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Original Research Article

Stressors, Self Efficacy and Level of Hope for Patients with Chronic Renal Failure Undergoing Hemodialysis

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Abstract

Chronic renal failure (CRF) is a life-threatening disease in which a patient needs a long-term treatment such as hemodialysis, kidney replacement to save his life. ***Aim:*** this study was aimed to identify the relation between stressors, self efficacy and level of hope for patients with CRF, undergoing hemodialysis. ***Design:*** a descriptive correlation research design was utilized in this study. ***Setting*****:** The study was conducted at King Fahd unit for hemodialysis at, ELManial hospital**,** Cairo University. ***Subjects****:* a purposive sample of 160 patients with CRF undergoing hemodialysis. ***Tool of data collection:*** Socio-demographic datasheet,hemodialysis stressor scale(HSS) ,self efficacy scale &Herth hope scale. ***Results:*** Showed that more than two thirds of the studied subjects undergoing hemodialysis for more than 24 months less than two third of them were suffering from moderate degree of stress, more than fifty percent of the studied subjects had high levels of hope, while less than fifty percent of them had a moderate level of hope. ***Conclusion****:* The highest percentage of the studied subjects were suffering from moderate degree of psychosocial stressors, such as depression, sadness, changed in family responsibility and dependence on others, statistically significant negative correlation was found between stress and self-efficacy. Moreover, a negative correlation was found between stress and level of hope while, there is no, statistically significant correlation between self-efficacy and level of hope. ***Recommendation*****:** Supportive and therapeutic intervention program should be provided for both patients with chronic renal failure and their families to alleviate their stress ,increase sense of hope and improve their quality of life**.**

Keywords: Stressors, self efficacy, level of hope, chronic renal failure, hemodialysis.

INTRODUCTION

Chronic renal failure (CRF) is an irreversible and progressive kidney failure where the body fails to maintain metabolism and electrolyte balance, resulting in uremia, metabolic acidosis, anemia, electrolyte imbalances [1]. There is a growing number of chronic kidney disease CKD patients undergoing dialysis. In 2010, there were 49,077 patients with chronic renal failure, and in 2014 the number increased to 112, 0 0 4 [2, 3].

According to previous research hemodialysis is the most common method used to treat advanced and permanent type of kidney failure. It imposes a variety of physical and psychosocial stressors that challenge patients. The treatment methods available in ESRD are hemodialysis and peritoneal dialysis, which are known as renal replacement therapies, so hemodialysis has been proved to be the most effective treatment modality, as it results in longer survival rates [4].

Hemodialysis treatment often generates feeling of frustration and limitations, it can leads to many restrictions for patients, such as maintaining a specific diet associated with fluid restrictions and changed body appearance due to the presence of a catheter for vascular access or an Arteriovenous Fistula (AVF) [5]. A life dependent on a hemodialysis machine, for up to 15 hours per week presents is overwhelming. It implies having to cope with major stressors including the symptoms of ESRD and their associated social and societal consequences [6].

In entire Egypt, there are no recent data on the prevalence of end-stage renal disease ESRD; however, the last statistics were calculated in 2004, and the prevalence rate of ESRD; was 483 pump [7] In El-Minia governorate 2007, one of the upper Egypt governorates, the number of patients with ESRD was 367 pump [8]. In Sohag governorate, 2010, the number of patients with ESRD was 316 pump [9], whereas, in Menoufia governorate in the delta region, the number of patients with ESRD on regular hemodialysis at the end

of the year 2011 was 414 pump [10]. From this study, it was found that, ESRD because of unknown etiology was prevalent in 25% of patients (the highest proportion), and in 15.2% of patients in entire Egypt in 2008.

Dialysis change the life style of patient and their family. Having felt of chronically ill, there are evidences of conflict, frustration, guilt and depression. It may be difficult for the patient, spouse and family to express anger and negative feelings. The sense of loss that the patient experiences cannot be underestimated because every aspect of a "Normal Life" is disturbing. Clients receiving maintenance dialysis often have an ambivalent feeling they realize that dialysis therapy is their "tie to life". They often report that they feel in limbo between the world of life and death [5]. As the process of hemodialysis often leads to patients' disability and limits their everyday activities, it imposes on them high levels of mental tension, anxiety, and depression [11, 12]. Previous studies [13] reported that, patients undergoing hemodialysis experience both physiological and psychosocial stressors. Such as itching, fatigue, limitations of fluids and food, sleep disturbances, feeling of uncertainties about the future, limitations of vacation , limitations of activity, limitation of social activities, limits on time and place of work, length of dialysis treatment, and cost factors.

In accordance to [14] in renal patients, self-efficacy is associated with self-care of the disease, adherence to treatment, with decreased physical and psychological symptoms In this regards [15], referred to patients with higher self-efficacy have been shown to practice more self-management behaviors, leading to better disease control, and better physical functioning, it has been identified as a moderator or mediator of self-management.

Self-efficacy, plays an important role in the decrease of CKD progression, it has been included in different approaches for use with patients diagnosed with CKD in all stages, specifically with patients on hemodialysis. It plays a major role as a contributor that affects not only the decision making process, but also the initiation and maintenance process [16, 17].

Several studies investigated the role of hope for goal achievement and found that hope is considered a cognitive goal-oriented process. People with high levels of hope can create a large number of ways to fulfill their goals, and are sufficiently motivated to reaching their desired outcome. On the contrary, people with low level of hope are neither likely to find possible solutions for their goals, nor are they highly motivated to achieve them [18, 19]. Renal failure is a chronic and incurable disease, these patients may feel disappointed due to decreased physical capabilities, functions and social changes [20]. Hope is vital to all aspects of life. It has a strong penetrating power and can stimulate an individual's vitality [21].

According to [22], keeping hope in the face of a chronic disease like renal failure is an endless process, though also a valuable resource in the coping method. Hope has an important effect on individuals' health because it helps patients to deal with crises, to maintain quality of life, to remain resolute in achieving healthy objectives and improving health.

