CLIENTS KNOWLEDGE OF RENAL DONATION AT A SPECIFIC URBAN HEALTH CARE FACILITY IN THE LIMPOPO PROVINCE

by

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DECLARATION

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I declare that the study on **CLIENTS KNOWLEDGE OF RENAL DONATION AT A SPECIFIC URBAN HEALTH CARE FACILITY IN THE LIMPOPO PROVINCE** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references

________________________ 28/10/2018
SIGNATURE DATE

DEDICATION

I would like to dedicate this study to my husband Phiri, my children Kapoko, Mmabatho and Katlego for their support and understanding.

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ABSTRACT

The purpose of this study was to explore and describe the knowledge of clients regarding renal donation at a specific urban health care facility in the Limpopo province. A quantitative, explorative, descriptive and cross-sectional design was used. Data was collected using a structured pre-tested questionnaire. Out of 317 questionnaires, 300 were valid and considered for the study. Analysis was done using Statistical Package for Social Sciences (SPSS) computer software version 25. Data was presented using tables, graphs and charts. The study revealed that 32% (n=95) were males and 68% (n=205) were females. The results showed that there are a significant correlations between the attitudes, knowledge and actions of clients with regards to renal donation. The study revealed inadequate knowledge on the majority 74,7% (n=224) of the respondents on renal donation. A recommendation was that awareness campaigns on renal donation to be planned on world kidney days. Furthermore, the recommendations of the study will be presented to the Limpopo Department of health to take effective measures to educate people with relevant information on renal donation. A policy regarding awareness programme of renal donation should be developed.

KEY CONCEPTS

Clients, donation, health care,kidney, knowledge, transplant.

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LIST OF ACRONYMS AND ABBREVIATIONS

ESKD	End stage kidney disease
HIV	Human immune virus
HLA	Human leucocyte antigen
RRT	Renal replacement therapy
SSA	Sub-Saharan African
SPSS	Statistical Package of Social Sciences
WHO	World health organisation
PD	Peritoneal dialysis
HD	Haemodialysis
CRF	Chronic renal failure
GFR	Glomerular filtration rate
ARF	Acute renal failure

CHAPTER 1
ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Organ donation shortage has become a public health crisis due to increased demand which continues to surpass supply (Manojan, Raja, Nelson, Beevi & Jose 2014:25). However, irrespective of all the treatment options for kidney failure, the burden of chronic diseases such as chronic renal failure is high and keeps increasing (Thomson & McKeown 2012:252).

Kidney failure has the following phases: pre-renal, acute renal, chronic renal, and end-stage kidney failure. In pre-renal failure, there is reduced blood flow which leads to decreased glomerular perfusion and filtration of the kidneys. If decreased perfusion persists for an extended period, the kidneys lose their ability to compensate and damage to kidney parenchyma occurs. This parenchymal damage may lead to acute kidney failure. In that case, careful monitoring of fluid intake and output and electrolyte balance is essential (Urden, Stacy & Lough 2011:808).

If a patient does not recover from acute kidney disease, then chronic kidney disease develops. Chronic kidney disease involves progressive, irreversible loss of kidney function. The last stage of kidney failure is end-stage kidney disease (ESKD). At this stage dialysis or transplantation is required to maintain life (Lewis, Dirksen, Heitkemper & Butcher 2014:1124-1130).

Every year thousands of individuals are added to transplant waiting lists around the world. Unfortunately, the demand for organs far exceeds the supply of suitable donors and many patients die before a suitable organ can be identified. It is thus important to ensure that all potential donors are identified and appropriately managed to maximise organ availability (Thomson & McKeown 2012:254).

According to the study by Timmerman, Ismael, Luchtenburg, Zuidema, Ijzermans, Busschbach, Welmar and Massey (2015:581) to explore knowledge about dialysis, transplantation and living donation among patients and their living kidney donors, both potential donors and patients with end-stage-renal disease need appropriate knowledge about dialysis, transplantation, and living organ donation; with specific reference to that of the kidney, to make a fully informed treatment decision. Oluyombo, Fawale, Ojewale, Busari, Ogunmola, Olanrewaju, Akinlege, Oladosu Olamogegun, Gbadegesin, Obajolowo, Soje, Adelaja and Ayodele (2016:20) have identified attitudes and lack of knowledge among health care workers as a barrier to successful organ donation in their study on health care workers' knowledge regarding organ donation and willingness to donate in South-West Nigeria.

The researcher has observed that renal patients' relatives and the public are not knowledgeable about kidney donation. The researcher intended to explore and describe clients' knowledge with regard to kidney donation at a specific urban health care facility in Limpopo province. It should be noted that the terms "renal" and "kidney" will be used interchangeably throughout the discussion.

1.2 BACKGROUND TO THE RESEARCH

Kidney failure is a major threat to the world's health, and has been found to be associated with an increased mortality and morbidity rate over the years. Kidney failure is the partial or complete impairment of kidney function, which results in an inability to excrete metabolic waste products and water, and it contributes to disturbances of all body systems. Most patients with ESKD are treated with dialysis because there is a lack of donated organs. Some people do not want to become donors in the absence of knowledge. Kidneys for donation may be obtained from compatible blood-type deceased donors, blood relatives, emotionally related (close and distant) living donors (for example spouses and distant cousins), and altruistic living donors who are known (friends) or unknown to the recipient (Lewis et al 2014:1124).

The advances made in organ procurement and preservation, surgical techniques, tissue typing and matching, immunosuppressant therapy, and prevention and treatment of graft rejection have dramatically increased the success of kidney transplantations. Even though kidney transplantation is by far the best treatment option available to patients with ESKD, fewer than 4% ever receive a transplant. This is because of the high disparity between the supply and demand for kidneys (Hamed, Awad, Youssef, Fouda, Nakeeb & Wahab 2016:1).

Many lives are saved each year through organ transplantation, however, many people die while waiting on the transplant waiting list. On average, about 106 people are added to the transplant waiting list every day, and eighteen people die each day while waiting for an organ donation. On the other hand, there is an alarming situation in Third World countries of “organ tourism”. Thousands of people from Europe, the Middle East, the United States of America (USA) and Australia come to India, Pakistan, China, Egypt, the Philippines and other countries annually in search for underprivileged donors, who are willing to give away their organs because they need financial compensation in order to survive economically.Pakistan is one of the favourite resorts worldwide as far as transplant tourism is concerned (Khan, Masood, Tufail, Shoukat, Ashraf, Ehsan, Zehra, Battol, Akram & Khalid 2011:16).

Every year more than 93,000 people with kidney failure are waiting for kidney transplantation, yet less than one-fourth ever receive a kidney. Transplantation from a deceased donor usually requires a prolonged waiting period with differences in waiting time depending on age, gender, and race. The average waiting times in the USA for a cadaveric kidney (deceased donor) to become available ranges from two to five years (Lewis et al 2014:1124).

There are currently 121,678 people waiting for life-saving organ transplants in the USA. Of these, 100,792 are waiting for kidney transplants. In 2014, 17,107 kidney transplants took place in the USA; 11,570 came from deceased donors and 5,537 came from living donors. On average over 3,000 new patients are added to the kidney waiting list each month (on average one person every fourteen minutes), yet thirteen people die each day while waiting for a life-saving kidney transplant. In the USA, 4,761 patients died while waiting for a kidney transplant in 2014 (National kidney foundation 2017:4).

It is estimated that approximately 50,000 South African citizens require chronic renal replacement therapy. Currently, 8,500 patients are dialysed in both private and public hospitals in South Africa. Adding to the increasing number and related costs of patients on chronic dialysis is the plummeting transplantation rate (National kidney foundation 2016:2).

In the study conducted by Khan et al (2011:20) on the knowledge and attitude of people with regard to organ donation, the results revealed that there is a wide gap in terms of organ donation on the basis of education and socioeconomic status among the population. People who can donate seem to be reluctant to donate their organs to those in need due to a lack of knowledge. The study recommended that adequate knowledge may change people's attitudes towards organ donation. Based on the discussion, the researcher identified a need to explore and describe clients' knowledge with regard to kidney donation.

1.3 STATEMENT OF THE RESEARCH PROBLEM

Grove, Gray and Burns (2015:131) describe the research problem as an area of concern in which there is a gap or a situation in need of a solution, improvement or alteration, or in which there is a discrepancy between the ways things are and the way they ought to be. These problematic situations or discrepancies stimulated interest and prompted this study.

In Limpopo province, the 2017 statistics – obtained from the records of an urban health care facility – revealed that there is one dialysis centre for public patients in a specific urban health care facility which has 200 patients, of which 100 are on peritoneal dialysis and 100 are on haemodialysis. There are also additional newly diagnosed patients who are not yet on the programme for haemodialysis. In 2016, only four transplants were done and seven patients died while on the transplant waiting list. In 2017, six patients died and there were no transplants (Register of the researched urban health care facility 2017:8).

Looking at dialysis centres, with specific reference to the statistics of public patients who attend dialysis in the specific urban health care facility that the researcher intended to research, the researcher assumed that there might be limited knowledge of kidney donation. Therefore, a need to explore and describe clients' knowledge with regard to kidney donation was identified.

The researcher has worked in the renal unit for two years. The mortality of those on the transplant waiting list for kidney donation raised a concern. Their families should have saved their lives by donating their kidneys. Based on that, and the researcher's observations during interaction with clients who she met at malls for yearly awareness campaigns on world kidney days, the researcher noted that clients' lack of knowledge about kidney donation might be a contributory factor to mortality. Therefore, a need was identified to explore and describe clients' knowledge with regard to kidney donation.

1.4 DEFINITION OF KEY CONCEPTS

1.4.1 Client: The client is explained as a person who seeks treatment (Tompkins 2015:151). In this study, the client refers to the person seeking treatment in an urban health care facility in Limpopo province.

1.4.2 Deceased donors: These are relatively healthy individuals who have suffered an irreversible brain injury and are declared brain dead. Their next-of-kin consents to organ donation (Lewis et al 2014:1125). It refers to a donated kidney after an individual has demised.

1.4.3 Dialysis: a technique in which substances move from the blood through a semipermeable membrane and into a dialysis solution (dialysate) (Chapman 2016:289). It refers to a procedure of cleaning the blood toxins via a machine in a patient with ESKF.

1.4.4 Donor: A donor is explained as someone who agrees to give blood or any body part to help another person (Sawinski & Locke 2017:740). In this study, a donor shall mean a person who voluntarily gives away any part of his or her body.

1.4.5 Family: is defined as a group of people who associate and interact with one another and share common beliefs or activities (Hattingh, Dreyer & Roos 2012:215). In this study, family refers to parents, brothers, sisters, uncles, and aunts who are biologically related to the patient.

1.4.6 Haemodialysis: is the separation and removal of excess electrolytes, fluids and toxins from the blood by means of a haemodialyser which acts as an artificial kidney (Urden et al 2011:805). Haemodialysis means cleaning the patient's blood through a machine with the intention of clearing the urea.

1.4.7 Kidney (renal) donation: is defined as a process of surgically removing a kidney from someone, either brain dead or alive (Lewis et al 2014:1124). Kidney donation shall mean giving away one of your kidneys while alive or signing a donor card for your kidneys to be taken when you are dead.

1.4.8 Kidney transplant: is defined as the replacement of a patient's diseased organ with a healthy organ from someone who either died or who is still alive (Tong, Chapman, Wong, Josephson & Graig 2013:433). In this study, a kidney transplant refers to the replacement of damaged kidneys with a donated one.

1.4.9 Knowledge: is defined as information that helps students do or apply something that is specific to a discipline, programme or course. It also includes not only specific skills, techniques and methodologies, but also knowledge of criteria about when, how and under what circumstances students should use the information (Bruce, Klopper & Mellish 2011:175). In this study, knowledge refers to understanding information about renal donation.

1.4.10 Living donor: This refers to a living person who undergoes a surgical procedure to remove an organ and place it in another person whose organ is no longer functioning properly (Lewis et al 2014:1125). In this study, a living donor is any person who volunteers to donate a kidney while still alive; being related to the patient or not.

1.4.11 Peritoneal dialysis: Is defined as the introduction of sterile dialysing fluid through an implanted catheter into the abdominal cavity (Urden et al 2011:185). Peritoneal dialysis refers to putting the dialysis solution into the peritoneal cavity to remove waste products in patients with renal failure.

1.4.12 Public patients: are referred to as patients who receive free treatment from the government (Coggon 2012:116). In this study, a public patient refers to a person receiving free treatment and care from the government.

1.5 RESEARCH PURPOSE

The research purpose is a clear, concise statement of the specific goal or focus of a study (Grove et al 2015:131). The purpose of this study was to explore and describe clients' knowledge regarding renal donation at an urban health care facility in Limpopo province.

1.6 RESEARCH OBJECTIVES

The research objective is a clear, concise, declarative statement that is expressed in the present tense (Grove et al 2015:145). The objectives of this study are as follows:

1.6.1 To determine clients' knowledge and understanding regarding renal donation.
1.6.2 To identify the factors that prevents clients from volunteering to donate a kidney.
1.6.3 To describe the attitudes of clients with regard to renal donation.

1.7 RESEARCH QUESTIONS

The research question is an interrogative statement and is used for the same purpose as objectives (Brink, van der Walt & van Rensburg 2012:86). The research questions for this study are:

1.7.1 What are clients' knowledge and understanding regarding renal donation?
1.7.2 What factors prevent clients from volunteering to donate a kidney?
1.7.3 What are the attitudes of clients with regard to renal donation?

1.8 RESEARCH PARADIGM

The researcher used the quantitative design, positivism approach in this study. Positivists value objectivity and attempt to hold personal beliefs and biases in check to avoid contaminating the phenomena under study. The researcher is independent of those being researched and the researcher did not influence findings. Positivists also state that reality exists. Therefore, there is a real world driven by real natural causes and ensuing effects (Polit & Beck 2012:13).

In this study, the main purpose of exploring and describing clients' knowledge with regard to kidney donation was addressed and the study was not contaminated as the researcher was not part of the results.

1.9 RESEARCH SETTING

The research setting refers to the specific place or places where data are collected (Brink et al 2012:59). This study was conducted at an outpatient department of a public urban health care facility situated in Polokwane, Limpopo province. This public urban health care facility is a tertiary hospital in an urban area. It is also a referral hospital for all hospitals in Limpopo province, and caters for all races from different towns, townships and villages. It is the only health care facility with a dialysis centre for all public patients in Limpopo province.

1.10 RESEARCH DESIGN

The research design is a type of inquiry within qualitative, quantitative, and mixed methods approaches that provides specific direction for procedures in a specific study (Creswell 2014:247). In this study, a quantitative, explorative, descriptive and cross-sectional design was used.

1.10.1 Quantitative research

Quantitative research is a formal, objective, rigorous, systematic process for generating numerical information about the world. It is conducted to describe new situations, events or concepts, examine relationships among variables, and determine the effectiveness of treatments in the world (Grove et al 2015:32).

The researcher used the quantitative research as it assisted in generating new knowledge on kidney donation, which aided in developing awareness programmes.

1.10.2 Descriptive design

A descriptive design is the exploration and description of phenomena in real-life situations. Descriptive studies are usually conducted with large numbers of subjects, in natural settings, with no manipulation of the situation in any way (Grove et al 2015:212). The purpose of using a descriptive approach was to determine the clients' knowledge of kidney donation, and to describe their attitudes towards kidney donation at a specific urban health care facility in Limpopo province.

1.10.3 Explorative design

Explorative designs are conducted to gain insight into a situation, phenomenon, community or individual. The need for such a study could arise from a lack of basic information on a new area of interest (De Vos, Strydom, Fouché & Delport 2011:95). An exploratory approach was considered appropriate to explore the respondents' knowledge regarding kidney donation.

1.10.4 Cross-sectional study

A cross-sectional study is a study that collects a large amount of data from the respondents at one point in time (Brink et al 2012). Cross-sectional studies examine a group of subjects simultaneously in various stages of development, levels of education, severity of illness, or stages of recovery to describe changes of phenomena across stages (Grove et al 2015:212). In this study, the researcher collected data from the respondents for two weeks.

1.11 RESEARCH METHODS

A research method involves the forms of data collection, analysis, and interpretation that researchers propose for their studies (Creswell 2014:247). The method used in this study was quantitative.

1.11.1 Population

The population is the entire group of persons or objects that is of interest to the researcher, in other words, that meets the criteria that the researcher is interested in studying (Brink et al 2012:131). In this study, the population was clients who were visiting the outpatient department for check-ups. The population size obtained from the outpatient's register was 1,800. This size was determined by the total number of clients who were seen in 2017 in the outpatient department of the specific public urban health care facility. The researcher targeted clients who met the inclusion criteria and who were willing to participate in the study.

1.11.2 Sampling technique and sample

Sampling is the process of selecting a portion of the population to represent the entire population. A sample is a subset of a population comprising those selected to participate in a study (Polit & Beck 2012:742). Simple random sampling was used in this study to select respondents. The respondents were drawn in a random way from the sampling frame. Each respondent was listed separately and therefore had an equal chance of being included in the sample (Brink et al 2012:135). The sampling frame was the register of clients who visited the outpatient department for various services.

The researcher targeted clients who met the inclusion criteria and who were willing to participate to the study. The population size was 1,800 (The total number of clients seen in the outpatient department for two weeks during the year 2017). The statistics were taken from an outpatient register (Outpatient Register 2017:198). The sample was calculated through the assistance of a statistician, using Slovin's formular. The calculated sample list consisted of 317 respondents.

1.11.3 Inclusion criteria

The inclusion criteria were:

- All males and females.
- All races.
- Clients between 18 and 80 years old.
- All clients who could read and write.
- All languages.

1.11.4 Development and pre-testing of an instrument

An instrument is a tool or device that is used to collect data and it can be in the form of a questionnaire, test, or observation schedule. In this study, the researcher developed a questionnaire. A questionnaire is defined as a document used to gather self-reported data and usually takes place through self-administration (Polit & Beck 2012:297).

The questionnaire consisted of 32 closed-ended questions written in English. There were closed-ended questions which addressed the demographic data and were also questions of the Likert scale type. The Likert scale consists of several declarative items that express a viewpoint on a topic (Polit & Beck 2012:301). The questionnaire was divided into sections A, B, C and D (refer to Annexure D). The different sections were as follows:

- Section A collected demographic information such as age, gender, level of education, nationality, marital status, residential area, and employment status.
- Section B consisted of questions regarding clients' knowledge and understanding of kidney donation.
- Section C were questions about factors which prevent clients from volunteering to donate a kidney.
- Section D described clients' attitudes concerning organ donation.

After its finalisation, before pre-testing, it was sent to the researcher's supervisor, statistician and staff working in the outpatient department and renal unit to check its content validity and reliability. Pre-testing is the trial administration of a newly developed instrument to identify problems or assess time requirements (Polit & Beck 2012:738).

Pre-testing was conducted to investigate possible flaws in the instrument, such as ambiguous instructions or wording, and inadequate time limits (Brink et al 2012:175). The researcher conducted a pre-test to assess whether the statements in the questionnaire were easily understandable. Furthermore, it was done in order to check its validity and reliability. Verbal permission was requested from the unit manager of the outpatient department to conduct the pre-test. After the permission was granted, the researcher gave the respondents informed consent (refer to Annexure E) with all the necessary information about the study. The researcher explained what was written in detail before the respondents agreed to participate.

Informed consent is defined as an agreement by a prospective subject to participate voluntarily in a study after he or she has assimilated essential information about the study (Grove et al 2015:506). The respondents were informed that their participation is voluntary and that they could withdraw from participation at any time should they wish without any penalty. After explanation, the respondents signed their consent forms (refer to Annexure E). Pre-testing was conducted on 23 February 2018.

Ten (10) respondents from the outpatient department of an urban health care facility in Limpopo province received the designed questionnaire to complete (refer to Annexure D). The respondents consisted of men and women of different races, ages, educational levels, and languages. Questionnaires were completed in a private room at the outpatient department provided by the unit manager. The respondents had the right to expect that their data would be kept in the strictest confidence (Polit & Beck 2012:156). The researcher assured confidentiality by informing the respondents that only she and the responsible authorities would have access to the results (refer to Annexure K). Anonymity exists when the respondent's identity cannot be linked, even by the researcher, with his or her individual responses (Grove et al 2015:107). The anonymity of the respondents was protected as they did not write their names or identification numbers on the questionnaire. It took them 10-15 minutes to complete the questionnaire.

The respondents who participated in the pre-testing were not part of the larger study as they might have an impact on its final results, thus giving duplication of the same results. After pre-testing, the questionnaire needed modification. Alterations included: On the Likert scale questions it was difficult for the researcher to measure “strongly agree”, “agree”, “disagree”, and “strongly disagree”. The researcher consulted the supervisor in this regard. After approval of the changes from the supervisor, the questionnaire was amended (refer to Annexure D).

1.12 DATA COLLECTION

Data collection is the process of gathering information relevant to address a research problem (Polit & Beck 2012:725). In this study, the researcher used a structured pre-tested questionnaire to collect data. This was done after being granted ethical clearance by the Research and Ethics Committee of the Department of Health Studies at the University of South Africa (UNISA) (refer to Annexure A). Additionally, permission was granted by the Ethical Committee of the Limpopo Department of Health (refer to Annexure F) and from the public urban health care facility in Limpopo province (refer to Annexure G). Data were collected for two weeks, from the 12th to the 15th of March 2018 and from the 19th to the 22nd of March 2018.

