

# Quality of Life of Hemodialysis Elderly Patients at Assiut City

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**Abstract:** *Background:* All stages of CKD are associated with increased risks of premature mortality and/or decreased quality of life. *Aims of the study:* To assess quality of life for hemodialysis elderly patients at Assiut city. *Subjects and method:* descriptive design was carried out for hemodialysis elderly patients (83) within all hemodialysis units at Assiut city. Structured interview questionnaire developed by the researchers was used in the study, it was structured into two parts: Part 1): It was included personal characteristics of the elderly, such as name, age, marital status.etc, Part (2): Quality of life index scale, Dialysis Version- III, Arabic Version (Halabi, 2004). *Results:* It was noticed that 71.1% of the studied elderly hemodialysis patients' age ranged from 65- 75 years old, while only 4.8% of them were more than 85 years old. 90.4 % of hemodialysis elderly had mild to moderate Q O L. *Conclusion:* It was concluded that less than on tenth of the studied hemodialysis elderly had high quality of life. *Recommendation:* Enhance health care services level for elderly to eliminate complications and improve quality of life, develop specific transportation supportive system for retired elderly to improve quality of life.

**Keywords:** Elderly, Hemodialysis, Quality of life

## 1. Introduction

During the last century, human lifespan has increased substantially resulting in a substantial increase of elderly people over the next two decades. Individuals aged 65 years or more represented 12.8% of US population in 2008. By 2030, the number of elderly people is expected to be 71 million, accounting for 21% of US population (Bolignano, et al, 2014).

One in 10 people worldwide have kidney disease, according to the first detailed global report on care delivery for kidney disease, although high-income countries have the highest costs for dialysis and kidney transplantation, fewer than one (29%) in three high-income countries consider chronic kidney disease a priority compared with almost two (59%) in three low-income countries (Marcia, 2017).

Acute kidney injury (AKI) is a syndrome characterized by a rapid (hours to days) deterioration of kidney function. It is often diagnosed in the context of other acute illnesses and is particularly common in critically ill patients. The clinical consequences of AKI include the accumulation of waste products, electrolytes, and fluid, but also less obvious effects, including reduced immunity and dysfunction of non-renal organs (organ cross-talk) (Singbartl & Joannidis, 2015).

Chronic kidney disease (CKD) is a global health burden with a high economic cost to health systems and is an independent risk factor for cardiovascular disease (CVD). All stages of CKD are associated with increased risks of cardiovascular morbidity, premature mortality, and/or decreased quality of life (Nathan, et al, 2016).

## 2. Study Rational

Patients in the final stage of the CKD have a worse quality of life (QOL) in comparison to the general population of the same age. The treatment for CKD patients aim should not be only longevity, but also the strengthening of QOL, since

plain survival it is not sufficient, it is necessary to live well (Pereira, et al, 2017).

In a study of prevalence of end stage renal disease in Assiut Governorate, Upper Egypt, A cross-sectional multi centric study was carried out with 1109 at Assiut Governorate patients in 13 hemodialysis units found that more than 25 % of End Stage Renal Disease patients are > 50 years old age (Abbasi, et al, 2015).

Gerontological nurses work with healthy older adults in their communities, acutely. The role of gerontological nurses has a significant role to play in the care of older people. They provide focused health screening, counseling, crisis intervention, and comprehensive care to this population. They serve as important advocates in directing appropriate utilization of resources and making referrals that promote continuity of care geared to the needs of older adults. Provide essential educational services to older clients, their families, and other nursing and health care professionals involved in their care (Mauk, 2014).

### Research questions:

Do the hemodialysis Elderly patients have low quality of life?

Do the hemodialysis Elderly patients have low satisfaction toward different life aspects?

Do the hemodialysis Elderly patients have low importance in according to different life aspects?

### Aim of the study

To assess quality of life of hemodialysis elderly patients in Assiut city.

### Subjects and Method

### Research design:

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Descriptive research design was carried out in the present study.

#### Setting:

The study carried out for hemodialysis elderly patients within all hemodialysis units at Assiut city; it was included: Assiut University Hospital's hemodialysis unit, Health Insurance Hospital's hemodialysis unit, Al- Iman General Hospital's hemodialysis unit, Assiut General Hospital's hemodialysis unit, and Assiut Fever Hospital's hemodialysis unit.

