

A Quantitative Study on The Sociodemographic, Medical-Profile and Effect of Dialysis on the Quality of Life of Patients-The Case of Northern Region in Ghana

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Abstract

Background: End stage renal disease patients almost always end up requiring renal replacement therapy (RRT). The knowledge on sociodemographic characteristics and medical profile of patients with ESRD and the effects of dialysis on their quality of life is of immense importance to the effective planning and care of these patients. However, there is paucity of literature on this topic.

Methods: A cross sectional survey was employed in this study.

Objective: The study was meant to uncover knowledge on the sociodemographic characteristics, medical profile and the effects of dialysis on the quality of patients undergoing dialysis.

Results: At a mean age of 42.9 years, (35.3%, n = 18) of participants were within 41 and 50 years (Mean = 42.9 years, SD 14.5, Min. 13 years, Max. 77 years). Majority (72.6%, n = 37) of the participants were males, meaning more males were on dialysis than females even though literature suggest that more females are diagnosed with renal conditions. Out of the total number, (29.4%, n = 15) of the participants had attained tertiary education while about 25.5% (n = 14) had no formal education and more than half of the participants earned below Ghc500 equivalent to 34 US dollars monthly. The ability to carry out activities of daily living are severely affected.

Conclusion: Kidney failure has become a very common disease among the general public, causing devastating effects, hence there is the need to research into it for effective actions against it.

Introduction

End stage renal disease is a disease of the kidneys and have a common place among the diseases of public health concern across the globe in modern times, especially the under developed countries. The end result of chronic renal failure is end stage renal disease, where patients must undergo either kidney transplant or dialysis. Despite alarming increase of this condition, the knowledge regarding the sociodemographic information and medical profile of patients on renal replacement therapy and the effects of the therapy on their quality of life in Ghana is little if any at all. This is so especially in the country of study.

Therefore, this study seeks to gain insight into the sociodemographic features as well as the medical profile of patients undergoing renal dialysis at the study site, thus underscoring the exigent need for more attention to be paid to patients undergoing renal dialysis in general. This study seeks to determine the sociodemographic characteristics of patients undergoing hemodialysis, examine the medical profiles of patients undergoing hemodialysis; and assess the perception of patients themselves on the effects of hemodialysis on their quality of life. This will help inform clinicians on how to plan for the care of these patients' population.

Background to the Study

Chronic Renal Disease (CRD) is a renal disorder characterized by a slow and continuous loss of renal function or a decline in glomerular filtration rate [1]. A Proper and adequate renal function is optimal health and it is estimated that one in seven Americans have chronic renal disease [2]. Among the non-communicable diseases (NCD) of public health concern, chronic renal disease has been acknowledged as one of the increasingly burdensome and leading diseases in modern times across the globe [3].

The worldwide prevalence of the disease is estimated at 13.4%. Patients with CRD unfortunately and most often, progress to end stage renal disease (ESRD), which refers to the irreversible damage to the kidneys, which then requires replacement therapy. Across the globe, patients with end-stage renal disease (ESRD) requiring kidney replacement treatment is projected at between 4.90 and 7.1 million people [3].

Across the world, some of the principal causes of CRD comprise hypertension and Diabetes Mellitus. However, in Sub-Saharan Africa, additional causes such as use of herbal drugs and HIV have been identified as other causes, with notable complications including cerebrovascular accident, cardiac failure, and metabolic bone disease.

The distribution and determinants of ESRD is an interconnected function of each country's distinct genetic, lifestyle, environmental and sociodemographic characteristics. How spread the disease is differs between the developed and the under developed countries. In Sub-Saharan Africa, there is an exponential rate of increase of

the disease. Survival and quality of life of patients with this disease in Sub-Saharan Africa is influenced by poverty, poor or crude health systems, underdevelopment, poor access to or availability of treatment options [4].

The replacement therapies include hemodialysis, peritoneal dialysis, and kidney transplantation. The commonest form of kidney replacement therapy across the globe is hemodialysis [5]. In recent times, it has been observed that there is a rising tide of end stage renal disease among the population of the study country, especially in the Metropolis of study. As a result, many of these patients, who come from far and near, undergo renal dialysis at the Teaching Hospital located there. Yet very little is known about their sociodemographic characteristics, medical profile and the effects of dialysis on their quality of life. This study therefore seeks to gain knowledge on the sociodemographic characteristics, medical profile of patients undergoing renal dialysis and the effects of dialysis on their lives.