The data collection was conducted at an outpatient department of the urban health care facility. The background, purpose and the significance of the study were explained to the respondents before starting to collect data. The researcher gave the respondents information leaflets (refer to Annexure E) with all the information about the study and explained what was written in detail before they agreed to participate in the form of signing an informed consent.

The informed consent is defined as an agreement by a prospective subject to participate voluntarily in a study (Grove et al 2015:506). They were further informed that participation in the study was voluntary and they were allowed to withdraw from the study, should they wish, without any penalty. Privacy was maintained by allowing the respondents to complete the questionnaire in an available private room provided by the unit manager. Anonymity and confidentiality were maintained by not revealing the respondents' identities during reporting or publishing of the study.

The respondents had the right to expect that their data would be kept in the strictest confidence (Polit & Beck 2012:156). The respondents were given the guarantee that their information would not be made accessible to parties other than those involved in the research (refer to Annexure K). Anonymity exists when the respondent's identity cannot be linked, even by the researcher, with his or her individual responses (Grove et al 2015:107). The anonymity of the respondents was protected as they did not write their names or identification numbers on the questionnaires.

The respondents were selected randomly from the outpatient register while waiting for the doctor. Out of 317 questionnaires which were distributed, 10 were incomplete and were not used for data analysis, and 7 were not returned. Three hundred (300) questionnaires were used for data analysis. The inclusion criteria were considered. Throughout the data collection process, the researcher was available to clarify questions that needed further explanation. It took the respondents 10-15 minutes to complete the questionnaire. After data collection, all the staff and the unit manager were thanked for their cooperation. The researcher collected the data and took it for analysis and interpretation. The collected data was kept in a locked cupboard in the researcher's office.The detailed data collection procedure is discussed in Chapter 3.

1.13 DATA ANALYSIS

Data analysis is the systematic organisation and synthesis of research data in quantitative studies, and includes the testing of hypotheses using those data (Polit & Beck 2012:725). The purpose of data analysis is to reduce, organise and give meaning to data (Grove et al 2015:47). Data were analysed using Statistical Package for Social Sciences (SPSS) computer software version 25 with the assistance of a statistician. Data were presented using tables, graphs and charts to illustrate the responses. A detailed discussion of the data analysis is presented in Chapter 4.

1.14 VALIDITY AND RELIABILITY

1.14.1 Validity

The validity of an instrument is a determination of how well the instrument reflects the abstract concept being examined. It is measured on a continuum (Grove et al 2015:290). Validity is the degree to which an instrument measures what it is supposed to measure (Polit & Beck 2012:336).

The following types of validity were used in this study:

1.14.1.1 Internal validity

It is the extent to which the effects detected in the study are a true reflection of reality rather than the results of extraneous variables (Grove et al 2015:226).In this study, there were no threats to internal validity as no causality was examined.

1.14.1.2 External validity

It is about the generalisability of causal inferences and this is a critical concern for research that aims to yield evidence for evidence-based nursing practice (Polit & Beck 2012:237). The researcher did not generalise this study to other public health care facilities.

1.14.1.3 Content validity

Examines the extent to which a measurement method includes all the major elements relevant to the concept being measured (Polit & Beck 2012:723). The questionnaire was checked to ensure that the content was determining clients' knowledge of kidney donation as mentioned in the objectives. The questionnaire was sent to the researcher's supervisor, a statistician, and staff working in the outpatient department and renal unit to check its content validity.

1.14.1.4 Face validity

The instrument appears to measure what it is supposed to measure. The development of the instrument must be readable and accurate in terms of the topic

(Brink et al 2012:166). The questionnaire was checked for accuracy and readability by the statistician and the researcher’s supervisor.

1.14.1.5 Construct validity

Construct validity is a key criterion for assessing the quality of a study (Polit & Beck 2012:339). The questionnaire was analysed and checked by the Research and Ethics Committee of the Department of Health Studies at the University of South Africa (UNISA), the researcher’s supervisor, and the statistician.

1.14.2 Reliability

Reliability refers to the degree to which the instrument can be depended upon to yield consistent results if used repeatedly over time on the same person, or if used by two researchers (Brink et al 2012:169).

The following types of reliability were applied:

1.14.2.1 Test-retest reliability

Test-retest reliability relates to repeated measures with a scale or instrument to determine the consistency or stability of the instrument in measuring a concept (Grove et al 2015:289). The researcher pre-tested the questionnaire for consistency and stability. The questionnaire was pre-tested with 10 respondents. The results of pre-testing helped the researcher to modify the questionnaire. The 10 piloted respondents were not part of the main study.

1.14.2.2 Internal consistency reliability

Reliability testing is used primarily with multi-item scales in which each item on the scale is correlated with all other items to determine the consistency of the scale in measuring a concept (Grove et al 2015:289). The internal consistency of the results of the pilot study and the main study was calculated using Cronbach’s alpha.

1.15 ETHICAL CONSIDERATIONS

Ethics refer to a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal and social obligations to the study participants (Polit & Beck 2012:727). The three broad principles on which standards of ethical conduct in research are based include beneficence, respect for human dignity, and justice (Polit & Beck 2012:153-157).

1.15.1 Researcher-specific ethical considerations

Data collection was done after approval was granted from the Research and Ethics Committee of the Department of Health Studies at the University of South Africa (UNISA) (refer to Annexure A). The researcher also obtained written permission to conduct the study from the Provincial Research Ethics Committee (refer to Annexure F) and the specific urban health care facility in Limpopo province (refer to Annexure G).

1.15.2 Respondents'-specific ethical considerations

1.15.2.1 Informed consent

The significance of the study was explained to the respondents before starting to collect data and a signed informed consent form was requested (refer to Annexure E). The respondents had the right to withdraw their participation even if they had signed the consent form without any penalty, if they wished to.

1.15.2.2 Privacy

In this study, privacy was ensured by allowing each respondent to complete the questionnaire in a private room at outpatient department.

1.15.2.3 Confidentiality

Confidentiality relates to the way that data is treated, that is, the measures taken to ensure that it cannot be linked to individual responses and that it was not revealed to anyone outside the research team without the authorisation of the person whose confidence it is (Botma, Greeff, Mulaudzi & Wright 2016:17). In this study, no unauthorised person was allowed to gain access to data and individuals were not identified by their names. The researcher further signed the confidentiality binding form (refer to Annexure K) and explained and reassured the respondents that the information provided will be kept confidential.

1.15.2.4 Anonymity

The identity of the participant cannot be linked, even by the researcher, to the individual response (Botma et al 2016:17). In this study, the respondents were given code numbers for identification instead of using their names.

1.15.2.5 Beneficence

The researcher protected the respondents' well-being from any physical, spiritual and psychological harm.

1.15.2.6 Respect for human dignity

The researcher respected the rights of the respondent to participate in the study, and was sensitive to and respected the beliefs, habits, and lifestyles of respondents from different cultures.

1.15.2.7 Justice

The researcher selected the study population randomly, no hidden cameras or video recorders were used, and the respondents were not manipulated.

1.16 SIGNIFICANCE OF THE STUDY

The significance of the study is associated with its importance in contributing to nursing's body of knowledge (Burns & Grove 2011:410).

The recommendations of the study will be presented to the Limpopo Department of Health to take effective measures to educate people with relevant information on renal donation.

1.17 SCOPE AND LIMITATIONS OF THE STUDY

The study was limited to the people from Limpopo province in one public health care facility. Therefore, it cannot be generalised to other provinces or private health care facilities.

1.18 STRUCTURE OF THE DISSERTATION

Chapter 1: Orientation to the study

An overview of the research problem, purpose and significance of the study. The research design and methodology, measures to ensure reliability and validity, ethical considerations, and definition of key concepts were also discussed.

Chapter 2: Literature review

Chapter 2 presents a discussion of the literature reviewed on the topic.

Chapter 3: Research design and methodology

In Chapter 3 the research design and methodology used, including data collection and analysis techniques, validity and reliability, and ethical considerations are presented.

Chapter 4: Data analysis, presentation and interpretation

In Chapter 4 the results, data analysis and interpretations are discussed.

Chapter 5: Discussion, conclusion, limitations and recommendations

A discussion of the results, conclusion, limitations and recommendations of the study is presented in Chapter 5.

1.19 CONCLUSION

Chapter 1 addressed the background, the research purpose and the research design methods used in this study. A quantitative, explorative and descriptive cross-sectional study was conducted and a structured questionnaire was used for data collection. The researcher obtained ethical clearance for the study before collecting data and the respondents' right to autonomy, privacy and confidentiality was respected. The following chapter will discuss the literature review.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The previous chapter was an orientation to the study. This chapter presents the literature review related to the study. A literature review is a systematic and explicit approach to the identification, retrieval and bibliographical management of independent studies to locate information on a topic, synthesising conclusions, identifying areas for future studies, and developing guidelines for clinical practice (Brink, van der Walt & van Rensburg 2018:71). The researcher conducted the literature review to critically evaluate the current level of available knowledge for people regarding renal donation from relevant journals, books, articles and research reports. The relevant journals were accessed from the internet through Sabinet, Google Scholar, and Science Direct.

This chapter focusses on the:

- overview of renal transplantation;
- legality aspect of organ transplant;
- stages of renal failure;
- renal dialysis;
- types of renal donation;
- clients' knowledge and understanding regarding renal donation;
- factors contributing to clients not volunteering for kidney donation and
- attitudes of clients with regard to renal donation.

2.2 OVERVIEW OF RENAL TRANSPLANTATION

The advances made in organ procurement and preservation, surgical techniques, tissue typing and matching, immunosuppressant therapy, and prevention and treatment of graft rejection have dramatically increased the success of renal transplantation. Even though renal transplantation is by far the best treatment option available to patients with ESRD, fewer than 4% ever receive a transplant. This is because of the high disparity between the supply and demand for kidneys. Every year more than 93,000 patients are waiting for kidney donation, yet less than one-fourth of those ever receive a kidney (Lewis, et al 2014:112).

An advantage of renal transplantation when compared to dialysis is that it reverses many of the pathophysiologic changes associated with renal failure. Transplantation is also less expensive than dialysis after the first year; during the first year, transplant recipients take a lot of immunosuppressive therapy, which provides the recipient with adequate levels of immune suppression while minimising toxicity, unfavourable side effects, and high susceptibility to infections (Chapman 2016:289).

2.2.1 International countries

In many countries around the world, the transplant waiting list is very long and many patients die while on the waiting list due to the lack of availability of donor organs. This is also true in India, as the organ donation rate is 0.16 donor per million population, whereas in some countries such as Spain the rate is much higher; approximately 35 donors per million population (Bharambe, Rathod & Angadi 2016:34).

More than 120,000 individuals in the USA are currently waiting for life-altering solid organ transplants like kidneys, hearts and livers, yet usable organs from deceased donors are scarce. The need for organs has outpaced the availability and waiting times have increased, particularly in certain geographic regions. Living kidney donation now accounts for approximately one-third of all kidney transplants occurring annually in the USA (Henderson & Gross 2017:66).

Internationally, there has been a call for governments of each country to assume responsibility for the organ donation and transplantation needs of its society. This should be achieved by accessing its own population resources within an ethical framework that protects human rights (Fabian & Crymble 2017:545).

According to statistical data from Organ Registry and Sharing Centre for Taiwan and the Transplantation Society of Taiwan, in 2005-2016 the number of patients who received transplantations per year ranged from 230-325. In Taiwan, among patients waiting for organ transplantation, renal transplants have always been the most requested and there were a total of 6,557 patients waiting in line for transplantation by 5 April 2017 (Lu & Yang 2017:1006).

American Indians and Alaskan natives suffer a disproportionate burden of diabetes and kidney failure. For those with chronic kidney disease, transplantation may be the most effective treatment option. However, low rates of organ donation and transplantation are reported for American Indians and Alaskan natives, who face significant barriers in accessing the transplant waiting list (Jernigan, Fahrenwald, Harris, Tsosie, Baker & Buchwald 2013:735).

In Europe, the Netherlands had the highest number of live donor transplantations spread over eight renal transplant centres, with an annual living donation rate of 31.0 per million population in 2013. In Turkey, the organs to be transplanted are generally provided from patients' close relatives. Similarly, in Asian and Middle Eastern countries, cadaver organs have not been donated in sufficient numbers, widening the gap between the need and procurement of transplantable organs. Approximately 75% of organ transplantations are performed with organs taken from cadavers in European countries (Kose, Onsuz & Topuzoglu 2015:20).

Kidney transplantations in India first started in the 1970s, and India has since become a leading country in this field on the Asian sub-continent. Still, despite the Transplant of Human Organs (THO) Act No. 42 of 1994, the commerce has not stopped nor has the number of deceased donors increased to take care of the organ shortage in the country (Sequira & Pai 2014:63).

2.2.2 African countries

In the study on predictors of public attitude towards living organ donation in Kano, Northern Nigeria, it was found that the level of awareness of organ donation among the respondents was 79.6%, which is comparable with the 49.4% reported from Enugu (Iliyasu, Abubakar, Lawan, Abubakar & Adamu 2014:201).

Renal transplantation is the preferred treatment option for patients with advanced chronic kidney disease. Despite its advantages, sustainable transplant programmes are only available in a few African countries. In Ghana, for example, renal transplants are rarely available to most patients due to financial constraints. Africans are known to be very religious and deeply rooted in their culture and traditions about life after death. Thus, treatment like transplantations raises challenges for them. They have to consult their family about the acceptance and donation of an organ in addition to their beliefs (Clinical Transplantation 2017:2).

In Saudi Arabia, organ needs are met with few cases of transplantation each year. From 1993, 13,160 patients were receiving haemodialysis and 5,154 patients were suitable for transplantation. In 2013, of 243 brain death cases suitable for transplantation, 68% of the families rejected donation (Agrawal, Binsaleem, Al-Homrani, Al-Juhayim & Al-Harbi 2017:82).

In Egypt, an organisation for deceased organ donation is still awaited, which makes living donor organ transplantation the only hope for patients with failing organs. A full stand-alone law legalised living donor organ transplantation in the 1970s. Renal transplantations have been performed in Egypt since 1978 (Hamed et al 2016:1).

Renal transplantations in Sudan are purely from living donors as no cadaveric donation programme is available. In 1974 the first Sudanese patient received a transplant from a living donor. Today, renal transplantation constitutes 28.4% of total renal replacement therapy in Sudan (Banaga, Mohammed, Siddig, Salama, Elbashir, Khojali, Babiker, Elmusharaf & Homeida 2015:502).

2.2.3 South Africa

Worldwide, the incidence of end-stage disease for organs such as the heart, liver and kidneys, continues to increase more than the supply of these organs. Similarly, in South Africa, as thousands wait on national lists, annual numbers who receive transplants are steadily decreasing. The inadequacy of the national transplant service is succinctly reflected in the South African Renal Registry data for 2014. The kidney transplant rate was only 4.1 per million population. This translates into many who will receive prolonged interim therapy while awaiting transplant at vast costs to the healthcare system. As a result, low transplant rates prevent those with newly diagnosed disease from accessing care (Fabian & Crymble 2017:545).

Seven of the 45 countries in Sub-Saharan Africa provide renal transplants to their patients. The majority of the transplants are from living donors, with the exception of South Africa where deceased donor transplants are practised to a greater extent (Naiker 2013:161).

The South African government's health care policy, which is highly focused on primary health care interventions as a cost-effective strategy to improve the health of a population, should not neglect transplantation. Although it is not prioritised as a major health care need, transplants reflect the whole health care system. One can only be assessed as a potential organ donor when all treatment options have been exhausted. The family can only be approached for consent when they have been adequately counselled about the clinical situation. As such, organ donation rates can and should be used as a measurable health outcome (Thomson 2017:36).

2.3 LEGALITY ASPECT OF ORGAN TRANSPLANT

Organ and tissue donations are regulated globally by the Revised Uniform Anatomical Gift Act No, 62 of 2006, to allow for fair and consistent transplant laws among all states. Patients are matched to available donors based on a number of factors: ABO blood group and human leukocyte antigen (HLA) typing, medical urgency, time on the transplant waiting list, and geographic location (Lewis et al 2014:220).

Individuals can decide to become a donor when they sign a donor card, indicate their wish on the back of their driver's license, or get placed on a donor registry and indicate their wish to donate organs. An organ donor needs to carry a card in their wallet at all times reflecting their donor status. However, upon their death or imminent death, ultimately the person’s legal next-of-kin must consent to the donation regardless of whether the donor card is signed. This is why it is extremely important for people to notify their next-of-kin about their willingness to donate organs or tissues at the time of their death (Kirk, Knechtle, Larsen, Madsen, Pearson & Webber 2014:1654).

The South African Human Tissue Act No. 65 of 1983 seems to deal with the issue of informed consent for the removal of human biological material from living and deceased persons for research or study purposes. The law protects the donor’s rights and dignity in respect to their integrity, without discrimination (National Health Act 61 2003:2).

2.4 KIDNEY TRANSPLANT

Kidney transplant is a surgical procedure performed to replace a diseased kidney with a healthy kidney from another person. The kidney may come from a deceased organ donor or from a living donor (Tong et al is 2013:433).

2.4.1 Donor source

2.4.1.1 Deceased donor

According to Walsh (2016:1183), a deceased donor kidney is a kidney that comes from a person who has just died, and the family has given permission for the person’s kidneys to be donated for transplant.

2.4.1.2 Living related donor

A living related donor kidney is a kidney that comes from a blood relative such as a parent, brother or sister. Transplant can occur before the recipient requires dialysis, since there is greater control over timing with a living donor (Walsh 2016:1184).

2.4.1.3 Living unrelated donor

A living unrelated donor kidney is from someone not related to the person who needs a transplant; such as a spouse, a friend and donors unknown to the recipient (Chapman 2016:288).

2.4.2 Requirements of a donor

A donor must be healthy and free from disease, infection or injury that affects the kidney. The donor’s blood must be compatible and usually of the same type as the recipient. The donor must be willing to donate their kidney free from any mental, physical, or financial coercion (National kidney foundation 2017:4).

2.4.3 Benefits of kidney donation to the donor

The donor improves another’s quality of life as the recipient is able to live life to the fullest and free from pain. Kidney donation is free from any medical costs, and everything is covered by the recipient and organ recovery organisation (Jha, Garcia-Garcia, Iseki, Li, Naicker, Plattner, Saran, Wang & Yang 2013:267).

2.4.4 Possible risks to a donor

The donor will experience pain after surgery and medications will be provided. The operated site might become infected and antibiotics will be given. Blood clotting can occur, however, movement after surgery will help stimulate blood flow (Thompson & Mckeown 2012:252).

2.5 TRANSPLANT TEAM

The kidney transplant team is a group of health care professionals who provide care to both donors and recipients through every step of the transplant and recovery process. They all work together for a successful transplant. The transplant surgeon performs the actual kidney transplant and determines the quality of the donor kidney before doing the transplant. The transplant physician or nephrologist, performs examinations, test results and adjust medicines accordingly. The transplant coordinator coordinates all events starting with pre-transplant testing, finding a donor kidney, testing for donor compatibility, contacting a patient when a kidney is found, and offering follow-up care (National kidney foundation 2017:7).

The transplant coordinator handles patients’ needs during their hospital stay and facilitates open communication between the patient and the transplant team. The psychologist who works with family members and the patient to discuss feelings before and after surgery is another member of the transplant team. There is also a social worker who helps patients set rehabilitation goals, assists with referral to resources and provides encouragement to keep their jobs or finding new employment. Lastly, the transplant team includes a pharmacist who educates patients and family members about medications (National kidney foundation 2017:7).

2.6 LIVING DONOR TRANSPLANTATION

2.6.1 Recipient

The patient is accepted to this programme after full assessment by the nephrologist. This involves a physical and medical examination to exclude conditions like cardiac and psychiatric diseases, TB, and other malignancies. Blood typing to determine blood type, a mammogram to exclude breast cancer, and dental evaluations are necessary to ensure dental health while the recipient is awaiting a transplant (Lewis et al 2014:1126).

2.6.2 Donor

A living donor needs to be between the ages of 18 and early 70s. The donor needs intensive screening, which includes laboratory and x-ray tests, renal functional tests, liver functioning, cardiac and lung functioning tests. Exposure to viral illnesses is checked. Blood and tissue typing are also conducted (Thompson & McKeown 2012:257).

2.7 STAGES AND TREATMENT OF RENAL FAILURE

2.7.1 Pre-renal

2.7.1.1 Definition of pre-renal

Pre-renal is defined as a sudden reduction of blood flow to the kidneys which causes loss of kidney function (Lewis et al 2014:1102).

2.7.1.2 Causes of pre-renal

Causes for pre-renal failure include: hypovolemia, which can be due to dehydration, haemorrhage, gastrointestinal losses due to vomiting and diarrhoea, excessive diuresis and burns; decreased cardiac output due to cardiac arrhythmias, heart failure and myocardial infarction; decreased peripheral vascular resistance due to anaphylaxis, septic shock and neurologic injury; and decreased renovascular blood flow due to bilateral renal vein thrombosis, embolism, hepatorenal syndrome and renal artery thrombosis (Lewis et al 2014:1102).