In other words, hope is an active feature that includes having a goal, having the ability to plan for achieving it, paying attention to problems which prevent a person from achieving the goal and decreasing such problems. Therefore, the hope of individuals in regaining health leads patients to travel long distances in the search for a difficult treatment, to accept endless invasive procedures, to change their lifestyles, and continue, even if weakened, undergoing treatment [23].

Cheavens *and* Grabmeier [24], added that, hope is one of the strong and effective methods to fight with and overcome anxiety and depression, and those who were either highly hopeful or gradually got hopeful had more knowledge about health issues, types and severity of stress, compared to those with lower levels of hope. They also had better self-care and fight with the disease more efficiently. So nurses play an important role through, identify, manage stress and improve the hope level of patients with chronic diseases such as improving self efficacy, mental state, and enhanced well-being [25].

Significance of the study

According to statistics and tendencies of increasing prevalence rates of chronic kidney diseases CKDs all over the world, especially in developing countries and Egypt in particular. It is stressful for patients to be diagnosed with chronic renal failure because these diseases is incurable. Fear of disease, worrying about prognosis and huge medical expenses are significant sources of stress to the patients. During long-term treatment, patients are prone to helplessness, despair, anxiety and depression. patient's psychological state is significantly correlated with their level of hope and self care.

From nursing perspectives,especially psychiatric nurses, are responsible for the mental care, as well as, physical care of the patients, the initial goal of the nurse is to identify problems and establish a plan of intervention to reduce the frequency and severity of stress experienced by patients and provide them with a sense of hope that may be helpful to alleviate stresses among them .For this reason,it is hoped that this study returns in benefits to the practice and enrich the nursing science which may be reflected positively on the patient outcomes and will directly affect patient

psychological condition. Thus the present study will shed the light on the stressors, self efficacy and hope which affecting patients with renal failure which can help to provide useful information, support and manage its complications.

Aim of the Study

This study was aimed to identify the relation between stressors, self efficacy and level of hope for patients with chronic renal failure, undergoing hemodialysis.

Research Questions

Q1- What is the level of stress experienced by patients undergoing hemodialysis?
Q2- What is the level of self efficacy experienced by patients undergoing hemodialysis?
Q3-What is the level of hope experienced by patients undergoing hemodialysis?
Q4-Is there a relationship between stress,self efficacy and level of hope for patients undergoing hemodialysis?

SUBJECTS AND METHODS

Research Design

The selected design which used in the current study was descriptive correlation research design.

Sample

A purposive sample of 160 male and female patients with CRF was participated for the condution of the study.

Inclusion Criteria

Aged from 30 to 65 years, both genders, can read and write, maintenance on hemodialysis for at least 3 months, undergoing hemodialysis for (2-3) session a week.

Exclusion Criteria

Patients with cognitive impairment, organic brain syndrome, or mental handicap were excluded from the study.

Setting

The study was carried out at the King Fahd unit for hemodialysis at, EL, Manial. Hospital, Cairo University .In the second floor, the capacity of unit includes 10 hemodialysis machine working through three shifts (morning, afternoon and night), the total number of patients receiving maintenance dialysis per day about 30 patients.

Tools for Data Collection

The following tools were utilized in data collection:

1- **Socio-Demographic data sheet**

It was designed by the researchers and it includes personal data, such (patient code, gender, age, education, occupation, marital status, diagnosis, duration of illness, number of hospital admissions, family history of the disease).

2- **Hemodialysis Stressor Scale (HSS**)

Developed by Baldree *et al.*, [26] it was used to determine the incidence and severity of physiological and psychosocial stressors experienced by patients undergoing hemodialysis. It consisted of 23 potential stresses which were classified as sixteen physiological and seven psychosocial stressors A 5-point Likert scale was used 1 = Never, 2= rarely, 3= often, 4 = usually and 5 =always). Patients were asked to rate the extend to which they were troubled by each of the 23 stresses by circling a number from (1-5) The respondent completed the questionnaire during the dialysis treatment, in the presence of the researcher .A total stressor score as well as a psychosocial and physiological sub scores were derived by simple summation of ratings. The higher the score, the greater the degree of stress. Summing the rating scores of all items resulted in a total stressor scale score that range between (1-115) A higher score indicates a greater degree of stress. The averaged summative score of each item was also computed to examine the intensity of stress for each item on the scale, score ranged between (23-52) indicating mild degree of stress, score ranged between (53-83) indicating a moderate degree of stress and score ranged between (84-115) indicating severe degree of stress

3-Self Efficacy Scale

It is a ten item scale, which has been developed by Schwarzer & Jersalem [27]. It assesses the strength of an individual's belief in his or her own ability to respond to novel or difficult situations and to deal with any associated obstacle or setbacks. It's a 4-point Likert scale the choice of response ranged from "not at all true" (1) "hardly true" (2) "moderately true" (3) to "exactly true" (4). The scores for each of the ten items are summed to give a total score, the higher the score the greater the individualized sense of self-efficacy, the total score range from (10-40) was divided into, poor self efficacy(10-20),fair self efficacy(21-30)and good self efficacy (31-40). Chronbach's alpha ranges from 0.75 to 0.94 across a number of different studies. Reliability: Internal reliability for GSE = Cronbach's alphas between .76 and .90.

4- Herth Hope Scale (HHS)

It measures the multidimensional aspects of hope. Developed by Herth [28]. It is a 4-point rating scale. A score of 4 indicates that the item, often applies and a score of 1 indicates that the statement never applies to the respondent. Summative scores can range from (1 - 48) higher scores denote greater hope. In terms of item order, no two consecutive items are from the same subscale. Reversed item questions no (4,9), its classified into three subscales include: (1) An inner sense of temporality and future, (2) Inner positive readiness and expectancy (3) interconnectedness with self and others. The total scores were ranged from (12

to 48) low hope level of (12-23), moderate hope level from (24-36) high hope level of (37 -48). Alpha coefficient was.97 with a 2-week test-retest reliability of.91. Criterion-related validity was established by correlating the HHI with the parent HHS (r = 0 92), the Existential Well-Being Scale (r =.84) and the Nowotny Hope Scale (r = .81), Hopelessness Scale (r= - .73). Construct validity was supported through the factorial isolation of three factors, accounting for 41% of total variance.

