THE PERCEPTION ON DIALYSIS TREATMENT AND THE QUALITY OF LIFE OF RENAL DISEASE PATIENTS

June T. Cañedo
Master of Arts in Nursing

Abstract

Chronic kidney disease is a serious major global health problem worldwide. Aside from kidney transplantation, patients can choose between hemodialysis (HD) and peritoneal dialysis (PS) as treatment options. This correlational study was intended to investigate the kidney patients' perception on dialysis treatment and their quality of life, based on their socio-demographic profiles, and the efficacy, convenience and safety of dialysis treatment. A total of 21 respondents, who had initially undergone hemodialysis (HD), then shifted to peritoneal dialysis (PD), were selected from different dialysis centers located in Sta. Cruz and Bambang, Manila as well as hospitals situated in Manila, Quezon, and Pasay City. A modified-questionnaire was prepared, which contained general information about the respondents, and items focused on the efficacy, convenience and safety of their dialysis treatment, in response to their quality of life. The results revealed a significant relationship between the perception of dialysis treatment in terms of efficacy, convenience, safety, and quality of life of renal patients. However, age, sex and socio-economic status of the respondents showed no correlation in the perception of dialysis treatment.

Keywords: Chronic kidney disease, hemodialysis, peritoneal dialysis, quality of life, perception

The Philippine Renal Registry of the Department of Health, Renal Disease Control Program (REDCOP), and Philippine Society of Nephrology disclosed that there are 18,868 patients on dialysis treatment in 2012, with 12,122 new patients nationwide who started on dialysis in the same

year. This number of new patients starting on dialysis has been increasing by more than 10 percent every year for the past ten years.

According to Makkar (2015), there are two major modalities of dialysis used in clinical practice aside from kidney transplantation. Both hemodialysis (HD) and peritoneal dialysis (PD) are established renal replacement therapies to treat patients with kidney failure. However, it is uncertain from previous studies which dialysis treatment provided better quality of life. Few studies had reported little difference between these two treatment modalities. However, the decision to choose which modality of renal replacement therapy is a crucial decision for renal patients. Various factors including the patients' age, different comorbidities, and ability to tolerate the procedure influenced the choice for either peritoneal or hemodialysis.

Chronic Kidney Disease (CKD) is an irreversible and progressive disease that leads to kidney failure if not treated. It is generally considered as an important public health problem and has been recognized as a national health priority. The level of disease severity is divided into five stages, with stage 5 referring to the advanced stage of CKD, also known as "kidney failure", which can further progress to End Stage Renal Disease (ESRD). ESRD is a deadly condition implying that kidney failure has reached the point of requiring dialysis therapy or kidney transplantation to maintain life.

It is well recognized that factors other than medical considerations, such as socioeconomic capabilities, facilities, geographical location, age, gender and more importantly physician preference may have had a greater impact on dialysis treatment (Karopadi, 2011).

The study aims to find out if there is a relationship between the perception and quality of life of renal patients on dialysis treatment. Through this investigation, the researcher would be able to determine the perceptions of patients on

improving their quality of life while under dialysis treatment.

Significance of the Study

The treatment for chronic kidney disease differed on various considerations. This study would benefit the following:

Patients. This study will provide understanding on the two modalities of dialysis treatment, particularly the impact, benefits, risk, and perception in terms of efficacy, convenience and safety in choosing the treatment modality to improve their quality of life.

Health care personnel. The study will improve the current practices based on patient perceptions regarding dialysis treatment and will enhance the quality of life of renal patients, concerning their age, gender and socio-economic status.

Future researchers. This study will be of great support and assistance, because it will provide empirical data that will serve as future reference for related research.

Related Literatures

The Center for Disease Control and Prevention (2015) defined chronic kidney disease as a condition in which the kidneys are damaged and cannot filter blood. This damage caused wastes to build up in the body and which led to other health problems, including cardiovascular disease (CVD), anemia, and bone disease.

People with early CKD tend to be asymptomatic. The only ways to detect CKD are through a blood test to estimate kidney function and a urine test to assess kidney damage. One such method is through determination of the glomerular filtration rate (GFR), wherein the level of kidney function is measured and the stage of kidney disease is determined. If the GFR score is low, the kidneys are not functioning as well as they should. The earlier kidney disease is detected, the

better the chance of slowing or stopping its progression. In adults, the normal GFR number is more than 90. GFR declines with age, even in people without kidney disease.

The Philippines is one of the countries with a high risk population when it comes to renal disease because of numerous cases of diabetes, high blood pressure and other hereditary diseases, all of which can lead to kidney malfunction and even heart attack. Around 7,000 patients die annually due to kidney malfunction in the country. The prevalence of renal diseases has been alarmingly increasing, indicating that renal diseases may rank among the top seven health problems.

Furthermore, the treatment of renal diseases remained costly and unaffordable for most Filipinos. Dialysis treatment used artificial devices to perform the function of the kidney at about 15%, enough to sustain life but needed to be performed adequately on a regular basis, every two to three times a week permanently. To maintain adequate dialysis treatment, a patient has to spend P25,000.00 to P46,000.000 per month or P300,000.00 to P552,000.00 a year. Maintenance medication estimated at about P20,000.00 per month. Due to these conditions, it was reported in 2007, that 73% of Filipino patients with kidney failure were able to afford necessary treatment.