2.7.1.3 Pathophysiology of pre-renal

In pre-renal stage, systemic circulation is reduced causing a reduction in renal blood flow. The decrease in blood flow leads to reduced glomerular perfusion and filtration of the kidneys. Since the parenchyma is undamaged, the kidney responds by reabsorbing sodium in order to reabsorb water. This occurs when decreased perfusion is associated with intravascular volume depletion. If not corrected on time, the lack of perfusion will result in an acute tubular necrosis leading to acute kidney failure (Wolfson 2018:1183).

2.7.1.4 Characteristics of pre-renal

The characteristics of pre-renal failure include a reduction in systemic circulation causing reduced renal blood flow. Glomerular filtration is reduced as a result of decreased perfusion (Walsh 2016:1190).

2.7.1.5 Management of pre-renal stage

Observe and record accurate fluid intake and output. The patient is advised to weigh themselves daily with the same scale at the same time to detect excessive gains or losses of body fluid. Assess for common signs and symptoms of hypervolemia and other electrolyte imbalances. Give antibiotics to treat infections (Walsh 2016:1190).

2.7.2 Acute renal failure

2.7.2.1 Definition of acute renal failure

Acute renal failure is an abrupt decrease in kidney function resulting in the retention of urea and other nitrogenous waste products in the dysregulation of extracellular volume and electrolytes (Wolfson 2018:1181).

2.7.2.2 Causes of acute renal failure

Causes of acute renal failure include prolonged pre-renal ischaemia; acute glomerulonephritis; thrombotic disorders; toxaemia in pregnancy; and malignant hypertension (Lewis et al 2014:1103).

2.7.2.3 Pathophysiology of acute renal failure

The decreased perfusion that exists for hours or days causes the kidneys to lose their ability to compensate. As a result, damage to the parenchyma occurs, which is called intrarenal damage. The intrarenal damage causes direct damage to the kidney tissue, resulting in impaired nephron functioning (Wolfson 2018:1185).

2.7.2.4 Characteristics of acute renal failure

Acute renal failure is characterised by rapid loss of kidney function which is accompanied by an increase in serum creatinine and a reduction in urine output. Acute renal failure is reversible and can develop over hours or days with progressive elevations of blood urea, creatinine, and potassium with or without a reduction in urine. Although acute kidney failure is potentially reversible, it has a high mortality rate. It usually affects people with other life-threatening conditions. Acute kidney failure follows severe, prolonged hypotension or hypovolemia or exposure to a nephrotoxic agent (Walsh 2016:1070).

2.7.2.5 Treatment for acute renal failure

Treatment of the precipitating cause. Enteral nutrition. Parenteral nutrition. Initiation of dialysis, if necessary. Continuous renal replacement therapy, if necessary. Treatment for elevated potassium levels and hyperkalaemia to be introduced to prevent serious complications that can cause cardiac dysrhythmias (Walsh 2016:1071).

2.7.3 Chronic renal failure

2.7.3.1 Definition of chronic renal failure

Chronic renal failure is the decreased Glomerular Filtration Rate (GFR) for at least three months with functional or structural abnormalities, with or without a decreased GFR (Jha et al 2013:260). According to Jha et al (2013:260) study on the global dimension and perspectives of chronic kidney disease, chronic renal failure is defined as a reduced GFR, increased urinary albumin excretion, or both. Its prevalence is estimated to be 8-16% worldwide. Diabetes mellitus and hypertension are the most common causes of chronic kidney failure worldwide, but in some regions other causes, such as herbal and environmental toxins, are more common.

2.7.3.2 Treatment options for chronic renal failure

Various factors play a role in the treatment decision. This depends on the rate of progression to renal failure, and the presence of other co-morbid conditions. If the patient is considered a candidate for kidney transplantation, the evaluation can be accomplished before initiation of dialysis. Even though transplantation offers the best therapeutic management for patients with chronic kidney failure, the critical shortage of donor organs has limited this treatment option. Most patients require either peritoneal dialysis (PD) or haemodialysis (HD). Information is provided about the treatment options so that the patient can be involved in the decision making (Walsh 2016:1074).

2.7.3.3 Haemodialysis

2.7.3.3.1 Definition of haemodialysis

According to Sawinski and Locke (2017:738), haemodialysis is dialysis that uses an artificial membrane as the semipermeable membrane through which the patient's blood circulates. Haemodialysis is a method of removing excess fluids, salts and waste from the blood, effectively replacing the excretion function of the failed kidneys.

2.7.3.3.2 Description of haemodialysis

The types of vascular access include arteriovenous fistulas, arteriovenous grafts and temporary vascular access. Blood is removed via a needle inserted in a fistula or via catheter lumen. It is propelled to the dialyser by a blood pump. Heparin is infused, either as a bolus pre-dialysis or through a heparin pump continuously, to prevent clotting. Dialysate is pumped in and flows in the opposite direction of the blood. The dialysed blood is returned to the patient through a second needle or catheter lumen. Old dialysate and ultrafiltrate are drained and discarded (National kidney Foundation 2017:2).

2.7.3.4 Peritoneal dialysis

2.7.3.4.1 Definition of peritoneal dialysis

Peritoneal dialysis is a dialysis using the peritoneal membrane as a semipermeable membrane. Peritoneal access is obtained by inserting a catheter through the anterior abdominal wall. The tip of the catheter rests in the peritoneal cavity and has many perforations spaced along the distal end of the tubing to allow fluid to flow in and out of the catheter (Shier, Butler & Lewis 2013:590).

2.7.3.4.2 Description of peritoneal dialysis

The peritoneal membrane lining the patient's peritoneal cavity acts as a natural filter for waste and excess fluids. Peritoneal dialysis solutions are instilled and removed via a permanent catheter placed through the abdominal wall into the abdominal cavity. Dialysis takes place four times a day, seven days a week, but can be performed anywhere, and it is a treatment for life until a transplant donor is found (Walsh 2016:1074).

2.7.3.4.3 Objective of peritoneal dialysis

The objective of peritoneal dialysis is to reserve the residual functioning of the kidney while also removing the toxic waste circulating in the body through the peritoneal dialysate fluid.

2.7.3.4.4 Access used for peritoneal dialysis

Access to the peritoneal cavity is obtained through a peritoneal catheter. The acute peritoneal catheters (also called stick catheters) are inserted at the patient's bedside, while chronic peritoneal catheters (also called Tenkchoff catheters) are inserted in an operating theatre (Lewis et al 2014:1120).

2.7.4 End-stage renal failure (ESRF)

This is the last stage of renal failure. It occurs when the GFR is less than 15Ml/min and at this point dialysis or transplantation is required to maintain life. During this time, the patient is educated about health maintenance and dialysis. The patient becomes acquainted with the nephrology team consisting of the nephrologist nurse, social worker, dietician, and psychiatrist experienced in the multiple problems encountered by ESRF patients (Wolfson 2018:1182).

Table 2.1 Stages of chronic renal disease (Lewis et al 2014:1108)

DESCRIPTION	GLOMERULAR FILTRATION RATE (GFR)	CLINICAL ACTION PLAN
Stage 1 Kidney damage with normal or increased GFR	>90 -	Diagnosis and treatment Cardiovascular disease risk reduction
Stage 2 Kidney damage with mild decreased GFR	60-89	Estimation of progression
Stage 3 Moderate decreased GFR	30-59	Estimation and treatment of complications
Stage 4 Severe decreased GFR	15-29	Preparation for renal replacement therapy (dialysis, kidney transplant)
Stage 5 Kidney failure	<15(or dialysis)	Renal replacement therapy (if uremia present and patient desires treatment)

2.8 RISK FACTORS OF CHRONIC RENAL FAILURE

2.8.1 Hypertension

2.8.1.1 Definition of hypertension

Hypertension (high blood pressure) is a persistent elevation of arterial pressure (Shier et al 2013:589).

2.8.1.2 Hypertension as a cause of chronic renal failure

The nephrons in the kidneys are supplied with a dense network of blood vessels, and high volumes of blood flow through them. Over time, uncontrolled high blood pressure can cause arteries around the kidneys to narrow, weaken or harden.

These damaged arteries are not able to transport enough blood to the kidneys, so these will make it difficult for the kidneys to remove waste from the body, causing chronic renal disease. Hypertension is a cause of chronic renal disease and aggravates existing chronic renal disease in a vicious cycle. Anti-hypertensive therapy has been proven to disrupt this cycle. Patients with hypertension should be treated in accordance with the South African Hypertension Society guidelines (Moosa, van der Walt, Naiker & Meyers 2015:1).

The prevalence of hypertension was 37%, 21% and 20% in established market economies, India, and China, respectively. In Latin America, 40.7% of men had hypertension and 34.8% of women had hypertension, whereas in Sub-Saharan Africa the values were 27.0% for men and 28.0% for women. Prevalence was higher in urban populations than in rural populations and developing countries (Jha et al 2013:264).

2.8.2 Diabetes

2.8.2.1 Definition of diabetes

Diabetes is elevated glucose in the urine and blood due to a deficiency of insulin or poor response to it (Shier et al 2013:946).

2.8.2.2 How does it causes renal failure

High blood glucose levels damage the blood vessels in the kidneys, causing them not to function properly, leading to renal failure. Diabetes Mellitus is the most common cause of chronic kidney disease worldwide, and both types 1 and 2 are on the increase. Strict glycaemic control, lifestyle changes and adequate nutrition are recommended to reduce the prevalence of Diabetes Mellitus (Moosa et al 2015:8).
The worldwide prevalence of diabetes in adults is estimated to be 6.4%, affecting 285 million people, and it is expected to rise to 7.7% by 2030 (439 million cases). The largest increases in prevalence are expected in developing regions (the Middle East, 163%; Sub-Saharan Africa, 161%; India, 151%; Latin America, 148%; and China, 104%). Diabetes is predicted to increase in all age groups and ageing

populations. A shift towards urbanisation will also substantially contribute to the rise in people with diabetes (Jha et al 2013:264).

2.8.3 Obesity

2.8.3.1 Definition of obesity

Obesity refers to excess adipose tissue when the state of a body mass index is 30 or above (Shier et al 2013:946).

2.8.3.2 Prevalence of obesity

Obesity is a potent risk factor for the development of kidney disease. It increases the risk of developing major risk factors for chronic kidney disease like diabetes and hypertension, and it has a direct impact on the development of chronic kidney disease and ESRF. In individuals affected by obesity, a compensatory mechanism of hyperfiltration occurs to meet the heightened metabolic demands of the increased body weight. The increased intraglomerular pressure can damage the kidney structure and increase the risk of developing chronic kidney disease (Jha et al 2013:264).

The prevalence of obesity worldwide is also mounting. Three hundred and twelve million adults worldwide were estimated to be obese at the beginning of the 21st century. What is alarming, in particular, is the increase in the number of overweight and obese children. In contrast to the developed world, obesity in developing countries is rising in educated populations. Obesity is another cause of renal failure (Jha et al 2013:264).

2.8.4 Herbs

Herbal medicines are widely used by rural populations in Africa and Asia, and have become popular in developed countries. Nephrotoxic effects can result from consumption of potentially toxic herbs, incorrect substitutions of harmless herbs with toxic herbs, or interactions between herbs and conventional treatments.

Herbs can cause acute kidney injury, tubular dysfunction, electrolyte disturbances, hypertension, urolithiasis, and chronic renal failure (Jha et al 2013:264).

In recent years much attention has been directed to the potential beneficial effects of herbal medicines on the morphology and function of kidneys. However, it should be emphasised that herbal medicines might cause direct toxicity of renal tissue. This toxicity is thought to result from progressive fibrosis of the kidney interstitium and can cause damage to the renal tubular cells. Some herbs can have anti-inflammatory effects. Patients who innocently take large quantities of herbs may experience a decline in kidney function (Nasri, Nasri, Baradaran, Abedi-Gheshlaghi & Rafiein-Kopaei 2015:2).

2.8.5 HIV infection

There are an estimated 35 million people infected with HIV, of which 68% are from Sub-Saharan Africa. South Africa is the worst affected, with the national adult HIV prevalence exceeding 15% in eight Southern African countries. There is a wide clinical spectrum of renal disease in the course of HIV infection. However, transplantations have been performed with success in HIV-infected patients (Moosa et al 2015:7).

An escalating burden of HIV chronic kidney disease may be anticipated as a result of the increasing life expectancy of HIV patients on antiretrovirals, the ageing of HIV-infected populations, and nephrotoxicity of the various drugs used in this population. Early initiation of antiretroviral treatment (ART) may impact on the burden of chronic kidney disease due to HIV infection. A recent study showed that the response of both microalbuminuria and proteinuria to ART was rapid and sustained, resolving to normal limits within 3-6 months (Naicker 2013:162).

2.9 CLIENTS’ ATTITUDES WITH REGARD TO RENAL DONATION

According to the study conducted by Manojan et al (2014:7) on clients’ knowledge and attitude towards organ donation in rural Kerala, only 26% of the participants had a good attitude towards organ donation, whereas 48% showed poor attitude. The negative attitude was driven by religious beliefs, lack of family support, perceived health risks, and financial insecurity. The reasons for unwillingness should be considered more carefully and awareness campaigns should be planned to increase acceptance. In the study conducted by Yalakshmi, Sunitha, Gandhi, Thimmaiah and Math (2016:259) 67% of their participants had a positive attitude towards organ donation. However, while 76.2% supported organ donation, only 62.2% were willing to donate organs after death.

Agrawal et al (2017:87) study in Al-Kharj, Saudi Arabia, found that 78% of respondents were in support of organ donation, but less than 25% were willing to donate an organ at any stage. Those who fear body distortion comprised 39%, fear of health complications 35%, lack of information comprised 20%, and those whose religion does not allow organ donation constituted 19%.

According to the study by Jernigan et al (2013:739) on knowledge, beliefs, and behaviours regarding organ and tissue donation in selected tribal college communities, the results confirmed that cultural beliefs influence attitudes about organ donation and transplantation. Issues related to mistrust of the local health care system were also raised. Health professionals can play a significant role in improving the general public’s attitude by creating awareness among them and improving their knowledge.

In a study conducted on Egyptian medical students’ knowledge and attitudes about organ donation (Hamed et al 2016:2), 45% of students rated themselves as supporting organ donation, in comparison to the 63% of students who did not support organ donation. Fifty per cent (50%) were willing to donate to any recipient, while 42% were selective in their desire to donate either to their family or friends. The causes of refusal to donate among those with negative attitudes were familial refusal (13%), religious prohibitions (19%), fear of commercialism (27%), fear of surgery (10%), and lack of confidence in the health care system (31%) (Hamed et al 2016:2).

2.10 KNOWLEDGE AND UNDERSTANDING OF RENAL DONATION

In Agarwal (2015:29), which was conducted at a government medical college in the state of Karnataka in India, it was revealed that 100% of medical students know the term “organ donation”, though there is a significant lack of knowledge on the topic. There is no formal education on this issue. The lower rate of transplants in India compared to the developed countries means that students have less exposure to such scenarios. Introducing “renal donation” as part of the medical curriculum may have a significant impact on the improvement of medical students’ knowledge on the topic. Still, there was a 100% positive attitude of medical students towards organ donation.

A study on knowledge and attitude towards organ donation among the adult population of Al-Kharj, Saudi Arabia (Agrawal et al 2017:87), revealed that out of 403 respondents, 35.6% did not have the knowledge that organ donation is legal, and 97% did not know where to go if they want to donate. In the study conducted by Yalakshmi et al (2016:257), 52.8% of the participants had adequate knowledge of kidney donation, and 67% had a positive attitude towards organ donation. Also, 93.8% of participants were aware of organ donation, and 76.2% supported organ donation; yet, only 62.2% were willing to donate organs after death.

Nurses support end-of-life care and organ donation in South Africa, but their knowledge-base is lacking. Few nurses participate in this process as they are unclear about their scope of practice (Fabian & Crymble 2017:545). The study by Jernigan et al (2013:739) found that community knowledge of organ donation and transplantation was influenced by direct family experience with chronic illness, including diabetes and renal disease.

2.11 FACTORS CONTRIBUTING TO CLIENT NOT VOLUNTEERING FOR KIDNEY DONATION

In the study conducted by Agrawal et al (2017:86), nearly half of the 403 respondents believed that their religion does not allow for organ donation. The role of health care workers and hospital displays as a source of knowledge about renal donation was found to be minimal. In different studies, health concerns were the main causes to oppose donation, including fear of living with one kidney, fear of the transplant operation, and inadequate information on organ donation. In the study by Kose et al (2015:23) on the knowledge levels of and attitudes to organ and transplantation among university students, students mentioned a lack of knowledge as one of the reasons for not donating. According to Manojan et al's (2014:2) study in rural Kerala, 50% of the participants thought that live organ donation could cause severe health problems. In general, the barriers against organ donation were religious perceptions (17%), lack of family support (25%), and fear of loss of earning potential (25%).

Takure, Jinadu, Adebayo, Shittu, Salako and Kadiri (2016:773) explained in their study on the knowledge, awareness, and acceptability of renal transplantation among patients with end-stage renal disease in Ibadan, Nigeria, that some respondents expressed the desire to be paid for the donation, in addition to having fears of adverse health consequences.

Agrawal (2015:31) study found that while medical students have enough knowledge about organ donation, they regarded infections as a contraindication to organ donation. A lack of knowledge among the entire population and many myths and beliefs accepted by people with respect to organ donation were noted.

According to the study by Marques-Lespier, Ortiz-Vega, Sanchez, Soto-Aviles and Torres (2013:187) on medical students' knowledge and attitudes towards organ donation in Puerto Rico, the reasons for not pledging for organ donation was perceived parental and family refusal, fear for personal safety, disapproval of body mutilation, and religion.

2.12 CONCLUSION

According to the literature reviewed, the findings of the studies conducted revealed that most people have a positive attitude towards renal donation, but they have a fear of being live donors, and rather opt to be deceased donors. A lack of knowledge also plays a major part for most people, like medical students. Health professionals can play a significant role in improving the general public’s attitude by creating awareness among them and improving their knowledge. Chapter 3 presents the research design and methodology.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

The previous chapter discussed the literature review. This chapter presents the research design and methodology used in the study, as well as the research processes. The data collection method and analysis, population and sample, methods to ensure validity and reliability, and ethical considerations are also discussed.

3.2 RESEARCH DESIGN

A research design is a type of inquiry within qualitative, quantitative, and mixed methods approaches that provide specific direction for procedures in a specific study (Creswell 2014:247). According to Grove et al (2015:63), the research design is a blueprint for conducting a study that maximises control over factors that could interfere with the study's desired outcomes. In this study, a quantitative, explorative, descriptive and cross-sectional design was used.

3.2.1 Quantitative research

Quantitative research is a formal, objective, rigorous, systematic process for generating numerical information about the world. It is conducted to describe new situations, events or concepts, examine relationships among variables, and determine the effectiveness of treatments in the world (Grove et al 2015:32). According to Polit and Beck (2017:184), quantitative methods typically focus on a relatively small portion of the human experience in a single study.

The researcher used the quantitative design as it assisted in generating new knowledge on renal donation, which will be beneficial in planning for awareness programmes. This design also allowed the researcher to measure and quantify the respondents' knowledge with the use of statistical procedures.

3.2.2 Descriptive design

A descriptive design is the exploration and description of phenomena in real-life situations. Descriptive studies are usually conducted with large numbers of subjects, in natural settings, with no manipulation of the situation in any way (Grove et al 2015:212). This entails making observations with the intention of describing and documenting the characteristics and features of naturally occurring events (Polit & Beck 2017:725). The purpose of using a descriptive approach was to determine clients' knowledge of renal donation and to describe their attitudes towards renal donation at a specific urban health care facility in Limpopo province.

3.2.3 Explorative design

An explorative design is used in a study that explores the dimensions of a phenomenon, or that develops or refines hypotheses about relationships between phenomena (Polit & Beck 2017:727). An exploratory approach was considered appropriate to explore the respondents' knowledge on renal donation.

3.2.4 Cross-sectional study

Cross-sectional studies examine groups of subjects simultaneously in various stages of development, levels of education, severity of illness, or stages of recovery to describe changes of phenomena across stages (Grove et al 2015:212). A cross-sectional study involves obtaining data from a cross-section of the population at a specific point in time, indicating that the data are gathered once from a specific sample (Botma et al 2016:113). In this study, the researcher collected data from all respondents who met the inclusion criteria at an outpatient department.

3.3 RESEARCH SETTING

The research setting refers to the specific place or places where data are collected (Brink et al 2018:47). It is the location for conducting research, which can be either natural, partially controlled, or highly controlled (Grove et al 2015:512).

The study was conducted at an outpatient department of a public urban health care facility situated in Polokwane, Limpopo province. This public health care facility is a tertiary hospital in an urban area. It is also a referral hospital for all hospitals in Limpopo province. It is the only public hospital in Limpopo province with a dialysis centre. The outpatient department has approximately 900 visits per week of patients from different clinics.

3.3.1 Population

The population refers to the entire group of persons or objects that is of interest to the researcher, in other words, which meet the criteria that the researcher is interested in studying (Brink et al 2018:116). Grove et al (2015:509) refer to the population as all elements that meet the sample criteria for inclusion in a study.

