



# Measuring beliefs and satisfaction regarding nursing care among Greek patients on hemodialysis

Elenitsa Ferentinou<sup>1,2</sup>, Margarita Giannakopoulou<sup>3</sup>,  
Panagiotis Prezerakos<sup>1</sup>, Athanassios Sachlas<sup>1</sup>,  
Paraskevi Theofilou<sup>1,4</sup>, Sophia Zyga<sup>1</sup>

<sup>1</sup>Department of Nursing, Faculty of Human Movement and Quality of Life Sciences, University of Peloponnese, Sparta, Lakonia, Greece,

<sup>2</sup>General Hospital of Sparta, Lakonia, Greece,

<sup>3</sup>Department of Nursing, National and Kapodistrian University of Athens, Attiki, Greece, <sup>4</sup>General Hospital of Thoracic Diseases, Athens, Attiki, Greece

**Address for correspondence:**  
Paraskevi Theofilou,  
12 Eratous Street,  
14568, Athens, Greece.  
Tel. +30 6977441502,  
Fax +30 2106221435.  
E-mail: pardrothe@gmail.com

**Received:** March 30, 2016

**Accepted:** May 12, 2016

**Published:** May 22, 2016

## ABSTRACT

**Background:** During the last decades an increased interest has taken place intensively with regards to the assessment of patients' satisfaction and their beliefs regarding provided nursing care. In the context of the present study, empirical data are presented in a sample of patients with end - stage renal disease undergoing haemodialysis in order to assess their beliefs concerning provided nursing care as well as their level of satisfaction related to the provided services. **Method:** A questionnaire which has been developed in the context of the current study was used, consisted of seven domains, in order to measure patients' satisfaction on maintenance dialysis. 320 questionnaires were totally distributed. The total number of the questionnaires that were filled in and finally returned was 284. **Results:** The mean of patients' status of health was 65,51 ( $\pm 21,562$ ). The majority of patients indicated above average satisfaction with regards to the availability of information before the beginning of haemodialysis as well as the provision of nursing care. It is important to note that a large percent of patients did not indicate satisfaction concerning psychological support provided by health professionals (16,7%), medical care (15,8%), frequency of medical visits (15,8%) as well as the feeling of safety during the session of haemodialysis (15,8%). **Discussion:** The findings are useful to healthcare professionals, doctors, psychologists, nurses, as well as health services administrators, entrusted to provide medical treatment in patients with kidney disease.

**KEY WORDS:** Beliefs, hemodialysis, nursing care, satisfaction

## INTRODUCTION

Patients suffering from an end-stage renal disease (ESRD) have to cope with many adversities, e.g., work and economic status, social roles, physical symptoms, limitations in food and fluid intake, changes in their body image, activity levels, self-image, health status, and normal routines [1]. Such constraints are expected to affect the patients' lives and their physical and social functioning, leading them to reconsider their personal and professional goals within the context of living with a chronic illness [2,3].

Hemodialysis (HD) is a complex procedure for the patient which takes place in hospitals or dialysis centers, mainly three times a week, thus implying substantial changes in the normal routine of patients' everyday lives [4]. Nevertheless, significant

developments that have been achieved in recent years on dialysis methods have contributed to the increased survival of these patients [5]. The main issue is how HD patients evaluate (if they are satisfied or not) provided nursing care in the context of a dialysis unit. The patients' satisfaction undergoing HD is a factor of great importance in the provision of a qualitative nursing care.

According to the findings of recent studies, 322 patients on maintenance HD in 3 Saudi dialysis centers participated in a study regarding factors affecting their satisfaction with their dialysis therapy. The results indicated that the level of satisfaction is influenced by gender, duration on dialysis, educational level, and standard of care given. Specifically, a lower level of education was associated with worse dialysis effect on stress, overall health, sexual life, hobbies, and exercise ability [6].

Moreover, the longer period since the commencement of the dialysis was associated with an adverse effect on finances and energy [6].

