Effect of Psycho-Educational Nursing Program on Depressive Symptoms and Marital Satisfaction among Patients with Chronic Renal Failure

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Abstract

Background: Chronic renal failure affected patients, frequently experience a variety of depressive symptoms which reflect negatively not only on their marital satisfaction but also, all domains of quality of life. **Aim of the research:** Study aimed to evaluate the effect of psycho-educational nursing program on depressive symptoms and marital satisfaction among patients with chronic renal failure. **Research design:** A quasi-experimental design (one group pre/post -test) was utilized to fulfill the aim of the study. **Setting:** The study was conducted at dialysis unit at Benha University Hospital, Benha city, Qualybia Governorate. **Subject:** A purposive sample of (50) patients with chronic renal failure were taken from the above mentioned setting. **Tools of data collection:** Tool (I): - A structured Interviewing Questionnaire sheet. Tool (II) Beck's Depression Inventory Scale and Tool (III) Marital satisfaction scale. **Results:** Findings of the present study illustrated that there was a highly statistically significant reduction in the severity of the total level of depressive symptoms and improvement in the total level of marital satisfaction post program implementation than before. **Conclusion:** The psycho educational nursing program had a positive effect on reducing depressive symptoms and improving marital satisfaction among chronic renal failure affected patients. **Recommendations:** Alleviating depressive symptoms and improving marital satisfaction through implementation psycho-educational nursing program in all hospitals servicing all chronic renal failure affected patients.

Keywords: Psycho-education, Depressive Symptoms, Marital satisfaction, Chronic renal failure

Introduction

Chronic Renal Failure (CRF) is a chronic disease marked by progressive and an irreversible kidney failure as the body don't had the ability to maintain metabolic and electrolytic balance, resulting in uremia, metabolic acidosis, electrolyte imbalances, anemia and endocrine disorders. Hemodialysis is considered the most frequent treatment method for Chronic Renal Failure which not only has a detrimental impact on patients' physical and psychological well-being but also, negatively affect all domains of the quality of patient's life as it is associated with changes in their daily habits and lifestyle. In addition, when patients with chronic renal failure realize that their continued life is totally dependent on machine, a reaction characterized by depression, anxiety, stress or apathy occurs as patients become dependent and hence lost their control over their lives **(Nazar et al., 2022).**

Patients with chronic renal failure are subjected to many psychological disorders. This could be justified by several factors such as dependence on machine long life, financial strain, feeling of loss of role both at home and workplace, and restriction in all dimensions of life. Depressive symptoms are the most common psychological disorder among patients with chronic renal failure and undergoing hemodialysis such as depressed mood, sadness, and poor self-esteem, pessimism about the future, anxiety, decreased libido, sleep disorders and limited appetite. All of these not only had a negative impact on their social, economic but also, their psychological well-being as they associated with negative sequences of the clinical course, including reduced compliance with drugs, increased number of hospital admissions and mortality as well, reduced quality of life **(Birmaher et al., 2023).**

The concept of health usually refers to physical, mental and social well-being. Marital satisfaction is considered as an important aspect of social wellbeing and can be known as the overall health of a marriage and reflects its functioning and enjoyment as it consists of nine components, including the stability of relationships, love, sexuality, the same personality, religion, decision-making,

closeness, and the significance of husband and wife to communicate effectively. Additionally, marital satisfaction is the most prominent contributor of marital quality, psychological well-being, self-esteem and life satisfaction as well as it can directly affect the disease adjustment and the way they face disease outcomes and complications **(Brudek & Kaleta, 2022).**

On other hand, Marital dissatisfaction among patients with chronic renal failure and undergoing hemodialysis can disturb family dynamics processes and destroy the children of the family, especially when marital discord or divorce appears as it also severely links with many depressive symptoms, anxiety, lower health outcome, hormonal and psychological disturbances, drug consumption, sleeping disorders, anemia and sexual dysfunctions. In addition, a strong relationship was found between marital satisfaction and depressive symptoms as patients with depressive symptoms showed more marital conflicts such as personality issues, communication, sexual relations, children and parenting domains which affect perception of couples towards illness and decrease the ability to comply with hemodialysis. Conversely, high level of marital satisfaction may provide positive attitudes and warm intimacy for couples and enable them to adjust with the problems **(Bilal et al.,2023).**

Psycho-education is considered an important and ethically indispensable part of the comprehensive treatment provided for patients with chronic renal failure as empowering them with information about his/ her illness had a positive impact on the patient's coping skills and understanding their conditions. The main principal of psycho-education is that everyone has the right to receive information about their illness and its treatment in order for them to take a more active role in relation to the disease and its treatment. Other advantages of psycho-education include enhanced self-esteem, increased the probability of treatment compliance, more likely to feel satisfied with the services, have significant gains in social functioning as well as quality of life, reducing relapses and admissions **(Preljevic et al.,2022).**

A psychiatric liaison nurse has critical roles in managing patients with chronic renal failure as a nursing consultant in managing psychosocial concerns and as a clinician in helping the clients deal more effectively with physical and emotional problems. Furthermore, the liaison nurse should provide affected patients with the opportunity to release their positive and negative feelings, the nurse should also, discuss the capabilities and the strength points of their patients, discuss with the patients their abilities that can still be used, help these patients stop viewing themselves as inferior to others who are better than they are at any task. The nurse should give praise for success, increase activities in accordance with patients' tolerance condition and give examples of how implementation of activities could be done in order to achieve positive outcomes for the affected patient **(Bryan et al., 2022).**

Significance of the research

Depressive symptoms are the most prevalent psychiatric problem among patients with chronic renal failure and undergoing hemodialysis as it is reported as 73% and most of the patients are included in the category of moderate to severe depression. The association between psychosocial factors and depression depends on gender, age and type of dialysis **(Kimmel et al., 2024).**

As depression seems to play a major role in the mortality and morbidity rates in patients treated with hemodialysis. Many studies revealed that patients with chronic renal failure exhibit not only marital dissatisfaction as a result of the process of illness itself that affect on their sexual functioning, their abilities to perform daily activities and loss of their functional roles in the society but also, depressive symptoms that negatively alter all quality of life domains. Therefore, this study aimed to evaluate the effect of psycho educational nursing program on depressive symptoms and marital satisfaction among patients with chronic renal failure.