There is growing evidence that chronic renal disease is becoming a serious disease of public health concern. This affects people of all age categories and exposes the deep seated and bleak picture these paints for the economic development of this country just like other countries of the world. The common form of renal replacement treatment for ESRD patients is hemodialysis. This service is largely provided by the Teaching Hospitals and other major hospitals in the study country. Various categories of patients undergo the procedure daily at the designated centers and yet very little information is published about their demographic characteristics, medical conditions as well as effects of dialysis on the lives of these patients.

This largely unavailable information means a huge gap in the information needed to gauge the extent and depth of the incidence and prevalence of ESRD across the demographic profile of the population in the Northern Region and to also conduct proper health systems planning and needs assessment for patients undergoing hemodialysis in the country of study, most especially for patients undergoing dialysis at the Teaching Hospital. Given this paucity of data, this study therefore seeks to assess the sociodemographic information, medical profile of patients and their perceptions about the effect of dialysis on their quality of life at the Teaching Hospital where they undergo dialysis.

Theoretical Framework

The theoretical framework as denoted in Figure 1 below, broadly illustrates the components or elements that make up this framework and how these variables affect one another. These are the sociodemographic characteristics of study participants, medical profile of participants and the effect or impact of dialysis on their quality of life. The sociodemographic information of patients undergoing hemodialysis and their medical profile could influence their overall quality of life.