Regularity of dialysis treatment is considered very crucial for renal patients because any delay in treatment would endanger them, and may call for more expensive emergency procedures if not attended immediately.

Based on the records of National Kidney and Transplant Institute's (NKTI's) Out-Patient Hemodialysis Unit in January 2015, the unit had served a total of 2,694 out-patients. From these, 27% or 723 were service patients, while the bulk of the patients served were pay patients numbering 1,971 or 73%.

On the other side, health benefits offered by the national government are considered as contributory factors to the dropping cost of dialysis. Based on the Manual of Surgical and other Procedures, Philhealth covered the following procedures in accredited hospitals and free-standing dialysis centers: (1) Hemodialysis procedure; and (2) Dialysis procedure other than hemodialysis (e.g. peritoneal, hemofiltration). Within a period of 90 days from first admission in a tertiary level hospital, Philhealth members may avail themselves of a maximum coverage of P28,000.00 for drugs and medicines; P21,000.00 for X-ray, laboratory procedures and others; and P1,200.00 for the operating room fee.

Coverage also extended to the professional fee of the doctor conducting the procedure. Hospitalization and procedures for organ transplant for both members and their dependents were also covered by Philhealth. Both the donor and the recipient have to be active members or qualified dependents to be able to avail of this benefit.

A family member or caregiver was needed to care for the patient, attend to medications and meals, and assist in providing treatment, whether by performing dialysis itself with PD or accompanying the patient to an HD facility. Commonly, a family member had to stop working to care for the dialysis patient. The patient is too weak to provide self-care and loses independence.

Patients who cannot afford treatment relied on other family members to look for the needed funds. Children stopped schooling, savings are used up, objects of value are sold, and all the earnings of those who worked were used to pay for dialysis. These resulted to impoverished families that because of a single patient with kidney failure who needed treatment. The cost of treatment therefore is not limited to the cost of dialysis. Rather, the cost is multiplied a hundred-fold, and becomes the burden of an entire family.

To perform hemodialysis, an access is created to get the blood from the body to the dialyzer and back to the body. Kallenbach (2005) identified three primary methods used to gain access to the blood: an intravenous catheter, an arteriovenous fistula (AV) or a synthetic graft. The type of access was influenced by factors such as the expected time course of a patient's renal failure and the condition of his or her vasculature. Patients may have multiple accesses, usually because an AV fistula or graft matured and a catheter was still being used. The creation of all these three major types of vascular accesses required surgery.

The advantages of hemodialysis included having treatment often done by trained health professionals who can monitor for any signs of complications, allowing the patient to be in contact with other people having dialysis, promoting emotional support, permitting a short treatment time and ensuring medical help easily available during an emergency (Healthwise, 2011).

On the contrary, peritoneal dialysis may be the treatment of choice for patients with renal failure who are unable or unwilling to undergo hemodialysis or renal transplantation. According to Cheever (2008), peritoneal dialysis is the removal of toxic substances and metabolic wastes using the patient’s peritoneum, serving as the semi-permeable membrane, re-establishing normal fluid and electrolyte balance. Patients susceptible to the rapid fluid, electrolyte and metabolic changes that occurred during hemodialysis experienced fewer of these problems with the slower rate of peritoneal dialysis. Therefore, patients with diabetes or cardiovascular disease, geriatric patients, and those who may be at risk for adverse effects of systemic heparin were likely candidates for this type of dialysis. Furthermore, severe hypertension, heart failure and pulmonary edema not responsive to usual treatment regimens had been successfully treated with peritoneal dialysis.

The patients' background quality of life will be the major determinant of overall quality of life for a dialysis patient. The quality of life, also known as health-related quality of life, is the value assigned to the duration of life, as modified by the impairments, functional states, perceptions and social opportunities that are affected by disease, injury, treatment or policy.

According to the National Kidney Foundation (2015), the life expectancy on dialysis varied depending on other medical conditions and how well a patient followed the treatment plan of the physician. The average life expectancy on dialysis is five to 10 years; however, many patients have lived well on dialysis for 20 or 30 years. Patients with CKD are faced with a difficult decision of when to start dialysis which was made in collaboration between their nephrologists. The decision was considered difficult because, although dialysis effectively treated the signs and symptoms of CKD and fluid overload, it was considered a lifelong therapy associated with discomfort, inconvenience, and some risk for the patient. As a result, dialysis should be started when the benefit from relieving the signs and symptoms of CKD was thought to outweigh its risk and associated effect on quality of life, but not before this time.

It is well acknowledged that kidney transplantation is the renal replacement therapy of choice for improved patient survival in kidney disease. However, with growth in the incidence and prevalence of kidney disease and a shortage of organ donors, more patients remained on dialysis for a longer term.

An assessment of the quality of life of CKD patients conducted by Sathvik, et.al (2008), sustained that the availability of various renal replacement therapies reduced the severity of symptoms and resulted in longer survival of CKD patients. HD therapy was time-intensive, expensive, and required fluid and dietary restrictions. Long-term dialysis therapy often resulted in loss of freedom, dependence on

caregivers, disruption of marital, family, and social life, and reduced or loss of financial income. Due to these reasons, the physical, psychological, socioeconomic, and environmental aspects of life are negatively affected, leading to compromised quality of life.