Content Validity and Reliability

Hemodialysis stressor scale and hope scale were translated by the researchers used and followed the back translation procedure for verifying the translation of the tools (1). The researchers translated the instruments (English formats) into Arabic language (2) rendered the same English formats to bilingual experts for verification of the translation of the Arabic formats. (3) The resulting versions were translated back into the original language by other bilingual experts who was blind to the original, (4) and minor discrepancies in the content were founded and necessary modifications were done.

Content validity of the tools was evaluated by a panel of five experts in the field of psychiatric nursing ,at the faculty of nursing. Cairo University, who reviewed the tools for clearness, applicability, relevance, comprehensiveness, understanding ,agreed that it's valid, relevant with the aim of the study and ease of implementation. Their recommendation and suggestion were taken into consideration. Reliability of the tools was assessed by Cronbach's alpha test in SPSS (V.20). They show a high level of reliability in the current study as follows: The scale had good internal consistency. Cronbach's alpha was 0.89, and the test-retest reliability correlation was 0.71 Baldree *et al.*, [26]. In the present study, the Cronbach's alpha reliability coefficient was 0.90 inthe total scale, 0.89 for the psychosocial subscale, and 0.69 for the physiological subscale.

Pilot Study

A pilot study was conducted on (10%) 16 patient with CRF undergoing hemodialysis of the total subjects to check feasibility, objectivity, applicability and clarity of the items and estimated the time needed to complete the tool was 20-30 minutes according to the needed explanation. The results of the pilot study illustrated that no modifications were needed, so the subjects were included in the actual study sample.

Ethical Considerations

An official permission was obtained from the director of the King Fahd center for hemodialysis at, EL Manial hospital, Cairo University. A detailed description about the study, procedure and questionnaire was given to subjects. Participants were informed that they have the right to refrain from participating in the study at any time without experiencing any negative consequences. Informed consents were obtained from all eligible participants who agreed to participate in the study. Data confidentiality and patients' privacy were secured. Code numbers were created and kept by the researchers to keep patients' anonymity

Procedure

An official permission was obtained from the King Fahd Unit for hemodialysis at EL, Manial. University hospital. The researchers met with the subjects at the King Fahd unit for hemodialysis at, EL, Manial .Hospital, Cairo University. Explained the purpose of the study, assured them about the confidentiality and anonymity, and invited them for participation. They were also informed about their rights to withdraw from the study at any time without giving any reason.

Each participant were interviewed individually of questionnaire sheet for about 20-30 minutes, the questionnaire was read and explained, after obtaining their oral and written informed consent for participation in the study and being informed about the aim of the study. The researchers helped patients to complete the questionnaire if they were unable to read. Through explaining a clarifying any question. The researchers were available, two days/week from 10Am:2Pm. Data collection was carried out over a period of 3 months from the beginning October to the end of December 2018.

Statistical Analysis

Data was fed to the computer and analyzed using IBM SPSS software package version 20.0. Qualitative data were described using numbers and percent. Quantitative data were described using mean, standard deviation. The significance of the obtained results was judged at the 5% level. The used tests were Ttest and ANOVA-test were used to test the statistical significant differences and Chi-square test For categorical variables, to compare between different groups.

RESULTS

Table-1: Demographic data according to the studied subjects (n =160)

Q	Items	No.	%
1	**Gender**		
	Male	91	56.9
	Female	69	43.1
2	**Age/year**		
	<30	30	18.8
	30<40	35	21.9
	40<50	33	20.6
	50<60	45	28.1
	60 and more	17	10.6
3	**Level of education**		
	Illiterate	41	25.6
	Read and write	23	14.4
	Basic education	19	11.9
	Secondary education	52	32.5
	University education	25	15.6
4	**Occupation**		
	Working	60	37.5
	Not Working	100	62.5
5	**Residence**		
	Rural	69	43.1
	Urban	91	56.9
6	**Family number**		
	1:2	34	21.2
	3:5	83	51.9
	6:7	35	21.9
	More than 7	8	5.0
7	**Heredity**		
	Yes	23	14.4
	No	137	85.6
8	**Other diseases**		
	Yes	66	41.8
	No	94	58.2

Table-1 Showed that, more than half of the studied subjects were males (56.9%).

As regards age,more than one quarter of the studied subjects their age was ranged between (50<60) years. In relation to level of education, (32.5%) of the studied sample got secondary education ,regarding occupation,less than two thirds of them (62.5%) were not working, while more than one third (37.5%) were not working. The same table also revealed that, more than half of the studied sample their family numbers ranged from (3-5) member.

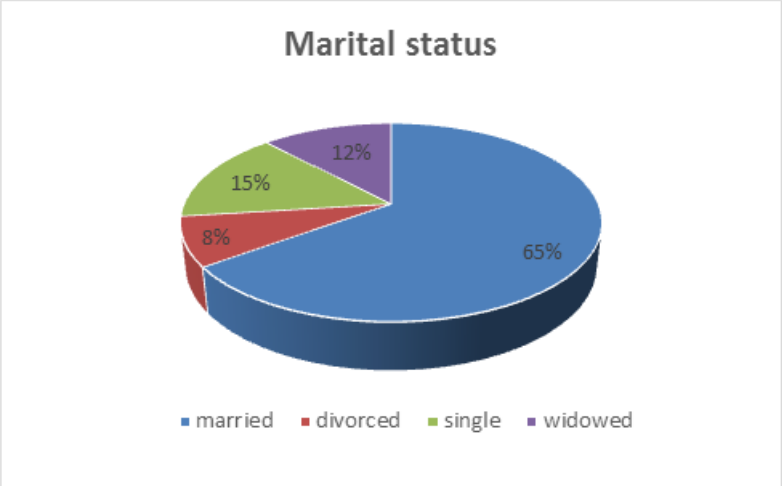

Fig-1: Distribution of the studied subjects according to marital status (n =160)

Figure-1 showed that, more than two thirds (65%) of the studied subjects were married, while (15%) of them were single.