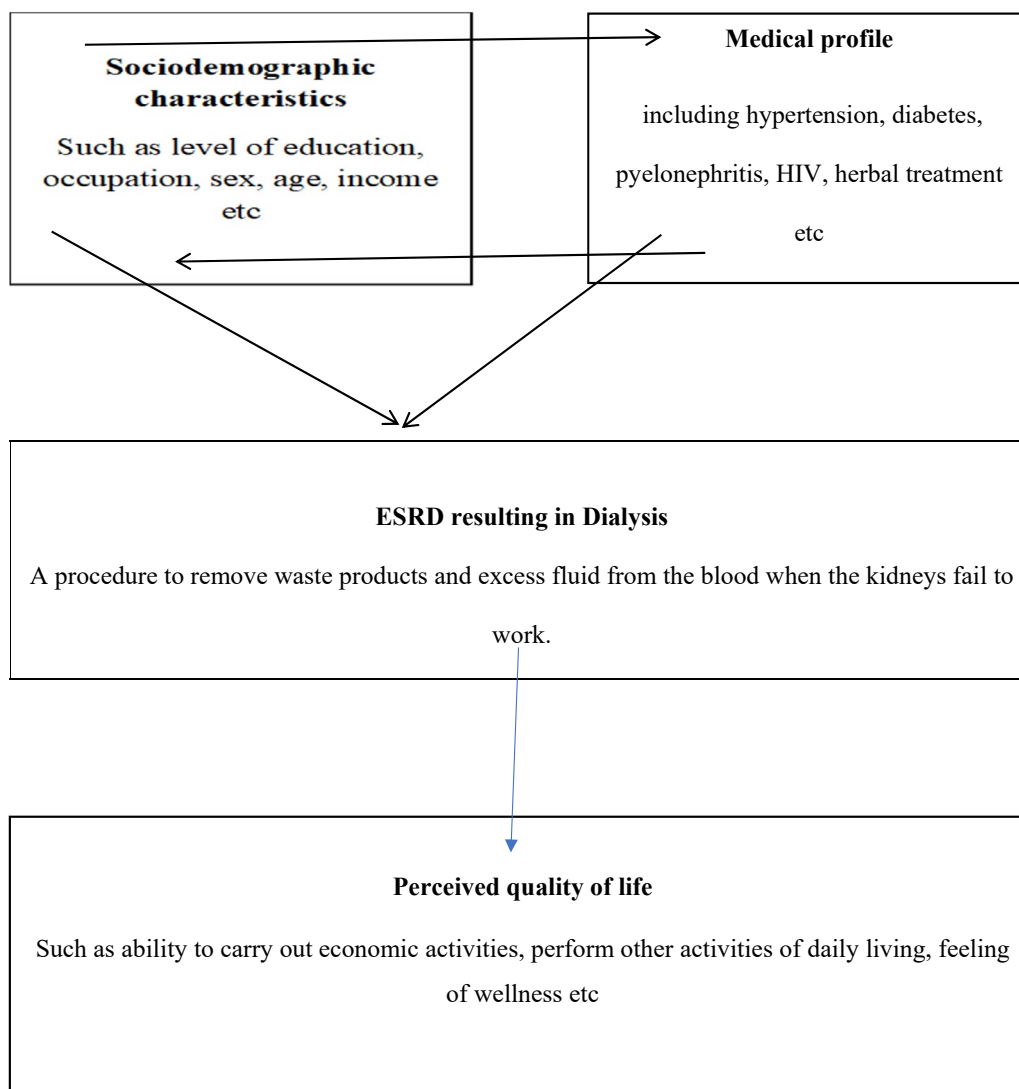


Figure 1:2 Theoretical framework

Methodology

This section of the study outlines the materials and methods employed for the study. It includes the study setting, study design and sampling among others.

Study Setting

The study took place at the Teaching Hospital, the major hospital in the Northern part of the country where the study was carried out. It is situated on the Eastern Part of the Metropolis (Digital address – NT-0101-5331) and has a landmass of 490,000m². It was commissioned in 1974 to serve as a regional hospital, it now serves as a referral Centre for many hospitals across the northern regions. In the year 2009, the facility was upgraded to the status of a Teaching Hospital to serve as the tertiary Centre for health care as well as a referral and teaching Centre for medical, nursing and allied students of the University situated there and Nursing and Midwifery Training Colleges in the country. It has a bed capacity of eight hundred and provides care to over one hundred thousand patients annually [6].

Study type and Design

A cross sectional study design was employed for the study. As with cross sectional designs, this study sought to obtain information about the characteristics of a phenomenon (sociodemographic characteristics and medical profile of patients undergoing dialysis) among a select population at a given point in time. A cross-sectional design is appropriate when uncovering knowledge level, prevalence of a phenomenon, attitudes and determinants or factors associated with a phenomenon among patients or health personnel, in validation studies. In this case, the study will seek to collect information about the sociodemographic characteristics and medical profile as well as the quality of life of patients undergoing dialysis at the Tamale Teaching Hospital. However, since this study was conducted at a specified period, it only provided information about the participants [7,8].

Study Population

The study involved patients undergoing dialysis at the chosen Hospital of study.

Inclusion and Exclusion Criteria

Inclusion Criteria

Respondents included male and female dialysis patients who underwent dialysis at the Tamale Teaching Hospital; were in optimal health; were capable and agreed to participate in the study willingly and voluntarily.

Exclusion Criteria

Respondents were not included if; they were patients undergoing dialysis but were not medically stable and capable (mental instability) as well as those who did not consent or agree to partake in the study.

Definition of variables

Dependent variable

For the purposes of this study, dependent variables were referred to medical profile and perceived effects of dialysis.

Independent Variables

The independent variables included sociodemographic characteristics and dialysis.

Sampling

Sample Size Determination

Using data from the hospital end of year report, an average number of about 10 patients undergo dialysis daily at the Tamale Teaching Hospital probably due to most of them not being able to afford for treatment. According to a criteria in determining sample size in relation to the re-search method which, cited in their study, asserted that if a research has a relational survey design, such as in this study, then the sample size should not be less than 30. This means sample size can be considered from 30 and above. Hence considering the low numbers of the sampling population for this study that is patients who can afford dialysis at the Tamale Teaching Hospital and the design chosen for this study, the researchers decided to choose a sample size of 51 which is more than 30 as suggested by Borg and Gall (1979), for this type of design [9, 10].

Sampling Technique and Process

In this study, the researcher adopted a simple random sampling. With this sampling technique, the investigator randomly picked a subset of respondents from a population and each member of the population had an equal chance of being selected to reduce bias, it is also simple and saves time and cost [11]. At the study site, respondents were randomly selected to increase their chances of being selected. Purposive sampling on the other hand, is a technique in which participants are selected based on the judgment of the researcher. Respondents who met the inclusion criteria were purposively selected for this study [12,13].

Data Collection Tool

A validated questionnaire was adopted from WHOQOL-BREF (Gurudev et, al., 2008). This questionnaire was employed to collect data in this study. It is designed based on the objectives of the study. The sections employed were: section A, the demographic

characteristics of respondents; section B included information on the medical profile of dialysis patients; and section C contained items on the perceived effects of dialysis on the quality of life of patients.