#### Subjects:

The target population of the study are **included all** elderly (**≥65 years**) with end stage of renal disease and treated with hemodialysis, which included **83** elderly patients from the previous setting.

#### Sampling technique:

Convenient sample are used in this study. The patients are selected by total coverage technique.

#### Tools of the study:

Structured interview questionnaire developed by the researchers for data collection based on review of related literature. It was **structured into two parts**:

#### Part (1):

It was included personal characteristics of the elderly, such as name, educational status, age, marital status ...etc.

#### Part (2):

Quality of life index scale, Dialysis Version- III, Arabic Version (**Halabi, 2004**), that composed of two domains:

- **Part 1:** Likert Scale statement ranged from (1=very dissatisfied to 6= very satisfied) that describe how the patient satisfied with that area of his life it includes 34 statement.
- **Part no 2:** Likert Scale statement ranged from (1= very unimportant to 6= very important) that describe how important that area of the elderly patient's life it includes 34 statement.
- The necessary modification in the scale was done to be suitable to the study conditions as following:
- **Part 1:** Likert Scale statement ranged from (1= dissatisfied, 2= moderate satisfied and 3= satisfied) that describe how the patient satisfied with that area of his life it includes 29 statement.
- **Part 2:** Likert Scale statement ranged from (1= unimportant, 2= moderate important and 3=important) that describe how important that area of the elderly patient's life it includes 30 statement.
- **Total scoring system** for Hemodialysis Patient's Quality of Life scale: <60% indicate low quality of life, from 60% to less than 85% indicate mild to moderate quality of life,

and 85% and more indicate high quality of life ( **Halabi, 2004**).

#### Validity:

The tool was reviewed by 5 experts in the field of nursing science who reviewed the instrument for clarity, relevance, understanding, and applicability.

#### Reliability:

The Cronbach's alpha coefficient for the instrument was 0.94 with a test-retest reliability of 0.94.

### 3. Methodology

#### 1) Administrative phase

An official letter approval was obtained from the Dean of the Faculty of Nursing Assiut University to the previous mentioned setting and an official letter approval was obtained from each mentioned setting which includes a permission to carry out the study in the selected areas.

#### 2) Ethical considerations

The research proposal was approved from ethical committee in the faculty of nursing, there is no risk for the study' subjects during application of the research, participants were advised of their rights to withdraw from the study at any point, participants were coded for data entry so their names couldn't be identified, participant agreement for voluntary participation was obtained and the nature of the study was explained, confidentiality anonymity was assured.

#### 3) Pilot study

Pilot study was carried out before starting data collection on 10 percent from the elderly hemodialysis patients. It aimed to test the clarity of the tools and to estimate the required time to fill the questionnaire, and the pilot study was included in the study.

#### 4) Field work

The researcher started to collect data from first of September 2016, until the end of June 2017. After obtaining approval for conducting the study, the researcher referred to the dialysis unit in every previous mentioned setting and selected all the patients who met the inclusion criteria via interviews and review of medical records.

#### 5) Statistical analysis and scoring system

The obtained data reviewed, prepared for computer entry, coded, analyzed, and tabulated. The data were tested for normality using the Anderson-Darling test and for homogeneity variances prior to further statistical analysis. Categorical variables were described by **number and percent**, where continuous variables described by mean and standard deviation (**Mean, SD**).

**Chi-square test** used to compare between categorical variables where compare between continuous variables, **p < 0.05** was considered statistically significant. All analyses were performed with the **IBM SPSS 20.0** software.

4. Results

**Table 1:** Personal characteristics of the studied hemodialysis elderly patients, at Assuit city' hospital, 2017 (no. = 83)