In this study, the population was clients visiting the outpatient department for check-ups. The population size obtained from the outpatient register was 1800. This size was determined by the total number of clients who were seen in the outpatient department of the specific public urban health care facility in 2017. The researcher targeted clients who met the inclusion criteria and who were willing to participate in the study.

3.3.2 Sampling technique and sample

Sampling is the process of selecting a portion of the population to represent the accessible population (Botma et al 2016:124). Simple random sampling was used. The respondents were drawn in a random way from the sampling frame and each respondent was listed separately; thus, they had an equal chance of being included in the sample (Brink et al 2018:115). The sampling frame was the register of clients who visited the outpatient department for different services.

The researcher targeted clients who met the inclusion criteria and who were willing to participate in the study. The total number of clients who were seen in the outpatient department every two weeks amounted to 1800. These statistics were taken from an outpatient register (Outpatient Register 2017:112). The sample was calculated through the assistance of a statistician using Slovin's formula (Barmby, Bolden & Thompson 2014:16).

It was calculated as follows:

$n=N/ (1+NE)^2$
$=1800/ (1+1800) (0.05)^2$
$=317$
n=the number of samples needed
N=total population
E=margin error=0,05

Therefore, the sample consisted of 317 respondents. Botma et al (2016:124) define a sample as a subset or portion of the accessible population identified for the study.

3.3.3 Inclusion criteria

The inclusion criteria were:

- All males and females.
- All races.
- Clients between 18 and 80 years old.
- All clients who could read and write.
- All languages.

3.4 DEVELOPMENT AND PRE-TESTING OF THE DATA COLLECTION INSTRUMENT

An instrument is a tool or device that is used to collect data and it can be in the form of a questionnaire, test or observation schedule. A questionnaire is defined as a document used to gather self-reported data and is usually done by self-administration (Polit & Beck 2017:243). In this study, the researcher developed a structured questionnaire in preparation for data collection.

The researcher opted to use a questionnaire for the following reasons:

3.4.1 Advantages of questionnaires

Questionnaires gather a large amount of data in a relatively short period, within reasonable limits of time and resources. The researcher can be confident of the quality of the data produced after having ensured validity and reliability. The anonymity offered may improve the honesty with which the respondents answer questions (Botma et al 2016:135).

3.4.2 Disadvantage of questionnaires

The response rate may be low and those who did respond may not be representative of the population (Botma et al 2016:135).

3.4.3 Data collection instrument

The questionnaire comprised of 32 closed-ended questions in English. Of these closed-ended questions, some included respondents' demographic information, and others were of Likert scale type. The Likert scale type questions consisted of several declarative items that express a viewpoint on a topic (Polit & Beck 2017:273). It was divided into sections A, B, C and D (refer to Annexure D). The different sections were:

- Section A addressed the respondents' demographical information including age, gender, highest standard passed, religion, nationality, residential area, marital status and employment.
- Section B addressed respondents' knowledge and understanding of renal donation.
- Section C focused on factors that prevent respondents from volunteering to donate a kidney.
- Section D presented the attitudes of respondents concerning organ donation.

After its finalisation, before pre-testing, it was sent to the researcher’s supervisor, statistician and staff working in the outpatient department and renal unit to check its content validity and reliability. Pre-testing is the trial administration of a newly developed instrument to identify problems or assess time requirements (Polit & Beck 2017:193). Pre-testing was done to investigate possible flaws in the instrument, such as ambiguous instructions or wording, and inadequate time limits (Brink, van der Walt & van Rensburg 2018:89).

The researcher conducted a pre-test to assess whether the statements in the questionnaire were easily understandable. It was also done in order to check its validity and reliability. Verbal permission was requested from the unit manager of the outpatient department to conduct the pre-test.

After the permission was granted, the researcher gave the respondents information leaflets (refer to Annexure E) with all the information about the study, and explained what was written in detail before they agreed to participate.

Informed consent is defined as an agreement by a prospective subject to participate voluntarily in a study after he or she has assimilated essential information about the study (Grove et al 2015:506). The respondents were informed that their participation is voluntary and that they could withdraw their participation at any time should they have wished without any penalty. After this explanation, the respondents signed their consent forms (refer to Annexure E). Pre-testing was conducted on 23 February 2018.

Ten (10) respondents from the outpatient department of the urban health care facility received the designed questionnaire to complete (refer to Annexure D). The respondents consisted of males and females, different races, ages and educational levels, and all languages were included. Questionnaires were completed in the private room at the outpatient department provided by the unit manager.

The respondents have the right to expect that their data will be kept in strictest confidence (Polit & Beck 2017:156). The researcher assured confidentiality by telling the respondents that only she and the responsible authorities would have access to the results. The researcher further signed confidentiality binding form. Anonymity exists when the respondent's identity cannot be linked, even by the researcher, with his or her individual responses (Grove et al 2015:107). The anonymity of the respondents was protected as they did not write their names or identification numbers on the questionnaire. It took them 10-15 minutes to complete the questionnaire.

The respondents who participated in pre-testing were not part of the larger study as they might have had an impact on its final results, thus giving duplication of the same results. After pre-testing, the questionnaire needed modification. On the Likert scale questions, it was difficult for the researcher to measure "strongly agree", "agree" and "disagree", "strongly disagree". The researcher consulted the supervisor in this regard. After approval of the changes from the supervisor, the questionnaire was amended (refer to Annexure D).

3.5 DATA COLLECTION

Data collection is the process of gathering information relevant to address the research problem (Polit & Beck 2017:57). Grove et al (2015:502) define data collection as an identification of subjects and the precise systematic gathering of information relevant to the research purpose or the specific objectives, questions, or hypotheses of a study. Data were collected after ethical clearance was granted by the Research and Ethics Committee of the Department of Health Studies at the University of South Africa (UNISA) (refer to Annexure A).

Furthermore, after permission was granted by the Ethical Committee of the Limpopo Department of Health (refer to Annexure F), and from the public urban health care facility in Limpopo province (refer to Annexure G), verbal permission was also obtained from the outpatient manager to collect data. Data were collected over a period of two weeks from the 12th to the 15th of March 2018, and the 19th to the 22nd of March 2018. The background, purpose and the significance of the study were explained to the respondents before starting to collect data.

After permission was granted to collect data, the researcher gave the respondents information leaflets (refer to Annexure E) which contained all the information about the study. The researcher explained what was written in detail before respondents agreed to participate in the form of signing an informed consent form.

The respondents were further notified that participation in the study was voluntary and they were allowed to withdraw from the study, should they wish without any penalty. A simple random sampling method was used for the selection of the respondents until the required sample size was obtained. The respondents were selected randomly from the outpatient register while waiting to be seen by the outpatient doctors.

The researcher used a structured pre-tested questionnaire to collect data (refer to Annexure D). Privacy was maintained by allowing the respondents to complete the questionnaire in an available private room provided by the unit manager. Anonymity and confidentiality were maintained by not revealing the respondents' identity during reporting or publishing of the study. The respondents had the right to expect that their data would be kept in the strictest confidence (Polit & Beck 2017:156). The respondents were given the guarantee that their information would not be made accessible to parties other than those involved in the research thus maintaining confidentiality (refer to Annexure K). Anonymity exists when the respondent's identity cannot be linked, even by the researcher, with his or her individual responses (Grove et al 2015:107). The respondents' anonymity was ensured as they did not write their names or identification numbers on the questionnaires. It took them 10-15 minutes to complete the questionnaire.

Out of 317 questionnaires which were distributed, 10 were incomplete and were not used for data analysis, and 7 were not returned. Thus, 300 questionnaires were used for data analysis. Throughout the data collection process, the researcher was available to clarify questions that needed further explanation. After data collection, all the staff and the unit manager were thanked for their cooperation. The questionnaires and the signed informed consent forms were kept safe in a locked cupboard in the researcher's office for data analysis purposes.

3.6 DATA MANAGEMENT AND ANALYSIS

The purpose of data analysis is to reduce, organise and give meaning to data (Grove et al 2015:47). Data were analysed using the SPSS computer software version 25 with the assistance of the statistician. Data were presented using tables, graphs and charts to illustrate the responses. Chapter 4 offers a detailed discussion of the study's data management and analysis.

3.7 VALIDITY AND RELIABILITY

3.7.1 Validity

The validity of an instrument is a determination of how well the instrument reflects the abstract concept being examined. It is measured on a continuum (Grove et al 2015:290). Validity is the degree to which an instrument measures what it is supposed to measure (Polit & Beck 2017:161).

The following types of validity were considered:

3.7.1.1 Internal validity

Internal validity relates to the validity of inferences that, given that an empirical relationship exists, it is the independent variable, rather than something else, that caused the outcome (Polit & Beck 2017:216). In this study, there were no threats to internal validity as no casualty was examined.

3.7.1.2 External validity

External validity is about the generalisability of causal inferences which is a critical concern for research that aims to yield evidence for evidence-based nursing practice (Polit & Beck 2017:216). The researcher did not generalise this study to other public health care facilities.

3.7.1.3 Content validity

Content validity examines the extent to which a measurement method includes all the major elements relevant to the concept being measured (Polit & Beck 2017:274). The questionnaire was reviewed to ensure that the contents determined respondents' knowledge of renal donation as mentioned in the objectives. The questionnaire was sent to the researcher's supervisor, statistician and professional nurses working in the outpatient department and renal unit to check its content validity.

3.7.1.4 Face validity

The instrument appears to measure what it is supposed to measure. The development of the instrument must be readable and accurate in relation to the topic (Brink et al 2018:152). The questionnaire was checked for accuracy and readability by the statistician and the researcher's supervisor.

3.7.1.5 Construct validity

Construct validity is a key criterion for assessing the quality of a study (Polit & Beck 2017:723). The questionnaire was analysed and checked by the Research and Ethics Committee of the Department of Health Studies at the University of South Africa (UNISA), the researcher's supervisor, and the statistician.

3.7.2 RELIABILITY

Reliability refers to the degree to which the instrument can be depended upon to yield consistent results if used repeatedly over time on the same person, or if used by two researchers (Brink et al 2018:155).

The following types of reliability were applied:

3.7.2.1 Test-retest reliability

Repeated measures with a scale or instrument to determine the consistency or stability of the instrument in measuring a concept (Grove et al 2015:289). The researcher did a pre-test to test the questionnaire for consistency and stability. The questionnaire was pre-tested with 10 respondents. The results of pre-testing helped the researcher to modify the questionnaire. The 10 piloted respondents were not part of the main study.

3.7.2.2 Internal consistency reliability

Reliability testing is used primarily with multi-item scales in which each item on the scale is correlated with all other items to determine the consistency of the scale in measuring a concept (Grove et al 2015:289).

The Cronbach's alpha is the most frequently used method for evaluating internal consistency and the normal range is 0.00 to 1.00. The higher the value of the calculation, the higher the internal consistency (Polit & Beck 2017:725). The internal consistency of the results of the pre-test and the main study was calculated using the Cronbach's alpha.

3.8 ETHICAL CONSIDERATIONS

Ethics refers to a system of moral values that is concerned with the degree to which research procedures adhere to professional, legal and social obligations to the study participants (Polit & Beck 2017:727). There are three broad principles on which standards of ethical conduct in research are based, namely beneficence, respect for human dignity, and justice (Polit & Beck 2017:141).

3.8.1 Researcher-specific ethical considerations

Data collection was done after approval was granted by the Research and Ethics Committee of the Department of Health Studies at the University of South Africa (refer to Annexure A). Additionally, written permission to conduct the study was obtained from the Provincial Research Ethics Committee (refer to Annexure F) and the specific urban health care facility in Limpopo province (refer to Annexure G).

3.8.2 Respondents'-specific ethical considerations

3.8.2.1 Informed consent

The significance of the study was explained to the respondents before starting to collect data and respondents' informed consent was requested (refer to Annexure E). The respondents had the right to withdraw their participation even if they had signed the consent form, without any penalty should they have wished.

3.8.2.2 Privacy

In this study, privacy was ensured by allowing each respondent to complete the questionnaire in a private room at outpatient department.

3.8.2.3 Confidentiality

Confidentiality relates to the way that data is treated. It includes the measures taken to ensure that data cannot be linked to individual responses, and that it will not be revealed to anyone outside the research team without authorisation from the respondents (Botma et al 2016:17). In this study, no unauthorised person was allowed to gain access to data, and individuals were not identified by their names.The respondents were assured that information obtained will be kept confidential (refer Annexure K).

3.8.2.4 Anonymity

Anonymity ensures that the identity of the participant cannot be linked, even by the researcher, to the individual response (Botma et al 2016:17). In this study, the questionnaires had code numbers for identification instead of using respondents' names.

3.8.2.5 Beneficence

The researcher protected the well-being of the respondents from any physical, spiritual and psychological harm.

3.8.2.6 Respect for human dignity

The researcher respected the right of the respondents to participate in the study, and was sensitive to and respected their beliefs, habits and lifestyles.

3.8.2.7 Justice

The researcher selected the study population randomly, no hidden cameras or video recorders were used, and the respondents were not manipulated.

3.9 CONCLUSION

This chapter discussed the research design and methodology that guided the study. The quantitative research instrument was described, and validity and reliability were discussed. The chapter concluded with the description of ethical considerations. The following chapter will present the data analysis, presentation and interpretations.

CHAPTER 4

DATA ANALYSIS, PRESENTATIONS AND INTERPRETATIONS

4.1 INTRODUCTION

The previous chapter discussed the research design and methodology of this study. The focus of this chapter is the data analysis, presentation and interpretation of the results.

The following objectives of this study were addressed:

- to determine clients' knowledge and understanding regarding renal donation;
- to identify the factors that prevent clients from volunteering to donate a kidney and
- to describe the attitudes of clients with regard to renal donation.

Finally, after data management and analysis of the results, they were presented in table and figure format.

4.2 DATA MANAGEMENT AND ANALYSIS

The researcher collected data from clients at the outpatient department of an urban health care facility in Limpopo province. A structured pre-tested questionnaire was used to collect data. Out of 317 questionnaires which were distributed, 10 were incomplete, and 7 were not returned. Data analysis was thus conducted on 300 questionnaires. Data analysis was based on the four sections of the questionnaire (refer to Annexure D). Those sections were:

- Section A addressed the respondents' demographical information including age, gender, highest standard passed, religion, nationality, residential area, marital status and employment.
- Section B addressed respondents' knowledge and understanding of renal donation.

- Section C focused on factors that prevent respondents from volunteering to donate a kidney.
- Section D presented the attitudes of respondents concerning organ donation.

4.2.1 Statistical analysis

A statistician, who is an expert in quantitative research, assisted the researcher in analysing the data (refer to Annexure I). The statistician aided the researcher by checking the accuracy of the data analysis and interpretation. The SPSS Version 25 was used. After the questionnaires were returned, they were screened to eliminate those that were incomplete. This procedure was followed by capturing data on a Microsoft Excel computer package. The Excel document was then imported into the SPSS Version 25, where it was coded in preparation of data analysis. Cronbach’s alpha test was used to provide a summary of inter-correlations that existed among the items on respondents’ knowledge of renal donation at a specific urban health care facility.

4.2.2 Descriptive statistics

Descriptive statistics are techniques that help to state the characteristics or appearance of sample data (Zikmund, Babin, Carr & Griffin 2013:54). Frequency tables and the mean score ranking technique were the descriptive statistics used in this study.

4.2.2.1 Frequency distributions

The frequency distributions employed to display the research results were percentages, graphs, line charts, pie charts, histograms and bar charts. Frequency distributions are used to depict absolute and relative magnitudes, differences, proportions and trends (Zikmund et al 2013:54). These methods use both horizontal and vertical bars to examine different elements of a given variable (Malhotra 2011:84).

The use of frequency distributions facilitated the assessment of age, gender distribution, highest standard passed, religion, nationality, residential area, marital status and employment status.

4.3 RESEARCH RESULTS

4.3.1 Demographical information of the respondents

4.3.1.1 Age (N=300)

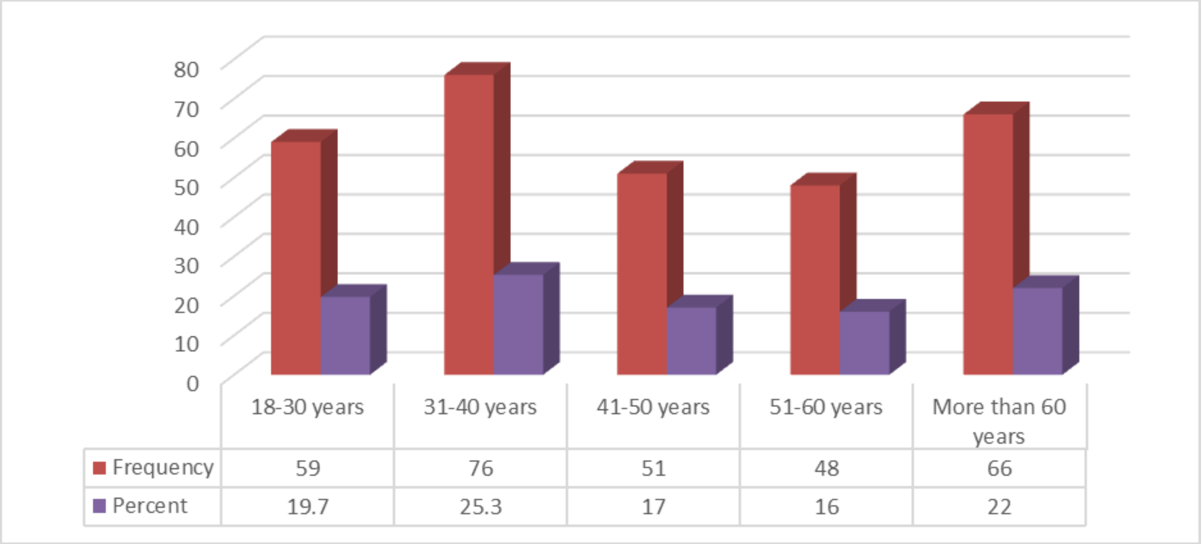


Figure 4.1 Age (N=300)

Figure 4.1 shows that 25% (n=76) of the respondents were aged between 31 and 40 years, 20% (n=59) were between 18 and 30 years, 17% (n=51) were aged between 41 and 45 years, 16% (n=48) were between 51 and 60 years, and 22% (n=66) were older than 60 years. These results indicated that all age groups were represented in the study. The majority of the respondents are between 31 to 40 years (25%). These results differ from the study by Sequira and Pai (2014:63) on the knowledge and attitude of adults on kidney donation in a selected village of Udupi district Karnataka. Out of 100 participants recruited for their study, 64% were between the age group of 19 to 40 years.

4.3.1.2 Gender (N=300)

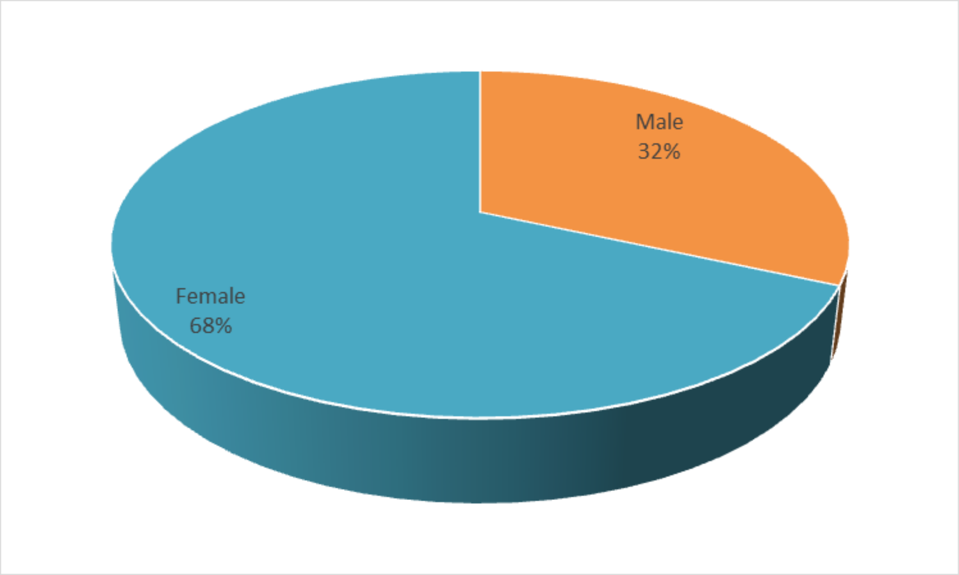
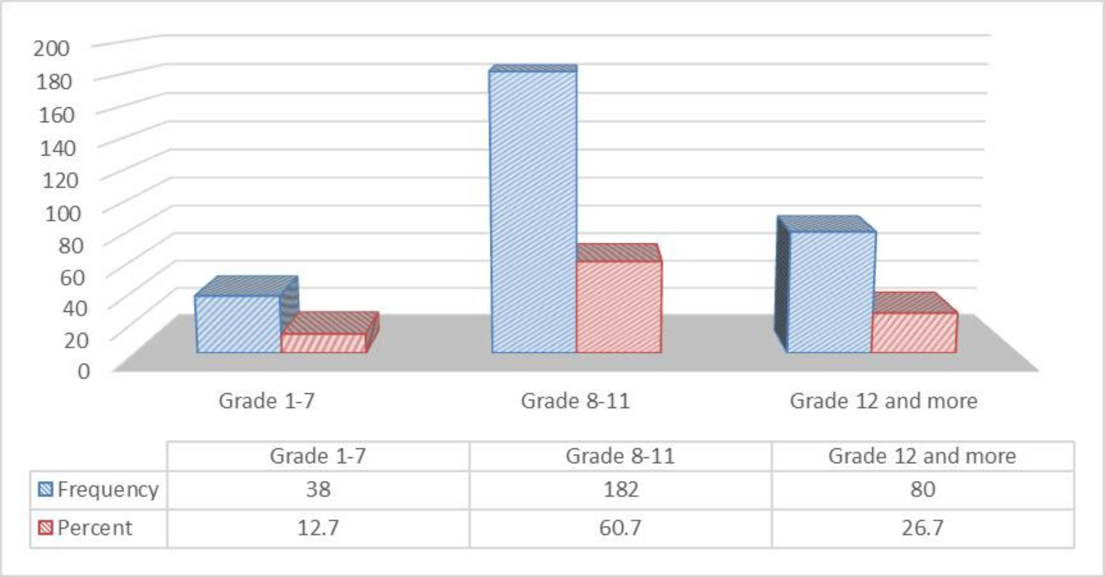


Figure 4.2 Gender (N=300)

The results of respondents' gender are presented in Figure 4.2. It is indicated that 32% (n=95) were males and 68% (n=205) were females. The fact that there was a 36% difference in the ratio of males to females in the sample suggests that there is gender imbalance in the clients' knowledge of renal donation at a specific urban health care facility. The 68% (n=205) of females indicated that they utilise the health care facility more often as they have better health-seeking behaviour than men.