Theoretical Framework

The following theories supported the researcher's study regarding the main principle of dialysis treatment and the quality of life of renal patients.

Individuals ability to take care of themselves, and shows responsibility for their health and the health of their dependents. Self-care is explained as the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health and well-being (Cardinal and Stritch University Library, 2011). Dorothea Orem was a nursing theorist who formulated the Self Care Theory. The theory of self-care included the practice of activities an individual executed and performed independently to maintain life, health and well-being.

The self-care agency is a human ability for engaging in self-care, conditioned by age, developmental state, life experience, socio-cultural orientation, health and available resources. Universal self-care conditions were associated with life processes, maintenance of integrity of human structure and functioning. Orem identified these requisites, also called as Activities of Daily Living (ADL) as the maintenance of sufficient intake of air, food and water, provision of care associated with the elimination process, a balance between activities and rest, as well as between solitude and social interaction, prevention of hazards to human life and well-being, and the promotion of human functioning.

Conceptual Framework

This study focused on the perception on dialysis treatment and the quality of life of renal patients. The socio-demographic profile such as age, sex and socio-economic status would support the correlation of perceptions to their quality of life.

The relationship between the perceptions of renal patients regarding their dialysis treatment and quality of life were studied; the independent variables were the patients diagnosed with CKD based on their socio-demographic profiles. On the other hand, the perception of dialysis treatment in terms of efficacy, convenience and safety, and the quality of life were the dependent variables.

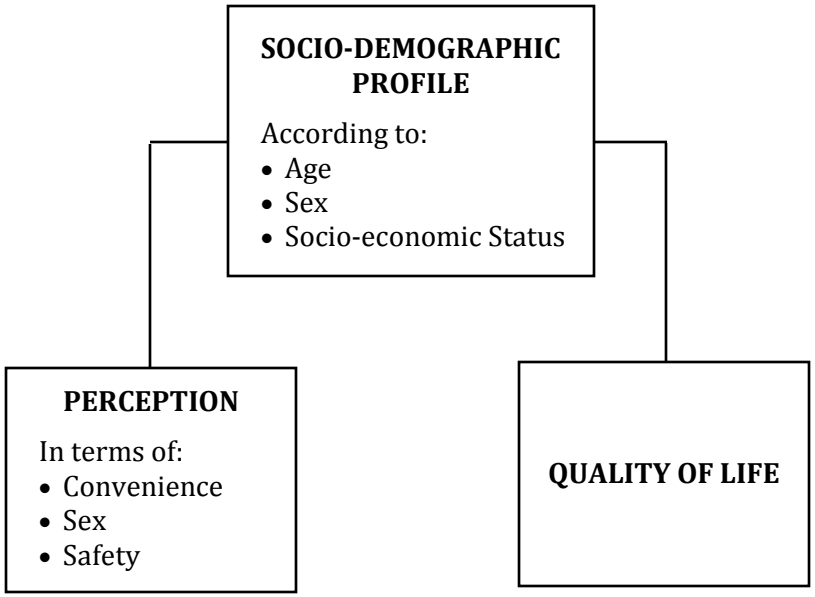

Figure I. The paradigm shows the independent variables and the dependent variables.

Statement of the Problem

This study sought answers to the following questions:

1. What is the profile of renal patients in terms of the following?
    a. age;
    b. sex; and
    c. socio-economic status?
2. What is the perception of renal patients in dialysis treatment in terms of the following :
    a. efficacy;
    b. convenience; and
    c. safety
3. Does the perception on dialysis treatment vary across age and sex?
4. What is the perceived quality of life of renal patients?
5. Is there a significant relationship between the perception on dialysis treatment and quality of life among renal patients?

Hypothesis

There is no significant relationship between the perception on dialysis treatment and quality of life among renal patients.

Scope and Delimitation

This study aimed to gather data relative to the perception of dialysis treatment and quality of life of renal patients. Its objective was to determine whether perception on the efficacy of treatment vary across age, gender and socioeconomic status. This study also wanted to prove if there was a significant relationship between the perception on dialysis treatment and quality of life among renal disease patients.

The researcher focused on the two widely used dialysis modalities; these include hemodialysis and

peritoneal dialysis which is limited to continuous ambulatory PD. The respondents included in the study initially had undergone peritoneal dialysis before shifting to hemodialysis. Continuous cyclic peritoneal dialysis (CCPD) was also a type of peritoneal dialysis not included in the study because this treatment modality was not widely practiced in the country. Kidney transplantation was not part of the study but would be given an overview, as this treatment is also used to treat CKD.

Method

This study used quantitative and qualitative method, which utilizes a non-experimental, descriptive research design to determine the perception of dialysis treatment and quality of life of renal patients across age, sex, and socio-economic status. The descriptive research design was employed to study the socio-demographic profiles of the selected respondents undergoing dialysis treatment, and to verify whether they agree/disagree if the dialysis treatment they received are efficient, safe and convenient, in relation to their current quality of life. At the same time, qualitative method was applied in this study by using interview to find out renal patient's perceived quality of life after being subjected to dialysis treatment. Purposive sampling that relied on the researcher's judgment regarding specific characteristics of the population of interest, which enabled the researcher to answer the research problem was done.