In a study conducted by Kim *et al.* [7] with regards to health-related quality of life (HRQOL) and its association with self-efficacy and the treatment satisfaction in Korean dialysis patients; the study subjects were 237 patients receiving either HD or peritoneal dialysis (PD) from two university hospitals. The main finding showed that patients' self-efficacy and treatment satisfaction could influence their HRQOL [7].

In the context of another study of Janssen *et al.* [8] regarding preferences of patients undergoing HD, with 4,518 patients, the results showed that the most important outcomes to patients were the safety of treatment, satisfaction with care at the clinic, and HRQOL. Patients were concerned about receiving good care, meaning safe treatment, and satisfaction with care. In contrast, life expectancy was rated as less important than one would have expected [8].

Bahadori *et al.* [9] investigated quality of provided services for patients with chronic kidney disease. This cross-sectional, descriptive-analytic study was performed from 23 January, 2014, to 14 February, 2014, in four HD centers in Kerman of Iran. All of the patients on chronic HD ( $n = 195$ ) who were referred to these four centers were selected and studied using census method. The required data were collected using the SERVQUAL questionnaire, consisting of two parts: Questions related to the patients' demographic characteristics, and 28 items to measure the patients' expectations and perceptions of the five dimensions of service quality including tangibility, reliability, responsiveness, assurance, and empathy. The highest and lowest means of negative gaps were related to empathy ( $-0.52 \pm 0.48$ ) and tangibility ( $-0.29 \pm 0.51$ ). In addition, among the studied patients' demographic characteristics and the five dimensions of service quality, only the difference between the patients' income levels and the gap in assurance were statistically significant ( $P < 0.001$ ) [9]. Overall, the results of the present study showed that the expectations of patients on HD were more than their perceptions of provided services [9].

In another study of Van Biesen *et al.* [10], patients' perceptions of information and education for renal replacement therapy were investigated. In total, 3867 patients from 36 countries completed the survey. Respondents were either on in-center HD or had a functioning graft at the time of the survey. The majority evaluated the general information about kidney disease and treatment as helpful, but 39% did not recall being told about alternative treatment options than their current one. Respondents were more often satisfied with information provided on in-center HD and transplantation than with the information provided on PD or home HD and were more satisfied with information from health care professionals versus other sources such as social media [10].

Finally, Palmer *et al.* [11] conducted a survey to evaluate patients' experiences of specific aspects of HD care across several countries in Europe and South America. 2748 adults treated in

HD participated in the study. Aspects of care that respondents the most frequently ranked as excellent were staff attention to dialysis vascular access; caring of nurses; staff responsiveness to pain or discomfort; caring, helpfulness and sensitivity of dialysis staff; and ease of reaching dialysis staff by telephone. The aspects of care least frequently ranked as excellent were information provided when choosing a dialysis modality, ease of seeing a social worker, information provided about dialysis, accuracy of information from nephrologist, and accuracy of nephrologists' instructions [11].

Although a considerable number of articles on ESRD have been published, few studies, particularly in Greece, have examined beliefs and satisfaction regarding nursing care among patients on HD. Furthermore, relevant studies have produced mixed findings. Consequently, the assessment of the current issue needs to be better understood and addressed more fully in ESRD patients.

The purpose of this study is to investigate the level of satisfaction as well as beliefs about different aspects of the function of a dialysis unit in Greek patients diagnosed with ESRD undergoing HD. We mainly hypothesize that the degree of satisfaction in this group of patients will be high.

## METHODS

### Participants

A cohort of 320 patients was recruited from 14 general hospitals in the broader areas of Athens and Peloponnese, respectively, undergoing in-center HD. From this cohort, 284 patients provided full data. Selection criteria included:

- a. >18 years of age
- b. Ability to communicate in Greek
- c. Diagnosed with ESRD
- d. On dialysis treatment
- e. An adequate level of cooperation and perceived ability.