Aim of the research:

This study aimed to evaluate the effect of psycho educational nursing program on depressive symptoms and marital satisfaction among patients with Chronic Renal Failure.

Research hypotheses

The psycho educational nursing program will have a positive effect on reducing depressive symptoms and improving marital

satisfaction among patients with Chronic Renal Failure.

Theoretical & Operational definitions:

Depressive symptoms are persistent, severe, and debilitating changes in mood, thought, and behavior that impair daily functioning. Key indicators include persistent sadness, low energy, loss of interest in activities and changes in sleep or appetite **(Daneker et al., 2024).** It will be measured in the present study by using Beck's Depression Inventory Scale.

Marital satisfaction is a subjective mental state, attitude, or emotional evaluation reflecting a person's contentment, pleasure, and happiness with their marital relationship. It constitutes a personal, overall appraisal of marital quality, often serving as a key indicator of health, emotional well-being, and marital success **(Nazanin & Raana, 2022).** It will be measured in the current study by using marital satisfaction scale.

Subject and Methods

Research Design:

A quasi experimental research design (one group pre &post-test) was utilized to achieve the aim of this study.

Research setting:

The study was carried out in dialysis unit at Benha University Hospital, Benha city, Qalyubia governorate which is affiliated to ministry of high education. This hospital consists of two major building, medical building and surgical building. Dialysis unit is located in the second floor of medical building and contains 22 beds that serve 104 patients with chronic renal failure. Care is provided by multidisciplinary team of physicians, nurses, social workers and psychologists through three shifts per day from (5am to 9am), from (10 am to 2pm), from (3pm to 7pm). All treated patients are divided in to two groups, group (1) on Saturday, Monday and Wednesday. And group (2) Sunday, Tuesday and Thursday.

Research subject:

A purposive sample of (50) patients with Chronic renal failure who are treated at the above mentioned settings.

Sample size:

Based on the previous studies that examine the same outcome and found significance differences, sample size has been calculated using the following equation: $n = (z2 \times p \times q)/D2$ at power 80% and CI 95% **(Thompson, 2012).** The estimated sample size was (50) patients with Chronic renal failure who were selected according to the following inclusion and exclusion criteria:

Inclusion criteria:

- Diagnosed as Chronic Renal Failure and undergoing hemodialysis.
- Being married.
- Aged from 18-65 years.
- Males and females.

Exclusion criteria:

- Patients with Acute renal failure.
- Patients suffering from any psychotic and neurological disorders.
- Patients with visual or hearing disabilities.

Tools of data collection:

The data was collected using the following tools:

Tool (I): A Structured Interviewing Questionnaire Sheet:

This tool was created by the researcher based on scientific review of literature to collect information about socio-demographic and clinical characteristics of the studied patients with chronic renal failure such as age, sex, level of education, residence, occupation, onset of disease, causes of disease and number of session per week.

Tool (II): Beck's Depression Inventory Scale:

Items	No. of items	Alpha Cronbach	F	p-value	Indicator
Depressive symptoms	21	0.925	17.94	0.000**	Strong reliability
Marital satisfaction Scale	25	0.917	23.25	0.000**	Strong reliability

It was originally developed by **Beck (1966)** for measuring depressive symptoms. This scale includes 21 questions. Each question was ranged from 0-3 grades. Where, minimum depression scored 0 grade, mild depression scored 1 grade, moderate depression scored 2 grade and severe depression scored 3 grade.

Scoring system:

- 0-13 grades: reflect minimum level of depression.
- 14-19 grades: reflect mild level of depression
- 20-28 grades reflect moderate level of depression.
- 29-63: grades reflect severe level of depression.

Tool (III): Marital Satisfaction Scale:

This scale was developed by **Walter (2001).** It used to measure the degree of satisfaction with marriage. It is not a test, so there is no right or wrong answers. Answer each item as carefully and as accurately as can by placing a number beside each statement as follows: Rarely, Never, Sometime, always, all the time. To score this questionnaire the positively worded items must be reverse-scored. If the subject have scored a positively worded item as 1 it is re-scored as 5, 2 becomes 4, 3 remains 3, 4 becomes 2 and a score of 5 becomes 1. The positively scored items that must be reversed scored are 1,3,5,8,9,11,13,16,17,19,20,21,23. After all the positively worded items have been reverse scored, all 25 items are summed. The final step is to subtract 25 from this sum. Scores below 30 are pointed to of satisfaction with the relationship while the higher score reflected the more dissatisfaction with the relationship**.**

Content Validity of the tools:

Content validity of used tools was carried out by a Jury of 5 experts of psychiatric mental health nursing as simple modifications was done as the researcher gathering positive sentences in sequence followed by negative sentences in marital satisfaction scale to become easier in gathering data. As well as, the researcher make rephrasing of some sentences to give the right meaning in Arabic translation in both depressive symptoms scale and marital satisfaction scale to become easier and more understandable for the studied patients.

Reliability of the tools:

The internal consistency of the tools was checked by Alpha Cronbach reliability analysis.

Administrative approval:

Before starting any step of this current study, an official letter requesting permission to conduct the study had been submitted from the director of University Hospital at Benha city, Qalubia Governorate requesting their cooperation and permission to conduct the study.