Data Collection Procedure

An approval letter from the Teaching Hospital was obtained from the research ethical review committee. Respondents who met the inclusion criteria were randomly and purposively contacted to partake in the study only at their convenience and when they were not engaged. A letter of introduction containing the description and purpose of the study was showed to the participants and the researchers also gave a consent form in English and Dagbani to them. After respondents agreed or consented to partake in the study, the questionnaires were then issued to them.

Pre-Testing of Data Collection Tool

To ensure that the study tool met the objectives of the study, the tool was pretested on patients with chronic kidney disease in the renal Unit of the Teaching hospital but the results were not added to the main study. Problems identified in the tool were corrected accordingly.

Data Management

Data obtained from the study were stored by securing it with a password and saved on a personal laptop and a backup stored in drop box and Google drive. Sole access to the study was for the researchers.

Data Analysis

Data collected were cleaned and entered into excel. Quantitative data were analyzed using descriptive statistics using STATA version 14.0. Frequency tables were used to present the data in simple and understandable manner.

Ethical Consideration

Permission was sought from the Ethics Review Committee of the Teaching Hospital where the study was carried out, which was granted before commencement of the study. All ethical issues that deal with research according to the World Medical Association declaration of Helsinki accord were duly followed.

Results

This section outlines the analysis from findings of the study, which are presented under the stated objectives. These include; assessing the sociodemographic characteristics of participants, examining the medical profile of participants as well as the effects of dialysis on the quality of life of participants. A total of 51 responses were obtained from dialysis patients at the dialysis unit of the Hospital where the study was carried out.

Socio-Demographic Characteristics of Participants

Table 4.1 illustrates the socio-demographic information of the participants. About (35.3%, n = 18) of participants were between the ages of 41 and 50 years (Mean = 42.9 years, SD 14.5, Min. 13 years, Max. 77 years), while the maximum age was 77 years and the minimum age was 13 years. Majority (72.6%, n = 37) of the

participants were male while nearly a third (29.4%, n = 15) of the participants had attained tertiary education and about 25.5% (n = 14) had no formal education. Over two-thirds (66.7%, n = 34) of the participants were currently married, while a third, 29.4% (n = 15) were single. In terms of occupation, majority of the participants (39.2%, n=20) were unemployed, while close to a third (37.5%, n = 14) were engaged in formal education and a third were resident

in rural areas (38%, n =19). Interestingly, majority (70.1%, n = 24) of the participants were earning less than Ghc500 a month and only a small proportion (5.9%, n = 2) of them earned above Ghc3, 500. Regarding alcohol and cigarette use, about a tenth (11.8%, n =6) had either previously smoked cigarette or almost all of the participants (98.0%, n = 49) had not previously used alcohol but only one participant (2.0%) currently smokes.

Table 4.1 Socio-demographic characteristics of participants

Variable	Frequency (N=51)	Percentage (%)
Age group		
0-20	5	9.8
21-30	5	9.8
31-40	11	21.6
41-50	18	35.3
51-60	7	13.7
61-70	2	3.9
71 and above	3	5.9
Mean Age 42.9 years, SD 14.5, Min. 13 years, Max. 77 years		
Gender		
Male	37	72.6
Female	14	27.4
Education		
No formal education	13	25.5
Basic education	14	27.5
Senior High/Vocational School	9	17.7
Tertiary	15	29.4
Marital status		
Single	15	29.4
Married	34	66.7
Divorced	1	2.0
Widow/widower	1	2.0
Occupation		
Unemployed	20	39.2
Seasonal wage earner	5	9.8
Formal employment	14	27.5
Self-employed/Vocational	12	23.5
Location of residence		
Rural	19	38.0
Urban	29	58.0
Peri-urban	2	4.0
Income (Ghc)		
Below 500	24	70.1
501 –2,000	5	14.7
2001 and 3,500	3	8.8
Above 3,500	2	5.9
Alcohol and cigarette use	Yes, N(%)	No, N(%)
Current alcohol use	1(2.0)	49 (98.0)
Current cigarette use	3(5.9)	48 (94.1)
Previous cigarette use	6 (11.8)	43(84.3)
Source: Field work, 2022 *SD – Standard Deviation		