These results are supported by the study of Nunu and Munyewende (2017:2) conducted in the Free State and Gauteng provinces, South Africa. Theirs was a comparative study which stated that women were the majority of respondents in both provinces, accounting for over 60% of the study sample, and women are caregivers in most cases. The ratio is different than Agrawal et al's (2017:83) study in Al-Kharj, Saudi Arabia, where a total of 403 respondents were surveyed and there were 74.7% (n=301) males and 25% (n=102) females.

4.3.1.3 Educational level (N=300)



	Grade 1-7	Grade 8-11	Grade 12 and more
▨ Frequency	38	182	80
▨ Percent	12.7	60.7	26.7

Figure 4.3 Educational levels (N=300)

The results of the educational levels among the respondents are captured in Figure 4.3. It indicates that only 13% (n=38) of the respondents specified that their highest qualification was between Grade 1 and 7. Sixty-one per cent 61% (n=182) of the respondents indicated that their highest qualification was between Grade 8 and 11. This shows that most clients visiting outpatient departments have not matriculated. Finally, 27% (n=80) of the respondents indicated that their highest qualification was Grade 12 and above.

According to the results, respondents' level of education might have a negative impact on this study, since only 27% (n=80) of the respondents had successfully completed Grade 12 or attained a higher qualification. A significant association was found between knowledge and education in the study by Sequira and Pai (2014:63) on adults' knowledge and attitude of kidney donation in a selected village of Udupi district, Karnataka; 52% of their participants were graduates.

4.3.1.4 Religion (N=300)

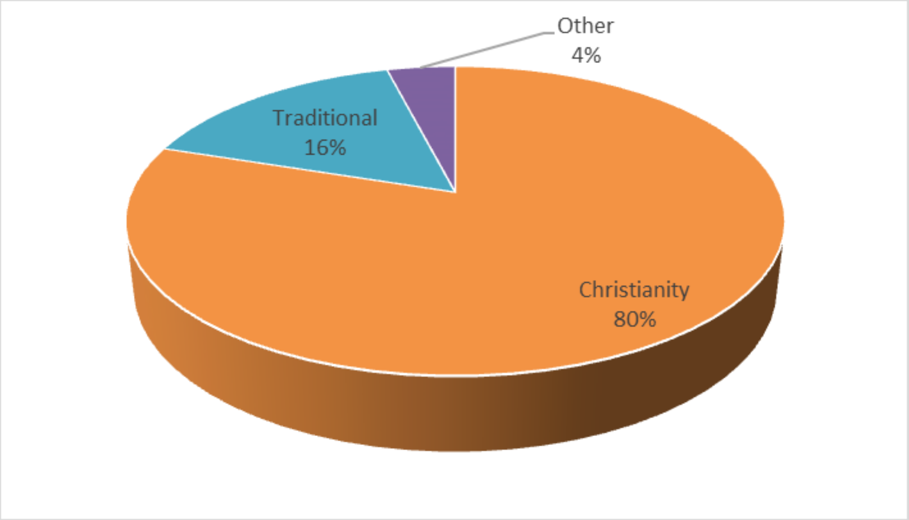


Figure 4.4 Religion (N=300)

The results in Figure 4.4 reflect the religion of the respondents. The results indicated that the majority of the respondents 80%, (n=240) were Christians, 16% (n=48) believed in their tradition, and 4% (n=12) had their own beliefs. Christians responded by disagreeing with the statement that "My religion does not allow me to give away my kidneys". The results were similar to the study by Yalakshmi, Sunitha, Gandhi, Thimmaiah and Math (2016:258) on the general population's knowledge, attitude and behaviour towards organ donation; 52.3% of their respondents agreed that religious people do not oppose organ donation.

4.3.1.5 Nationality (N=300)

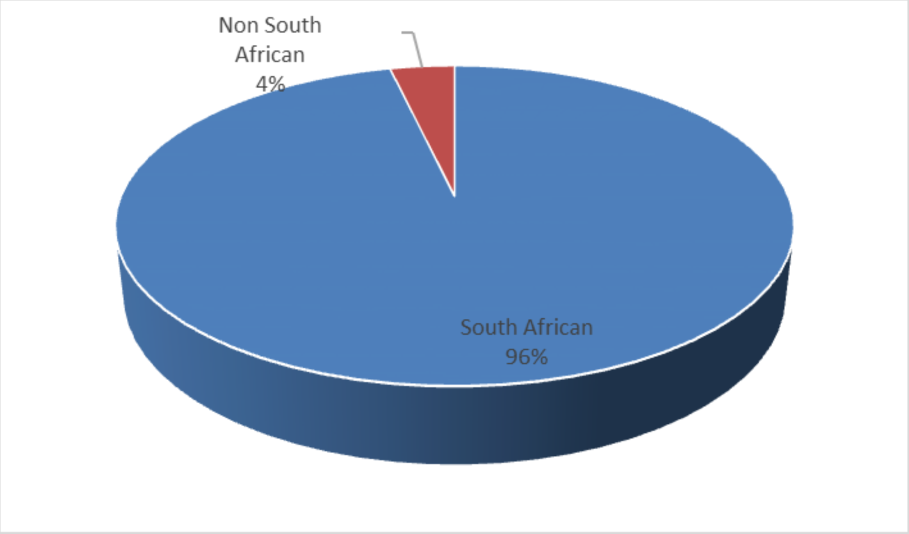
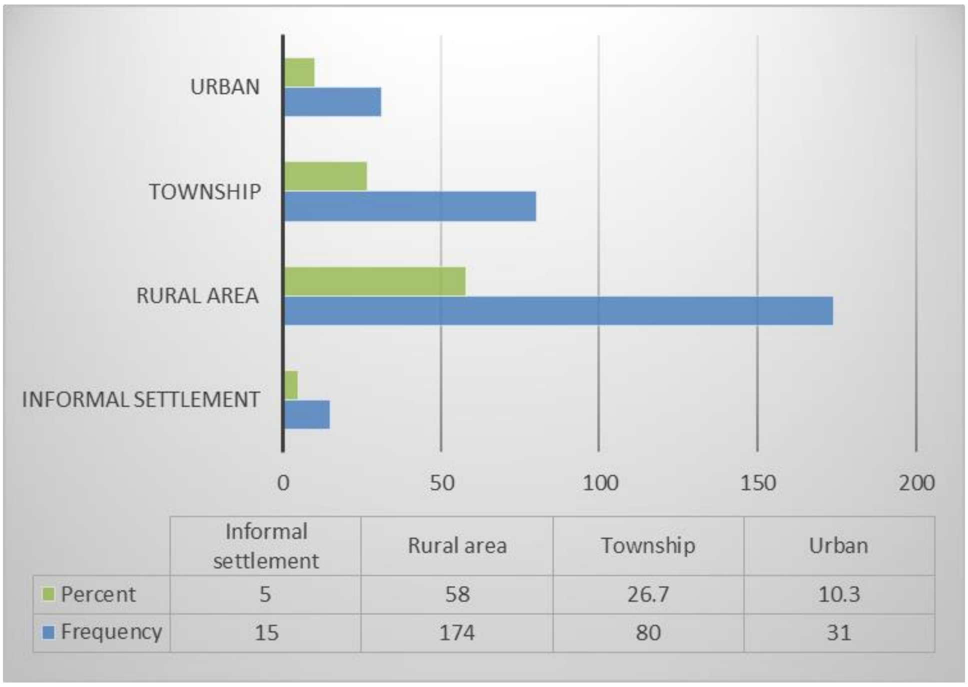


Figure 4.5 Nationality (N=300)

The percentage distribution of respondents' nationality in Figure 4.5 indicated that 96% (n=289) were South Africans, whereas 4% (n=11) were non-South Africans. This was in accordance with the researcher's expectation to conduct research on South African citizens.

4.3.1.6 Residential area (N=300)



	Informal settlement	Rural area	Township	Urban
🟩 Percent	5	58	26.7	10.3
🟦 Frequency	15	174	80	31

Figure 4.6 Residential area (N=300)

The results in Figure 4.6 reveal that the respondents from informal settlements were 5% (n=15), followed by 58% (n=174) from rural areas, 27% (n=80) from townships, and 10.3% (n=31) were from urban areas. The majority of the respondents came from rural areas in Limpopo province. The researcher assumed that clients in urban settlements around the urban health care facility are either not utilising the facility as expected, or are not affected by renal failure, or do not attend haemodialysis at that specific health care facility.

4.3.1.7 Marital status (N=300)

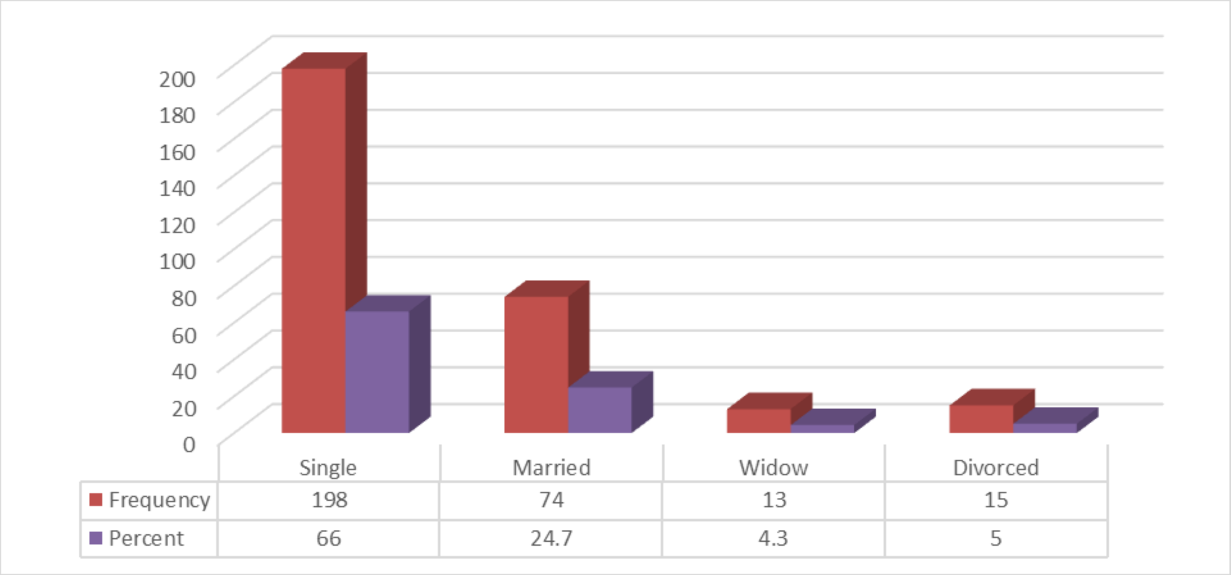


Figure 4.7 Marital status (N=300)

The results in Figure 4.7 revealed that 66% (n=198) of the respondents are single, 25% (n=74) are married, 4.3% (n=13) are widowed, and 5% (n=15) are divorced. Thus, the results indicated a higher percentage 66%, (n=198) of single respondents were visiting the urban health care facility. This shows that single respondents experience a greater burden when caring for their families. This was supported by the study by Whitley and Brennenstuhl (2015:3) on the health characteristics of solo grandparent caregivers and single parents. Their study stated that single parents experience poor physical and psychological stress, leading to hypertension, obesity, risk of diabetes and high cholesterol levels, especially for those who are economically disadvantaged.

4.3.1.8 Employment status (N=300)

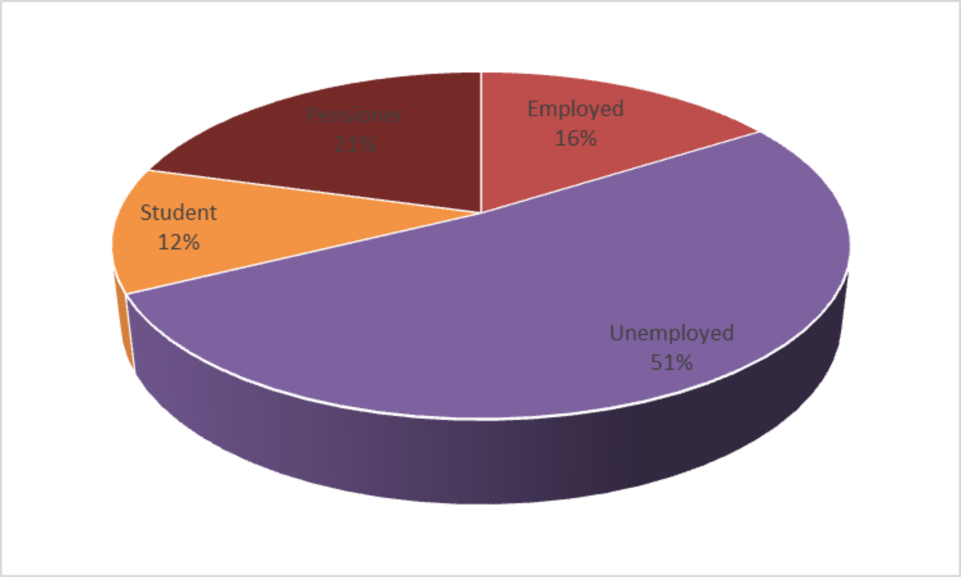


Figure 4.8 Employment status (N=300)

The results from Figure 4.8 reflect that 51% (n=155) of the respondents were unemployed, 21% (n=62) were pensioners, 16% (n=48) were employed, and 12% (n=35) were students. Therefore, the majority of the people who are visiting the urban health care facility are unemployed.

The South African government funds public healthcare has many advantages. The advantages of public healthcare include free care to all citizens because of the high numbers of impoverished communities in South Africa. This benefit those who cannot afford to pay for healthcare (Nunu & Munyewende 2017:2). Hence, the majority of unemployed respondents visiting urban healthcare facilities are not affected by funding.

4.4 KNOWLEDGE AND UNDERSTANDING ON RENAL DONATION

The researcher adopted the item numbering according to how items were indicated on the questionnaire (refer to Annexure D).

Table 4.1 Knowledge and understanding on renal donation (N=300)

Items	Description	Agree	Not sure	Disagree
9	A normal person has two kidneys.	n=217 (72.3%)	n= 83 (27.7%)	0
10	Kidneys remove waste and poisonous substances from our bodies.	n=55 (18.3%)	n=245 (81.7%)	0
11	Damaged kidneys can be replaced by another healthy kidney.	n=60 (20%)	n=224 (74.7%)	n=16 (5.3%)
12	Renal donation is done when you are healthy.	n=45 (15%)	n=255 (85%)	0
13	Renal donation is to give away one of your kidneys if you are alive.	n=24 (8%)	n=276 (92%)	0
14	A friend, relative, parents or anybody can donate a kidney.	n=36 (12%)	n=264 (88%)	0
15	A person can survive with one kidney if the other one is damaged or absent.	n=44 (14.7%)	n=236 (78.7%)	n=20 (6.7%)
16	A person can donate to anyone even if you are not family.	n=33 (11%)	n=247 (82.3%)	n=20 (6.7%)

Items	Description	Agree	Not sure	Disagree
17	Your family can sign for your kidneys to be donated.	n=10 (3.3%)	n=105 (35%)	n=185 (61.7%)
18	A person can be kept on dialysis while waiting for renal donation.	n=14 (4.7%)	n=286 (95.3%)	0

Table 4.1 shows the results of the respondents' knowledge and understanding of renal donation. Seventy-two per cent (72%) (n=217) agreed that a normal person has two kidneys, whereas 27.7% (n=83) were not sure. Therefore, most of the respondents 72% (n=217) were knowledgeable about the number of kidneys a person has. About 18% (n=55) agreed with the statement that kidneys remove waste and poisonous substances from our body, and 81.7% (n=245) were not sure. This indicates that the majority of the respondents do not know the function of the kidneys.

Twenty per cent 20% (n=60) of the respondents agreed that damaged kidneys could be replaced by another healthy kidney, whereas 74.7% (n=224) were not sure, and 5.3% (n=16) disagreed. The majority of the respondents 74.7%, (n=224) were thus not sure if kidneys can be replaced. The results are similar to the study conducted in Egypt by Hamed et al (2016:2), which found that 64% of their medical student participants had poor knowledge of organ donation. Fifteen per cent 15% (n=45) agreed that renal donation is done when you are healthy, 85% (n=255) were not sure. The majority of the respondents 85%, (n=255) were not sure when to make a renal donation. Eight per cent 8% (n=24) agreed that renal donation is to give away one of your kidneys while you are alive, and 92% (n=276) were not sure.

Ninety-two per cent 92% (n=276) of the respondents were not aware that one kidney can be removed for donation while one is still alive. The study by Iliyasu et al (2014:199) on predictors of public attitude towards living organ donation in Kano, Northern Nigeria, differs with this study as it showed that 61.6% of the people knew that kidneys could be donated, followed by 26.2% who knew that the heart could be donated, and 5.3% who knew that the liver could be donated.

Fourteen per cent 14% (n=44) agreed that a person can survive with one kidney, 78.7% (n=236) were not sure, and 6.7% (n=20) disagreed. The respondents who were not sure gave reasons such as only knowing that the two kidneys are working together, so if one is not functioning one cannot survive. Eleven per cent 11% (n=33) agreed that a person could donate to anyone even if you are not family. Eighty-two per cent 82% (n=247) were not sure, and 6.7% (n=20) disagreed. The respondents who disagreed with the statement mentioned that you could only donate if one of your family members need a donation, to save the loved ones' life.

Three-point three per cent 3.3% (n=10) of the respondents agreed that your family could sign for your kidney donation, 35% (n=105) were not sure, and 61.7% (n=185) disagreed. This indicated that the majority of families would not give away the body parts of their loved ones without their consent. Four point seven per cent 4.7% (n=13) agreed that a person could be kept on dialysis while waiting for a renal transplant, yet 95.3% (n=286) were not sure. Thus, the majority of the respondents do not know what dialysis is. Others had just heard this word “dialysis” for the first time.

Regarding respondents' knowledge and understanding of renal donation, it is clear that the majority of the respondents do not have adequate knowledge of renal donation.

4.5 FACTORS THAT PREVENT THE CLIENTS TO VOLUNTEER DONATING KIDNEYS

Table 4.2 Factors that prevent the clients to volunteer donating kidneys (N=300)

Items	Descriptions	Agree	Not sure	Disagree
19	My religion does not allow me to give away my kidney.	n=22 (7.3%)	n=38 (12.7%)	n=240 (80%)
20	Diseases like diabetes and hypertension can prevent you from donating.	n=156 (52%)	n=140 (46.7%)	n=4 (1.3%)
21	Cultural beliefs prevent me from donating a kidney.	n=183 (61%)	n=25 (8.3%)	n=92 (30.7%)
22	I am scared to donate a kidney.	n=258 (86%)	n=23 (7.7%)	n=19 (6.3%)
23	If I am obese I cannot donate a kidney.	n=6 (2%)	n=281 (93.7%)	n=13 (4.3%)
24	If I am diagnosed with cancer I cannot donate.	n=51 (17%)	n=238 (79.3%)	n=11 (3.7%)
25	If I am HIV positive I cannot donate a kidney.	n=267 (89%)	n=33 (11%)	0
26	My family will not allow me to donate.	n=84 (28%)	n=26 (8.7%)	n=190 (63.3%)

Table 4.2 shows the frequency and percentages of factors that prevent the respondents from volunteering to donate a kidney. The results revealed that 7.3% (n=22) agreed that their religion does not allow them to donate a kidney, 12.7% (n=38) were not sure, and 80% (n=240) disagreed. This indicates that the majority of respondents’ religions are not against organ donation. The study by Iliyasu et al (2014:200) differs in that 2.9% of their respondents were sure that their religion allowed for organ donation, and 63.5% were not sure of their religions’ beliefs on organ donation and transplant.