Ethical consideration:

- An approval from Scientific Research Ethics Committee of the Faculty of Nursing granted formal approval for the research before it was carried out, with code number REC.PSYN.P99.
- Written official permission and approvals for conducting this study has been obtained from the vice dean of the Faculty of Nursing, Benha University to general director of Benha University Hospital to obtain approval for data collection.
- The researchers obtain written consent from all patients included in the study .
- Confidentiality of each subject was achieved by putting code for each one instead of using subject's name

Pilot study

Has been carried out on 10% of total sample (5patients) selected from the previously mentioned setting before starting the data collection to test the applicability, feasibility, clarity, objectivity of the tool. In addition, it served to estimate the approximate time required for interviewing the patients as well as to find out any problems or obstacles that might interfere with data collection. These patients were excluded later from the actual study sample.

Field of work

The present study was conducted in four phases.

Preparatory phase:

This phase included searching and reviewing of relevant literature and different studies talk about the topic of research, using

textbooks, articles, magazines, periodicals, and internet search was done to get a clear picture of all aspects related to the research topic that help in designing the program.

Designing phase:

This phase pointed to plan for psycho-educational training nursing program through identifying educational objectives, formulating the training program, designing the methodology and media and calculate the total number of sessions and the time needed for implementing of each session.

Development of psycho-educational nursing program:

Psycho-educational nursing program was formulated by the researcher after searching all available literatures and after making the pilot study. The program content was designed by the researcher in the form of a booklet. Psycho-educational nursing program aimed to evaluate the effect of psycho-educational nursing program on depressive symptoms and marital satisfaction among patients with chronic renal failure. This program has a set of general objectives and specific objectives for each session. The number of program's sessions was 10 sessions (1 introductory, 3 theoretical and 6 practical). It was implemented for 2 day every week and each session take (60-90 min) for theoretical sessions and (90-120 min) for practical sessions a day (according to subjects understanding and span of attention and content of sessions). The final booklet was distributed for all studied patients with chronic renal failure in the first session in order to make them familiar with the program contents and provide basic knowledge and information that helping them in reflecting their own experiences**.**

General objective of the booklet-:

At the end of psycho-educational nursing program, the studied patients with chronic renal failure will be able to-:

- Acquire overall knowledge and information about chronic renal failure, apply and implement different methods to decrease depressive symptoms and improve marital satisfaction.

Specific objectives of the booklet:

At the end of Psycho-educational nursing program, the studied patients with chronic renal failure will be able to:

- Explain basic information about chronic renal failure including definition, causes, signs and symptoms, diagnosis, and its treatment and complications.
- Recognize the concept of depressive symptoms and practice different techniques to minimize it.
- Understand the concept of marital satisfaction and apply different ways to improve it.

Implementation phase:

The implementation phase of the study has done through three phases; Assessment phase (pre-test), implementation phase and post assessment phase.

Data collection pre-test (Assessment phase):

- Data collection of this current study was carried out at dialysis unit at Benha University hospital, Qalubia Governorate. A suitable place was chosen for making an interview with all the studied patients (waiting room). Explanation about the purpose and content of the program for all the studied patients was done.
- Each subject was interviewed individually pre applying the planned program to collect the necessary data in privacy using all study tools, (Socio-demographic and clinical data, depressive symptoms scale and marital satisfaction scale).
- Researcher began to collect data by introducing herself to the studied patients as well as patients were told about their rights to withdraw from the study without any reason and at any time.
- The pre-test was collected 2 days/ week (Sunday& Wednesday) at 10 A.M. to 2 P.M. through while 5 patients were interviewed per

day. Each interview lasted for 45-50 minutes depending on the response of interview.

Implementation of the program:

The program consisted of 10 sessions (1 introductory, 3 sessions theoretical and 6 sessions practical.

- The researcher divided 50 studied patients into 5 subgroups each subgroup involves 10 patients with chronic renal failure and each one was attending a total of 10 sessions.
- The researcher took 1subgroups/ day and attended 2days/ weeks (Sunday& Wednesday) and attends all 10 session of the program in a period of 5 weeks (2) sessions per week.
- The estimated time of the whole psycho-educational nursing program was about 7 months and two weeks (1 month & 1 week for pre-test and 6 months and 1week for program session) during the period of (beginning of July 2025 to the middle of February 2026).
- To ensure the studied patients, understanding of the program contents, each session was started with a summary about what was given through the previous session and the objectives of the new session were mentioned taking into consideration using simple language to be suitable for all studied patients with chronic renal failure.
- During the session, the researcher be familiar with several teaching methods such as lecture, discussion, brain storming, and demonstration, re- demonstration, role-play & modeling. Laptop, video, pictures and booklet were used as media to facilitate explanation and to be a reference for them
- The researcher made a summary, immediate feedback, further clarifications were done for any vague items at the end of each session and the studied patients about the time of the next session and give the patients homework which was discussed in the next session.
- After ending the program, the researcher thanked all the studied patients for their participation, encouraged them for asking about any unclear points as well as talking post- test.

psych education training nursing program sessions:

Session 1: Introduction about aim, objectives and content of the sessions.

Session 2: Theoretical background about chronic renal failure: definition, causes, signs and symptoms, diagnosis, and its treatment and complications

Session 3: Depressive symptoms: definition, causes, signs and symptoms and its negative impact on patients with chronic renal failure.

Session 4: Marital satisfaction**:** meaning, causes, signs and symptoms and causes of marital dissatisfaction and its impact on patients with chronic renal failure..

Session 5: Application of some different coping strategies with depressive symptoms (Deep breathing exercise- progressive muscle relaxation).

Session 6: Implementation of some different coping techniques with depressive symptoms (Guided imagery-visualization-self-hypnosis and assertiveness)

Session 7: Practicing of some different coping strategies with depressive symptoms (Reading a book- praying- therapeutic touch- exercises and music therapy).

Session 8: Application of some different coping strategies to improve marital satisfaction.