Figure-2 showed that more than two thirds of the studied subjects (70.6%) undergoing hemdialysis for more than 24 months, while (5.6%) of them undergoing hemodialysis for less than 6 months.

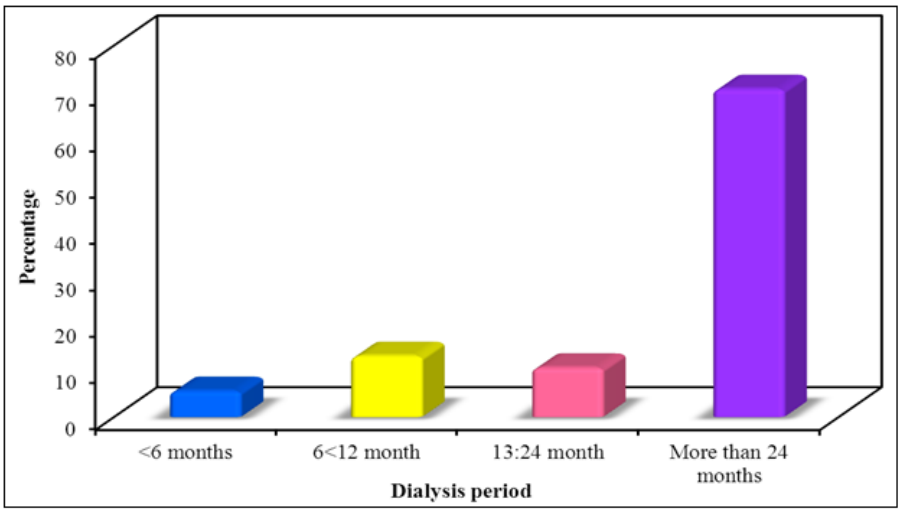

Fig-2: Distribution of the studied subjects according to dialysis period (n =160)

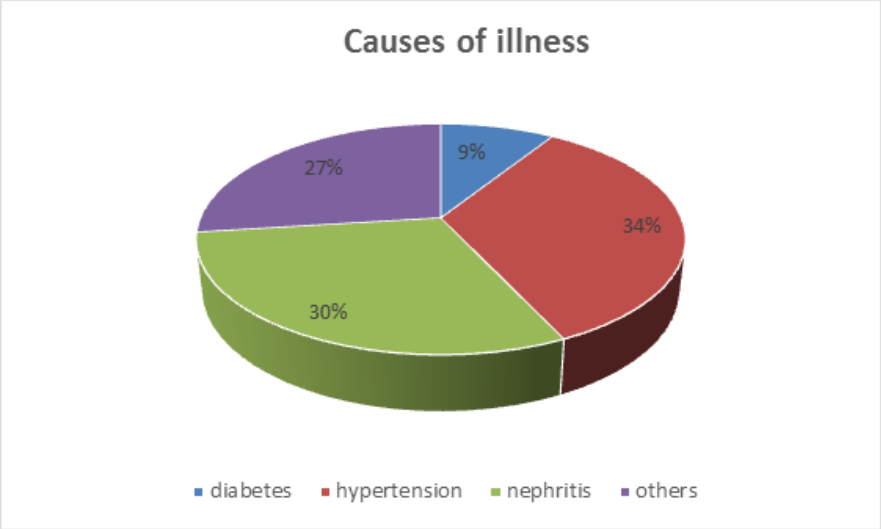

Fig-3: Causes of illness among the studied subjects (n=160)

Figure-3 indicated that, nearly one third of the studied subjects their causes of illness related to other disease (34%) while, more than one quarter of them (30%) their cause of illness results from nephritis and (9%) of them results from diabetes.

Table-2: Distribution of the psychosocial stressors among the studied subjects (n = 160)

	Psychosocial Stressors	Never		Rarely		Often		Usually		Always	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Depression	68	42.5	27	16.9	16	10.0	24	15.0	25	15.6
2	Sadness	39	24.4	43	26.9	32	20.0	16	10.0	30	18.8
3	Irritability	47	29.4	35	21.9	33	20.6	29	18.1	16	10.0
4	Dependency on other	36	22.5	24	15.0	40	25.0	34	21.3	26	16.3
5	Uncertainty about future	49	30.6	29	18.1	31	19.4	33	20.6	18	11.3
6	Fear of being alone	40	25.0	31	19.4	28	17.5	37	23.1	24	15.0
7	Change in family responsibility	42	26.3	23	14.4	26	16.3	35	21.9	34	21.3

Table-2 Illustrated that, (21.3%) of the studied subjects always suffered from changed In their family responsibility, while (18.8%) of them had always felt of sadness and (16.3%) always depended on another while, (15.6%) had always feeling of depression.

Table-3: Degree of stressors among the studied subjects (n = 160)

Degree of stressors	No.	%
Mild degree	36	22.5
Moderate degree	96	60.0
Severe degree	28	17.5
Total score	66.14 ± 17.17	
% score	2.88 ± 0.75	
Psychosocial stressors		
Total score	19.13 ± 7.22	
% score	43.30 ± 25.77	
Physiological stressors		
Total score	47.02 ± 12.79	
% score	48.47 ± 19.99	

As shown in the above table, more than fifty percent of the studied subjects (60%) were Suffered from a moderate degree of stress while, (17.5%) of them had severe degree of stressors. Also the same table revealed that, the total scores of Psychosocial Stressors were (19.13 ± 7.22) in relation to physiological stressors it was (47.02 ± 12.79)

Table-4: Level of self-efficacy among the studied subjects (n=160)

Level of self-efficacy	No.	%
Poor self-efficacy	72	45.0
Fair self-efficacy	73	45.6
Good self-efficacy	15	9.4
Total score	21.93 ± 6.20	
% score	39.77 ± 20.68	

Table-4 revealed that, nearly less than half of the studied subjects had fair and poor self efficacy (45.6%,45.0%) respectively, while (9.4%) of them had good self-efficacy with total scores (21.93 ± 6.20).