Medical Profile of Patients Undergoing Dialysis

This section describes the medical profile of participants as reported in this study. Participants were asked to report on the frequency of dialysis as well as the comorbidities they lived with in addition to dialysis. This is illustrated in table 4.2 below. From this study, majority of the participants received dialysis between two and three times weekly (38.0%, n = 19), while closely related to the majority are participants who received dialysis once weekly (32%, n = 16) and only 14% of the participants undertook dialysis above three times (n = 7). Meanwhile, majority of participants also reported having been undergoing dialysis for a year (68.6%, n =35) and nearly a tenth (7.8%, n = 4) reported having been undergoing dialysis for more than two years. Also, hypertension was the predominant disease condition co-existing with end-stage renal disease among participants (73.9%, n = 34) followed by diabetes mellitus (13%, n = 6). Again, hypertensive nephropathy was the predominant cause of their condition while diabetic nephropathy was the second factor that caused their end-stage

renal disease (11.1%, n = 5). Apart from cramps, which was less prominent as an associated problem according to the participants, all other stated symptoms were responded in the affirmative as an associated symptom or problem associated with their condition. They reported chest pain, 72.0% (n=36), itchy skin 60.0%(n = 30), loss of appetite 54.2% (n =26%), nausea and vomiting, 51.0% (n=26), stomach upset 58.8%, (n = 30) and shortness of breath 63.2% (n = 31) among others.

These findings expose the numerous challenges patients undergoing dialysis face on a daily basis and lend credence to the increased need to pay attention to managing the associated signs and symptoms of patients undergoing dialysis. Even though majority of participants did not state that cramps was a symptom associated with their condition, nearly half of the participants 46%, (n = 23) constituting a significant proportion, indicated that cramps was associated with their dialysis.

Table 4.2 Medical profile of patients undergoing dialysis

Variable	Frequency (N=51)	Percentage (%)
How many times do you go for dialysis in a week?		
None	1	2.0
Once a week	16	32.0
2 – 3 times	19	38.0
Above 3 times	7	14.0
How long have you been undergoing dialysis?		
Less than 6 months	17	33.3
6-12 months	18	35.3
13 -18 months	4	7.8
10 – 24 months	8	15.7
Above 2 years	4	7.8
What disease do you have along with your kidney disease?		
Hypertension	34	73.9
Diabetes Mellitus	6	13.0
Hypertension and Diabetes Mellitus	2	4.4
Hepatitis	2	4.4
Ischemic Heart disease	2	2.2
Hypertension, Diabetes mellitus and Hepatitis	2	2.2
Others	0	0.0
What is your primary kidney disease? (Cause)		
Hypertensive nephropathy	33	73.3
Diabetic Nephropathy	5	11.1
Hypertensive and Diabetic Nephropathy	2	4.4
Others	5	11.0
Symptoms and associated problems		
	Yes, N (%)	No, N (%)
Do you have chest pain?	36(72.0)	14(28.0)
Do you have itchy skin?	30(60.0)	20(40.0)
Do you have cramps?	23(46.0)	27(54.0)
Do you lose appetite?	26(54.2)	22 (45.8)
Do you have nausea and vomiting?	26(51.0)	25(49.0)
Do you have stomach upset?	30(58.8)	21(41.2)

Do you have problems with the dialysis access site?	30(63.8)	17(36.2)
Do you have shortness of breath?	31(63.2)	18(36.7)
Source: Field data, 2022		

Effects of Renal Dialysis on The Quality of Life of Patients

The quality of life of patients undergoing dialysis is a key function of the quality of dialysis care as well as the general medical, psychological, physical and emotional care they receive. In this section of the analysis, participants reported how their condition affected the quality of their lives. As described in table 4.3, More than a quarter of participants in the study reported not being able to work to earn a living (26.5%, n = 13), while about a tenth (14.3%, n = 7) disclosed that they had reduced their working capacity to suit their new situation and demands of the disease. Furthermore, they indicated that dialysis interfered so much with their lives (98.0%,

n =50) because they spent too much time on a daily basis dealing with it (98.0, n = 49), thus making it very frustrating (93.9%, n=46). Given this situation, participants noted that they felt like they are a burden on their various families and society (96.1%, n = 49). Apart from the fact they felt like a burden on society and their families, on an individual level, almost all of the participants indicated that their sexual lives were negatively impacted by the condition along with other basic activities of daily living like working around the house 82.5% (n = 41) and even travelling 80.4% (n =41), as well as their diet 86.3% (n= 44).