Fifty-two per cent 52% (n=156) of the respondents agreed that diseases like diabetes and hypertension could prevent a person from donating an organ, 46.7% (n=140) were not sure, and 1.3% (n=4) disagreed. This shows that more than half of the respondents know that diseases like diabetes and hypertension can prevent a person from donating. About 61% (n=183) agreed that cultural beliefs prevent a person from donating a kidney, 8.3% (n=25) were not sure, and 30.7% (n=92) disagreed. This revealed that the majority of people followed their culture. The study by Takure et al (2016:771) found that only 6.2% of their respondents indicated that their culture forbids transplantation.

Eighty-six per cent 86% (n=258) of the respondents agreed that it is scary to donate a kidney, 7.7% (n=23) were not sure, and 6.3% (n=19) disagreed. This indicated that the majority of the respondents are not willing to donate kidneys based on their fear of the procedure. Two per cent 2% (n=6) agreed that obesity could prevent a person from donating a kidney, 93.7% (n=281) were not sure, and 4.3% (n=13) disagreed. The results showed that the majority of the respondents are unaware of the barriers to renal donation. About 17% (n=51) agreed that if a person is diagnosed with cancer they cannot donate a kidney, 79.3% (n=238) were not sure, and 3.7% (n=13) disagreed. The majority of the respondents were therefore not knowledgeable about renal complications related to cancer.

Eighty-nine per cent 89% (n=267) of the respondents agreed that if a person is HIV positive they cannot donate a kidney, and 11% (n=33) were not sure. This revealed that the respondents are aware that HIV prevents a person from becoming an organ donor. Argarwal's (2015:30) study, which was conducted at Mandya, Karnataka, found that 76.8% of participants were aware that infectious diseases are a contradiction for organ donation.

About 28% (n=84) agreed that their family would not allow them to donate a kidney, 8.7% (n=26) were not sure, 63.3% (n=190) disagreed. This indicated that the majority of the respondents are independent because they can make their own decisions without their families. The study by Yalakshmi et al (2016:258) revealed that the majority of their respondents 54.9%, (n=106) recognised the importance of discussing their wishes related to organ donation with their family.

4.6 ATTITUDES OF CLIENTS WITH REGARD TO RENAL DONATION (N=300)

Table 4.3 Attitudes of clients with regard to organ donation.

Items	Descriptions	Agree	Not sure	Disagree
27	I am willing to donate a kidney.	n=40 (13.3%)	n=103 (34.3%)	n=157 (52.3%)
28	Renal donation might change my body after transplant.	n=143 (47.7%)	n=121 (40.3%)	n=36 (12%)
29	I must die with my body parts complete.	n=219 (73%)	n=54 (18%)	n=27 (9%)
30	Payment has to be made for organ donation.	n=48 (16%)	n=34 (11.3%)	n=218 (72.7%)
31	Problems that may occur after transplant prevent me from donating.	n=186 (62%)	n=66 (22%)	n=48 (16%)
32	A person from a different race can donate a kidney to a different race.	n=179 (59.7%)	n=101 (33.7%)	n=20 (6.7%)

Table 4.3 shows the frequencies and percentages of the respondents' attitudes with regard to organ donation. Thirteen per cent 13% (n=40) of the respondents agreed that they are willing to donate a kidney, 34.3% (n=103) were not sure, and 52.3% (n=157) disagreed. This implied that for the majority of the respondents, their families are not affected by renal failure.

Forty-eight per cent 48% (n=143) of the respondents agreed that renal donation might change their body after transplant, 40.3% (n=121) were not sure, and 14% (n=36) disagreed. This indicated that most of the respondents were aware that transplant might cause changes to the functioning of the body. About 73% (n=219) agreed that they want to die with their body parts intact, 18% (n=54) were not sure, and 9% (n=27) disagreed. According to the responses to the statement "I want to die with my body parts complete", 73% (n=219) answered that they were scared to donate. The study by Yalakshmi et al (2016:258) found that organ and tissue donation does not disfigure the body (83.4%).

Out of 193 people interviewed (Yalakshmi et al 2016:258), 76.2% (n=147) supported organ donation, and 62% (n=120) were willing to donate organs after death. Sixteen per cent 16% (n=48) agreed that payment has to be made for organ donation, 11.3% (n=34) were not sure, and 72.7% (n=218) disagreed. This indicated that the majority of the respondents were against selling their body parts. This was similar to the study by Agarwal (2015:30) where 66.4% of participants responded that no payment is required for donated organs.

About 62% (n=186) of the respondents agreed that problems might occur after transplant and prevent a person from donating, 22% (n=66) were not sure, and 16% (n=48) disagreed. Therefore, the majority of the respondents were cautious of transplant complications. Fifty-nine point seven per cent 59.7% (n=179) agreed that a person could donate a kidney to someone of a different race, 33.7% (n=101) were not sure, and 6.7% (n=20) disagreed. Therefore, most respondents believe that any person can donate to a different race, thus, all races are the same.

4.7 RELIABILITY TESTING

Several statistical indexes may be used to measure internal consistency. Examples include the Average Inter-Item correlation, Average Item Total Correlation, Split-Half Reliability, and the Cronbach’s alpha (Wells & Wollack 2003:4). For this study, the Cronbach’s alpha was adopted as the measure of internal consistency for the measurement scale. According to Wells and Wollack (2003:4), the Cronbach alpha provides a measure of the extent to which the items on a measurement scale or test provide consistent information. It is often considered a measure of item homogeneity, that is, large alpha values indicate that the items are tapping into a common domain.

The scale in Cronbach’s reliability test ranges from 0 to 1. Scores that are close to 1 reveal that the instrument has a high reliability, while scores close to 0 indicate that the reliability of the instrument is very low (Wells & Wollack 2003:4). Most researchers require a reliability of at least 0.7 before they use the instrument.

In this study, the SPSS Version 25 was used to test the reliability of the measuring instrument. Furthermore, Cronbach's alpha test proved to be appropriate as it provided a summary of inter-correlations that existed among the items on respondents' knowledge of renal donation at a specific urban health care facility. These values are presented in Table 4.4.

Table 4.4 Internal consistency reliability values of scales

Items	Cronbach alpha	Average inter-item correlation
Knowledge and understanding of renal donation	0.924	0.597
Factors that prevent the respondents from volunteering to donate kidneys	0.851	0.476
Attitudes of respondents with regards to organ donation	0.922	0.674
Overall	0.961	0.54

The results from Table 4.4 show that the Cronbach's alpha value for each research concept ranged from 0.851, 0.922, 0.924 to 0.961. Thus, they were above the acceptable value of 0.7 as recommended by Wells and Wollack (2003:4). Furthermore, the value of the Average Inter-Item correlation was greater than the minimum acceptable value of 0.3. All average inter-item correlations were also above the acceptable value of 0.3, that is 0.597, 0.476, 0.674 and 0.540. The results indicate that the instrument that was used to test respondents' knowledge and understanding of renal donation, factors that prevent the respondents to volunteer donating kidneys, and respondents' attitudes with regards to organ donation, were reliable.

4.8 CONCLUSION

This chapter discussed data analysis and interpretation of the results in the form of pie charts, bar graphs and frequency tables. The demographic profile of the respondents was analysed. This was followed by an investigation of the respondents’ knowledge with regard to renal donation. The results showed that there are significant correlations between respondents’ attitudes, knowledge and actions with regards to renal donation. The next chapter will focus on the discussion of results, conclusions, limitations and recommendations of the study.

CHAPTER 5

DISCUSSION, CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In Chapter 4, the collected data were analysed and presented in graphs, figures and tables. This final chapter presents a discussion of the results followed by the limitations of the study, recommendations and conclusion.

5.2 SUMMARY OF THE RESULTS

5.2.1 Demographic data

This section discussed the respondents' age, gender, highest standard passed, religion, nationality, residential area, marital status and employment.

5.2.1.1 Age

Figure 4.1 showed that the majority 25%, (n=76) of the respondents were aged between 31 and 40 years, 20% (n=59) were between 18 and 30 years, 17% (n=51) were aged between 41 and 45 years, 16% (n=48) were between 51 and 60 years, and approximately 22% (n=66) were older than 60 years. These results indicated that all age groups were represented in the study. The majority of the respondents are between 31 to 40 years (25%). This suggests that every person needs health care to survive. In South Africa, the right to have access to health care services is therefore a constitutional right (Ngwenya 2000:27).

5.2.1.2 Gender

The results of respondents' gender were presented in Figure 4.2, indicating that 32% (n=95) were males and 68% (n=205) were females. The 36% difference in the ratio of males to females in the sample suggests that there is gender imbalance in the clients' knowledge of renal donation at the specific urban health care facility. By 68% (n=205) of respondents being female, it shows that they utilise the health care facility more often as they have good health-seeking behaviour compared to males. This finding is similar to the study by Okpere and Anochie (2014:50) on health care workers' knowledge and attitude towards kidney transplantation in Nigeria, which comprised of 80 (36.9%) males and 137 (63.1%) females.

5.2.1.3 Religion

The results in Figure 4.4 indicated the respondents' religion. The results revealed that the majority of the respondents 80%, (n=240) were Christians, 16% (n=48) believed in their tradition, and 4% (n=12) had their own beliefs. Christians have no objections to organ transplant, although Christian churches vary greatly between and within countries. This finding is supported by the study conducted in Benue State University in Nigeria by Rumun (2014:42), on the influence of religious beliefs on healthcare practice. It was found that Christians' faith and religious practice will be influenced by the tradition of the church to which they belong.

5.2.1.4 Nationality

The distribution of the respondents' nationality in Figure 4.5 indicated that 96% (n=289) were South Africans, whereas 4% (n=11) were non-South Africans. The researcher was able to collect knowledge of renal donation from a majority of South African respondents.

5.2.1.5 Residential area

The results in Figure 4.6 revealed that the respondents from informal settlement were 5% (n=15), followed by 58% (n=174) from rural areas, 27% (n=80) from townships, and 10.3% (n=31) were from urban areas. The majority of the respondents were from rural areas in Limpopo province. People in urban settlements around the urban health care facility are either not utilising the facility as expected, are not affected by renal failure, or not attending haemodialysis at that specific health care facility. This was demonstrated by the number of the respondents from urban settlements being fewer than 10.3% (n=31). The urban health care facility also serves as a referral hospital as there are specialised doctors for further treatment and care.

5.2.1.6 Marital status

The results in Figure 4.7 revealed that 66% (n=198) of the respondents are single, 25% (n=74) are married, 4.3% (n=1) are widowed, and 5% (n=15) are divorced. Thus, a higher percentage 66%, (n=198) of single respondents were visiting the urban health care facility. These findings are similar to the study conducted by Boima, Ganu, Dey, Yorke, Yawson, Otchere, Nartey, Gyaban-Mensah, Lartey and Mate-Kole (2017:1) on kidney transplantation in Ghana, where the majority of their respondents were single; out of 480 respondents, 282 (59%) were single, 130 (27%) were married and 14 (3%) were separated.

5.2.1.7 Employment status

In Figure 4.8 the results showed that 51% (n=155) of the respondents were unemployed, 21% (n=62) were pensioners, 16% (n=48) were employed, and 12% (n=35) were students. The majority of the respondents visiting the urban health care facility are thus unemployed. These results differ from the study by Balwani, Gumber, Shah, Kute, Patel, Engineer, Gera, Godhani, Shah and Trivedi (2015:583) on people’s attitude and awareness towards organ donation in western India, which had 0% unemployed respondents.

5.3 KNOWLEDGE AND UNDERSTANDING ON RENAL DONATION

Table 4.1 showed the results of the respondents’ knowledge and understanding of renal donation. Seventy-two per cent 72% (n=217) agreed that a normal person has two kidneys whereas 27.7% (n=83) were not sure. This showed that most of the respondents are knowledgeable about the number of kidneys a person has. This finding is similar to the study conducted in Nigeria by Okwuonu, Chukwuonye, Ogah, Abali, Adejumo and Oviasu (2015:160) on the awareness levels of kidney functions and diseases among adults in a Nigerian population. Their study found that participants’ knowledge of the number of kidneys in the human body was good (90.2%). Their participants knew the correct number of kidneys in the human body.

About 18% (n=55) agreed with the statement that kidneys remove waste and poisonous substances from our body, whereas 81.7% (n=245) were not sure. This showed that the majority of the respondents do not know the function of the kidneys. The study concurs with the study by Oluyombo et al (2016:161), where only 10.6% of 454 respondents could mention at least one function of the kidneys.

Twenty per cent 20% (n=60) of respondents agreed that damaged kidneys could be replaced by another healthy kidney, whereas 74.7% (n=224) were not sure, and 5.3% (n=16) disagreed. The majority of the respondents were not sure if kidneys can be replaced. This showed inadequate knowledge of renal donation. This finding is supported by the study conducted in Ghana (Boima et al 2017:1), which stated that the diseased or damaged kidneys might be replaced by transplant, which is the preferred treatment options for most patients with advanced chronic renal failure. Fifteen per cent 15% (n=45) agreed that renal donation is done when you are healthy, and 85% (n=255) were not sure. The majority of the respondents were not sure when renal donation should take place. It is important for potential living donors to undergo proper medical, surgical and psychological screening before donation. The study conducted in the United States by Sawinski and Locke (2017:738) on the evaluation of kidney donors concurs; living kidney donors were healthy and free of isolated medical abnormalities at the time of donation.

Eight per cent 8% (n=24) agreed that renal donation is to give away one of your kidneys when you are alive, 92% (n=276) were not sure. Ninety-two per cent 92% (n=276) of the respondents were not aware that one kidney can be removed for donation while one is still alive. People can live with only one kidney as long as the donor was thoroughly evaluated and cleared for donation. A person can live a normal life after surgery, according to the National kidney foundation (2017:2).

Eleven per cent 11% (n=33) agreed that a person could donate to anyone, even if you are not family. Eighty-two per cent 82% (n=247) were not sure, and 6.7% (n=20) disagreed.

The respondents who disagreed with the statement mentioned that one could only donate if a family member needs a donation, to save the loved ones' life. According to a study conducted in the United States, consent to donate is less likely when there is family conflict, and a lack of rapport with healthcare providers where requests are ill-timed, and where families are dissatisfied with care (Ralph, Chapman, Gills, Butow, Howard, Irving, Sutanto & Tong 2014:923).

Table 4.1 showed that three-point three per cent 3.3% (n=10) agreed that your family could sign for your kidney donation, 35% (n=105) were not sure, and 61.7% (n=185) disagreed. This indicated that the majority of families would not give away the body parts of their loved ones without their consent. With reference to South Africa's legislation on consent for donating organs for transplantation, unless otherwise stated by the deceased prior to death in a formal witnessed statement or written declaration, consent for organ donation may be provided by the "spouse, partner, parent, guardian, major child, major brother or major sister" (National Health Act, no 61 of 2003:2). Table 4.1 showed that four point seven per cent 4.7% (n=14) agreed that a person could be kept on dialysis while waiting for a renal transplant, and 95.3% (n=286) were not sure. This showed that the majority of the respondents do not know what dialysis is. Others had just heard this word for the first time. The results on the respondents' knowledge and understanding of renal donation revealed that the majority of the respondents do not have adequate knowledge of renal donation.

Chronic renal failure is related to the decrease in the filtration rate, coupled with the loss of regulatory, endocrine and excretory functions of the kidney. The types of treatment for chronic renal insufficiency are peritoneal dialysis and haemodialysis while waiting for renal transplantation (Silva, Souza, Oliveira, Silva, Rocha & Holanda 2016:148).

5.4 FACTORS THAT PREVENT THE CLIENTS TO VOLUNTEER DONATING KIDNEYS

Table 4.2 showed the frequency and percentages of factors that prevent the respondents from volunteering to donate a kidney. The results revealed that 7.3%

(n=22) agreed that their religion does not allow them to donate a kidney, 12.7% (n=38) were not sure, and 80% (n=240) disagreed. This indicated that the majority of religions were not against organ donation. These findings are similar to the study conducted in India by Yalakshmi et al (2016:258) which indicated that 101 participants out of 193 (52.3%) agreed that religious people do not oppose organ and tissue donation.

Fifty-two per cent 52% (n=156) agreed that diseases like diabetes hypertension can prevent a person from donating an organ, 46.7% (n=140) were not sure, and 1.3% (n=4) disagreed. Thus, the majority of the respondents know that diseases like diabetes and hypertension can prevent a person from donating a kidney. People with diseases like diabetes and hypertension might not choose to donate because they may develop kidney problems later in life (Jha et al 2013:264).

About 61% (n=183) of the respondents agreed that cultural beliefs prevent a person from donating a kidney, 8.3% (n=25) were not sure, and 30.7% (n=92) disagreed. Therefore, the majority of the respondents follow their culture's beliefs when it comes to organ donation. According to the study by Etheredge, Turner and Kahn (2014:136) on attitudes to organ donation among some urban South African populations, the white population is more willing to donate their own organs and those of a relative than the black African population.

Eighty-six per cent 86% (n=258) agreed that it is scary to donate a kidney, 7.7% (n=23) were not sure, and 6.3% (n=19) disagreed. This indicated that the majority of the respondents are not willing to donate kidneys for reasons related to fear. The study by Ilori, Enofe, Oommen, Odewole, Ojo, Plantinga, Pastan, Echouffo, Tcheugui and McClellan (2015:4), on factors affecting minority patients' willingness to receive a kidney transplant at an urban safety-net hospital, found that out of 213 respondents, half reported that trust in physicians was important in their willingness to undergo a kidney transplant.

Two per cent 2% (n=6) agreed that obesity could prevent a person from donating a kidney, 93.7% (n=281) were not sure, and 4.3% (n=13) disagreed. The results showed that the majority of the respondents do not know the barriers to renal donation. About 17% (n=51) agreed that a person diagnosed with cancer cannot donate a kidney, 79.3% (n=238) were not sure, and 3.7% (n=13) disagreed. The majority of the respondents were not knowledgeable about complications related to cancer. Donors with a previous history of cancer could represent an important source of organs considering that the risk of cancer transmission may be lower than previously estimated. This finding is also supported by Baudoux, Gastaldello, Rorive, Hamade, Broeders and Nortier's (2017:136) study on donor-cancer-transmission in kidney transplantation.

Eighty-nine per cent 89% (n=267) of the respondents agreed a person who is HIV positive cannot donate a kidney, and 11% (n=33) were not sure. This revealed that the respondents are aware that HIV prevents one from being an organ donor due to the threat of disease transmission. Argarwal's (2015:30) study, which was conducted at Mandya, Karnataka, found that 76.8% of respondents were aware that infectious diseases are a contradiction for organ donation.

About 28% (n=84) of the respondents agreed that their family would not allow them to donate a kidney, 8.7% (n=26) were not sure, 63.3% (n=190) disagreed. Thus, the majority of the respondents are independent because they can make their own decisions without their families. The study by Yalakshmi et al (2016:258) found that the majority of their respondents 54.9%, (n=106) recognised the importance of discussing their wishes related to organ donation with their family.

5.5 ATTITUDES OF CLIENTS WITH REGARD TO RENAL DONATION

Table 4.3 showed that 48% (n=143) of the respondents agreed that renal donation might change their body after transplant, 40.3% (n=121) were not sure, and 12% (n=36) disagreed. Therefore, the majority of the respondents were aware that a transplant might cause changes in the functioning of the body. Post-transplant changes might include insomnia, anxiety and depression. This was supported by Pasquale, Veroux, Indelicato, Sinagra, Giaquinta, Fornaro and Pistorio (2014:270), who conducted research on psychopathological aspects of kidney transplantations.

Approximately 73% (n=219) agreed that they want to die with their body parts intact, 18% (n=54) were not sure, and 9% (n=27) disagreed. According to the responses to the statement “I want to die with my body parts complete”, 73% (n=219) were scared to donate. The results are similar to the study by Peris, Bagatti, Pane and Nativi (2014:598) on opposition to organ donation, which stated that one of the most important goals of a transplant system is the primary prevention of opposition to donation in order to maintain balance between the objectives of transplant programmes and respect for wishes regarding donation.

Yalakshmi et al (2016:258) study results differ from this study. Their findings indicated that organ and tissue donation does not disfigure the body (83.4%). Out of 193 people interviewed, 76.2% (n=147) of people supported organ donation and 62% (n=120) were willing to donate organs after death.

Sixteen per cent 16% (n=48) agreed that payment has to be made for organ donation, 11.3% (n=34) were not sure, and 72.7% (n=218) disagreed. This indicated that the majority of the respondents were against selling body parts. This was similar to the study by Agarwal (2015:30), where 66.4% of respondents responded that no payment has to be made for donating organs. About 62% (n=186) agreed that problems might occur after transplant, which prevents a person from donating, 22% (n=66) were not sure, and 16% (n=48) disagreed. This implies that the majority of the respondents were cautious of complications related to transplants. The complications include postoperative haemorrhage requiring reoperation, septicaemia, fever and pulmonary embolism. Similar results were found by Blohme, Fehrman and Norden (2016:152) in their study on living donor nephrectomy, which found complication rates in 490 consecutive cases.