Respondents and Sampling

In this study, the researcher used purposive sampling which relied on the researcher's judgment regarding specific characteristics of the population of interest which enabled the researcher to answer the research problem.

The study included twenty one (21) male and female respondents with renal disease whose age ranged from 18 years old to 60 years old and above, who have both undergone initially PD treatment and then resorted to HD

treatment.

The availability of the respondents was determined by sending a communication letter to the six targeted institutions, and addressed the chairman of department, operation managers and head nurse for permission to conduct the study, and obtaining an informed consent from their patients who initially PD treatment, then proceeded to HD treatment.

The six targeted institutions included government, private hospitals and private dialysis centers, namely: IM Health Medical, Dialysis, Diagnostics & Wellness Center, San Lazaro Hospital – Eminence Homecare Inc. Dialysis Center, Quezon City General Hospital - Eminence Homecare Inc. Dialysis Center, Metropolitan Hospital and Medical Center – EG Healthcare Renal Center, Kidney care Dialysis Center U.N. and San Juan De Dios Hospital - Dialysis Center.

Instrument

The researcher adopted and modified a questionnaire from different conducted and published studies: (1) End Stage Renal Disease Adherence Questionnaire (ESRD-AQ) (Kim, et.al, 2010) was patterned in a study entitled "The End-Stage Renal Disease Adherence Questionnaire (ESRD-AQ): Testing the psychometric Properties in Patients Receiving In-Center Hemodialysis designed by Kim, et.al (2010) a self-report instrument used to measure treatment adherence to HD attendance, medications, fluid restrictions and diet prescription among patients with renal disease; (2) Kidney Disease Quality of Life-Short Form Version 1.3 (KDQOL-SF) (Hays, et.al, 1997), was used in the study entitled "Your Health and Well Being, by Hays (1997) contained items regarding the symptoms/problems of kidney disease/dialysis treatment, effect of kidney disease in daily life, burden of kidney disease, work status, cognitive function, and quality of social interaction, sexual function and sleep. Also included were three quality of life scales: social support, dialysis staff

encouragement and patient satisfaction. And (3) The Study of Renal Dialysis Services in the Eastern Regional Health Authority: A Review of Patient Satisfaction Across Hospitals (Rundle, et.al, 2003), examined multiple dimensions in measuring patient satisfaction of renal patients undergoing dialysis therapy using five-point rating scales.

Pilot testing was done to ensure that the instrument would be brief, concise and easy to understand by the respondents.

At the end of the questionnaire, a follow-up qualitative question was indicated, asking how the dialysis treatment improved their quality of life. A variety of answers from the respondents were obtained to analyze and determine the perception and their quality of life.

The researcher utilized a 4-Point Likert scale which used qualifiers such as all *of the time, most of the time, some of the time*, and *never,* to measure the level of perception of dialysis treatment according to efficacy, convenience and safety. High scores would mean high quality of life perceived from the dialysis treatment. Low scores would mean low quality of life perceived from the dialysis treatment.

The reliability of the items in the research questionnaire was submitted to a statistician to determine its internal consistency (Cronbach's Alpha). Results of the Cronbach's alpha of the renal patients' quality of life and the perception of dialysis treatment as efficient, convenient and safe are indicated in the appendix. The *quality of life* questionnaire section consisted of 25 items (*a=0.927*), which revealed that the questions used to measure the quality of life were highly reliable and consistent. On the other hand, based on the seven-item questions measuring convenience, Cronbach's alpha was *0.828*, indicating that the *convenience* questionnaire section showed to be highly reliable and consistent. The results also verified reliability for the nine-safety (*a=0.786*), and 11-efficacy items (*a=0.743)* respectively.

Data Analysis and Statistical Treatment

The data obtained were analyzed and aided with a statistical software IBM-SPSS version 20. Descriptive statistics such as frequency and percentage distributions were used to analyze the socio-demographic profiles of the renal patients; these include age, sex, and current employment status.

Mean and standard deviation were used to analyze the patients' level of perceptions to the efficacy, convenience, and safety of the dialysis conducted in different government, private hospital and dialysis centers.

To further assess the level of perception among patients to the three factors (e.g. efficacy, convenience, and safety), the following levels and interpretations were formulated:

Level of Perception	**Interpretation**
3.26 - 4.00	All of the Time
2.51 - 3.25	Most of the Time
1.76 - 2.50	Some of the Time
1.00 - 1.75	Never

The score group of 3.26-4.00 would equate to an interpretation of *all the time*, connoting that the specific item perceived was always experienced during dialysis treatment. The score group of 2.51-3.25 would equate to an interpretation of *most of the time*, connoting that the specific item perceived was mostly experienced during dialysis treatment. The following score group of 1.76-2.59 would equate to an interpretation of *some of the time*, connoting that the specific item was perceived occasionally during dialysis treatment. A level of perception of 1.0-1.75 would constitute to *never* have experienced during dialysis treatment.