Table 4.3 Effects of renal dialysis on the quality of life of patients

Variable	Frequency (N=51)	Percentage (%)
What is your working status?		
Working as before dialysis	29	59.2
Reduced capacity at work	7	14.3
Not working	13	26.5
Other effects of dialysis on quality of life		
	Yes, N (%)	No, N (%)
My kidney disease interferes too much with my life	50(98.0)	1 (2.0)
I spend too much of my time dealing with my kidney disease	49(98.0)	1(2.0)
I feel frustrated dealing with my kidney disease	46(93.9)	3(6.1)
I feel like a burden on my family and society	49(96.1)	2(3.9)
My kidney disease has affected my sex life	47(92.2)	4(7.8)
My kidney disease has affected my ability to work around the house	41(82.5)	9(18.0)
My kidney condition has affected my ability to travel	41(80.4)	10(19.6)
My condition has affected my diet and ability to take fluids	44(86.3)	7(13.7)
My condition has affected my personal appearance	50(98.0)	1(2.0)
Do you currently engage in regular physical activity	30(58.8)	21(41.2)
Source: Fieldwork, 2022		

Discussion

This chapter discusses the findings from the study conducted on the sociodemographic characteristics and medical profile of patients on dialysis at the Tamale Teaching Hospital. Discussion of the findings is done in accordance with the stated objectives of the study.

Socio-Demographic Characteristics of Patients on Dialysis

The sociodemographic characteristics of participants in this study reveals an average age of 42.9 years and a high number of middle-aged participants who were largely male, as well as a significant proportion of young patients with the youngest being thirteen years. Also, over two-thirds of participants were also married. These findings are closely related to the outcome of a systematic review by, which found that majority of patients undergoing dialysis were young (35 years and younger) and their educational and smoking status did not show any significance. These findings however, are in contrast to the findings of a Brazilian study which revealed an average age of 60 years or older for patients undergoing dialysis in the study and majority of the participants were also married [14,15].

Again, majority of participants (70.1%) in this study were found to earn less than Ghc500.00, equivalent to 35 dollars, and this exposes the dire situation and difficult financial state of many of the participants. This makes it difficult for participants to be able to make ends meet and as well meet their medical bills. This means participants will need continued assistance to be able meet some of their basic needs. This identifies with findings in, which observed that dialysis patients lived poor quality of lives as a result of their low financial status. In terms of gender, majority of the participants in this study were males with a mean age of 42.9 years.

This is similar to the outcome of a study by Bassi et al (2020) which revealed that majority of the participants were male and presented an average age of 50 years, as well as that of a study in Sudan which revealed an average age of 36 and 45 years among participants in the Sudanese study and majority of the participants too were married [16].

The sociodemographic information of participants in this study shows that younger patients are undergoing dialysis than ever

before. This is because in the year 2014, a systematic review by Hamilton et al showed that majority of the participants on dialysis were at least 60 years, however, later studies like that of showed that the average age of dialysis patients was 50 years, while the Sudanese study in 2019 found ages between 36 and 45 years. This shows that over the years, younger and male patients are becoming diagnosed with end-stage renal disease and undergoing dialysis irrespective of their educational status. The authors of this study think this is a wake-up call to various governments and organizations interested in health because the working force of this generation appears to be the most victims according to this research and recent studies alike. Pragmatic actions should therefore be taken to mitigate these unfortunate revelations.

Medical Profile of Patients Undergoing Dialysis

From the findings of this study, only about a third of the participants were able to undergo the recommended weekly dialysis two or three times. This is due to the issue of finances which participants indicated that majority of them earned less than Ghc500 monthly, a very meager amount that could not afford even one session of dialysis along with the accompanying medication because a session of dialysis is estimated to cost between Ghc1000 and Ghc 1500 cedis, equivalent to between 68 to 104 dollars. Patients undergoing hemodialysis usually present with co-morbidities, which may have begun before the initiation of hemodialysis or after the onset of ESRD. The findings of this study found that the two most prominent diseases co-existing with dialysis are hypertension (73.9%, n = 34) and diabetes (13%, n = 6) and were even stated as the cause of their ESRD according to the participants in this study.

Furthermore, hypertensive 73.3% (n=33) and diabetic 11.1% (n=5) nephropathies are the major causes of ESRD according to participants in this study. The most fundamentally recognized causes of ESRD are hypertensive and diabetic nephropathies which have been acknowledged in this study and further emphasized in a study by Thurlow et al (2021) who stated that hypertension and diabetic nephropathy have been acknowledged globally. This is also confirmed in a systematic review of studies conducted in Africa and showed that in addition to hypertension and diabetes mellitus, other co-existing conditions include HIV and hepatitis. Other disease conditions identified by other studies other than those found in this study include; chronic glomerulonephritis, tubulointerstitial or obstructive disease, primary glomerular diseases, systemic lupus erythematosus (SLE) and polycystic kidney disease [17].