Table-5: Level of hope among the studied subject (n=160)

Levels of hope	Mean	SD
Total score	35.91 ± 6.19	
% score	66.42 ± 17.20	
1-Inner sense of temporality and future		
Total score	11.26 ± 3.03	
% score	60.52 ± 25.21	
2-Inner positive readiness and expectancy		
Total score	12.13 ± 2.58	
% score	67.71 ± 21.53	
3-Interconnectedness with self and others		
Total score	12.53 ± 1.91	
% score	71.04 ± 15.89	

Table-5 demonstrated that, the total score of hope level among the study subjects. Was (35.91 ± 6.19) the total score of hope in relation to inner sense of temporality & future (11.26 ± 3.03) ,total scores of hope in relation to Inner positive readiness and expectancy (12.13 ± 2.58)while the total scores in relation to Interconnectedness with self and others (12.53 ± 1.91).

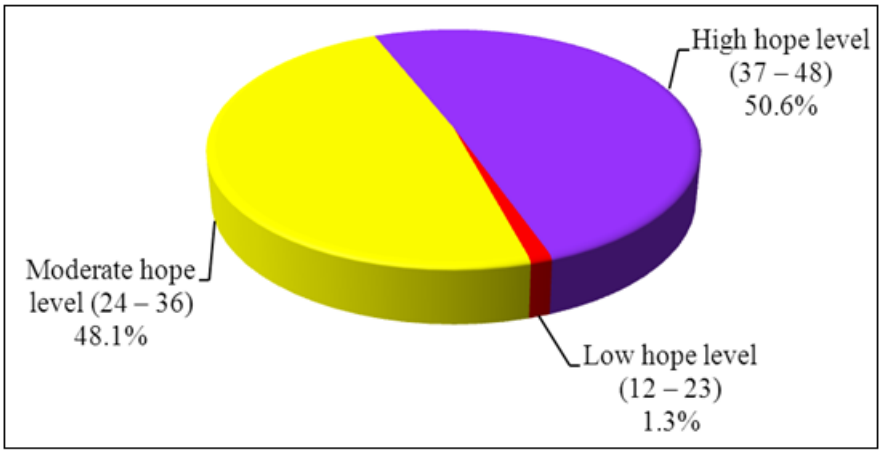

Fig-4: Distribution of the studied subjects according to level of hope (n = 160)

Figure-4 showed that, more than fifty percent of the studied subjects had high levels of hope (50.6%) and (48.1%) of them had a moderate level of hope, while (1.3%) had low Hope level.

Table-6: Correlation among stressors, self-efficacy and level of hope (n = 160)

Variables		Self-efficacy	level of hope
Stressors	**r**	-0.373*	-0.178*
	p	<0.001*	0.024*
Self-efficacy	**r**		-0.046
	p		0.566
level of hope	**r**		
	p		

r: Pearson coefficient; *: Statistically significant at $p \leq 0.05$

Table-6 showed that ,statistically significant negative correlation was found between stressors and self-efficacy (P=0.001*). Moreover, a negative correlation was found between stress and level of hope (P= 0.024*) while, there was no ,statistically significant correlation between self-efficacy and level of hope.

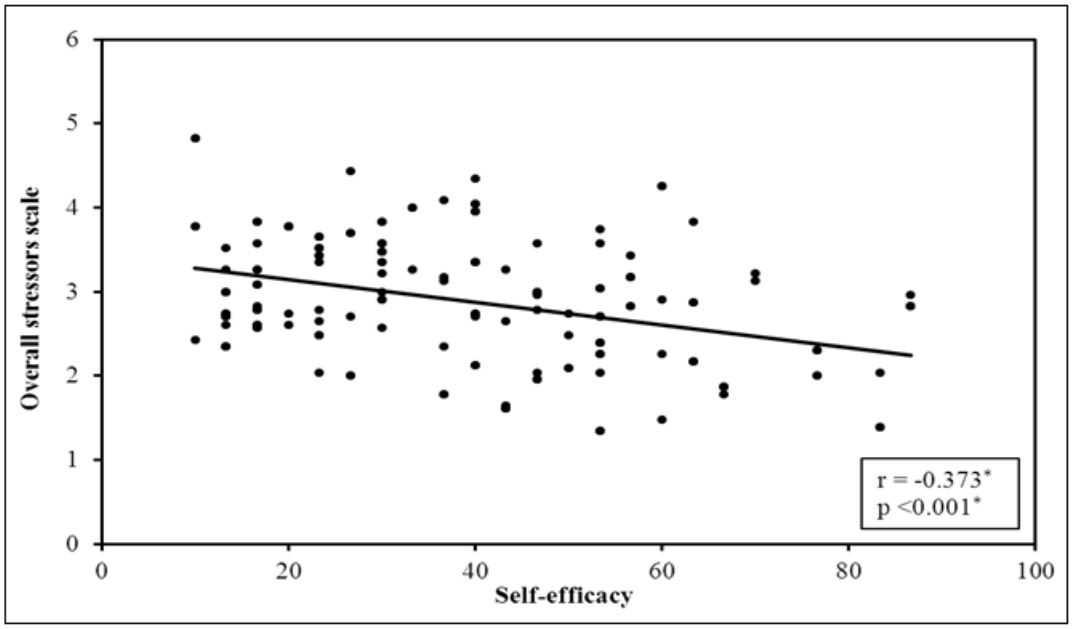

Fig-5: Correlation between self-efficacy and stressors

Figure-5 illustrated that negative statistical significant correlation was found between self efficacy and stressors.

Figure-6 illustrated that, the negative statistically significant correlation was found between level of hope and stressors.