The researcher used an independent sample t-test to determine if there were significant differences on the patients' perceptions regarding the efficacy of the dialysis

according to sex.

On the other hand, One-way Analysis of Variance (One-way ANOVA) was used to determine if there were significant differences on renal patients' perceptions regarding the efficacy of the dialysis according to age.

Pearson correlation coefficient (*r*) was further computed to determine if there were significant relationships between the patients' perceptions on the dialysis treatment and quality of life.

Results and Discussions

Table 1. Distribution of Respondents' Age

Age	*f*	%
46 to 60	6	28.60
More than 60	5	23.80
26 to 35	5	23.80
36 to 45	4	19.00
18 to 25	1	4.80
Total	21	100

Table 1 shows that 28.60% of patients undergoing dialysis treatment were 46 years old and above, while 23.80% were more than 60 years old. Moreover, 23.80% respondents where aged 26-35 years old. The youngest age group had the lowest number of kidney patients on dialysis. Based on the figures, the age group of 46-60 years old has the highest number of respondents undergoing dialysis treatment, while only one respondent belonged to the age group of 18-25 years old.

Table 2. Distribution of Respondents' Gender

Sex Category	*f*	%
Male	11	52.38
Female	10	47.62
Total	21	100

Table 2 reveals that the number of male patients (11 or 52.40%) was almost equal with female patients (10 or 47.60%), as shown in table 2. Thus, both male and female is suffering from kidney disease underwent dialysis treatment.

Table 3. Respondents' Socioeconomic Status based on Current Employment

Currently Employed	*f*	%
No	18	85.70
Yes	3	14.30
Total	21	100

The results in table 3 reflects that 18 (85.7%) were currently unemployed, while three (14.3%) respondents were employed. Based from these findings, most of the respondents undergoing HD treatment were currently unemployed, and very few were employed.

Table 4. Perception of Renal patients on Dialysis Treatment According to Efficacy

	Questions on Efficacy	Mean	Interpretation
1.	Do you think your dialysis treatment is effective?	3.76	All of the Time
2.	How often has your dialyzer been replaced?	3.50	All of the Time
3.	Do you receive the quality of care that is necessary?	3.44	All of the Time

(continued)

Table 4. Continuation

Questions on Efficacy	Mean	Interpretation
4. Have you ever thought that your current status will improve on dialysis?	3.15	Most of the Time
5. My health is excellent?	2.61	Most of the Time
6. I expect my health to get worse?	2.33	Some of the Time
7. I am healthy as anybody I know?	2.05	Some of the Time
8. I seem to get sick a little easier that other people	1.90	Some of the Time
9. Do you ever experience any difficulties during your dialysis treatment?	1.85	Some of the Time
10. Do you feel that the present service of your dialysis needs to be improved	1.82	Some of the Time
11. How often have you experienced any infection related to your dialysis?	1.61	Never
Weighted Mean	2.54	Most of the Time

Table 4 shows all the dimensions of the level of perception of renal patients in dialysis treatment according to efficacy. The weighted mean was 2.54 which indicated that the respondents perceived dialysis treatment as efficient *most of the time.*

Table 5. Perception of Renal Patients on Dialysis Treatment According to Convenience

Questions on Convenience	Mean	Interpretation
1. Is your dialysis schedule convenient for you?	3.77	All of the Time
2. Do you follow your dialysis schedule?	3.72	All of the Time

(continued)

Table 5. Continuation

Questions on Convenience	Mean	Interpretation
3. Are you comfortable during your dialysis treatment?	3.72	All of the Time
4. How satisfied are you with the days and times that you have dialysis?	3.61	All of the Time
5. Do you have a choice of which days of the week you have dialysis	2.80	Most of the Time
6. Are you having difficulty traveling to the Dialysis unit	2.61	Most of the Time
7. Have you had difficulty staying for your entire dialysis treatment as ordered by your doctor?	2.24	Some of the Time
Weighted Mean	3.21	Most of the Time

Table 5 shows the perception of renal patients in dialysis treatment according to convenience. The weighted mean was 3.21, which indicates that the respondents perceived the dialysis treatment as convenient *most of the time.*

Table 6. Perception of Renal Patients on Dialysis Treatment According to Safety

Questions on Safety	Mean	Interpretation
1. How often is microbial ointment applied on access sites during dressing changes?	3.95	All of the Time
2. Did health care workers hand-wash before, during and after the initiation of treatment?	3.95	All of the Time
3. How often are you satisfied on the current type of dialysis?	3.38	All of the Time
4. How often do you view the opportunity to rest and recover following treatment?	3.35	Most of the Time

(continued)

Table 6. Continuation

Questions on Safety	Mean	Interpretation
5. Do you change your access/ catheter dressing?	3.05	Most of the Time
6. How many times does your relative accompany you to the dialysis unit?		
7. How frequent do you feel any complications during treatment? e.g. shortness of breath, hypotension, fall, etc	2.54	Most of the Time
8. Do you experience malfunctioning of machine/access during treatment?	2.19	Some of the Time
9. How frequent have you encountered any problems with your access/catheter site?	1.52	Never
Weighted Mean	2.97	Most of the Time

Table 6 shows the level of perception of renal patients in dialysis treatment according to safety. The weighted mean was 2.97, which indicated that the respondents perceived the dialysis treatment as safe *most of the time*.