All participants were Greeks who have signed a consent form to participate in the study. They had been informed of their rights to refuse or to discontinue participating in the study according to the ethical standards of the Helsinki Declaration [12]. Ethical permission for the study was obtained from the scientific committees of the participating hospitals. The data were collected from June 2014 to February 2015.

### Measurement

To collect our data, a questionnaire was developed based on the dialysis patient satisfaction questionnaire. After getting written permission, the adaptation and translation in Greek were done according to the minimal translation criteria (Mapi Research Institute, 2002). The process involved the translation from French to Greek language by two independent translators. An inverse translation from Greek into French by an independent translator who was bilingual took also place. To achieve content validity, the questionnaire was given to a physician with specificity in dialysis nephrology and a nurse with an extensive

experience in dialysis units, who commented on whether questions are legible and understandable.

The questionnaire consists of seven sections and is designed to measure the satisfaction of patients on chronic HD. Specifically, these seven sections are the following:

- Level of satisfaction with the dialysis unit
- Level of satisfaction with the environment of dialysis session
- Level of satisfaction of the conditions during HD session
- Level of satisfaction with nursing care
- Level of satisfaction with the information available before the start of dialysis
- Level of satisfaction with the information available in recent weeks/months
- Suggestions - Enhancements.

The questionnaire design followed the pilot study and investigation of the reliability and validity of it. The questionnaire was completed by 19 patients undergoing HD at the Dialysis Unit of the General Hospital of Sparta. The internal consistency was satisfactory, with an overall Cronbach's  $\alpha$  at 0.733, in the context of this pilot study [13]. Moreover, the sections - total score correlations provided evidence that all sections converge on the same construct [13].

### Statistical Analysis

For the presentation of the results related to the replies to the questionnaire of patients who participated in the survey, frequency analysis (frequencies) was conducted. In addition, for the examination of averages, command of descriptives was performed. The quantitative variables are presented as mean ( $\pm$  standard deviation) while qualitative variables as a frequency (%). Statistical analysis was performed with the statistical program IBM SPSS Statistics 22. Value  $P < 0.05$  was considered to indicate statistical significance.

### RESULTS

According to the results of this study, 67.3% were males and 32.7% were females. The 48.0% of patients were married, 28.7%

unmarried, 10.0% divorced, 10.0% widowed while the remaining 3.2% had another family situation. The 45.5% of patients being parents had two children, 31.5% had one child, 16.4% had 3 children, 6.1% had four children while one person (0.6%) had 7 children. The 77.8% of patients having little children had one child while the remaining 22.2% had 2 children. The 43.5% of patients having adult children had two children, 34.1% had one child, 15.2% had three children while the remaining 7.2% had four or more children.

The 39.6% of patients were graduate secondary school, 30.2% were primary school graduate and 30.2% were graduate higher education. The 62.4% of patients were retired, 11.7% were unemployed, 9.5% were part-time, and 9.1% were full-time while 7.3% engaged in household. The 48.1% of patients had an average monthly income of 800-1500 euros, 37.0% to 800 euros, and 14.8% over 1500 euros. 68.2% of people lived in the village while 31.8% in town. The 87.9% of patients had public insurance coverage. 6.0% had a combination of public and private provision, 3.4% had private coverage while a rate of 2.6% was uninsured. The 53.4% of patients started dialysis treatment in this unit in the decade from 2001 to 2010, the 32.0% from 2011 and 14.6% before 2001.

Table 1 shows the level of satisfaction of patients from conditions of HD session. We noted that in all cases, the majority of patients were above average satisfied. The patients were basically very or extremely satisfied with the care they received from the medical staff (84.1%), from the discretion of doctors and nurses during the clinical examination (80.9%) and the safety they felt during the therapy process (79.4%).