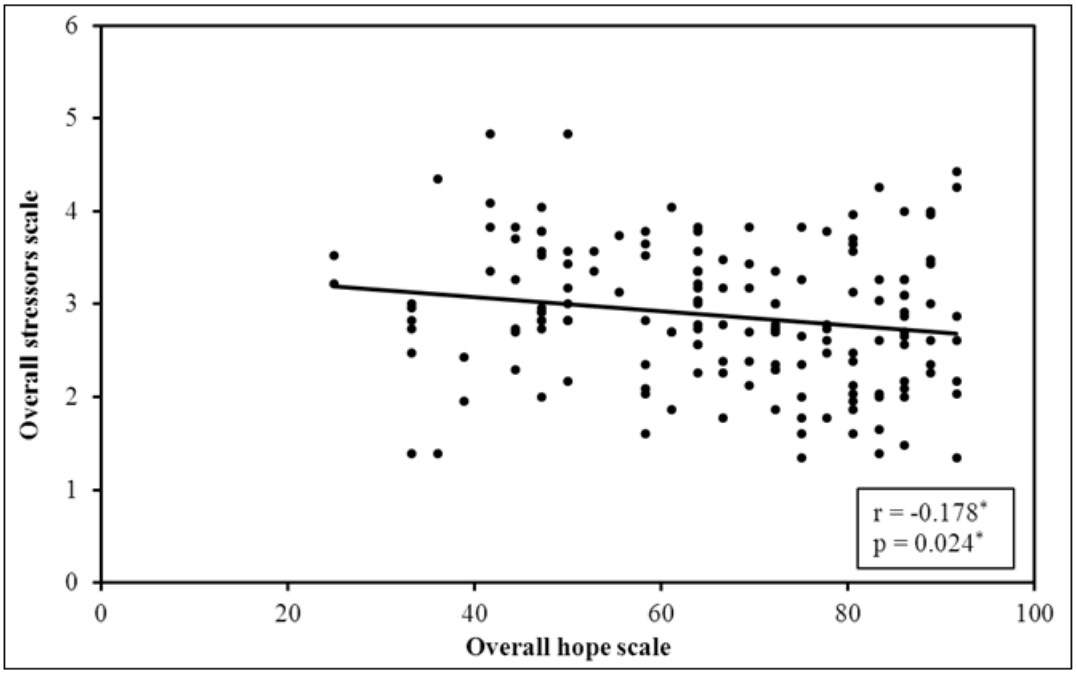

Fig-6: Correlation between level of hope and stressors

Table-7: Relation between demographic data,overall stressors, Self-efficacy and level of hope among the studied subjects (n = 160)

Demographic data	Stressors	Self-efficacy	levels of hope
	Mean ± SD.	Mean ± SD.	Mean ± SD.
Marital status			
Married	67.04 ± 16.26	21.79 ± 6.20	35.92±5.91
Divorced	51.80 ± 11.83	23.27 ± 6.52	37.20±6.25
Single	64.30 ± 14.38	24.70 ± 6.92	34.90±7.71
Widowed	73.41 ± 21.39	19.18 ± 4.02	35.91±6.23
F(p)	5.386*(0.001*)	3.141*(0.027*)	0.390 (0.761)
Level of Education			
Illiterate	69.51 ± 19.79	20.61 ± 5.38	35.10±6.46
Read and write	74.83 ± 10.19	16.43 ± 2.15	34.70±5.89
Basic education	70.47 ± 15.01	18.84 ± 4.02	36.42±6.34
Secondary education	60.27 ± 13.73	24.48 ± 5.87	36.77±5.75
University education	61.56 ± 20.79	26.20 ± 6.68	36.20±6.92
F(p)	4.499*(0.002*)	15.416*(<0.001*)	0.688 (0.601)
Occupation			
Working	60.03 ± 15.19	23.55 ± 6.76	35.77±6.07
Doesn't work	69.81 ± 17.31	20.96 ± 5.66	36.0±6.29
t(p)	3.618*(<0.001*)	2.603*(0.010*)	0.232 (0.817)
Duration of illness			
<6months	75.0 ± 19.32	25.22 ± 4.09	42.11±3.02
6-12 month	76.54 ± 15.94	21.85 ± 4.94	35.92±5.11
13-24 month	56.17 ± 17.16	21.39 ± 6.58	36.39±6.13
More than 24 months	64.55 ± 15.94	21.77 ± 6.54	35.31±6.40
F(p)	7.027*(<0.001*)	0.916 (0.435)	3.542* (0.016*)

t: Student t-test F: F for ANOVA test

The above table revealed that, there was a statistically significant positive relation between stress and self efficacy in relation to (marital status, level of education and occupation) (P=0.001, 0.0020 &. 001 respectively for stressors, (P=0.027, 0.001 & 0.010 respectively) for self efficacy. Moreover, level of hope was statistically significant related to duration of illness (P=0.016).

Table-8: Relation between demographic data, stressors, self-efficacy and level of hope among the studied subjects (n = 160)

Demographic data	Stressors	Self- efficacy	levels of hope
	Mean ± SD.	Mean ± SD.	Mean ± SD.
Dialysis period/month			
<6	83.0 ± 16.42	24.44 ±5.55	43.0±2.06
6<12	68.19 ± 13.99	21.62 ±4.64	36.95±4.81
12:24	73.29 ± 19.93	22.24 ±5.24	35.47±7.03
More than 24 months	63.35 ± 16.38	21.74 ±6.64	35.22±6.18
F(p)	5.388*(0.001*)	0.554 (0.646)	4.971* (0.003*)
Heredity			
Yes	64.04 ± 17.90	21.87 ± 6.50	35.67±6.79
No	66.50 ±17.08	21.94 ± 6.18	35.97±6.11
t(p)	0.633 (0.528)	0.051 (0.959)	0.269 (0.790)
Other diseases			
Yes	70.64 ± 17.51	22.80 ± 6.37	34.70±6.75
No	62.99 ± 16.29	21.32 ± 6.04	36.77±5.65
t(p)	2.834*(0.005*)	1.495 (0.137)	2.038*(0.044*)

t: Student t-test F: F for ANOVA test

As shown in Table-8 there was a statistically significant positive relation between stress, dialysis period and other diseases (P=0.001, 0.005). Moreover, level of hope was statistically significantly different with dialysis period and other diseases (P=0.003, 0.04).while, there was no a statistically significant difference between stress, self-efficacy, level of hope and heredity.

DISCUSSION

This study was aimed to identify the relation between stressors ,self efficacy and level of hope for patients with chronic renal failure, undergoing hemodialysis .As regards Socio-demographic data among the studied subjects, the current study results revealed that more than half of the studied subjects were males(56.9%), two thirds of them (62.5%) without job and more than half of them their family members were ranged from (3-5) member.

