL ranges from 0, extremely dissatisfied, to 10, extremely satisfied. 19 items resulted in satisfaction in three factors labeled as follows:

P = Satisfaction with physical health and well-being (5 questions 1, 2, 4, 5 and 19).

S = Satisfaction with social health and well-being (12 questions 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, and 20).

C = Satisfaction with cognitive health and well-being (2 questions 3, and 6).

While one item (number 7) did not appear to fall into any factor and was used on its own. It has also been established as a valid and reliable instrument.

- For items 1-until 19 Satisfaction/dissatisfaction is used, only for item 20, happy/unhappy can be used to these.
- The response of the patient, (ranged from zero to 10 where) ten means extremely satisfied and zero means being extremely dissatisfied.

- Total score was done by counting scores of each subscale assigned to each question in each factor.

Tool IV: Impairment function scale (Sheehan Disability Scale)

This scale was developed by Sheehan [15] in the English language, to Work-life, social-life, and family-life impairments are assessed in three interconnected domains. Patients' responses ranged from zero to 10 where zero was considered no impairment and 30 was extremely impaired. Its validity and reliability have been investigated in several studies [16]. There also was internal consistency (Cronbach's α) being 0.878, and showed good construct validity, and statistically significant correlations for the scale and its subdomains [17] total score in the short-term studies. There was excellent internal consistency reliability for the Sheehan Disability Scale (SDS) total score (Cronbach's alpha=0.89). Test-retest reliability was acceptable for the SDS total score (intraclass correlation coefficient=0.73). Correlations with other instruments demonstrate convergent and divergent validity. The SDS exhibited excellent internal consistency (α = .89) (intraclass correlation coefficient = 0.55) [18].

Pilot Study

A pilot study was conducted before starting data collection. It was carried out on 10% of the total sample, seven Patients should review the study instruments for clarity and relevance, as well as estimate the time required to collect data. (Approximately 40 minutes for each patient). This 10% of patients were included in the study because no modification was done.

Procedure

Assessment phase.

1. Before starting data collection, the aims of the study were explained to the patients, and oral consent was taken from them who were reassured about the confidentiality of the obtained information to avoid misunderstanding.
2. Selection of the subjects started from the emergency and inpatient department as this is the routine of the hospital (the patient was first admitted to the emergency department then transferred into the ward) after a confidence diagnosis of depression assessment was done for the patient, then the selected patients were classified into two groups. The first 35 patients for the study and the other 35 for control, until the period of study, was reached.
3. Data collection, by using the previous four tools for both control and study group. Each patient was interviewed to obtain the required data.
4. The program content was revised by a group of experts (the supervisors of the thesis) for the content's accuracy and relevance Using experts' opinions as a guide some modifications were done to ensure clarity of the tools and feasibility of the program.

Implementation phase

The implementation phase included the program strategy (time and number of sessions, interaction methods).

1. Psych- educational program is included 8 sessions were conducted for each group. The program was implemented for four weeks) Psychoeducation about depression and problems solving techniques). Each session has been carried out within an hour, two sessions per week, and each trial group consisted of three to five patients.
   - **First session**: Patients will be acknowledged about, the definition of depression, types of depression, and causes of depression.
   - **Second session**: Inform the patients with the types of antidepressants, the effectiveness of antidepressants, and the side effects of antidepressants.
   - **Third session**: Repetition of session "1".
   - **Fourth session:** Repetition of session "2".
   - **Fifth session:** The patients will be able to know the steps of problems solving techniques.
   - **Sixth session**: The patients will be able to apply the steps in problems solving techniques.
   - **Seventh session**: Repetition of session "5".
   - **Eighth session:** Repetition of session "6".
2. The interaction session was conducted at the inpatient psychiatric department in the activity hall.
3. Each patient received a brochure created by the researcher.

Evaluation of the program

- For the study group, the post-test was done twice: immediately after the implementation of the program (post-program), and after 3 months (follow up), by using the functioning impairment scale and quality of life scale.
- For the control, group evaluation was done only after 3 months.