With regards to the level of satisfaction from the nursing care, we noted that in all cases, almost all patients were very to extremely satisfied. Patients were basically very or extremely satisfied with the result, in terms of time, in which nurses are changing sera or intravenous solutions (94.6%), from the kindness of nurses (93.3%), the technique by which the nurses took care of the injuries (92.1%), from the respect that showed nurses as to their needs (91.9%), the result, in terms of time, by which nurses made injectable medications (91.6%), the

**Table 1: Level of satisfaction from the conditions of HD session**

	Not at all	Little	Moderate	Considerably	Extremely
Psychological support they receive from all health professionals during dialysis	21 (7.4)	21 (7.4)	41 (14.5)	63 (22.3)	136 (48.2)
The care taken by medical staff	10 (3.5)	10 (3.5)	25 (8.8)	67 (23.7)	171 (60.4)
The hours that visits take place by doctors and nurses	13 (4.6)	30 (10.6)	41 (14.5)	64 (22.6)	135 (47.7)
The frequency of medical visits	19 (6.7)	37 (13.1)	40 (14.1)	63 (22.3)	124 (43.8)
The discretion of doctors and nurses during the clinical examination	5 (1.8)	13 (4.6)	36 (12.8)	78 (27.7)	150 (53.2)
Your participation in decisions about dialysis sessions	11 (3.9)	24 (8.5)	41 (14.5)	77 (27.3)	129 (45.7)
Access to your personal folder of hospitalization	14 (4.9)	30 (10.6)	48 (17.0)	75 (26.5)	116 (41.0)
The sense of security you feel during the treatment process	8 (2.8)	7 (2.5)	43 (15.2)	97 (34.4)	127 (45.0)
Your tolerance to hemodynamic disorders (dizziness, hypotension, hypertension) that may occur during the session	10 (3.6)	31 (11.0)	76 (27.0)	94 (33.5)	70 (24.9)
Your tolerance to cramps that may occur during the session	6 (2.1)	34 (12.1)	78 (27.7)	88 (31.2)	76 (27.0)
Your tolerance to other complications (e.g., hemostasis disorders) that may occur during the session	4 (1.4)	24 (8.5)	74 (26.3)	95 (33.8)	84 (29.9)
The possibility of visiting in the dialysis area	11 (4.0)	21 (7.7)	49 (17.9)	83 (30.3)	110 (40.1)
Frequency (%)					

HD: Hemodialysis

technique by which nurses cared central catheters (subclavian, femoral, jugular) HD (90.7%), the technique by which nurses made puncture arteriovenous shunt (fistula) or arteriovenous graft (90.5%) of the consistency with time by which nurses cared for wounds, incisions, entry points intravascular catheters or the arteriovenous anastomosis or the graft (90.4%), from the respect that showed nurses as to the diversity of each patient (90.1%) and by the professionalism of nurses (90.1%).

From Table 2, we see the level of satisfaction with the nursing staff. Specifically, 50.7% of patients stated that perfectly agrees with the words “If I need again nursing care, I would like to have the same care nurses.” 37.1% said they agree, 11.4% neither agrees nor disagrees while only 0.8% (2 people) said that disagrees or totally disagrees. The 53.4% of patients stated that perfectly agrees with the words “I will recommend this dialysis unit to friends and relatives.” 36.3% said they agreed, 8.5% neither agree nor disagree, while 1.8% said they disagree or strongly disagree.

Table 3 shows the level of satisfaction of patients from the environment of HD session. The majority of patients were above average satisfied. Patients were basically very or extremely satisfied with the functionality - the comfort of the bed or chair (76.6%), from the equipment in the dialysis room (75.4%) and the light level in the dialysis room (83.4%).

Regarding satisfaction of patients from the information available before the start of dialysis, the majority of patients were above average satisfied. Patients were basically very or extremely

satisfied with the information received on the orientation and smooth integration into the dialysis unit (78.3%), from the information received about the process of dialysis session (71.6%) and the information received on replacement therapy possibilities (71.3%). Patients were “split” regarding their satisfaction with the information received from administrators in procedural issues.