Table 7. One Way Analysis of Variance of Renal Disease Patients Perception on Dialysis Treatment

	SS	*Df*	*MS*	*F*	*P*
Between Groups	.257	3	0.86	.524	.672
Within Groups	2.613	16	.163		
Total	2.869	19			

Note: Significant at **p<0.05 level of significance

Table 7 presents the results of One-Way ANOVA to test if there were significant differences in dialysis treatment as perceived by the mean of renal patients according to their

age. Based on these findings, there were statistically no significant differences on the perception of renal patients related to their age [(*F(3,16)=.524,p=.672*) at a 0.05 level of significance. Hence, this indicates that the patients' perception of effectiveness of the treatment is not significant in terms of the age groups of the respondents.

Table 8. Independent Samples T-Test Result

n	M	(SD)	95%CI	t	df	p
21	2.8	(.16)	[.04,.16]	1.80	18.92	0.888

Note: n = population, M = mean, SD = standard deviation, t = t-test, df = degree of freedom, *p = .05

Table 8 presents the group statistics and the independent sample t-test results on the differences of dialysis treatment as perceived by renal patients according to sex. These showed an average of 2.67 among male patients while 2.39 among female respondents. Further findings revealed that there were no significant differences on the perception of dialysis treatment between male (M=2.67,SD=37) and female (M=2.39,SD=.35); t(18.92)= 1.80,p=0.88. Hence, male and female renal respondents have the same perceptions regarding dialysis treatment.

Table 9. Correlation of Efficacy, Convenience and Safety of the Dialysis Treatment to Patient's Quality of Life

	Efficacy	Convenience	Safety
r	0.609	0.513	0.697
P	0.043	0.051	0.039
n	21	21	21

*Note: *Significant at 0.05 level.*

One of the main objectives of the study was to determine the significant relationship of efficacy, convenience, and safety to the respondents' quality of life.

Hence, the correlation analysis in Table 9 was presented based on the data; efficacy was significantly associated with the quality of life (*r=0.609, p=0.043*). The data also revealed that the quality of life was significantly affected by convenience (*r=0.513, p=0.051*) and safety (*r=0.697,p=0.039*).

Based on the results, effectiveness, convenience, and safety of the dialysis treatment was high, the quality of life among the selected renal respondent was also perceived high. This would be further sustained by the qualitative answers of the selected renal respondents, wherein 38.09% patients stated that their dialysis treatment improved their physical health, thru ease of breathing (safety), decreased renal symptoms (convenience) and enhanced feeling of well-being (efficacy).

The Perceived Quality of Life of Renal Patients

This section used a qualitative type of approach to analyze and determine the perception on dialysis treatment and renal patients' quality of life which used 21 selected renal respondents.

Eight (38.09%) respondents claimed that the dialysis treatment improved their physical health, focusing on alleviation of difficulty of breathing, decreased renal symptoms and enhanced feeling of well-being. The following responses were noted:

> R1: "Bago ako nagsimula magdialysis, mabilis akong mapagod at nahihilo, para din akong nalulunod pag naka-higa. Pero tuwing pagkatapos ng dialysis mas maganda na yung pakiramdam",
>
> R2: "Lumakas naman ako, Ok naman ang dialysis,"
>
> R3: "Sobrang ok ang hemo kesa sa peritoneal mas maginhawa ang pakiramdam at mas magandang benepisyo ang natanggap ko sa hemodialysis,"
>
> R4: "Kasi dati nung hindi pa ako nagdialysis, mabigat pakiramdam ko at hirap pero ngayon ok na at hindi ko na nararamdaman 'yon,"

> R5: "Naibsan ang problema. Ginhawa ang kalusugan", Una, after dialysis mas malinis ang dugo. Pangalawa, Mas nakakain ko ang gusto kong pagkain at wala masyadong complications,"
>
> R6: "Ok siya kasi minsan kapag natanggal na yung tubig mas ok na. Para kang na charge ng battery,"
>
> R7: "Kasi nung unang dialysis, nababawasan ang pagkahingal at gumanda ang pakiramdam ko. Nagkaroon ako ng ganang kumain.Sumigla ako nung nagdialysis ako," and
>
> R8: "Opo nakatulong naman sa akin ang dialysis."

On the other hand, dialysis treatment served as life-saving management and extension of life for their chronic illness according to six or 28.57% of the respondents. These respondents believed that without dialysis, their life expectancy would be cut too short. These are further supported by their responses:

> R9: "Kung hindi siya nagdialysis, malamang wala na siya."
>
> R10: "Definitely, my hemodialysis treatment has improved my quality of life only because the only option. (no dialysis) is definitely going to lead me to death."
>
> R11: "Dahil sa dialysis treatment, nadugtungan nang mas mahaba ang aking buhay."
>
> R12: "Dahil sa nagkakaroon ng ginhawa ang pakiramdam ko at kung hindi naman magdialysis baka umikli buhay ko."
>
> R13: "Sira na yung kidney ko kailangan ko ang dialysis kung walang dialysis 100% mamamatay ako. Mas maganda at nagdulot ng maganda sa aking buhay" and
>
> R14: "Malaki naitulong. Nabuhay pa ako ng 9 na taon."