In addition to living with ESRD and either hypertension or diabetes mellitus or both, participants have also described the common symptoms associated with ESRD and dialysis. Symptoms identified in this study included; cramps, loss of appetite, itchy skin, nausea and vomiting, stomach upset, shortness of breath and problems with the access site. The various studies reviewed as shown from above cited articles have showed that hypertension and diabetes mellitus are the most prevalent disease conditions found to be either co-existing with ESRD or create complications that cause ESRD and lead to dialysis.

Perceived Effects of Dialysis on the Quality of Life

The impact of dialysis on the way and quality of life of participants is very important as it can either negatively affect their way and quality of life or enhance their coping mechanisms. In this study, participants detailed the impact of dialysis on the quality of their lives in various forms. Even though over half of the participants (59%) appeared to continue working just like their pre-dialysis level, almost all (98%) the participants stated that dialysis still interfered with their daily lives and they take too much time dealing with issues related to dialysis on a daily basis and thus causing frustration, because they feel they are a burden on their various families and society.

This finding is in congruent and reflect the findings by, who found a sub-theme of “Being dependent on others” and a main theme of “Changed roles and status “in their study of lived experiences of Ghanaian patients living with ESRD. These problems could result in depressive symptoms as observed in a related study by D’Egidio et al (2019) in especially female participants even though the majority of sufferers of ESRD were men. This level of worry has also been shown to express the extent to which they perceive of the disease condition and dialysis as a burden leading to signs such as emotional instability, physical inactivity and failure to perform activities of daily living [18,19].

These depressive symptoms could be worse in patients who are young, unemployed and were less likely to be married. This thus makes it difficult for participants to raise enough funds to support themselves and to be able to undergo regular dialysis. In addition, this group of patients on dialysis is less likely to enjoy adequate psychosocial support and thus, may be unable to handle ill thoughts. The authors of this research therefore, suggest that these group of patients need various forms of support to be able to cope. The relevance of these support systems for patients on dialysis is further emphasized in content analyses of extensive data with themes which suggest for the need of these support systems.

The most important themes found included “Perceived Threats Caused by Disease Complications”, “Searching for Social Support”, “Accessible Social Support”, “Beliefs and Values”, and “Perceived Social Support”. Other issues affecting the quality of life of participants in this study include; effects on their sex life and the feeling of being a burden on family and society [20]. The findings of this study have thrown more light on the plight of patients on dialysis by presenting a snapshot of the situation at a given period of time at a particular place.

Conclusion

End stage renal disease (ESRD), is growing in prevalence among young people and adults alike. The experience of patients undergoing dialysis in the Hospital where study was done is not ephemeral but presents a broad picture of their sociodemographic characteristics, medical profile and effects of dialysis on the quality of life of patients on dialysis treatment. Majority of participants in the study were middle-aged and were men. Also, most of the participants had undergone dialysis for at least one year. Majority

of the participants (70.1%) also earned a monthly income less than Ghc500, that about 34 dollars and thus exposes the dire and desperate lives some patients on dialysis live. Again, hypertension and diabetes mellitus have been the most common co-existing disease conditions patients lived with and the complications of these two top disease results in nephropathies and causing patients to undergo replacement therapy such as dialysis. Dialysis was perceived as interfering with their lives, affected their ability to work optimally and they also feel frustrated as a result.

In addition, this frustration resulted in depressive symptoms such as emotional instability and makes patients feel that they were a burden on their families and society. On a personal level, dialysis affected the sex life, physical appearance of patients and their ability to travel. Therefore, the question and aim of this research of investigating the sociodemographic characteristics, medical profile and effects of dialysis on ESRD patients was achieved as shown in this conclusion.

Recommendations

Given the prominent role dialysis plays in the lives of ESRD patients, it will be helpful to make it accessible to all patients who need the service by including it in the national health insurance scheme. Designing and implementing sensitization programs for the general public to reduce the risk of ESRD among members of the population. Members of the general population should engage in regular health screening exercises to identify those at risk and reduce the tendency of their condition progressing to ESRD. Government and other stakeholders should partner to establish more facilities to provide dialysis to the teeming members of the population who require dialysis. More research should be conducted into the risk factors of renal disease in the population and also research into the reasons that lead to more men being on dialysis even though more women have chronic kidney disease than men recommend the best ways to reduce the occurrence in the general population.