Statistical Analysis

The data were tested for normality using the Kolmogorov-Smirnov test and for homogeneity variances before further statistical analysis. Categorical variables were described by number and percent (N, %), whereas continuous variables were described by the mean and standard deviation (Mean, SD). Chi-square test was used to compare categorical variables where compare between continuous variables by t-test (independent-samples T-Test and One-way ANOVA). A two-tailed $p < 0.05$ was considered statistically significant. All analyses were performed with the IBM SPSS 20.0 software.

The main results yielded by this study were

Table 1: Distribution of studied and control groups according to demographic characteristics:

Demographic characteristics	Studied (n=35) Group		Control (n=35) group		X^2	P. value
	No.	%	No.	%		
Age						
Less than 25 years	13	37.14	11	31.43	0.367	0.832
From 25 to 35 years	13	37.14	13	37.14		
More than 35 years	9	25.71	11	31.43		
Mean± SD	30.09±9.97		33.09±12.03		F 1.257	0.266
Sex						
Male	13	37.14	7	20.00	2.520	0.112
Female	22	62.86	28	80.00		
Marital status						
Married	12	34.29	17	48.57	1.562	0.668
Single	18	51.43	14	40.00		
Divorced	2	5.71	2	5.71		
Widowed	3	8.57	2	5.71		
Residence						
Rural	19	54.29	16	45.71	0.713	0.398
Urban	15	42.86	19	54.29		
Education level						
Illiteracy or read and write	8	22.86	11	31.43	4.618	0.329
Primary education	5	14.29	2	5.71		
Preparatory education	7	20.00	4	11.43		
Secondary education	13	37.14	12	34.29		
University education	2	5.71	6	17.14		
Occupation						
Not work	25	71.43	28	80.00	0.699	0.403
Work	10	28.57	7	20.00		

* Statistically significant at (p≤0.05

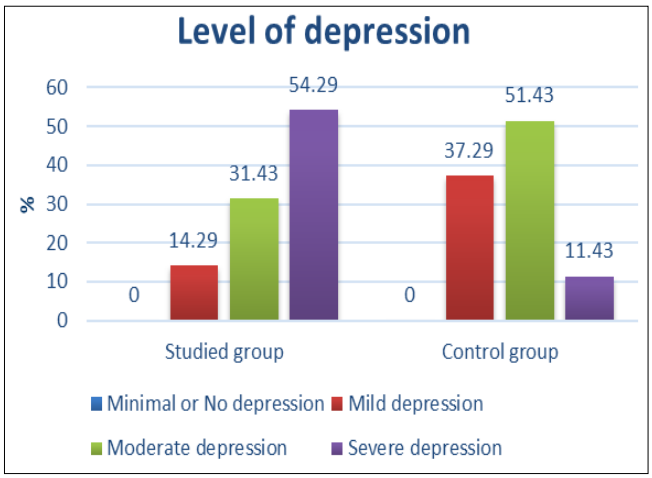
This table shows the highest percentages of the studied group and control group were in the age range from 25 to 35 years. The majority either from the studied or control group were female, single, had secondary education, not work an interesting result is that more than half of the control group were from urban areas, with no statistically significant differences between the studied group and control groups regarding their demographic data.

Table 2: Distribution of studied and control groups according to clinical data:

Clinical data	Studied group (n=35)		Control (n=35)		X^2	P. value
	No.	%	No.	%		
had medical diseases						
No	0	0.00	2	5.71	2.059	0.151
Yes	35	100.00	33	94.29		
previous of admission						
Never	2	5.71	15	42.86	26.902	0.000
Once	21	60.00	5	14.29		
Twice	1	2.86	6	17.14		
Three times	4	11.43	6	17.14		
Four times	4	11.43	3	8.57		
Five times and more	3	5.57	0	0.00		
Presence of family history						
No	17	48.57	26	74.29	4.884	0.027
Yes	18	51.43	9	25.71		
Parental consanguinity						
No	14	40.00	20	57.14	2.059	0.151
Yes	21	60.00	15	42.86		

* Statistically significant at (p≤0.05)

This table presents clinical data of the studied and control groups the majority of the studied group and control group have a medical disease (100%,94.29% respectively), and the statistically significant between them was high (p-value =0.000). Regarding family history, nearly half of the studied group reported they had family history compared to 25.71% of the control group with a statistically significant difference between them (p=0.027). the highest percentage of the studied group 60.00% have parental consanguinity compared to the 42.86% of the control group.



