Relationship between Social Support, Adherence to Pharmacological Treatment, and Quality of Life among Hemodialysis Patients

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Abstract

Social support and level of adherence to medications influences the quality of life among hemodialysis patients. The study aimed to investigate the relationship between social support, adherence to pharmacological treatment, and quality of life among hemodialysis patients. A correlational descriptive study was conducted on a convenience sample of 102 hemodialysis patients. Four tools were used to collect the required data: Demographic Data Sheet, Kidney Disease and Quality of Life, Perceived Social Support Scale, and Adherence to Pharmacological Treatment. Results of the study revealed that social support has a positive effect on adherence to pharmacological medications, and quality of life.
Keywords: Social support; Medication adherence; Quality of life; Hemodialysis.

1. Introduction

Social support is an individual's sense of interpersonal relationships with other individuals within a readily available network characterized by close personal relationships, shared interdependence, and identification with common values. In addition, family members play a vital role in improving self-care behaviors and facilitating patients' adjustment to illness [1, 2]. Social support has strong effects on patients' wellbeing and emotional status. Moreover, promoting patients' social support, especially emotional support from family may reduce the patients' psychological stress and psychiatric morbidities. Social support has strong effects on patients' wellbeing and emotional status. Moreover, promoting patients' social support, especially emotional support from family may reduce the patients' psychological stress and psychiatric morbidities [3]. Social support is important for improving the quality of life among hemodialysis patients through various mechanisms such as increasing patients' satisfaction from the provided care, enhancing adherence to the therapeutic regimen, as well, the more support patients had the better quality of life [3, 4].

Health habits have an impact on the individual's health. One of the most-studied health behaviors is pharmacological treatment adherence or adherence behavior. This can be defined as the extent to which a person's behavior (taking medication, following a diet, and making lifestyle changes) coincides with the advice received regarding health and prescriptions. Adherence is a multidimensional phenomenon determined by the interplay of five sets of factors: the health system or healthcare team, the disease, socioeconomic aspects, the treatment, and the patient. Hence, strict adherence to prescribed regimens is critical for treatment success. Non-adherence to dialysis can result in life-threatening consequences, increase morbidity, mortality, cost, and burden on the healthcare system [5].

Patients with chronic diseases should adopt behaviors that promote or protect health including healthy diet, physical exercise, and no smoking or alcohol drink. Therefore, the extent to which the patient feels able to carry out these changes will be crucial to developing these healthy behaviors and, ultimately, to their adherence to treatment [6]. Chronic kidney disease (CKD) is a global health problem. The Arab countries have a high prevalence of CKD

risk factors, e.g. diabetes, obesity, and hypertension. Unfortunately, the magnitude of CKD in the Arab world has not been studied well [7].

Quality of life (QoL) is a standard level that consists of the expectations of an individual or society for a good life. It is a subjective, multidimensional concept that defines a standard level for emotional, physical, and social well-being. It serves as a reference against which an individual or society can measure the different domains of one's own life [8]. According to patients' reports, they mainly need psychological, social, and spiritual support. However, the needs for social support vary among patients undergoing hemodialysis that is mainly attributed either to the quality and quantity of their social network or to the severity of the disease [9]. Hence, the current study provides information regarding the quality of life and its relationship to social support and adherence to pharmacological treatment among patients undergoing hemodialysis.

2. Aim of the Study

The aim of the study is to investigate the relationship between social support, adherence to pharmacological treatment, and quality of life among hemodialysis patients.

3. Materials and Methods

3.1. Research Design

A correlational descriptive study was conducted.

3.2. Setting

The data was collected at the artificial kidney unit in Quwesna Hospital, Menoufia governorate, Egypt.

3.3. Sample

A convenience sample was included in the study consisted of (102) patients in previously mentioned hospitals.

3.4. Tools

Data was collected using:

- **The Demographic Data Sheet:** it is prepared by the researcher to collect demographic data about the study sample based on hospital records. It mainly addresses the following information: age, marital status, and educational level.
- **Kidney Disease and Quality of Life (KDQOL-SF™ 1.3):** it is translated into Arabic and validated items. It includes nine domains: global health, physical, role, emotional, cognitive, social functioning, fatigue, nausea/vomiting, pain, and financial impact. Scores for these questions range between 0 and 100. For scale evaluating global health and function, a higher score represents higher level of functioning and health. For scales evaluating symptoms, a higher score indicates more problems and higher level of symptoms [10]. The Cronbach's alpha values that exceeded 0.70 for all scales.
- **The Perceived Social Support Scale:** The second scale is the Multidimensional Scale of Perceived Social Support (MSPSS). It was used to assess perceptions of social support adequacy from the following three sources: family (Items 3, 4, 8, and 11), friends (Items 6, 7, 9, and 12), and significant others such as healthcare team members (Items 1, 2, 5, and 10). This scale includes a 12-items, and each item is measured using a 7-point Likert scale ranging from 1 (very strongly disagree) to7 (very strongly agree). The total score ranges from 7 to 84. The higher scores indicate higher perceived social support [11]. The MSPSS was translated into Arabic to be administered among patients with end stage renal disease (ESRD) receiving hemodialysis.
- **Adherence to Pharmacological Treatment:** adherence was measured using an adapted version of the Haynes-Sackett test, which was originally composed of two items. Responses on one of the items follow a dichotomous format in which the interviewee indicates whether he/she has ever failed to comply with treatment (item 1), preceded by instructions that recognize the difficulties most people experience in following the clinical pharmacist's advice. In this case, this item is subdivided into three items focusing on nonadherence to medication, physical exercise, and the diet recommended by the clinical pharmacist. The other item has an open-response format in which the patients record the number of times they have forgotten to take their medication during the last 7 days (item 2), or the number of times they have not followed the exercise plan or diet recommended by their doctor.

A pilot study was carried out before starting data collection on 10% of the sample, to evaluate the tentative developed tools for clarity and applicability, as well to estimate the time needed for data collection. Needed modifications were carried out. The validity of the tools was determined by five experts to review these instruments and judge them to measure what was intended to be. reliability was tested by test retest for both questionnaires .84 and .79 respectively.

3.5. Procedure

After verbal consent from participants obtained, the study was started. The patients from the hospital were asked to answer the questionnaires and returned it to the researcher. The study lasted 3 months, it was started at first October to the end of December 2023.

3.6. Ethical Consideration

This study was conducted in compliance with the Declaration of Helsinki and Ethical Guidelines for Research Involving Human Subjects after receiving approval from the ethical review board in the hospital. Each participant was informed about the study purpose. The subjects were informed that their participation is totally voluntarily, and confidentiality and anonymity of the subjects were assured.

3.7. Statistical Analysis

Results were statistically analyzed using SPSS package. Quantitative variables were presented in the form of mean and standard deviation (SD). Pearson correlation. Statistical significance was considered at p-value <0.05.

4. Results

Description of the sample characteristics

Table (1) clears that (47.1%) were male, while 52.9% were female, (62.7%) of the studied sample were married, while the others were single, widowed or divorced (33.3%) were less than secondary school. As well, more than one third of them (34.3%) their age was ranged between (50-60) year with a mean age of 45.69 years (SD=12.961).

Table (2) it is evident that, mean score of social support by family were 19.33(7.79), however, mean score of social support by friends were 17.39(8.35), and by significant other were 18.24(7.76), with no significant statistical differences.

Table (3) illustrates that participants had a mean score for global health of 65.35 (27.31). Among functional scales, role functioning scored the highest 49.98 (34.45), whereas emotional functioning scored the lowest 38.70 (28.36). The most distressing symptom on the symptom scales was Dyspnea 55.55 (32.94) followed by insomnia and appetite loss.

Table (4) indicates that the test finding showed that there is positive correlation among quality-of-life items and symptoms and perceived social support (at 0.01 significance).

Table (5) indicates that social support has positively correlated with adherence to pharmacological medications, and quality of life.

Table-1. Distribution of Demographic and Clinical Characteristics (N = 102).

variable	N (%)
Sex	
Male	48 (47.1%)
Female	54 (52.9%)
Age	
20-3o year	15 (14.7%)
30-40 year	22(21.6%)
40-50 year	18 (17.6%)
50-60 year	35 (34.3%)
60-70 year	12 (11.8%)
Mean (SD)	45.69(12.96)
Marital status	
Single	18(17.6%)
Married	64 (62.7%)
Divorced	11 (10.8%)
Widowed	9 (8.8%)
Educational Level	
Illiterate	17(16.7%)
Less than secondary	34 (33.3%)
Secondary	28 (26.5%)
University	23 (23.5%)

Table-2. Mean Score of Social Support.