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APPENDIX

QUESTIONNAIRE

Dear Respondent,

We are researchers and are undertaking a study on *the sociodemographic characteristics, quality of life and medical profile of patients undergoing dialysis at the Tamale Teaching Hospital*. The questionnaire is designed to seek your candid views about this topic to enable us answer our research questions. We will be grateful if you could devote some of your valuable time to study and answer the questionnaire. All answers will be treated as confidential and will be used for academic purposes only. Please, agreeing to be a respondent in this study is voluntary and you are free to decline at any point of your response and there will be no repercussions against you. You are encouraged to answer all questions to help us gain a better understanding of the topic under study. However, you are also allowed to decline at any point in time answering specific questions during the study should you feel uncomfortable doing so. Thank you.

Please feel free to contact the researchers on 0242770528 / 0209318103 if you have any concerns.

Section A: Sociodemographic data

1. Please state your age.....
2. Please what is your marital status?
 - a. Single () b. Married () c. Divorced () d. Widow ()
3. What is your gender? a. Male () b. Female
4. What is your highest level of education?
 - a. No formal education () b. Basic () c. Secondary/Vocational () d. Tertiary
5. What is your occupational status? a. Unemployed () b. Seasonal/daily wage earner ()
 - c. ^{[[]]}Formal employment () d. ^{[[]]}Self-employed /vocation ()
6. Location of residence? a. Rural () b. Urban () c. Peri-urban () ^{[[]]}
7. Do you currently alcohol use? a. Yes () b. No ()
8. Do you currently smoke cigarette? ^{[[]]} a. Yes () b. No ()
9. Did you previously smoke cigarette? ^{[[]]} a. Yes () b. No ()
10. What is your average monthly income? ^{[[]]} a. Below Ghc500.00 b. Ghc501 – Ghc2000 c. Ghc2001 – Ghc3,500 d. Above Ghc3500

Section B: Medical profile of patients undergoing dialysis

11. How many times do you go for dialysis in a week? a. None () b. Once a week () c. 2 – 3 times () d. Above 3 times .
12. How long have you been undergoing dialysis? a. Less than 6 months () b. 6-12 months () c. 13 -18 months () d. 10 – 24 months () e. Above 2 years ()
13. What disease do you have along with your kidney disease?
 - a. Hypertension () b. Diabetes Mellitus () c. Hypertension and Diabetes Mellitus d. Hepatitis e. HIV f. Ischaemic Heart disease f. Hypertension, Diabetes mellitus and Hepatitis () g. Others ()
14. What is your primary kidney disease? (Cause) a. Hypertensive nephropathy ()
 - b. Diabetic Nephropathy () c. Hypertensive and Diabetic Nephropathy d. Others ()
- ^{[[]]}15. Symptoms and associated problems (Please select the appropriate response)
 - Do you have chest pain? a. Yes () b. No ()
 - Do you have itchy skin? a. Yes () b. No ()
 - Do you have cramps? a. Yes () b. No ()
 - Do you lose appetite? a. Yes () b. No ()
 - Do you have nausea and vomiting a. Yes () b. No ()
 - Do you have stomach upset? a. Yes () b. No ()
 - Do you have problems with the dialysis access site? a. Yes () b. No ()
 - Do you have shortness of breath? a. Yes () b. No ()

Section C: Effects of renal dialysis on the quality of life of patients

16. What is your working status? A. Working as before dialysis () b. Reduced capacity at work c. Not working
17. My kidney disease interferes too much with my life? a. Yes () b. No ()
18. I spend too much of my time dealing with my kidney disease? a. Yes () b. No ()
19. I feel frustrated dealing with my kidney disease? a. Yes () b. No ()
20. I feel like a burden on my family and society? a. Yes () b. No ()
21. My kidney disease has affected my sex life? a. Yes () b. No ()
22. My kidney disease has affected my ability to work around the house? a. Yes () b. No ()

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23. My kidney condition has affected my ability to travel? a. Yes () b. No ()
24. My condition has affected my diet and ability to take fluids? a. Yes () b. No ()
25. My condition has affected my personal appearance? a. Yes () b. No ()
26. Do you currently engage in regular physical activity? a. Yes () b. No ()

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