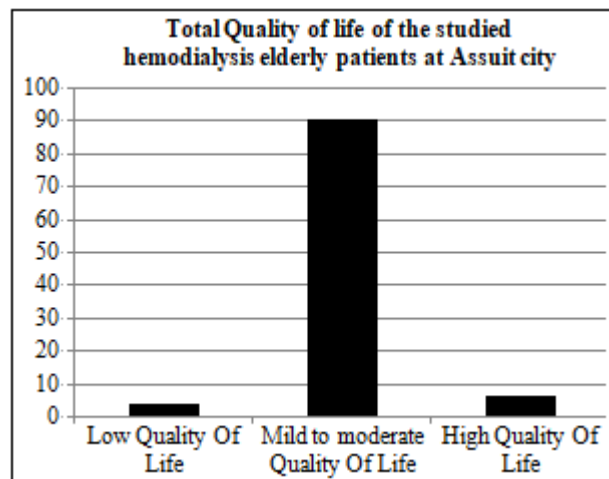
Items	No	%/ 100
<b>Age</b>		
65 - <75 years	59	71.1
75-<84years	20	24.1
≥85 years	4	4.8
<b>Gender</b>		
Male	52	62.7
Female	31	37.3
<b>Social status</b>		
Single	1	1.2
Married	48	57.8
Divorced	3	3.6
Widowed	31	37.3
<b>Level of Education</b>		
Illiterate	22	26.5
Reads and writes	6	7.2
Basic education	22	26.5
Secondary education	5	6.0
University	28	33.7
<b>Residence</b>		
Rural	37	44.6
Urban	46	55.4
<b>The duration of the disease</b>		
less than 5 years	44	53.0
5-10 years	26	31.3
more than 10 years	13	15.7
<b>Where the elderly live</b>		
Live alone	11	13.3
Live with family	72	86.7

**Table 2:** Satisfaction domain of Quality of Life, for the studied elderly patients, at Assuit city' hospitals, 2017(no = 83)

Quality of Life ( satisfaction domain)	Pretest	
	No	%
Not satisfied	31	37.3
Mild to moderate satisfaction	44	53.0
high satisfaction	8	9.6

**Table 3:** Importance Domain of Quality of Life, for the studied elderly patients, at Assuit city' hospitals, 2017 (no = 83)

Quality Of Life ( importance domain)	Pretest	
	No	%
Not important	1	1.2
Mild to moderate important	69	83.1
High importance	13	15.7



**Figure 1:** Total Quality of life scale among studied elderly, at Assuit city' hospital, 2017 (No. = 83)

**Table 4:** Relationship between total Hemodialysis Elderly Patients' Quality of Life and personal characteristic among studied elderly, at pre, post and follow up at Assuit city' hospital, 2017( n=83).

Item of personal characteristic.	Q O L						P value
	Low quality of life		mild to moderate quality of life		high quality of life		
	No	%	No	%	No	%	
<b>Age</b>							
65-74 years	2	2.4	54	65.0	3	3.6	0.874
75-84 years	1	1.2	19	22.8	0	0.0	
≥85 years	0	0.0	2	2.4	2	2.4	
<b>Gender</b>							
Male	2	2.4	47	56.6	3	3.6	0.982
Female	1	1.2	28	33.7	2	2.4	
<b>Social status</b>							
Single	0	0.0	1	1.2	0	0.0	0.960
Married	1	1.2	44	53.0	3	3.6	
Divorced	0	0.0	3	3.6	0	0.0	
Widowed	2	2.4	27	32.5	2	2.4	
<b>Education level</b>							
Illiterate	1	1.2	19	22.9	2	2.4	0.303
Read / writes	0	0.0	6	7.2	0	0.0	
Basic education	1	1.2	20	24.0	1	1.2	
Sec. education	0	0.0	5	6.0	0	0.0	
high educated	1	1.2	25	30.0	2	2.4	
<b>Residence</b>							
Rural	3	3.6	31	37.3	3	3.6	0.104
Urban	0	0.0	44	53.0	2	2.4	
<b>Disease' duration</b>							
less than 5	1	1.2	12	14.4	2	2.4	0.522
5-10 years	2	2.4	41	49.4	3	3.6	
>10 years	0	0.0	22	26.4	0	0.0	

Chi-squire test

The results of the present study are representing the relation between hemodialysis elderly patients' quality of life and their family caregivers' burden.

Table (1) shows the personal characteristics of the studied elderly hemodialysis patients, it was noticed that 71.1% of the studied elderly hemodialysis patients' age ranged from 65- 75 years old, while only 4.8% of them were more than 85 years old. The table revealed that 31.3% of the studied elderly hemodialysis patients had the disease since 5- 10

years ago, in which 53% of them had the disease since less than 5 years. Also 86.7% of elderly where live with their family care givers.