Session 9: Practicing of some different coping strategies to improve marital satisfaction..

Session 10: Summary about the program sessions and post- test was taken.

Evaluation Phase:

This phase pointed to evaluate the effect of psycho educational nursing program on depressive symptoms and marital satisfaction among patients with chronic renal failure. After the conduction of psycho-educational program sessions, a post test was taken immediately at the end of the final session by using the Beck's Depression Inventory Scale and marital satisfaction scale.

Statistical Design

The collected data were organized, computerized, tabulated and analyzed by using the Statistical Package for Social Science (SPSS) version 20. Data analysis was accomplished by the use of number, percentage distribution, mean, and standard deviation. In addition to, Paired t-test was used to compare means within group, Chi-square test (x2) for relation tests and linear correlation coefficient (r) and matrix correlation to detect the relation between variables (p- value).

Significance levels were considered as follows:

- Highly statistically significant P< 0.001**
- Statistically significant P < 0.05*
- Not significant P > 0.05

Results:

Table (1): Shows percentage distribution of the patients included in the study according to their socio-demographic characteristics. It represents that (36.0%) were in the age group from 48 - ≥ 58 years with the Mean ± SD 46.55 ± 6.65. As well as (58.0%) of the studied patients are females. Concerning to educational level (48.0%) of them have basic education. More than half live in rural areas and are employee (56.0% & 56.0% respectively).

Table (2): Demonstrates percentage distribution of the patients included in the study regarding their clinical data included in the study. It reflects that less than half of the studied patients have the disease 9 years and more and mention that diabetes is the main cause for chronic renal failure (40.0% & 42.0% respectively). In addition, (52.0%) of them perform dialysis 2 times / week.

Figure (1): Shows comparison between total level of depressive symptoms among the patients included in the study pre and post program implementation. It clarifies that there is a highly statistically significant reduction in the total level of depressive symptoms from moderate level (68.0%) preprogram implementation to mild level (60.0%) post program implementation among the studied patients at p- value <0.001.

Figure (2): Illustrates comparison between total level of marital satisfaction among the patients included in the study pre and post program implementation. It reflects that , there is a highly statistically significant improvement in the total level of marital satisfaction from un satisfied level (80.0%) preprogram implementation to satisfied level (74.0%) post program implementation among the studied patients at p- value<0.001.

Table (3): Reveals relationship between socio-demographic characteristic, clinical data and total level of depressive symptoms among the patients included in the study pre and post program implementation. It illustrates that there is no statistically significant difference between all items of socio-demographic characteristics, clinical data and the total level of depressive symptoms among studied patients except with items of occupation, onset and causes of disease pre-program implementation at p-value <0.05.

Table (4): Reflects relationship between socio-demographic characteristic, clinical data and total level of marital satisfaction among the patients included in the study pre and post program implementation. It shows that there is no statistically significant difference between all items of socio-demographic characteristics, clinical data and the total level of marital satisfaction among studied patients pre and post program implementation at p-value >0.05.

Table (5), Indicates correlation between total levels of depressive symptoms and marital satisfaction among the patients included in the study pre and post program implementation. It explains that there is a highly statistically significant negative correlation between total levels of depressive symptoms and marital satisfaction among the studied patients pre and post program implementation at p- value <0.001.

Table (1): Percentage distribution of the patients included in the study according to their socio-demographic characteristics (n=50)

Socio-demographic characteristics	Studied patients (n=50)			
	N	%	X^2	P
Age/years				
• 18- <28 Y • 28- <38 Y • 38- <48 Y • 48-≥58 Y	6 12 14 18	12.0 24.0 28.0 36.0	6.00	>0.05
Mean ± SD	**46.55 ± 6.65**			
Sex				
• Male • Female	21 29	42.0 58.0	1.28	>0.05
Educational level				
• Illiterate • Read and write • Basic education • High education • Postgraduate education	5 12 24 7 2	10.0 24.0 48.0 14.0 4.0	29.8	<0.001**
Residence				
• Rural • Urban	28 22	56.0 44.0	0.72	>0.05
Occupation				
• Not employee • Employee • Free business	17 28 5	34.0 56.0 10.0	15.88	<0.001**

Table (2): Percentage distribution of the patients included in the study regarding their clinical data (n=50)

Clinical data	Studied patients (n=50).			
	N	%	X^2	P
Onset of disease				
• <3 years	6	12.0	8.56	<0.05*
• 3-<6 years	10	20.0		
• 6-<9 years	14	28.0		
• 9 years and more	20	40.0		
Causes of disease				
• Diabetes	21	42.0	48.0	<0.001**
• High blood pressure	18	36.0		
• Genetic	7	14.0		
• Urinary tract problems	2	4.0		
• Nephrotic syndrome	1	2.0		
• Inflammation	1	2.0		
Number of hemodialysis session				
• 2 times / week	26	52.0	0.08	>0.05
• 3 times / week	24	48.0		