* Statistically significant at (p≤0.05)

Fig 1: Distribution level of depression for studied and control groups.

Fig 1 Showed distribution of depression levels between studied and control groups. There were 54.29% and 31.43% of the studied group have severe and moderate depression, while 37.29% of the control group have mild depression and 51.43% of them have moderate depression.

Table 3: Distribution of quality of life for studied and control group pre-intervention.

Quality of life items	Studied group (n=35)	Control group (n=35)	F	P. value
	Mean± SD	Mean± SD		
The total score of QOL	54.57±19.43	80.09±29.79	18.011	0.000
Satisfaction with physical health and well-being	13.43±8.36	21.2±8.06	15.671	0.000
Satisfaction with social health and well-being	32.26±12.56	45.6±19.22	11.820	0.001
Satisfaction with cognitive health and well-being	32.26±12.56	8.77±4.26	12.851	0.001

* Statistically significant at (p≤0.05)

This table illustrated that the total mean score of quality of life was 54.57±19.43 for studied groups and was 80.09±29.79 for control groups with a statistically significant difference (p=0.000). As regards satisfaction with physical, social, and cognition health and well-being for the studied group, it was 13.43±8.36, 32.26±12.56, and 32.26±12.56 respectively, compared to 21.2±8.06, 45.6±19.22, and 8.77±4.26 for the control group with a highly statistically significant difference between them (p=0.00).

Table 4: Function impairment for studied and control group preprograms.

Types of impairment	Studied (n=35)		Control (n=35)		X^2	P. value
	No.	%	No.	%		
At work	21	60.0	15	42.9	0.131	0.937
At social life	34	97.1	26	74.3		
At family life	35	100.0	29	82.9		

* Statistically significant at (p≤0.05)

This table presented the function impairment for the studied and control group pre-intervention. The highest impairment was in family life either for studied and control (100% & 82.9%) followed by social life (97.1% & 74.3%) and the last impairment was at work (60% & 42.9%) respectively, with no statistically significant differences.

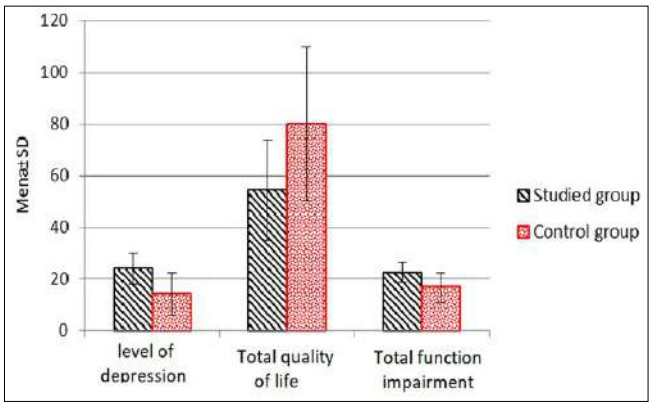


Fig 2: Comparison between studied and control groups in the total level of depression, total quality of life, and total function impairment by pre-intervention.

Figure 2 There were highly statistically significant differences between the studied and control group in pre-program intervention for a total score of depression, quality of life, and function impairment (p= 0.000).

Table 5: Comparison between studied and control groups in the total quality of life and total function impairment by pre-post and follow-up intervention.

Quality of life / Function Impairment	Studied group			F	P. value	Control group		F	P. value
	Pretest (n=35)	Post-test (n=35)	Follow up test (n=29)			Pretest (n=35)	Follow up test (n=28)		
	Mean± SD	Mean± SD	Mean± SD			Mean± SD	Mean± SD		
Total quality of life score	54.57±19.43	127.6±14.79	143.48±20.23	226.319	<0.001**	80.09±29.79	87.89±27.78	1.134	0.291
The total function impairment	22.46±3.84	4.37±2.82	3.59±5.65	222	<0.001**	16.8±5.74	45.6±19.22	0.136	0.714

* Statistically significant at (p≤0.05)

Table 5 Showed that there was a highly statistically significant difference in the quality of life and function impairment Pre, Post, and Follow up program regarding the studied group (p. value <0.001**), and there was no significant difference in pre and follow up for the functional impairment and quality of life for the control group (p. value <0.714, 0.0291) respectively.