Three or 14.28% of the respondents stated that dialysis treatment enabled them to perform their activities of daily living with ease. These are further supported by their responses:

R15: “Naging mas mabuti ang pamumuhay noong pag dialysis dahil mas nagagawa ko na yung mga bagay na hindi ko na nagagawa noong hindi pa ako nagdialysis.”

R16: “Para po sakin mas naging komportable sa hemodialysis kesa sa peritoneal dahil mas magaan kong nagagawa lahat ng daily activities ko.” and

R17: “Dati, yung emergency I don’t feel well, then yung nagdialysis ako mas nakakatrabaho na ng maayos nung na nagdialysis ako mas nagimprove ang buhay.”

However, 9.52% or two respondents felt that although dialysis was able to help them improve their well-being and health, they complained about its financial burden. These were further sustained by the following reactions:

R18: “Kung hindi ako nadialysis hindi ako makahinga, hindi ako makatulog. Pero pag nag dialysis ako mas maganda pakiramdam. Hindi padin mababago ang karamdaman ko pati na rin ang gastos” and

R19: “Mahirap kasi sa gastusin, ok naman kasi gumagaan pakiramdam ko.”

The remaining 4.76% or one respondent was not able to fill in an answer for this question.

Based from these qualitative responses, the highest quality of life perceived by 38.09% of the respondents undergoing dialysis treatment was improvement their physical health. These perceptions further supported that their dialysis treatment were efficient, safe and convenient. On the other hand, quality of life was slightly perceived by 9.52% of respondents due to financial burden caused by dialysis treatment.

Summary of Findings

Perception on Dialysis Treatment in Terms of Efficacy, Convenience and Safety

The dialysis treatment was perceived as convenient

most of the time among the respondents. The convenience of the respondents received the highest weighted mean among the factors, influencing the level of perception on dialysis treatment.

The respondents perceived dialysis treatment as safe most of the time. It was clearly noted that the selected respondents in the study were subjected to hemodialysis. Advantages of hemodialysis included having treatment often done by trained health professionals who can monitor for any signs of complications, allowing the patient to be in contact with other people having dialysis, promoting emotional support, permitting a short treatment time and ensuring medical help easily available during an emergency (Healthwise, 2011).

Dialysis treatment was perceived as efficient most of the time. This factor affecting the level of perception on dialysis treatment received the lowest weighted mean.

The treatment of CKD successfully prolonged the survival of patients with kidney disease but required that renal patients cope with frequent deleterious changes in their health and life situation and shortened survival. According to the National Kidney Foundation (2015), the life expectancy on dialysis varied depending on other medical conditions and how well a patient followed the treatment plan of the physician.

Living with the burdens of a long term illness and numerous treatment-associated stressors, renal patients braved and survived thru coping mechanisms, family/ support groups and self-care management. Dogan (2005), believed that self-management of health care included self-care activity, partnership in care, communication, self-care, self-efficacy and adherence. These components helped patients and clinicians favored this type of self-management approach, which resulted to positive outcomes for renal patients. The ability of these patients to cope and adapt, whether related to their medical regimen or to the

demands of daily life, suggested an important influence on their physical and psychological well-being.

The perception of the selected renal patients on their current hemodialysis treatment, based on its efficacy, convenience and safety, indicated the outcome of the quality of life they are receiving. Therefore, if the dialysis treatment was mostly perceived as convenient, safe and efficient by the selected respondents, the quality of life would also be reflected.

Profile of the Respondents

The age group of 46-60 years old acquired the highest number of respondents undergoing dialysis treatment, manifesting 28.6% or six respondents.

Out of the total 21 respondents, 10 or 47.6% were females, while the remaining 11 or 52.4% were males.

Because differences in men's and women's physiology have widely been recognized, a lot of researchers were encouraged to evaluate clinical study data by gender.

A total of 18 or 85.7% of the respondents who had undergone dialysis treatment belonged to the unemployed sector. The remaining 14.30% or three respondents were currently employed.

Treating kidney failure was considered a burden borne not only by the patient, but by the entire family. This was further supported from an article written by Danguilan (2008), wherein a family member or caregiver was needed to care for the patient, attend to medications and meals, and assist in providing treatment, whether by performing dialysis itself with PD or accompanying the patient to an HD facility.

Normally, a family member had to stop working to care for the patient because he/she is too weak to provide self -care and lost independence. Patients who cannot afford treatment relied on other family members to look for the

needed funds. Children could not continue their education, savings are used up, objects of value are sold, and all the earnings of those who work are used to pay for dialysis.

Perception on Dialysis Treatment and the Quality of Life of Renal Patients

The quality of life of renal patients was substantially affected by safety, efficacy and convenience. Therefore, there is a significant relationship between the perception on dialysis treatment and quality of life among the selected renal patients. The null hypothesis was rejected and the results were significant.