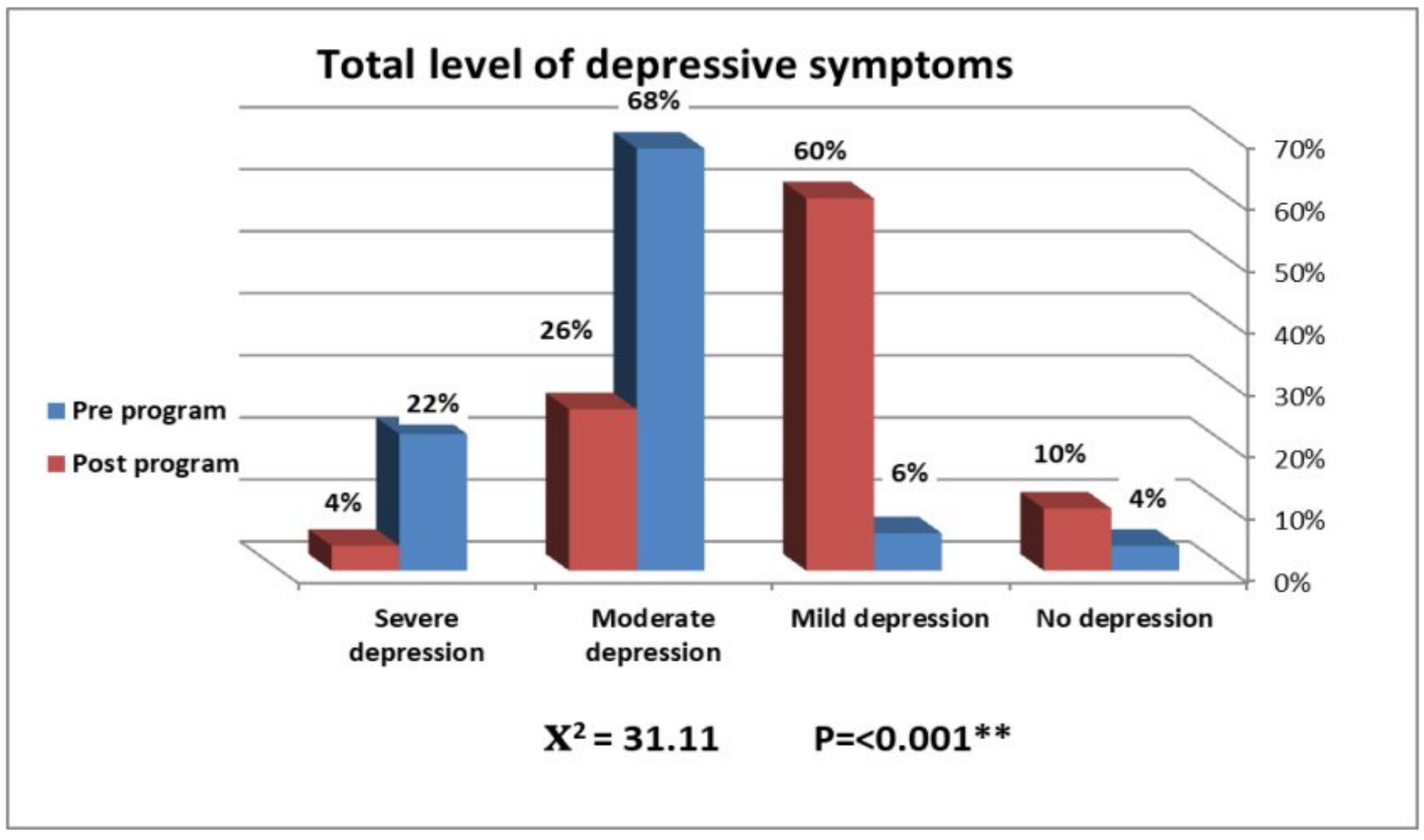

Figure (1): Comparison between total level of depressive symptoms among the patients included in the study pre and post program implementation (n=50).