Fifty-nine point seven per cent 59.7% (n=179) of the respondents agreed that a person could donate a kidney to someone of a different race, 33.7% (n=101) were not sure, and 6.7% (n=20) disagreed. This indicated that the majority of respondents believe that any person can donate to someone of a different race, meaning that all races are the same. The study conducted in the United States of America by Hod and Goldfarb-Rumyantzev (2014:1194) on the role of disparities and socioeconomic factors in access to kidney transplantation, differs from this study as blacks have lower access and poorer outcomes with transplantation, while whites are far more likely to receive kidney transplants.

5.6 LIMITATION OF THE STUDY

Collecting data from the clients awaiting service was challenging, as some of the clients were in a hurry to get the service and go home. The study was limited to the people at a specific urban health care facility in Limpopo province. Therefore, it cannot be generalised to other health care facilities in Limpopo province.

5.7 RECOMMENDATIONS

5.7.1 Clinical practice

- Health personnel need to be empowered with knowledge on the causes of renal failure so they can teach patients to prevent the occurrence of chronic renal failure, which leads to a kidney transplant.
- As the organ transplant waiting list is constantly growing, an educational programme on renal donation is to be considered.

5.7.2 Policy makers

- World kidney day should be celebrated by screening the public for diseases like diabetes and hypertension, as these are the main causes of chronic renal failure.
- A policy regarding awareness programmes of renal donation should be established at malls.

5.7.3 Future research

- From the data collected, the researcher observed that there was a need for a qualitative study to collect in-depth knowledge on renal donation through focus group interviews.

- From the literature review, the researcher found a need for a study on health personnel in Limpopo province about their knowledge of renal failure as they might impart that knowledge to the public.

5.8 CONCLUDING REMARKS

The purpose of this study was to explore and describe clients' knowledge regarding renal donation at a specific urban health care facility in the Limpopo province. The results revealed that clients' knowledge of renal donation at a specific urban health care facility was inadequate. This was achieved by addressing the objectives of the study, which will assist in organising awareness programmes on renal donation.

The study addressed the factors and attitudes that prevent clients to voluntarily donate a kidney. The results highlighted that their religions are not against renal donation. The majority agreed that their cultural beliefs prevent them from donating a kidney. The study further revealed that 258 (85%) out of 300 respondents are scared to donate a kidney. The majority of the respondents were against payment for donation. Complications after kidney donation was another barrier to kidney donation. In conclusion, there is more information required about renal donation in the community at large. This chapter concluded with the summary of the results, limitations, and recommendations.

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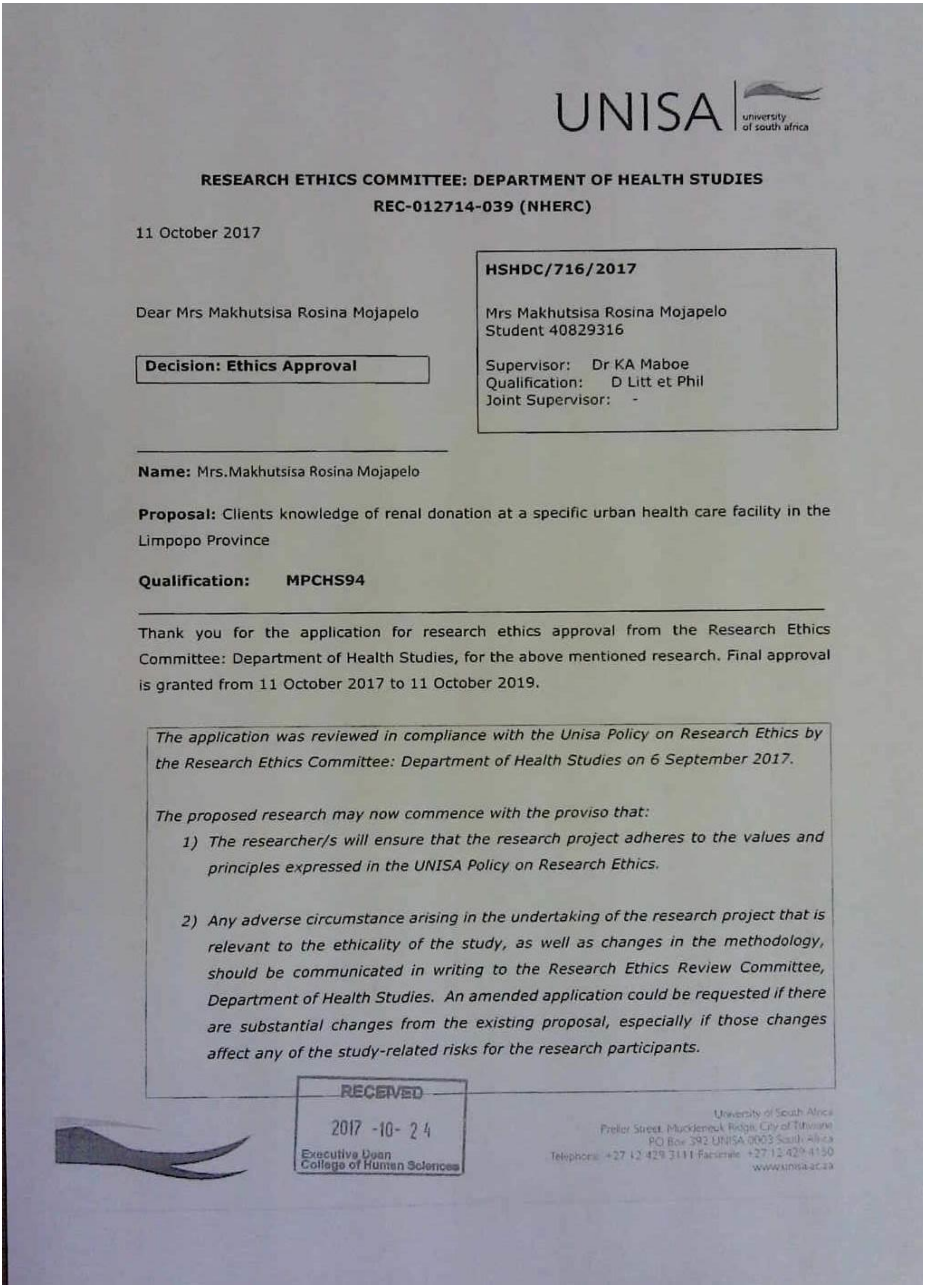
ANNEXURE A: ETHICAL CLEARANCE CERTIFICATE FROM UNISA



UNISA | university of south africa

RESEARCH ETHICS COMMITTEE: DEPARTMENT OF HEALTH STUDIES

REC-012714-039 (NHERC)

11 October 2017

HSHDC/716/2017

Mrs Makhutsisa Rosina Mojapelo
Student 40829316

Supervisor: Dr KA Maboe
Qualification: D Litt et Phil
Joint Supervisor: -

Dear Mrs Makhutsisa Rosina Mojapelo

Decision: Ethics Approval

Name: Mrs.Makhutsisa Rosina Mojapelo

Proposal: Clients knowledge of renal donation at a specific urban health care facility in the Limpopo Province

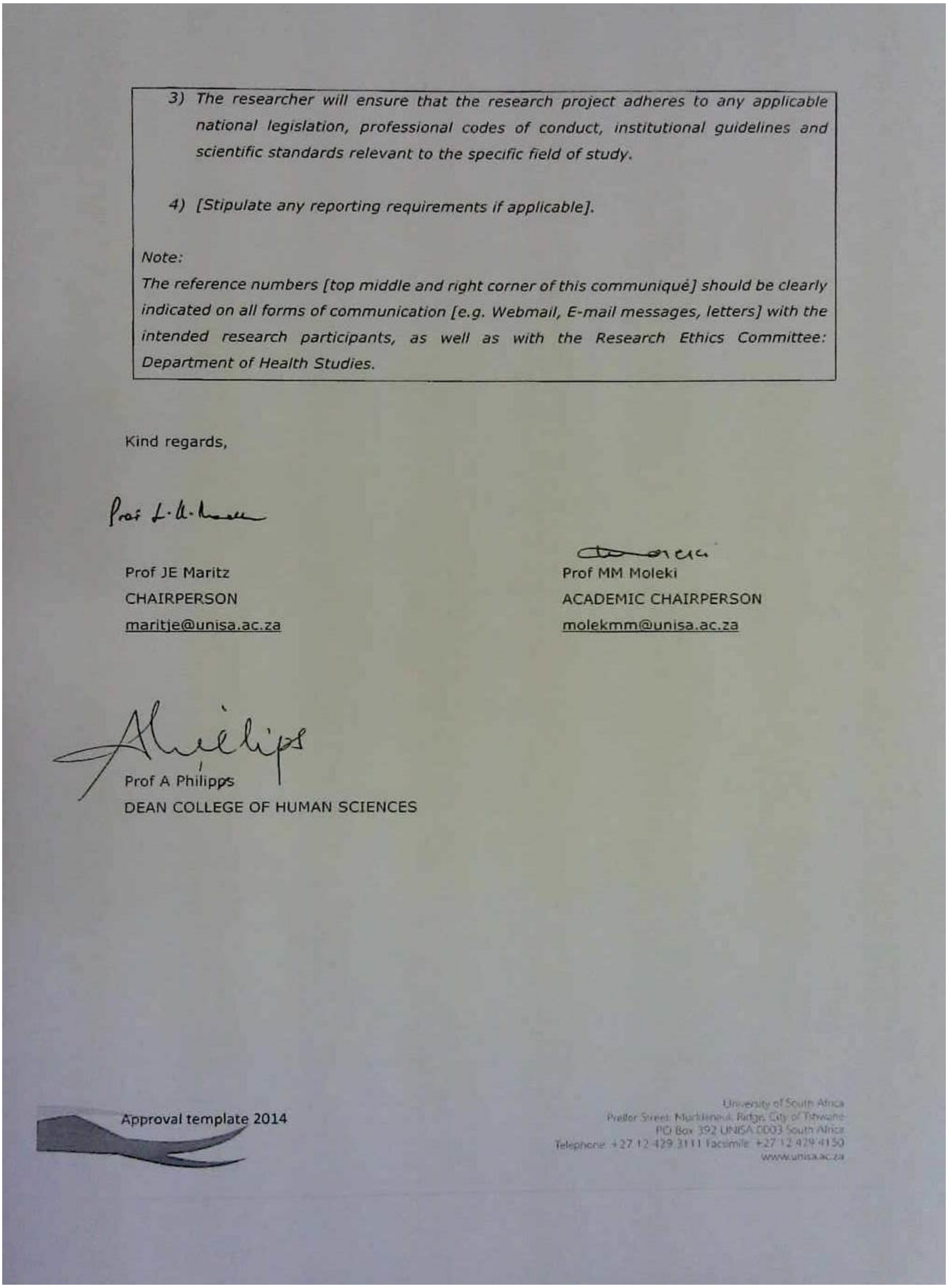
Qualification: **MPCHS94**

Thank you for the application for research ethics approval from the Research Ethics Committee: Department of Health Studies, for the above mentioned research. Final approval is granted from 11 October 2017 to 11 October 2019.

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the Research Ethics Committee: Department of Health Studies on 6 September 2017.

The proposed research may now commence with the proviso that:

1) *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*
2) *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the Research Ethics Review Committee, Department of Health Studies. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*



3) *The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.*

4) *[Stipulate any reporting requirements if applicable].*

Note:

The reference numbers [top middle and right corner of this communiqué] should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the Research Ethics Committee: Department of Health Studies.

Kind regards,

Prof JE Maritz
CHAIRPERSON
maritje@unisa.ac.za

Prof MM Moleki
ACADEMIC CHAIRPERSON
molekmm@unisa.ac.za

Prof A Philipps
DEAN COLLEGE OF HUMAN SCIENCES

Approval template 2014

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
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ANNEXURE B: REQUEST LETTER TO LIMPOPO PROVINCE DEPARTMENT OF HEALTH

Box 11590

Bendor

0699

Enquiries: Mojapelo M.R
Work Tell: 015 267 1114
Fax no : 015 276 9372
Cell no : 0724695571
Date : 11 September 2017

To: The Head of department

Department of Health and Social Development

P/Bag X9301

Polokwane

0700

Dear Sir/Madam

RE: REQUEST TO CONDUCT A STUDY AT PIETERSBURG PROVINCIAL HOSPITAL.

My name is Rosina Mojapelo. I am a Master's of Public Health student at the Department of health studies at the University of South Africa (UNISA). I am a lecturer at Sovenga Campus, Limpopo College of nursing and conducting a research on **CLIENTS' KNOWLEDGE OF RENAL DONATION AT A SPECIFIC URBAN HEALTH CARE FACILITY IN LIMPOPO PROVINCE.**

The purpose of the study is to explore and describe the knowledge of clients regarding renal donation. The study has been approved by the Research and Ethics

Committee of the Department of Health Studies at the University of South Africa (UNISA) and the Ethical Committee of the Limpopo Department of Health (refer to attached copies).Data will be collected at outpatient department on clients visiting the clinic. A self-administered questionnaire of 32 questions will be given to clients to complete. Health professionals will not be part of the study. The purpose of the study is to explore and describe the knowledge of clients regarding renal donation. The study has been approved by the Research and Ethics Committee of the Department of Health Studies of the University of South Africa(UNISA) and the Ethical Committee of the Limpopo Department of Health.(Refer to Ethical clearance certificate attached)

The researcher undertakes to observe all ethical principles for conducting the study. A copy of the research report will be made available to your office on request. After completion of my study information will be disseminated at academic conferences and be published in accredited journals. You are free to contact the researcher Ms M.R Mojapelo at 0724695571 and email address rosinamojapelo@gmail.com and my supervisor Dr KA Maboe at UNISA Department of Health Studies telephone number 012 429 2393 and her email address is maboeka@unisa.ca.za or Chairperson of the University of South Africa, Department of Health Studies Research and Ethics Committee Prof. E Maritz maritje@unisa.ac.za for further information.

Yours faithfully

Ms Makhutsisa Rosina Mojapelo.

ANNEXURE C: REQUEST LETTER OF URBAN PUBLIC HEALTH CARE FACILITY

Box 11590

Bendor

0699

Enquiries: Mojapelo M.R
Work Tell: 015 267 1114
Fax no : 015 276 9372
Cell no : 0724695571
Date : 11 September 2017

To: The Chief Executive Officer
Pietersburg Provincial hospital
Polokwane
0700

Dear Sir/Madam

RE: REQUEST TO CONDUCT A RESEARCH

My name is Rosina Mojapelo. I am Masters of Public Health student at Department of health studies at the University of South Africa (UNISA). I am a lecturer at Limpopo college of nursing at Sovenga campus. The title of my study is: **CLIENTS KNOWLEDGE OF RENAL DONATION AT A SPECIFIC URBAN HEALTH CARE FACILITY IN THE LIMPOPO PROVINCE.** Data will be collected at outpatient department on clients visiting the clinic. A self-administered questionnaire of 32 questions will be given to clients to complete. Health professionals will not be part of the study. The purpose of the study is to explore and describe the knowledge of clients regarding renal donation. The study has been approved by the Research and

Ethics Committee of the Department of Health Studies of the University of South Africa (UNISA) and the Ethical Committee of the Limpopo Department of Health (refer to Ethical clearance certificate attached).

The researcher undertakes to observe all the ethical principles for conducting the study. All information will be kept confidential. A copy of the research report will be submitted to your office on request. After completion of my study information will be disseminated at academic conferences and be published in accredited journals. You are free to contact the researcher, Ms MR Mojapelo, on 0724695571, rosinamojapelo@gmail.com or supervisor Dr KA Maboe 012 429 2393, Maboeka@unisa.ac.za or Chairperson of the University of South Africa,Department of Health Studies Research and Ethics Committee Prof. E Maritz maritje@unisa.ac.za for further information.

Yours faithfully

Ms Makhutsisa Rosina Mojapelo.

ANNEXURE D: QUESTIONNAIRE

CLIENTS KNOWLEDGE OF RENAL DONATION AT A SPECIFIC URBAN HEALTH CARE FACILITY IN LIMPOPO PROVINCE.

KINDLY TICK YOUR RESPONSES IN THE APPROPRIATE BOX OF EACH QUESTION. Kindly note that each question must have one response.

SECTION A

DEMOGRAPHIC INFORMATION

1. Age in years

18-30	1
31-40	2
41-50	3
51-60	4
61>	5

2. Gender

Male	1
Female	2

3. Highest standard passed

Grade 1-7	1
Grade 8-11	2
Grade 12<	3

4. Religion

Christianity	1
Traditional	2
Other	3

5. Nationality

South African	1
Non-South African	2

6. Residential area

Informal settlement	1
Rural area	2
Township	3
Urban	4

7.Marital status

Single	1
Married	2
Widow	3
Divorced	4

8.Employment status

Employed	1
Unemployed	2
Student	3
Pensioner	4

SECTION B

Knowledge and understanding on renal donation

	Agree	**Not sure**	**Disagree**
9.A normal person has two kidneys.	1	2	3
10.Kidneys remove waste and poisonous substances from our bodies.	1	2	3
11.Damaged kidneys can be replaced by another healthy kidney.	1	2	3
12.Renal donation is done when you are healthy.	1	2	3
13.Renal donation is to give away one of your kidneys if you are alive.	1	2	3
14.A friend, relative, parents or anybody can donate a kidney.	1	2	3
15.A person can survive with one kidney if the other one is damaged or absent.	1	2	3

16.A person can donate to anyone even if you are not family.	1	2	3
17.Your family can sign for your kidneys to be donated.	1	2	3
18.A person can be kept on dialysis while waiting for renal donation.	1	2	3

SECTION C

Factors that prevent the clients to volunteer donating kidneys.

	Agree	**Not sure**	**Disagree**
19.My religion does not allow me to give away my kidney.	1	2	3
20.Diseases like diabetes and hypertension can prevent you from donating an organ.	1	2	3
21.Cultural beliefs prevent me from donating a kidney.	1	2	3
22.I am scared to donate a kidney.	1	2	3
23.If I am obese I cannot donate a kidney.	1	2	3
24.If I am diagnosed with cancer I cannot donate.	1	2	3
25.If I am HIV positive I cannot donate a kidney.	1	2	3

26.My family will not allow me to donate.	1	2	3

SECTION D

Attitudes of clients with regard to organ donation.

	Agree	**Not sure**	**Disagree**
27.I am willing to donate a kidney.	1	2	3
28.Renal donation might change my body after transplant.	1	2	3
29.I must die with my body parts complete.	1	2	3
30.Payment has to be made for organ donation.	1	2	3
31.Problems that may occur after transplant prevent me from donating.	1	2	3
32.A person from a different race can donate a kidney to a different race.	1	2	3

ANNEXURE E: INFORMED CONSENT FORM

My name is Rosina Mojapelo. I am a Master's of Public Health student at the Department of health studies at the University of South Africa (UNISA). I am a lecturer at Sovenga Campus, Limpopo College of Nursing. The title of my study is: **CLIENTS KNOWLEDGE OF RENAL DONATION AT A SPECIFIC URBAN HEALTH CARE FACILITY IN LIMPOPO PROVINCE.**

The main aim of the study is to identify the knowledge of clients regarding renal donation. The study has been approved by the Research and Ethics Committee of the Department of Health Studies of the University of South Africa (UNISA). The findings of this study will be presented to the Department of health in Limpopo province to take effective measures to educate people with relevant information on renal donation.

I hereby request your participation to this study. Your participation will be the completion of a questionnaire that will take about fifteen (15) minutes. No names will be used on the questionnaire and the information will be kept in a safe place by the researcher for confidentiality. Your participation in this study is totally voluntary, and you can withdraw to participate at any time.

If you have any question concerning the study, or your participation in the study, please feel free to contact the researcher, Ms MR Mojapelo, on 0724695571, rosinamojapelo@gmail.com or supervisor Dr KA Maboe 012 429 2393, Maboeka@unisa.ac.za or Chairperson of the University of South Africa, Department of Health Studies Research and Ethics Committee Prof. E Maritz maritje@unisa.ac.za. Your participation will be valuable to my study and will contribute towards determining the knowledge and understanding of renal donation among the community.

You are kindly requested, if you agree to participate, to sign the consent form to confirm that you are willing to participate in this study. Furthermore kindly know that this study will be distributed by presentation at the educational workshops.

The researcher

I have discussed the benefits and obligations involved in this research with the respondents and in my opinion, the respondents understand this information.