Table 4 indicates the level of patient satisfaction concerning the available information in recent weeks/months. The majority of patients were above average satisfied. The patients were basically very or extremely satisfied with the information received about what they should pay attention on regarding their diet (79.9%), from the information received about the test results (77.4%) and from the information received on their medication (77.0%). Patients appear not to have been very satisfied with the information received about sexual activity and for the tact with which they were given information about their health.

Finally, HD patients made some suggestions to improve certain aspects of the dialysis unit, nursing care, and the interdisciplinary health care. We observed that patients wanted too much to change the psychological support from other health professionals (40.8%), the behavior of other health professionals (42.8%), the amount of small meals (37.2 %), means of entertainment (37.0%), the time needed to reach the artificial kidney unit (36.5%), facilities for people with disabilities (36.5%), and access to the unit (35.8%).

**DISCUSSION**

The organization and administration of a unit HD play a very important role in the overall improvement of the quality of renal care services and the satisfaction of patients undergoing HD. In this study, we investigated the perceptions of patients with the chronic kidney disease who undergo substitution treatment of the renal function using method of dialysis, regarding the nursing care provided and the level of satisfaction with the services offered.

The high level of patient satisfaction is observed in the environmental of HD session. Specifically, they are very satisfied with the functionality - the comfort of the chair or bed, by the equipment in the dialysis room and the lighting level in the dialysis room. Regarding the conditions of HD session, the majority of patients are above average satisfied with the care

**Table 2: Level of satisfaction with the nursing staff**

	Frequency (%)
If I need again nursing care, I would like to have the same care nurses	
Strongly disagree	1 (0.4)
Disagree	1 (0.4)
Neutral	32 (11.4)
Agree	104 (37.1)
Strongly agree	142 (50.7)
I will recommend this dialysis unit to friends and relatives	
Strongly disagree	1 (0.4)
Disagree	4 (1.4)
Neutral	24 (8.5)
Agree	102 (36.3)
Strongly agree	150 (53.4)

**Table 3: Level of satisfaction from the environment of HD session**

	Frequency (%)				
	Not at all	Little	Moderate	Considerably	Extremely
By the equipment in the dialysis unit	4 (1.4)	18 (6.4)	47 (16.7)	83 (29.5)	129 (45.9)
The comfort of the chair or bed	7 (2.5)	15 (5.3)	44 (15.6)	84 (29.8)	132 (46.8)
The level of noise in the dialysis unit	13 (4.6)	30 (10.6)	79 (28.0)	124 (44.0)	36 (12.8)
The level of light in the dialysis unit	4 (1.4)	10 (3.6)	56 (19.9)	163 (58.0)	48 (17.1)
Temperature in the dialysis unit	9 (3.2)	28 (9.9)	62 (21.9)	75 (26.5)	109 (38.5)
The means of entertainment offered to you	47 (16.7)	39 (13.9)	63 (22.4)	60 (21.4)	72 (25.6)
The quality and quantity of small meals offered to you	35 (12.5)	48 (17.1)	72 (25.6)	54 (19.2)	72 (25.6)

HD: Hemodialysis

**Table 4: Level of patient satisfaction concerning the available information in recent weeks/months**

	Frequency (%)				
	Not at all	Little	Moderate	Considerably	Extremely
The information you receive about your medications	6 (2.1)	21 (7.4)	38 (13.4)	85 (30.0)	133 (47.0)
The information you receive about the side effects of your medications	10 (3.6)	26 (9.3)	53 (18.9)	75 (26.8)	116 (41.4)
The information you receive about your test results	2 (0.7)	18 (6.4)	44 (15.5)	64 (22.6)	155 (54.8)
The information you receive about what to look in your diet	4 (1.4)	15 (5.3)	38 (13.4)	63 (22.3)	163 (57.6)
The information you receive about the physical activities you should do or not do	13 (4.6)	23 (8.1)	42 (14.8)	77 (27.2)	128 (45.2)
The information obtained about your sexual activity	58 (22.1)	54 (20.5)	44 (16.7)	37 (14.1)	70 (26.6)
The information you receive from other health professionals about your health	75 (26.7)	49 (17.4)	55 (19.6)	28 (10.0)	74 (26.3)
The tact with which you are given information about your health	20 (7.1)	26 (9.2)	37 (13.1)	72 (25.5)	127 (45.0)

they receive from the medical staff, the discretion of doctors and nurses during the clinical examination and the sense of security felt by during the treatment process.