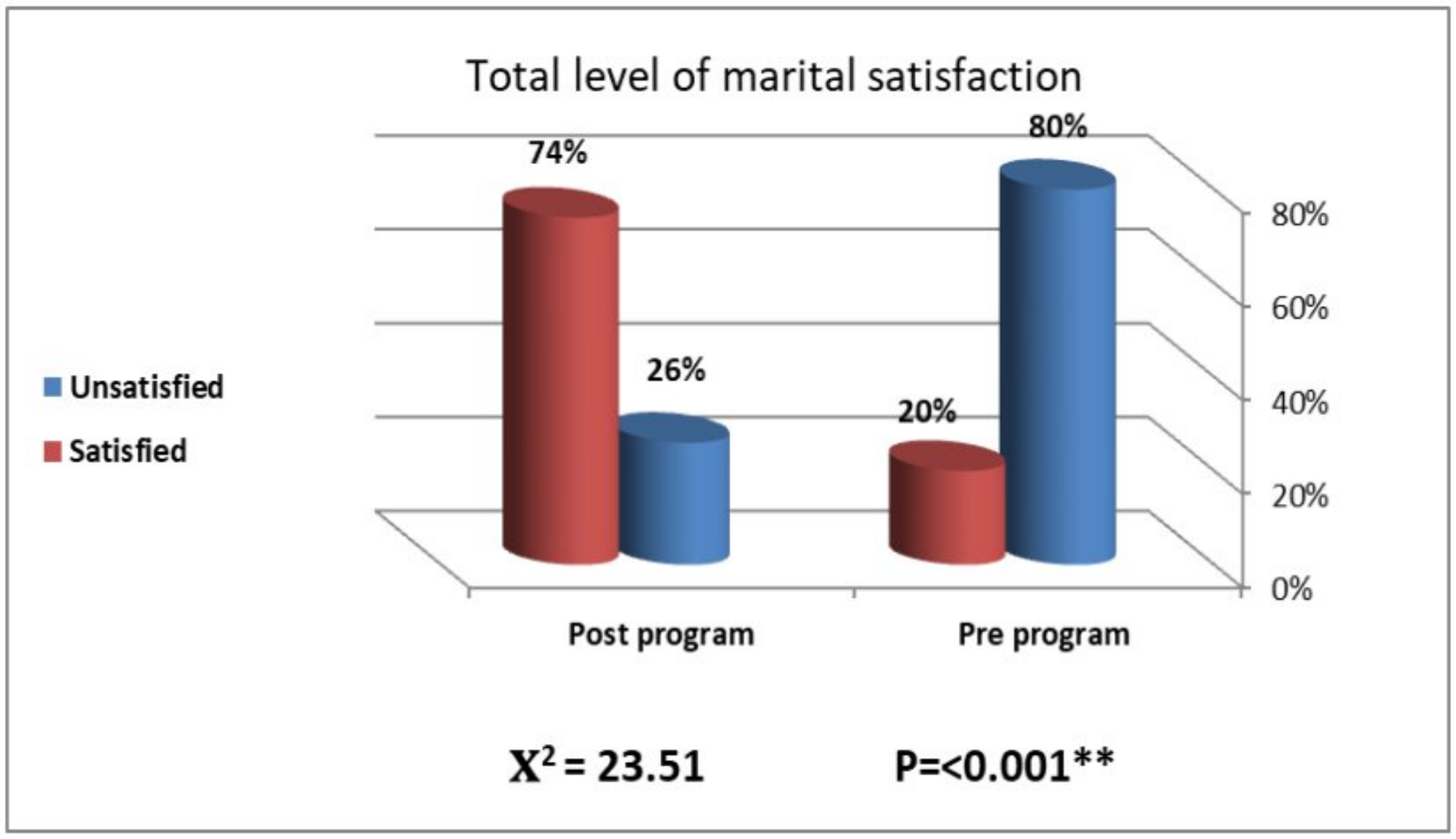

Figure (2): Comparison between total level of marital satisfaction among the patients included in the study pre and post program implementation (n=50).

Table (3) Relationship between Socio-demographic characteristic, clinical data, and total level of depressive symptoms among the patients included in the study pre and post program implementation (N= 50)

Socio-demographic characteristics of the studied patients	Total level of depressive symptoms															
	Pre program implementation								Post program implementation							
	Minimum depression (N=3)		Mild depression (N=34)		Moderate depression (N=11)		Severe depression (N=0)		Minimum depression (N=5)		Mild depression (N=30)		Moderate depression (N=13)		Severe depression (N=2)	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Age (in years)																
18- <28 Y	1	50.0	0	0.0	4	11.8	1	9.1	2	40.0	2	6.7	2	15.4	0	0.0
28- <38 Y	1	50.0	1	33.3	7	20.5	3	27.3	3	60.0	9	30.0	0	0.0	0	0.0
38- <48 Y	0	0.0	2	66.7	8	23.5	4	36.3	0	0.0	11	36.6	2	15.4	1	50.0
48-≥58 Y	0	0.0	0	0.0	15	44.1	3	27.3	0	0.0	8	26.7	9	69.2	1	50.0
X^2	**9.06**								**21.00**							
P-value	**>0.05**								**>0.05**							
Sex																
Male	1	50.0	2	66.7	13	38.2	5	45.4	3	60.0	13	43.4	5	38.5	0	0.0
Female	1	50.0	1	33.3	21	61.8	6	54.6	2	40.0	17	56.6	8	61.5	2	100.0
X^2	**1.05**								**2.20**							
P-value	**>0.05**								**>0.05**							
Educational level																
Illiterate	1	50.0	0	0.0	4	11.8	0	0.0	1	20.0	4	13.3	0	0.0	0	0.0
Read and write	1	50.0	2	66.7	8	23.5	1	9.1	1	20.0	10	33.4	1	7.7	0	0.0
Basic education	0	0.0	1	33.3	18	52.9	5	45.4	2	40.0	11	36.6	9	69.2	2	100.0
High education	0	0.0	0	0.0	4	11.8	3	27.3	1	20.0	5	16.7	1	7.7	0	0.0
	0	0.0	0	0.0	0	0.0	2	18.2	0	0.0	0	0.0	2	15.4	0	0.0

X^2 P-value	**19.14 >0.05**								**15.21 >0.05**							
Residence																
Rural	20	100.0	12	333	16	47.0	92	81.8	41	80.0	16	53.3	7	53.9	1	50.0
Urban	0	0.0	2	66.7	18		2	18.2	1	20.0	14	46.7	6		1	50.0
X^2 P-value	**6.27 >0.05**								**1.30 >0.05**							
Occupation																
Not employee	2	100.0	1	33.3	10	29.4	4	36.3	4	80.0	8	26.7	4	30.8	1	50.0
Employee	0	0.0	0	0.0	21		7	36.7	1	20.0	17	56.6	9		1	50.0
Free business	0	0.0	2	66.7	3	61.5	0	0.0	0	0.0	5	16.7	0	69.2	0	0.0
X^2 P-value	**16.88 <0.05***								**8.68 >0.05**							
Clinical data of the studied patients																
Onset of disease	2	100.0	1	50.0	3	8.8	0	0.0	2	40.0	3	10.0	1	7.7	0	0.0
<3 years	0	0.0	1	50.0	4	11.5	5	45.4	2	40.0	6	20.0	2	15.4	0	0.0
3-<6 years	0	0.0	0	0.0	13	8	1	9.2	0	0.0	8	26.6	6	4	0	0.0
6-<9 ears	0	0.0	0	0.0	14	38.5	5	45.4	1	20.0	13	43.4	4	46.1	2	100.0
X^2 P-value	**26.03 <0.05***								**11.51 >0.05**							
Causes of disease	1	50.0	1	33.3	17	50.2	2	18.2	2	40.0	11	36.6	8	61.5	0	0.0
Diabetes	0	0.0	0	0.0	12	0	6	54.5	0	000	13	43.4	3	5	2	100.0
High blood pressure	1	50.0	1	33.3	3	35.4	2	18.2	1	20.0	5	16.7	1	23.1	0	0.0
	0	0.0	0	0.0	1	4	1	9.1	0	0.0	1	3.3	1	1	0	0.0
Genetic	0	0.0	1	33.4	0	8.8	0	0.0	1	20.0	0	0.0	0	7.7	0	0.0
Urinary tract problems	0	0.0	0	0.0	1	2.9	0	0.0	1	20.0	0	0.0	0	7.7	0	0.0
Nephrotic						0.0								0.0		
						2.9								0.0		
X^2 P-value	**25.52 <0.05***								**27.04 >0.05**							
Number of hemodialysis session	20	100.0	21	66.7	15	44.2	7	63.7	50	100.0	15	50.0	5	38.5	1	50.0
2 times / week	0	0.0	1	33.3	19		4	36.3	0	0.0	15	50.0	8		1	50.0
3 times / week						55.8								61.5		
X^2 P-value	**3.54 >0.05**								**5.62 >0.05**							