As the dialysis treatment was perceived mostly convenient, safe and efficient by the selected renal patients, their quality of life manifested improvement. This was further supported by their previously qualitative statements, indicating that highest quality of life perceived by 38.09% of the respondents undergoing dialysis treatment was improvement of their physical health.

The Center for Disease Control (2011) defined health-related quality of life as an individual's or group's perceived physical and mental health over time, which included physical and mental health perceptions and their correlates—including health risks and conditions, functional status, social support, and socioeconomic status.

Conclusions

The findings and supporting evidences in this study formulated the conclusion of a significant relationship between the perception of dialysis treatment and quality of life of renal patients according to efficacy, safety and convenience. However, the socio-demographic profiles contributed no significant relationship in dialysis treatment, according to their age groups, while male and female participants had equally the same perceptions of dialysis treatment.

In this study, both sexes were almost equally distributed, with their age mostly ranged from 45-60 years old. Initially, the selected respondents had undergone peritoneal dialysis treatment before advancing to hemodialysis treatment. Despite a large part of the respondents being currently unemployed, all of them managed to undergo hemodialysis treatment. In conclusion, sex, age and employment are not essential variables in determining the perception of selected renal patients regarding dialysis treatment.

The convenience, efficacy and safety of the dialysis treatment played a major role in influencing the quality of life of selected renal patients. The highest quality of life perceived by most of the respondents undergoing dialysis treatment was improvement of their physical health.

Recommendations

The following are the recommendations of the study:

Registered renal nurses should continue improving and updating their knowledge and skills regarding dialysis care and management. The efficacy, convenience and safety of patients must be consistently maintained and perceived highly, and that they may impart and foster self-care management and performance of activities of daily living among renal patients

More dialysis centers in the Philippines should be opened to continuing and/or launching CAPD treatment to decrease hospital/dialysis center stay and promote patient independence.

Future researchers may utilize and increase the number of respondents as their sample size; it is suggested that the number of respondents be increased for a more specific and dependable result.

Moreover, the existing research instrument can be modified or a different instrument may be used in conducting

another study.

It is highly recommended that qualitative method may be used, not conjoined with quantitative method

References

Amarga, E. (2013, April 18). Chronic Kidney Disease Prevalent among Pinoys. *The Philippine Star*.

Anthony Bleyer, M. (2016). *Indications for initiation of dialysis in chronic kidney disease.* Wolters Kluwer

Center for Disease Control and Prevention (CDC). National Chronic Kidney Disease Fact Centers for Disease Control and Prevention. Chronic Kidney Disease Surveillance System. Atlanta. nbhttp://www-cdc-gov/ckd. Accessed August 5, 2013.

Dañguilan, R. A. (2008, July 29). The Burden of Kidney Disease in the Philippines. *ABS CBN News*.

Dogan E, Erkoc R, Eryonucu B, Sayarlioglu H, Agargun MY. (2005) *Relation between depression, some laboratory parameters and quality of life in hemodialysis patients*. Renal Failure; 27(6): 695-699.

Foundation, N. K. (2015). *Chronic Kidney Disease: Further Asked Questions.* Retrieved 2016, from The National Kidney Foundation: www.kidney.org

Gordon EJ, Leon JB, Sehgal AR. (2003). Why are hemodialysis treatments shortened and skipped? Development of a taxonomy and relationship to patient subgroups. *Nephrology Nursing Journal*; 30(2):209–218. [PubMed: 12736999]

Harris SAC, Lamping DL, Brown EA et al. (2002); Clinical outcomes and quality of life in elderly patients on peritoneal dialysis versus hemodialysis. (2001 NTDS Group). Int. Soc. Perit. Dial; 22: 463–70.

Hays RD, Kellich JD & Mapes DL et al. (1995). Kidney Disease and Quality of Life Short Form (KDQOL-SF™), Version 1.1: A manual for use and scoring; Santa Monica, RAND p 7928.

Hays, R.D., Kallich, J.D, Mapes, D.L., Coons, S.J, & Carter, W. B (1994). Development of Kidney Disease Quality of Life (KDQOL) Instrument. Quality of Life Research, 3, 329-338

Makkar, Vikas., Kumar, Manish., Mahajan, Rajesh. (2015). Comparison of Outcomes and Quality of Life between Hemodialysis and Peritoneal Dialysis Patients in Indian ESRD Population. *PubMed.gov*.

Merkus, MP, Jager, KJ & Dekker, FW, et.al (2000). Predictors of poor outcome in chronic dialysis patients; The Netherlands Cooperative Study on the Adequacy of Dialysis. Am J Kidney Dis; 35:1: 69–79.

Mirhelen Mendes de Abreu, MD, David R. Walker, PhD, Ricardo C. Sesso. (2011). Health-Related Quality of Life of Patients ReceiPving Hemodialysis and Peritoneal Dialysis in São Paulo, Brazil: A Longitudinal Study. *PubMed.gov*.

Morgan L. (2002). A decade review: Methods to improve adherence to the treatment regimen among hemodialysis patients. Nephrology Nursing Journal; 27(3):299–304.

Sathvik, B.S., Parthasarathi, G., Narahari, M.G. (2008). An Assessment of the Quality of Life in Hemodialysis Patients Using the WHOQOL-BREF Questionnaire.