A research study in United State Renal Data System USRDS [29] consistent with the study results, male patients showed a substantially higher prevalence of CKDs and the incidence rate of ESRD than those observed in female patients. A previous study by Carrero [30] contradicted with study results, CKDs were more prevalent in women than in men. Two-thirds of the studies that reported gender-specific CKD prevalence in women.

A research study conducted by Anees *et al*., [1] showed that , unemployment represent a major stressor among hemodialysis patients. According to that study, (60.2%) of patients receiving dialysis were not able to keep their profession and (36.7%) had to retire after the beginning of dialysis. Loss of employment is related to the appearance of intense anxiety and sexual problems while employment positively affects the psychological status and libido of spouses .Another significant stressor was fatigue, which could negatively affect the ability of the person's to work and to participate in various daily activities. Physical or mental fatigue can be caused by sleep disorders or fatigue after dialysis [31].

Moreover ,a similar study by Feroze *et al*., [32] found that, patients with progressive decreased of CRF come upon with intense fear and anxiety for any disability or death, concern about disturbance of social, professional function and financial problems. During this period, coexisting sleep disorders, depressive symptoms and intense concern about the loss of autonomy, employment, family role and sexual function.

The present study also revealed that, more than two thirds of the studied subjects (70.6%) undergoing dialysis for more than 24 months, A research study by Meuleman, de Goeij, & Halbesma[33], found that, patients with CKD perceived their illness as having a substantial impact on their lives. However, patients with an earlier stage of CKD perceived this to a somewhat lesser extent [34], pointed out that, patients described fears related to the future consequences associated with starting dialysis at a later stage in their disease [35].

Similary, a research study conducted by Theofilou [36] revealed that, depression occurs more frequently among patients with CRF mainly between the third to the ninth year of treatment and affects females with greater frequency. Also, depression manifests mainly with sadness, anxiety, depressed mood, poor self-esteem, pessimism about the future, decreased libido, sleep disorders and loss of appetite. Moreover, during the period of starting a dialysis program, one in 500 patients attempt suicide or violates the dietary rules [37].

In relation to causes of illness ,the study findings found that, more than one quarter of the studied subjects (30%) their cause of illness might be related to hypertension and nephritis and only (9%) of them might be related to diabetes. According to National Kidney Foundation [38]. The two leading causes of kidney failure, called ESRD, were diabetes or adult onset diabetes and high blood pressure. When these two diseases were controlled by treatment, the associated kidney disease can often be prevented or slowed down. Moreover, the third leading cause of end stage kidney disease in the U.S. is glomerulonephritis, a disease that damages the kidneys' filtering units, called the glomeruli. In many cases, the cause of this disease is not known, but some cases may be inherited and others may be triggered by an infection

CKD is associated with serious medical conditions, such as diabetes, cardiovascular disease, stroke, dementia, and arthritis [39]. Regarding the degree of stress experienced by the studied subjects the study results , showed that more than fifty percent of the team (60%) were experienced moderate degree of stress while, (17.5%) of them had a severe degree of stress. Compared to a previous study conducted by Naik, Dyer & Kunik [40] declared that, pschological problems were evident in patients with chronic renal failure and might compromise self-management efforts and self efficacy. Thus, emotional management was a critical component in self-management of patients with chronic illness Furthermore, as the process of hemodialysis often leads to patients' disability and limits their everyday activities, it imposes on them high levels of mental tension, anxiety, and depression [11].

In accordance, Mollahadi *et al.*, [41] in a study on comparison of stress, anxiety, and depression among hemodialysis patients and kidney transplant (KT) patients in Tehran, showed the levels of stress as (51.7% & 38.4%) In hemodialysis and KT patients, respectively. This study showed that, prevalence of stress was higher in both hemodialysis and KT patients. Although it was more among hemodialysis patients. Depression was one of the most common psychological problem among hemodialysis. through time, mental disorders were increased among these patients due to a changed in their lifestyle and reduced social function [32]. Therefore, conducting the required interventions is essential to treat these patients. One of the methods of administering psychotherapy for these patients is hope therapy.

Similarly, Chan *et al*., [31]reported that, the most common stressors which affect patients undergoing hemodialysis were financial constrains, changes in social and marital relationships, frequent hospital admission, inability of holiday vacation, restriction of leisure time, relationships with nursing and medical staff, fear of disability or death, increased dependence on artificial kidney machine, feeling of uncetainity about the future and physical fatigue.

The progression of the illness and having a machine-dependent life may significantly influence the daily lifestyle and indirectly affect the patients and their families. This chronic disease and long-term treatment deeply impacted these patients and might cause increased stress levels among them.

On other contrary, study results conducted by Hsin-Ya *et al*., [13], the patients who were on hemodialysis for longer periods of time had fewer stressors. These patients may have become accustomed to their treatments and may perceive hemodialysis as a routine activity, so the feelings of stress decreased over time. In addition ,these patients may have appropriate coping strategies to adapt to their treatments. Therefore, more attention should be provided to the feelings and concerns of patients who were new in hemodialysis; they should be provided with detailed and accurate information ,resources regarding hemodialysis and be encouraged to attend support groups.

Moreover, a research study about Physiological and psychosocial stressors among hemodialysis patients in educational hospitals of northern Iran reported that, many of the psychosocial stressors experienced by renal failure were associated with the logistics and economic aspects of being in treatment. Transportation; cost of treatment or other costs; decreased in social life; interference with job; length of treatment were all reported by more than 90% of the participants [42].