Table (4) Relationship between Socio-demographic characteristic, clinical data, and total level of marital satisfaction among the patients included in the study pre and post program implementation (N= 50)

Socio-demographic characteristics of the studied patients	Total level of Marital satisfaction							
	Pre- program implementation				Post program implementation			
	Satisfied (N=10)		Unsatisfied (N=40)		Satisfied (N=37)		Unsatisfied (N=13)	
	N	%	N	%	N	%	N	%
Age (in years)								
18- <30Y	2	20.0	4	10.0	5	13.5	1	7.6
30- <40Y	5	50.0	7	17.5	10	27.0	2	15.4
40- <50Y	1	10.0	13	32.5	8	21.6	6	46.2
50-≥65Y	2	20.0	16	40.0	14	37.9	4	30.8
X^2 P-value	**6.52 >0.05**				**3.01 >0.05**			
Sex								
Male	4	40.0	17	42.5	16	43.3	5	38.5
Female	6	60.0	23	57.5	21	56.7	8	61.5
X^2 P-value	**0.02 >0.05**				**0.09 >0.05**			
Educational level								
Illiterate	2	20.	3	7.5	3	8.2	2	15.4
Read and write	5	50.0	7	17.5	10	27.0	2	15.4
Basic education	3	30.0	21	52.5	15	40.5	9	69.2
High education	0	0.0	7	17.5	7	18.9	0	0.0
Postgraduate education	0	0.0	2	5.0	2	5.4	0	0.0
X^2 P-value	**7.86 >0.05**				**5.86 >0.05**			
Residence								
Rural	7	70.0	21	52.5	23	62.2	4	30.8
Urban	3	30.0	19	47.5	14	37.8	9	69.2
X^2 P-value	**0.99 >0.05**				**2.19 >0.05**			
Occuption								
Not employee	5	50.0	12	30.0	10	27.0	7	53.9
Employee	3	30.0	25	62.5	23	62.2	5	38.5
Free business	2	20.0	3	7.5	4	10.8	1	7.6
X^2 P-value	**3.70 >0.05**				**3.09 >0.05**			
Clinical data of the studied patients								
The onset of disease								
<3 years	3	30.0	3	7.5	4	10.8	2	15.4
3-<6 years	2	20.0	8	20.0	9	24.3	1	7.6
6-<9 years	1	10.0	13	32.5	9	24.3	5	38.5
9 years and more	4	40.0	16	40.0	15	40.6	5	38.5
X^2 P-value	**6.74 >0.05**				**2.19 >0.05**			

Causes of disease								
Diabetes	5	50.0	16	40.0	15	40.6	6	46.2
High blood pressure	2	20.0	16	40.0	12	32.4	6	46.2
Genetic	2	20.0	5	12.5	6	16.2	1	7.6
Urinary tract problems	0	0.0	2	5.0	2	5.4	0	0.0
Nephrotic syndrome	1	10.0	0	0.0	1	2.7	0	0.0
Inflammation	0	0.0	1	2.5	1	2.7	0	0.0
X^2 P-value	**6.15 >0.05**				**2.48 >0.05**			
Number of hemodialysis session								
2 times / week	6	60.0	20	50.0	18	48.6	8	61.5
3 times / week	4	40.0	20	50.0	19	51.4	5	38.5
X^2 P-value	**0.32 >0.05**				**0.64 >0.05**			

Table (5) Correlation between total levels of depressive symptoms and marital satisfaction among the patients included in the study pre and post program implementation (n=50).

Correlation (Pre& Post Test)	Total level of marital satisfaction			
	Pre-program		Post-program	
	R	P-value	R	P-value
Total level of depressive symptoms	-0.36	<0.01**	-0.32	<0.01**

Discussion

Hemodialysis is essential treatment for all patients suffering from chronic renal failure. Hemodialysis alters not only psychological wellbeing to the affected patients manifested by anxiety, stress and depressive symptoms but also, social and occupational impairment such as marital dissatisfaction, attendance to work, pain, chronic symptoms, and fear of death. Depressive symptoms are common psychological problem among patients undergoing hemodialysis resulting in decreasing self-esteem, self-efficacy and hence disturbance in their marital life and social relationship **(Rezaei et al ., 2022).**

The present study was conducted to evaluate the effect of psycho educational nursing program on depressive symptoms and marital satisfaction among patients with chronic renal failure. It was hypothesized that the psycho educational nursing program will have a positive effect on reducing depressive symptoms and improving marital satisfaction among patients with Chronic Renal Failure. So the researcher assess the levels of two variables among the studied patients, setting psycho educational nursing program as therapeutic strategy , carrying out this program and evaluating the effect of this program on depressive symptoms and marital satisfaction among the studied patients with chronic renal failure.

The present study findings reflected that more than one quarter of the patients included in the study were in the age group from 48 - ≥ 58 years with the Mean ± SD 46.55 ± 6.65 and more than half of them are females. From the investigator point of view, this could be due to many studies suggested that chronic renal failure can affect any age group and the risk increase by increasing the age as well as this disease more prevalent among females than males. Furthermore, the current study results illustrated that nearly and more than half of them have basic education and live in rural areas and are employee respectively. This result attributed to people living in rural areas in Egypt becoming more exposure to chronic renal failure because of many factors as water pollution. In addition, this study conducted at Benha university hospital which serves many

rural areas where there was less attention to complete high education. As well as many affected patients having financial responsibilities toward their families as well as the cost of treatment which neciessate the job.