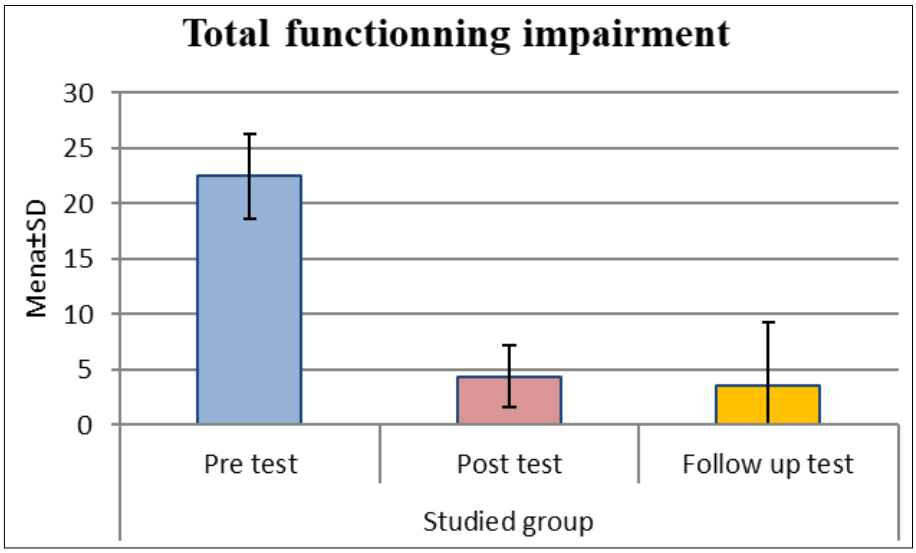


Fig 3: Comparison between studied groups in total function impairment by pre-post and follow-up intervention.

Figure 3 Showed that interesting decrease in total function impairment by pre-post and follow-up intervention among the studied group.

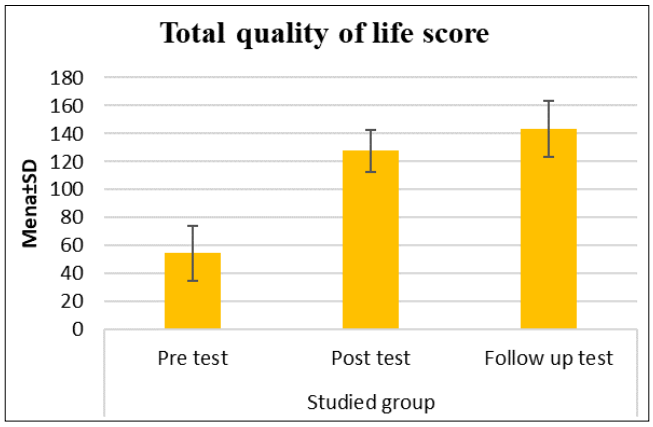


Fig 4: Comparison between studied groups in the total quality of life by pre-post and follow-up intervention.

Figure 4 Revealed that increase in the total quality of life by pre-post and follow-up intervention among the studied group.

Discussion

Major depressive disorder (MDD) is described as a multifaceted condition with emotional, cognitive, and physical symptoms, which are important for psychosocial functioning such as feelings of worthlessness or diminished interest in life, trouble concentrating, insomnia, or fatigue [19]. Ershad *et al*., [20] discovered that "Psychoeducation" is one of the most significant non-pharmacological treatments for depressive disorder. Psychoeducational intervention has been defined as a patient's empowering training targeted at promoting awareness and proactivity, providing tools to manage, cope and live with a chronic or recurrent condition, and changing behaviors and attitudes related to this condition [21]. So, this study aimed to determine the impact of psychosocial intervention on the life functioning of patients with depressive disorders.

The current study revealed that a higher percentage of the studied group had moderate and severe depression (54.29%, and 31.43%) respectively, while the highest percentage of the control group (51.43%), was suffering from moderate depression. This might be because they still suffering from a symptom of depression as they were in the acute phase of depression. Similar to A Study conducted by Thokchom & Ray [22] whose study aimed to assess the level of depression among depressed patients, found that the majority of patients have a moderate level of depression. In contrast with Hudiyawati & Prakoso, [23] whose study aimed to evaluate the effects of cognitive behavior therapy on psychological symptoms, found that there was no statistically significant difference in mean scores of depression (p=0.567) between the studied and control groups at pretest.