--- --------------------------

Researcher’s signature Date

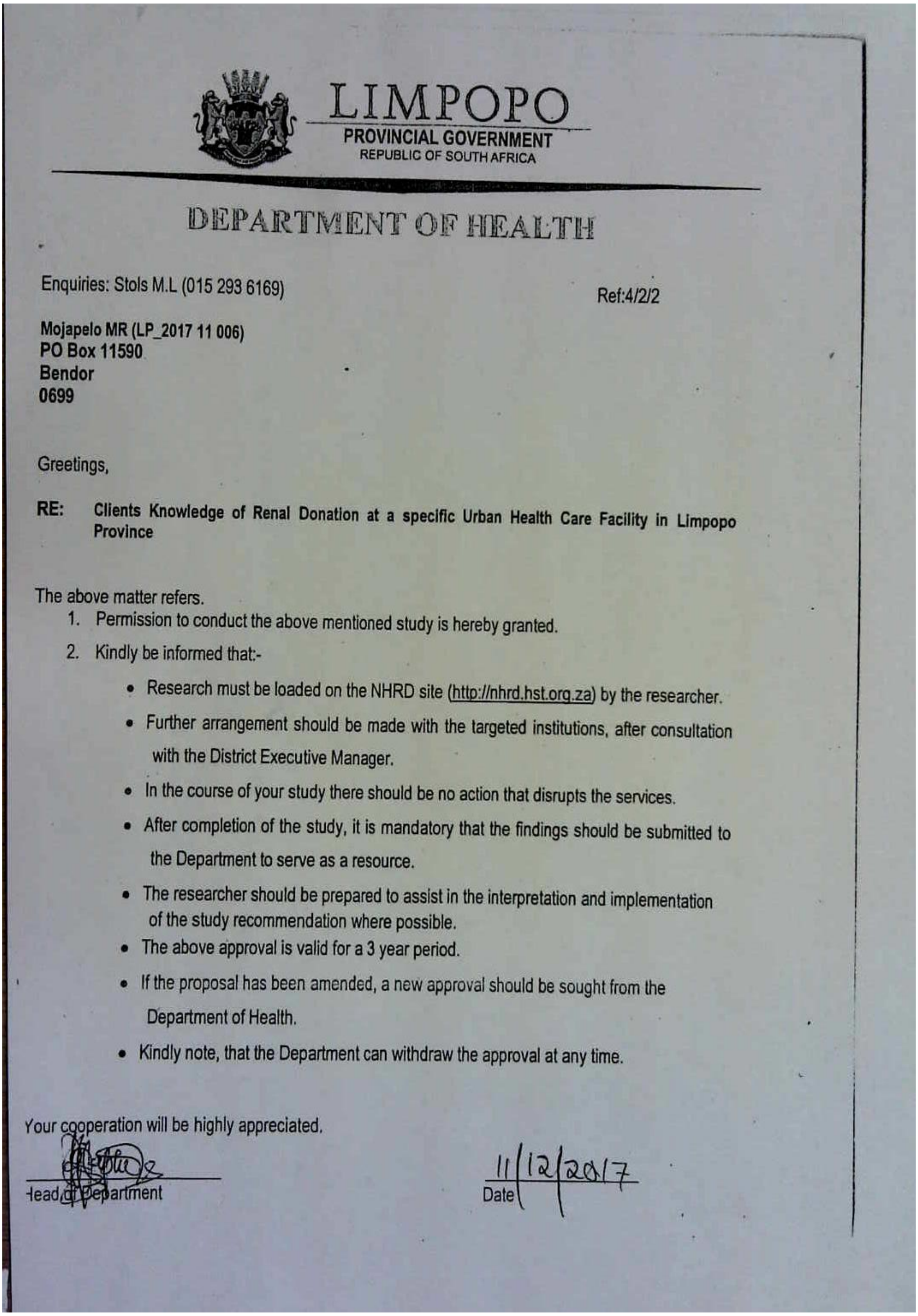
The respondent

I hereby give informed consent to voluntarily participate in the above research study. I agree to complete a questionnaire. I have read the information leaflet and understood that my participation is voluntary and that I may refuse to participate or withdraw from the study at any time.

-- ------------------------------

Respondent’s signature Date

ANNEXURE F: PERMISSION LETTER FROM LIMPOPO DEPARTMENT OF HEALTH



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH

Enquiries: Stols M.L (015 293 6169)
Ref:4/2/2

Mojapelo MR (LP_2017 11 006)
PO Box 11590
Bendor
0699

Greetings,

RE: Clients Knowledge of Renal Donation at a specific Urban Health Care Facility in Limpopo Province

The above matter refers.

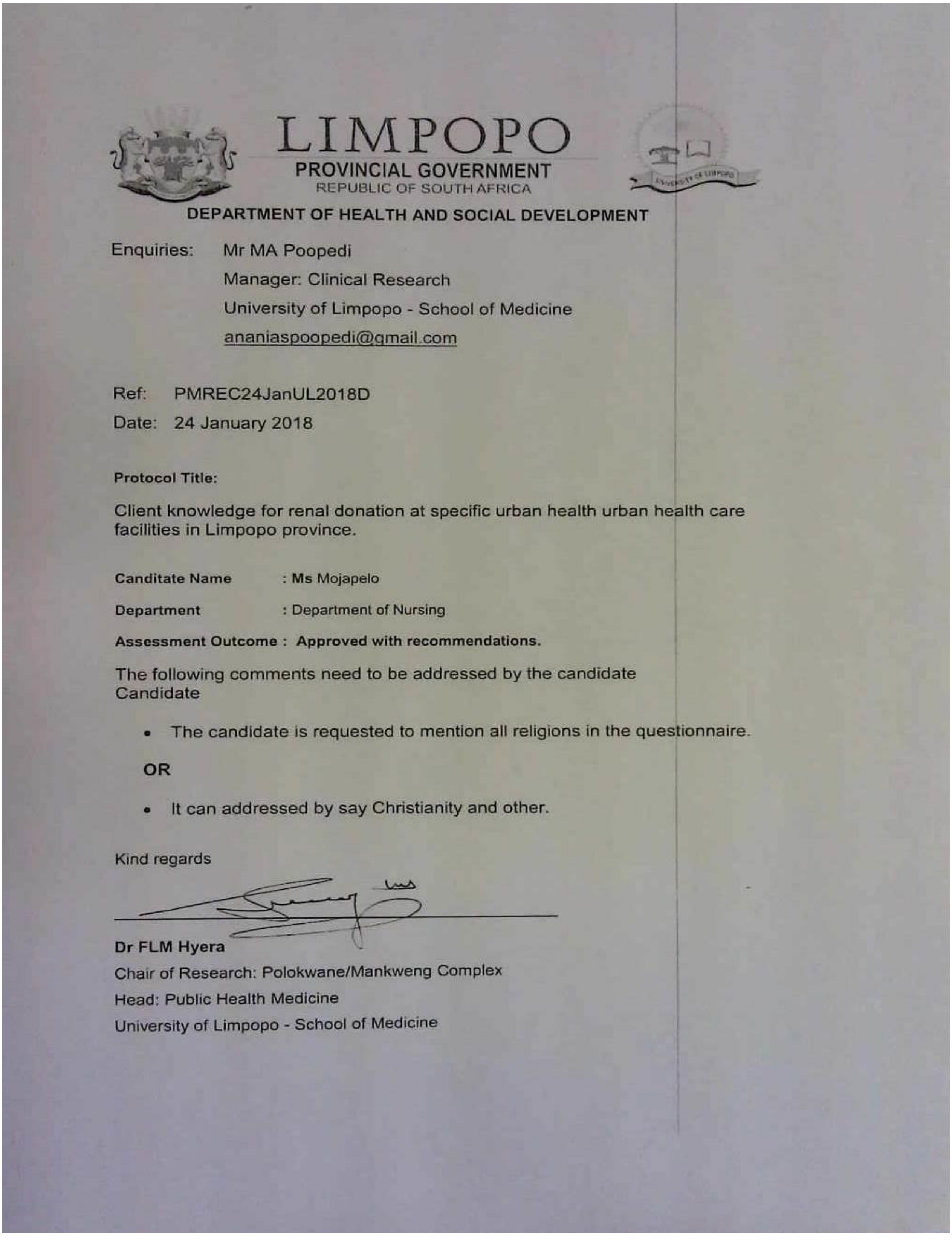
1. Permission to conduct the above mentioned study is hereby granted.
2. Kindly be informed that:-
    - Research must be loaded on the NHRD site (http://nhrd.hst.org.za) by the researcher.
    - Further arrangement should be made with the targeted institutions, after consultation with the District Executive Manager.
    - In the course of your study there should be no action that disrupts the services.
    - After completion of the study, it is mandatory that the findings should be submitted to the Department to serve as a resource.
    - The researcher should be prepared to assist in the interpretation and implementation of the study recommendation where possible.
    - The above approval is valid for a 3 year period.
    - If the proposal has been amended, a new approval should be sought from the Department of Health.
    - Kindly note, that the Department can withdraw the approval at any time.

Your cooperation will be highly appreciated.

Head of Department

11/12/2017
Date

ANNEXURE G: PERMISSION LETTER FROM HOSPITAL ETHICS COMMITTEE



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
DEPARTMENT OF HEALTH AND SOCIAL DEVELOPMENT

Enquiries: Mr MA Poopedi
Manager: Clinical Research
University of Limpopo - School of Medicine
ananiaspoopedi@gmail.com

Ref: PMREC24JanUL2018D
Date: 24 January 2018

Protocol Title:

Client knowledge for renal donation at specific urban health urban health care facilities in Limpopo province.

Canditate Name : **Ms** Mojapelo

Department : Department of Nursing

Assessment Outcome : **Approved with recommendations.**

The following comments need to be addressed by the candidate Candidate

- The candidate is requested to mention all religions in the questionnaire.

OR

- It can addressed by say Christianity and other.

Kind regards

Dr FLM Hyera
Chair of Research: Polokwane/Mankweng Complex
Head: Public Health Medicine
University of Limpopo - School of Medicine

ANNEXURE H: LETTER OF REQUEST TO THE NURSING MANAGER

Box 11590
BENDOR
0699
01.02.2018

Enquiries: Mojapelo M.R
Work Tell: 015 267 1114
Fax no : 015 267 9372
Cell no : 0724695571

To: The Nursing Manager
Pietersburg Provincial
Polokwane
0699

Dear sir/madam

RE: REQUEST TO CONDUCT A RESEARCH AT OUTPATIENT DEPARTMENT

I am a student at Unisa Department of health studies, studying for master's in public health. I am a lecturer at Limpopo college of nursing at Sovenga campus. The tittle of my study is: Clients' knowledge of renal donation at a specific urban health care facility in Limpopo Province. Data will be collected at outpatient department on clients visiting the clinic. A self- administered questionnaire will be given to clients to complete. Health professionals will not be part of the study. The purpose of the study is to explore and describe the knowledge of clients regarding renal donation. The study has been approved by the Research and Ethics Committee of the Department of health studies of the University of South Africa (UNISA), the Ethical Committee of the Limpopo Department of Health and the Ethics Committee at Pietersburg hospital.

The researcher undertakes to observe all the ethical principles for conducting the study. All information will be kept confidential.

Yours faithfully

Mojapelo M.R (0724695571)

ANNEXURE I: RESEARCH STATISTICIAN'S LETTER

Lanzarac 4
67 Doornkraal
Ladana
Polokwane (South Africa)

Box 11590
Bendor
0699
Rosinamojapelo@gmail.com

14 June 2018

STATISTICAL SUPPORT

This is to certify that I analysed data of the thesis "Clients Knowledge of renal donation at a specific urban health care facility in the Limpopo Province", by Mrs M.R Mojapelo for her MA (Public Health) degree at the University of South Africa.

_________________ 03/04/2018_

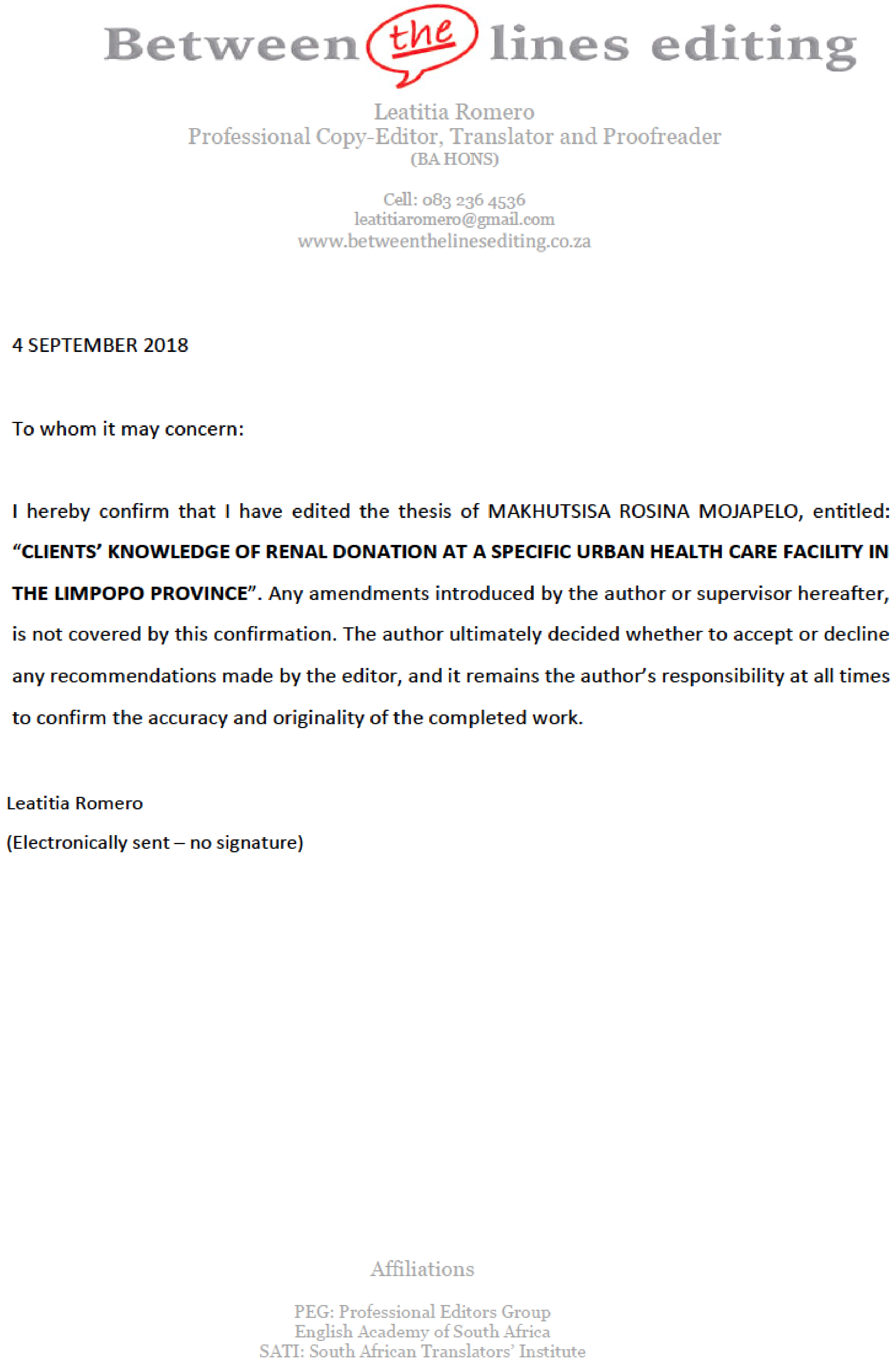
Netshidzivhani Mmbengeni Victor

Statistician Signature Date

Printed name

Mr Victor Mbengeni Netshidzivhani
Chartered Statistician: Research Development and Administration
Tel : +27 15 268 3702
Fax : +27 86 696 0812\ 015 268 2306
Mobile : +27 72 246 4551
E-mail : mmbengeni.netshidzivhani@ul.ac.za
mnetshid23@gmail.com

ANNEXURE J: LETTER FROM THE EDITOR



Between the lines editing

Leatitia Romero
Professional Copy-Editor, Translator and Proofreader
(BA HONS)

Cell: 083 236 4536
leatitiaromero@gmail.com
www.betweenthelinesediting.co.za

4 SEPTEMBER 2018

To whom it may concern:

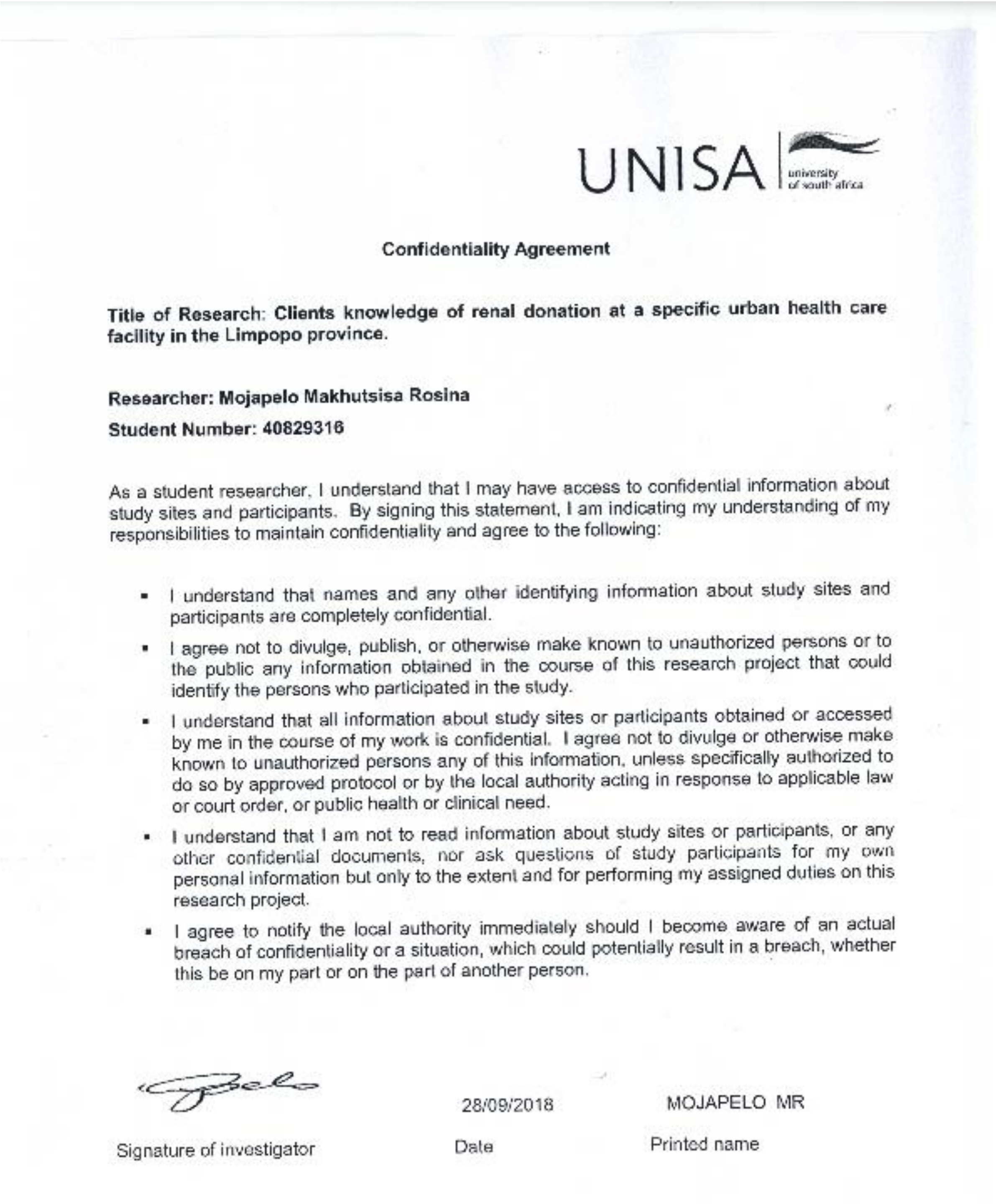
I hereby confirm that I have edited the thesis of MAKHUTSISA ROSINA MOJAPELO, entitled: **"CLIENTS' KNOWLEDGE OF RENAL DONATION AT A SPECIFIC URBAN HEALTH CARE FACILITY IN THE LIMPOPO PROVINCE"**. Any amendments introduced by the author or supervisor hereafter, is not covered by this confirmation. The author ultimately decided whether to accept or decline any recommendations made by the editor, and it remains the author's responsibility at all times to confirm the accuracy and originality of the completed work.

Leatitia Romero
(Electronically sent – no signature)

Affiliations

PEG: Professional Editors Group
English Academy of South Africa
SATI: South African Translators' Institute

ANNEXURE K: CONFIDENTIALITY FORM



UNISA university of south africa

Confidentiality Agreement

Title of Research: Clients knowledge of renal donation at a specific urban health care facility in the Limpopo province.

Researcher: Mojapelo Makhutsisa Rosina

Student Number: 40829316

As a student researcher, I understand that I may have access to confidential information about study sites and participants. By signing this statement, I am indicating my understanding of my responsibilities to maintain confidentiality and agree to the following:

- I understand that names and any other identifying information about study sites and participants are completely confidential.
- I agree not to divulge, publish, or otherwise make known to unauthorized persons or to the public any information obtained in the course of this research project that could identify the persons who participated in the study.
- I understand that all information about study sites or participants obtained or accessed by me in the course of my work is confidential. I agree not to divulge or otherwise make known to unauthorized persons any of this information, unless specifically authorized to do so by approved protocol or by the local authority acting in response to applicable law or court order, or public health or clinical need.
- I understand that I am not to read information about study sites or participants, or any other confidential documents, nor ask questions of study participants for my own personal information but only to the extent and for performing my assigned duties on this research project.
- I agree to notify the local authority immediately should I become aware of an actual breach of confidentiality or a situation, which could potentially result in a breach, whether this be on my part or on the part of another person.

	28/09/2018	MOJAPELO MR
Signature of investigator	Date	Printed name