The current study findings reflects that less than half of the patients included in the study have the disease 9 years and more and mention that diabetes is the main cause for chronic renal failure. Concerning the number of hemodialysis session, more than half of them perform dialysis 2 times / week. From the From the investigators' point of view, this result could be due to the nature of disease as renal failure is chronic disease that characterized by long life hemodialysis on two or three sessions per week according to patient condition to expel waste products and poisons from the body to save the life of the affected patients

Concerning the total level of depressive symptoms among the patients included in the study pre and post program implementation, the present study findings reported that that there is a highly statistically significant reduction in the total level of depressive symptoms from moderate level preprogram implementation to mild level post program implementation among the studied patients.

From the investigator point of view, this might be due to the advantages of the psycho-education nursing program as the content and sessions application was with the need and interest of the studied patients with chronic renal failure in which they told how to cope effectively with depressive symptoms through using different strategies such as guided imagery positive thinking, praying, exercises, deep breathing exercises, progressive muscle relaxation technique, reading a book and visualization.

Furthermore, the patients included in the study were learned to apply these strategies through participation in demonstration and re-demonstration to reduce their feeling of depression which leads to increasing patients' hope in their lives, encouraging them to perform their daily activities freely without stress and cope effectively with their conditions. These results were went in the same line with the studies done by **Gohy et al., (2023) & Hassan et al., 2022),** demonstrated that depressive symptoms are common among their studied patients and there was significant reduction in the moderate level of it after implementation of psycho educational program than before.

Regarding the total level of marital satisfaction among the patients included in the study pre and post program implementation. The present study results reflected that, there is a highly statistically significant improvement in the total level of marital satisfaction from unsatisfied level pre-program implementation to satisfied level post program implementation among the studied patients.

From the investigator point of view, this could be due to negative impact of the disease and hemodialysis that included dependence on machine long-life, loss more of weight, change the color of the skin, site of fistula and fear of tomorrow, feeling of uncertainty about the future and fear of death, un stable emotional response, un acceptance of his/her self-image and low self-esteem. All of these negatively disturb their psychological well-being and caused them stressed, anxious, depressed, social isolated and feared all the time how they perform their responsibilities and other daily activities normally which limit their marital relationship, social relationship leading to marital dissatisfaction and social isolation.

Moreover, marital dissatisfaction was improved among the patients included in the study after program implementation, which reflected the effectiveness of the psycho-educational program sessions, in which the studied patients were acquired essential knowledge and information about how to adapt with their illness, importance of spouse support, importance of practicing exercise, having friends and social network to provide them with psychological support all the time. All these things help the studied patients with chronic renal failure to be less depressed, had the ability to perform marital responsibilities and daily living activities and hence achieve satisfaction not only marital but also, all quality of life domains.

These present study findings were similar to the study done by **Bilal& Rasoo (2022)** revealed that majority of his studied sample experienced significant improvement in the total level of marital satisfaction from un satisfied level pre-program implementation to satisfied level after attending the session of psycho educational program. Also, these results

were parallel with the study of **Rostami & Gol (2023)** reported the same results.

Concerning the relationship between socio-demographic characteristic, clinical data and total level of depressive symptoms among the patients included in the study pre and post program implementation. The current study findings illustrates that there is no statistically significant difference between all items of socio-demographic characteristics, clinical data and the total level of depressive symptoms among the studied patients except with items of occupation, onset and causes of disease pre-program implementation at p-value <0.05.

from the investigators' point of view, this could be due to more than half of the studied patients were employee and had continuous fear to lose their job because of their disease and loss the ability to perform their work as required as well as long duration of having chronic renal failure 9 years and more and suffering from diabetes causing many depressive symptoms, anxiety, stress, sadness, fear of spouse loss, distorted self-esteem, body image and social isolation which negatively affected their marital life.

As regards the relationship between socio-demographic characteristic, clinical data and total level of marital satisfaction among the patients included in the study pre and post program implementation. The present study results illustrated that there is no statistically significant difference between all items of socio-demographic characteristics, clinical data and the total level of marital satisfaction among studied patients pre and post program implementation. These results were consistent with the study of **Nazanin & Raana (2022)** reflected the same results among his studied sample

Regarding the correlation between total levels of depressive symptoms and marital satisfaction among the patients included in the study pre and post program implementation. The current study findings explained that there is a highly statistically significant negative correlation between total levels of depressive symptoms and marital satisfaction among the studied patients pre and post program implementation that mean when depressive symptoms increased, marital satisfaction decreased.

From the investigators' point of view, this probably due to patients suffering from chronic renal failure developed many depressive symptoms such as social isolation, hopelessness, helplessness that happened a result of dependence on machine long life, chronic pain, stress, anxiety, sadness, fear from death at any time and inability to perform activities of daily living and marital responsibilities.

All of these, distorted affected patients concept toward body image, their self-esteem which preventing them from enjoying their normal life, performing daily activities, which ultimately negatively affected on all dimensions of quality of life as it is not only the health but social, financial, sexual and marital life of the affected patients were adversely affected.

Conclusions:

Psycho-educational nursing program had a positive effect on reducing depressive symptoms and improving marital satisfaction among the studied patients with chronic renal failure.

Recommendations

- Alleviating depressive symptoms and improving marital satisfaction through implementation psycho-educational nursing program in all hospitals servicing all chronic renal failure affected patients.
- Assertiveness training program and stress management strategies and should be given to all patients with chronic renal failure to alleviate their depressive symptoms and enhance their coping patterns.
- Sex counseling should be continuously provided for patients with chronic renal failure which have a positive impact on their sexuality concern and marital satisfaction.
- The Future research should be carry out with a larger sample size in several hospitals and in a broader

geographical area to generalize the results

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