Moreover, the patients are basically very or extremely satisfied with the result, in terms of time, in which nurses are changing sera or intravenous solutions, from the kindness of nurses, the technique by which the nurses took care of the injuries, from the respect that showed nurses as to their needs, the result, in terms of time, by which nurses made injectable medications, the technique by which nurses cared central catheters (subclavian, femoral, jugular) HD, the technique by which nurses made puncture arteriovenous shunt (fistula) or arteriovenous graft of the consistency with time by which nurses cared for wounds, incisions, entry points intravascular catheters or the arteriovenous anastomosis or the graft, from the respect that showed nurses as to the diversity of each patient and by the professionalism of nurses.

The results of this research are in agreement with those of similar surveys. In particular, in the research study of Palmer *et al.* [11] in a sample of 2748 patients undergoing HD, the high satisfaction of the latter from the provided nursing care as well as the response and sensitivity of staff to the pain felt by patients was recorded.

In another study of Shnishil *et al.* [14] in 150 patients included in dialysis program the high degree of satisfaction reflected in relation to nursing care, knowledge and experience of the medical staff of the unit as well as the communication between the nurse and the patient.

Moreover, in a study carried out by Ndambuki [15], it appears that 151 patients who participated evaluate favorably the nursing care provided in the artificial kidney unit.

Regarding satisfaction of patients from the information available before the start of dialysis, the majority of patients are above average satisfied. Patients are basically very or extremely satisfied with the information received on the orientation and smooth integration into the dialysis unit, from the information received about the process of a dialysis session and the information received on replacement therapy possibilities. This result is confirmed by the research of Van Biesen *et al.* [10] conducted in 3867 dialysis patients from 36 different countries, who show great satisfaction from information, which we have received, both in the disease and in treatment.

However, in the context of a research of Fadem *et al.* [16] in 9000 patients with chronic kidney failure, the main finding of this relates to the lack of adequate information regarding the treatment options that exist in the treatment of this disease.

It is also important to note that in a study conducted by Palmer *et al.* [11] regarding the assessment of satisfaction of 2145 HD patients from different countries, the results indicate the little satisfaction with the care provided. Patients' expectations for accurate information and the possibility of kidney transplantation or alternative treatment options are key issues in research and application of best practices in health care.

Finally, regarding the limitations of this study, it is noted that patients participated in the study are clinical specimen, which was available, i.e. patients treated in units with long operation in public general hospitals. Therefore, it cannot be generalized in the entire population of renal patients but only in respective populations. The results obtained from this study can be further investigated in samples from other medical contexts, private or in units of the region, enabling control of the studied variables, comparison of results so that they can arise general conclusions.

## CONCLUSION

Overall, the findings of this study can be useful in theoretical and practical level. In the theoretical level, a model for the satisfaction and quality of life of patients suffering from kidney disease may be offered indicating the operation of the unit dialysis, HD sessions, satisfaction with nursing care and information, as more determinants for the areas of physical health, psychological well-being and social relations as well as for the overall assessment of quality of life.

In a practical level, the findings are useful to health-care professionals, doctors, psychologists, nurses, as well as health services administrators, entrusted to provide the medical treatment in patients with kidney disease. For example, the implementation of education programs for health professionals working in a dialysis unit could be recommended in relation to issues of communication and support of patients undergoing dialysis.

## REFERENCES

1. Theofilou P. Medication adherence in Greek hemodialysis patients: The contribution of depression and health cognitions. *Int J Behav Med* 2013;20:311-8.