Social support	Mean	± SD	F- value
Namely Family	18.55	7.46	
Friends	18.20	7.78	0.107
Significant Other	18.67	7.42	p= 0.898
Total Social Support	55.44	21.79	

Table-3. Mean score of all items in QoL (N = 102)

Item	Mean (SD)
Global health status/QoL	65.35 (27.31)
Functional scales	
Physical Functioning	47.88 (29.92)
Role Functioning	49.98 (34.45)
Emotional Functioning	38.70 (28.36)
Cognitive Functioning	48.83 (24.20)
Social Functioning	45.56 (32.61)
Symptom scales	
Fatigue	47.38 (31.77)
Nausea and Vomiting	44.77 (28.81)
Pain	45.26 (34.57)
Dyspnea	55.55 (32.94)
Insomnia	50.98 (36.54)
Appetite loss	50.32 (37.74)
Constipation	39.21 (33.95)
Diarrhea	34.96 (32.96)
Financial difficulties	35.62 (31.90)

Table-4. The Pearson correlation between the main study variables (quality of life and social support).

Variable	Social support
Global health status	.783[**]
Functional scales	
Physical Functioning (PF)	.845[**]
Role Functioning (RF2)	.842[**]
Emotional Functioning (EF)	.776[**]
Cognitive Functioning (CF)	.887[**]
Social Functioning (SF)	.838[**]
Symptom scales	
Fatigue (FA)	.898[**]
Nausea and Vomiting (NV)	.746[**]
Pain (PA)	.864[**]
Dyspnea (DY)	.760[**]
Insomnia (SL)	.836[**]
Appetite loss (AP)	.806[**]
Constipation (CO)	.821[**]
Diarrhea (DI)	.833[**]
Financial difficulties (FI)	.774[**]

Table-5. Correlation among social support, adherence to pharmacological medications, and quality of life.

Items	1	2	3
1. Social support	-----		
2. Adherence to medication	.70	-----	
3. Quality of life	.80[**]	.79[**]	-----

5. Discussion

Patients under hemodialysis treatment suffer from numerous psychological and social problems. Low awareness and emotional problems result in the increase of anxiety and reduction of perceived social support. Reduction of social support has a negative effect on treatment outcomes [12]. It is evident that dialysis patients have been determined to get the utmost social support from their families. In the studies conducted by Mollaoğlu [13], it has been found that dialysis patients receive the utmost support from family members. Also, Eneanya [14] reported that home modality patients appear to have higher quality of life compared to in-center patients and less physical functioning when switching to in-center dialysis over time [14]. Family has an important role in enabling sick individuals to adapt to treatment and for them to be able to cope with the problems brought about by the disease.

Concerning the quality of life, it was illustrated that participants had a mean score for global health of 65.35 (27.31). Among functional scales, role functioning scored the highest 49.98 (34.45), whereas Emotional functioning scored the lowest 38.70 (28.36). The most distressing symptom on the symptom scales was dyspnea (Mean 55.55 (32.94) followed by insomnia and appetite loss. In the study conducted to determine the quality of life of dialysis patients [15], it was found that the patients have a low quality of life. In the studies conducted by Erez, et al. [16], and Nagasawa, et al. [17], they had also been determined that dialysis patients have low quality of life. The result of

our research is parallel to the literature. Hemodialysis treatment is considered to cause a decrease in the quality of life of patients for affecting individuals in all aspects physically, psychologically, socially, and economically.

Study findings revealed that social support has positively correlated with adherence to pharmacological medications, and quality of life, it is determined that the more support patients had the better quality of life they had. Also, in a study conducted by Pereira, et al. [18], a positive significant relation was detected between social support and quality of life [18]. In the study conducted by Polańska, et al. [19], it has been found that quality of life increases with higher levels of social support [19]. The level of perceived social support increases physical and psychological wellness level of dialysis patients. Since the quality of life of an individual who is physically and psychologically well would increase, it is considered that social support is an important factor for increasing the quality of life of dialysis patients.

6. Conclusion

According to the results of our research, quality of life and social support of dialysis patients have been found to be of medium level. Social support has a positive effect on adherence to pharmacological medications, and quality of life. Since dialysis treatment is a tough and long process, patients may face numerous physical and psychological problems and these problems may cause decrease in quality of life by reducing adaptation to the disease. For the patient's quality of life to be increased, we can suggest increasing the level of social support and including social support strategies in the care plans of nurses, who are important factors in providing social support.

Recommendations

The study recommended establishment educational programs centers in all hospitals which responsible for updating and refreshing the nurses' knowledge and practice; workshops which emphasize on the evidence-based practices about quality of life and social support, and adherence to pharmacological medications in hemodialysis units within the hospitals, these services must be included the recently graduated nurses, as well, conducting similar studies by including additional demographic variables.

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