In relation to the distribution of quality of life (QOL) of the studied group in the pretest. The higher mean score was (32.26±12.56) in either social or cognitive well-being in the studied group. While control group had a higher mean score in social health and wellbeing, (45.6±19.22) followed by physical health and well-being (21.2±8.06). This dissatisfaction with the social and cognitive quality of life either for the control or study group may be due to a lack of family or social support, marital conflict, life situations, or physical health problems. Similar., Vieta *et al*., [24] whose study aimed to examine the effects of treatment on functional outcomes in patients with bipolar I disorder, reported that the quality of life of the patients was affected negatively by mood changes in a form of social, interpersonal, and occupational impairments.

Contrary to our findings, Tonga *et al*., [25] whose study aimed to evaluate the feasibility and effectiveness of a psychosocial intervention to manage depressive symptoms, found that there are no statistically significant differences between the studied and control groups in their quality of life. Stefan *et al*., [26] whose study aimed to examine changes in QOL in adults with a major depressive disorder who received cognitive therapy, found that there were no clinically or statistically significant differences between the control group and the studied group at pretest.

The present study shows functioning impairments in the study and control group before program intervention, there

was the highest impairment in family life for both study and control groups followed by social life and the last impairment was at work with no statistically significant differences between them. This finding can be interpreted that depressed patients have impairment in role function in family or society, which may be related to hopelessness, helplessness, worthlessness, and lack of interest or pleasure in daily life activities. Similarly, Baune & Christensen, [27] study referred that patients with mood disorders depressive episodes have a functional impairment that extends to their work, social, and family life and has important consequences on health-related quality of life for them.

There were highly statistically significant differences between the studied and control groups regarding the total mean score of depression, total quality of life, and total function impairment in pre-program intervention. The functioning impairment score (Impairment at work, social life, and family life) in the studied group was higher than the control group, this may be due to the period of data collection for the studied group was done at the beginning of winter the symptoms of depression was severe in this time as it mentioned by Simon- Øverland *et al*., [28] whose study suggested that depressed mood was most common in winter and it varies with all seasons during the year.

The studied group has a better level of psychosocial functioning. Compared to the control group during the follow-up after the same duration. This may be due to that intervention helping the patients develop coping skills to manage upsetting life experiences and teach them how to apply them in their daily life situations and supporting that by using psychoeducation to teach them skills to cope with depression. In comparing between study and control groups by the quality of life and function impairment during the periods of program intervention, there was a statistically significant difference between the studied and control group in the total for quality of life (p. value <0.001**), this may be due to psychoeducational intervention program in the studied patients increased their knowledge and understanding about their condition, healthy lifestyles, and their daily routines. These results are supported by Jones *et al*., [29] who found overall health-related QOL improvements after the intervention. Also. Lerma *et al*., [30] whose study aimed to analyze behavioral intervention for depression and anxiety symptoms improves the quality of life, found that there is a statistically significant difference between the intervention and usual care on QOL at post-treatment and after 5 weeks of follow-up.

Conclusions

Based on the results of the present study, it can be concluded that:

- Psychoeducation interventions based on problem-solving were effective in the quality of life of patients with depression
- Psycho-educational program was effective to improve the psychosocial functioning and quality of life of depressed patients.
- The value of the psychoeducation sessions that they learned has helped them to manage their physical, social, and cognitive health and well-being during their daily life activities, as well as control their depressive symptoms.

Recommendations

Based on the findings of the present study, the following recommendations are suggested:

- It is important for psychiatric nurses to provide psychological education to patients in the hospital to reduce the psychological symptoms of depressed patients.
- Psychoeducation for depressed patients is important in a reduction of mood episodes recurrence, duration of hospital stays, and medication cost.

Limitation of the study

- Low admission rate of depressed patients during the period of data collection.
- Subject were 70 patients; 6 patients were dropped out of the studied group and 7 from the control group during the follow-up period so the subject become 29 from the studied group and 28 from the control group.

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