2. Theofilou P. Quality of life and mental health in hemodialysis and peritoneal dialysis patients: The role of health beliefs. *Int Urol Nephrol* 2012;44:245-53.
3. Zyga S, Alikari V, Sachlas A, Fradelos E, Stathoulis J, Panoutsopoulos G, *et al.* Assessment of fatigue in end stage renal disease patients undergoing hemodialysis: Prevalence and associated factors. *Med Arch* 2015;69:376-80.
4. Gerasimoula K, Lefkothea L, Maria L, Victoria A, Paraskevi T, Maria P. Quality of life in hemodialysis patients. *Mater Sociomed* 2015;27:305-9.
5. Zyga S, Alikari V, Sachlas A, Stathoulis J, Aroni A, Theofilou P, *et al.* Management of pain and quality of life in patients with chronic kidney disease undergoing hemodialysis. *Pain Manag Nurs* 2015;16:12-20. Available from: <http://www.dx.doi.org/10.1016/j.pmn.2015.03.004>. [Last accessed on 2016 Jan 31].
6. Eissa MA, Sulaiman AM, Jondeby M, Karkar A, Barahmein V, Shaheen FA, *et al.* Factors affecting hemodialysis patients' satisfaction with their dialysis therapy. *Int J Nephrol* 2010;2010:Article ID:342901, 5. DOI: 10.4061/2010/342901.
7. Kim JY, Kim B, Park KS, Choi JY, Seo JJ, Park SH, *et al.* Health-related quality of life with KDQOL-36 and its association with self-efficacy and treatment satisfaction in Korean dialysis patients. *Qual Life Res* 2013;22:753-8.
8. Janssen IM, Gerhardus A, von Gersdorff GD, Baldamus CA, Schaller M, Barth C, *et al.* Preferences of patients undergoing hemodialysis - Results from a questionnaire-based study with 4,518 patients. *Patient Prefer Adherence* 2015;9:847-55.
9. Bahadori M, Raadabadi M, Heidari Jamebozorgi M, Salesi M, Ravangard R. Measuring the quality of provided services for patients with chronic kidney disease. *Nephrourol Mon* 2014;6:21810.
10. Van Biesen W, van der Veer SN, Murphey M, Loblova O, Davies S. Patients' perceptions of information and education for renal replacement therapy: An independent survey by the European Kidney Patients' Federation on information and support on renal replacement therapy. *PLoS One* 2014;9:103914.
11. Palmer SC, de Berardis G, Craig JC, Tong A, Tonelli M, Pellegrini F, *et al.* Patient satisfaction with in-centre haemodialysis care: An international survey. *BMJ Open* 2014;4:005020.
12. World Medical Association Declaration of Helsinki. Ethical Principles for Medical Research Involving Human Subjects. 35<sup>th</sup> WMA General Assembly. Venice, Italy; 1983.
13. Ferentinou E, Prezerakos P, Giannakopoulou M, Sachlas A, Theofilou P, Zyga S. Development and measurement of the reliability and validity of the Greek questionnaire of satisfaction among patients with chronic renal disease undergoing haemodialysis. *Hellenic J Nurs* 2014;53:276-88.
14. Shnishil AT, Khalida A, Mansour KA. Assessment of patients' satisfaction toward nursing care at hemodialysis units Ali T. *Iraqi Natl J Nurs Specialties* 2013;26:1-9.
15. Ndambuki J. The level of patients' satisfaction and perception on quality of nursing services in the Renal Unit, Kenyatta National Hospital Nairobi, Kenya. *Open J Nurs* 2013;3:1-9.
16. Fadem SZ, Walker DR, Abbott G, Friedman AL, Goldman R, Sexton S, *et al.* Satisfaction with renal replacement therapy and education: The American Association of Kidney Patients Survey. *Clin J Am Soc Nephrol* 2011;6:605-12.

© SAGEYA. This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0/>) which permits unrestricted, noncommercial use, distribution and reproduction in any medium, provided the work is properly cited.

**Source of Support: Nil, Conflict of Interest: None declared.**