Also, the current study Results found that, less than half of the studied subjects had fair and poor self efficacy (45.6%) according to Richard and Shea[43], self efficacy was the moderator or mediator of the concept and self-management. It was an important concept in disease control, emphasizing health guidance to guid patients to focus on their own problems. Patients need to identify the problems of most concern and what they mean to them. These results were similar to the results of the study conducted by Zimbudzi, Lo &Misso [44] & Lee, Wu & Hsieh [12] found that CKD progression, had been included in various approaches for use with persons diagnosed with CKD in all stages, specifically with patients on hemodialysis and peritoneal dialysis

Furthermore, a research study by Wu *et al*., [45].Lived experiences and illness representation of Taiwanese patients with late-stage chronic kidney disease found that, patients with chronic renal failure perceive their illness as more unpredictable in nature, which could impact upon patients' sense of control and adherence to self-management regimens.Another research study conducted by Mohamadinejad *et al*., [46], declared that, self-efficacy was also considered an important concept in the assessment and improvement of chronic conditions (self-management, quality of life, behavioral modification, hopefulness, lifestyle modification, physical and mental health, and disease prevention).

Moreover, a similar study conducted by Shojaee *et al*., [18] about measures of self-efficacy among hemodialysis ,and showed that,(60.8%) self-efficacy was moderately true among hemodialysis with value significance of less than (0,05) easy to commit to achieving goal were reported not at all true (20.4%).Among hemodialysis versus who expressed that self-efficacy scale were not at all true. Patients' ability to keep calm during difficulties and relied on their ability to adapt were found to be moderately true among (52.7%) of hemodialysis compared to successes, organizing and correcting objectives, spending time with patient's family, and emphasizing patient's religious beliefs,

In other contrary, patients with CKD believed that their treatment positively impacts on their condition, with following medical advice being the best course of management [35]. In this regard, the acceptance of having a chronic illness help patients to identify one's desires or preferences as well as having free will to manage the disease and recommend regimens.

Concerning the level of hope among the studied subjects the study findings declared that, more than fifty percent of them had high level of hope (50.6%) similar study conducted by Melo *et al.*, [47], patients with chronic renal failure had high level of hope, and this might lead them to travel long distances in search of treatment for their illness; to submit to the relentless invasive procedures; to change their lifestyle, routine and attach to the treatment, despite being weakened. Mehmet and Michael [48] showed that ,hope is something that can be learned and acted as a barrier against relapse of depression through making positive emotions. Furthermore,Cheavens & Grabmeier [24] and Sturesson & Ziegert [49], reported that, hope therapy is one of the strong and effective methods to fight with and overcome anxiety and depression, and those who are either highly hopeful or gradually get hopeful had more knowledge about health issues, types and severity of stress, compared to those with lower levels of hope. They also had better self-care and able to fight with the disease more efficiently.

This reflected that, hemodialysis is inevitable, unavoidable and brings direct changes in lifestyle, in its

objectives, in family, work, income and body image. Thus, chronic patients cannot lose hope, and for this they stick to their faith and/or their religion to redirect their days in search of better quality of life. On the contrary, Folkman [19] reported that, people with little hope are neither likely to find possible solutions for their goals, nor are they highly motivated to achieve them.

When patients were under the influence of a disease, they lose their hope for the future and their levels of quality of life decreased. Hence, all enjoyments of life seem meaningless to them. This is while when patients, despite the pain and difficulties caused by a disease, can maintain their hope; this feeling directs and stimulates them to move towards a better life, which changes their lives. In this regard, they accept their disease and instead of focusing on their disease, they focus on positive and pleasant aspects of their lives. Consequently, this leads them to be more satisfied with their lives and increases their mental health and quality of life.

In this respect, Individuals with a high level of hope can protect themselves against depression and anxiety and were less likely to experience depression and anxiety again. These individuals have a more realistic goal and melt away hopelessness that ruins their confidence. Consequently, they are more resistant against negative events.

The study findings also revealed that, statistically significant negative correlation found between stress, self efficacy and level of hope .This showed that, the more stresses faced by patients the less self efficacy and level of hope among them. As reported in earlier studies conducted by Balsanelli, Grossi, & Herth [50], patient's hope level had a negative correlation with anxiety and depression, self management and a positive correlation with self-esteem and self-respect. When the hope level was high, self-esteem and self-respect were also high. In contrast, the anxiety and depression scores were low.

Moreover, Mehmet and Michael [48] showed that, hope is something that can be learned and acts as a barrier against relapse of depression through making positive emotions.. Thus, keep the hope while facing the disease was hard, continuous and important process because it stimulates patients with chronic renal failure and their social support network to seek new solutions or the acceptance of the new condition imposed by the disease [11].

The study findings also revealed that, there was no, statistically significant correlation between self efficacy and level of hope ,this result contradicted with results of Zhaoand Cui [51] pointed out that, the hope level was an important factor that affects the patient's self-management ability. Improving the patient's hope level had a positive effect to enhance his or her self-care. In addition, other studies showed that, the self-care behavior ability, disease, coping styles and adaptability was positively correlated with the hope level of patients with chronic diseases. This might be explained that, patients with chronic renal failure were able to resist against problems and difficulties .They do not lose their hope and they consider their problems as challenges and do not let their lives be limited to the difficulties, which were caused by the disease. These people had high levels of tolerance and patience.

CONCLUSION

Based on the findings of the current study, it was concluded that. The highest percentage of the studied subjects were suffering from moderate degree of psychosocial stressors, such as depression, sadness, changed in family responsibility and dependence on others, nearly half of the studied subjects had fair self efficacy, more than fifty percent of them had high levels of hope. Statistically significant negative correlation was found between stress and self-efficacy .Moreover, a negative correlation was found between stress and level of hope while, there was no, statistically significant correlation between self-efficacy and level of hope.

Recommendations

It Can Be Recommended That

- Develop and coordinate multidisciplinary team approach in the hemodialysis unit that to assist patients in maintaining a normal life style at the highest possible level.
- More attention should be provided to hemodialysis patients feeling and concerns through detailed,accurate information,resources regarding hemodialysis and be encouraged to attend support groups.
- Supportive and therapeutic intervention programs that are evidence based should be provided for both patients with chronic renal failure and their families is beneficial, and will help to reduce psychological problems of these patients.
- Intervention and counseling sessions should be provided to staff units' through educational programs to raise their awareness and promote the biopsychosocial approach to the disease.
- Widening the scope of this study by carrying it on a larger sample size and different hemodialysis units.

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