**Table (2)** illustrate that 9.6%, 37.3%&53%of the studied elderly shown high satisfaction, were not satisfied & mild to moderate satisfied with their life, respectively.

**As table (3)** shows 15.7%, 83.1 have high importance toward their life' aspects and mild to moderate importance, respectively.

**Figure 1** illustrates the total quality of life scale for hemodialysis Elderly patients, in which 3.6% of them had low Quality Of Life & 90.4 % of them had mild to moderate Quality Of Life, respectively.

**Table (3)** illustrate the relationship between total Quality Of Life and personal characteristics of studied hemodialysis elderly patient, in which 65.0%, 56.6%, 53.0% of elderly that 65-74 years, males & married, had mild Quality Of Life respectively.

## 5. Discussion

Chronic Kidney Disease (CKD) can be defined by a renal parenchymal injury (with normal kidney function) and/or by impaired renal function that persists for a period of three months or longer. CKD has gained increased attention from the international scientific community as a high prevalence of it has been reported in studies (**Salvador\_ and Magdalena, 2015**)

Regarding personal characteristics of the studied hemodialysis elderly, the finding of the present study revealed that about two third of them were male, in which about one third were female, and more than half of them were married, The predominance of data in humans suggests that the course of non-diabetic kidney disease is more aggressive in men than women. Male gender is arguably also a risk factor for progression of diabetic nephropathy (**Neugarten and Golestaneh, 2013**).

Also the results of (**Gesualdo, et al, 2017**) who conducted a study in **Preto Da University** about(Factors Associated with the Quality of life of Patients Undergoing Hemodialysis) reported that about two third of the studied elderly were males, and about one third were female, in which more than half were married. While (**Havva Tel, 2009**) who conducted a study about Determining Quality of Life and Sleep in Hemodialysis Patients in Turkey university, who showed that the majority of the studied elderly were females.

The present study shows that more than two third of the studied elderly were 65-<75 years old. It may relate to the life span in Egypt, 2016 is 71.48 years old(**CAPMUS, 2016**). This agreed with (**de Melo, et al, 2016**) who conduct a study in Brazil university about (Health-Related Quality of Life in Elderly Chronic Kidney Disease Patients Undergoing Hemodialysis) who reported that more than two third of the studied elderly had the same age such as the present study.

The finding of the present study revealed that the majority of the studied elderly were live with family. It related to the extended family tradition that preserved till now in Upper Egypt. These results on the contrary with study conducted by (**de Melo, et al, 2016**) showed that the majority of the studied elderly were life alone in their own places.

The perception of quality of Life by patients with end-stage renal disease is an important measure of patient outcome. Patients on hemodialysis have a significant level of disturbance in their quality of Life (**National Kidney Foundation, 2017**). In the present study revealed that the majority of the studied elderly' quality of Life were determined to be mild to moderate. This finding is consistent with (**Havva Tel, 2009**) who revealed that the studied elderly had a mild to moderate quality of Life.

In the present study, the variable of educational level had effect on the total quality of life. In which, a very low percent of the studied hemodialysis elderly that had high educational level had high quality of life. This finding was in the same line with findings of studies that conducted by (**Manns, et al, 2003**) about Quality of life in patients treated with hemodialysis or peritoneal dialysis: What are the important determinants who reported that higher educated studied elderly showed higher quality of life.

Concerning to the duration of dialysis the patient how had dialysis duration from 5-10 years only less than five percent of them had high quality of life. This was agreed with (**Assal et al., 2006**) who conducted a study about Health related quality of life among Egyptian patients on hemodialysis, in Egypt Found that there was a negative correlation between Quality Of Life of the studied elderly and duration on dialysis. However, other studies were disagreed with our finding such as (**Adel &Abdul Manaf, 2012**) who reported that there was no relation between dialysis duration and quality of life level.

## 6. Conclusion and Recommendation

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

More than two half of the studied elderly showed mild to moderate satisfaction toward their life, the results illustrate that only more than one tenth of the studied elderly showed high importance toward life aspects of their life & less than on tenth of them had high quality of life.

**Recommendation:** Enhance health care services level for retired elderly to eliminate complications and improve quality of life, provide easy access transportation for elderly to improve quality of life.

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