

**EXPERIENCES OF NURSES IN THE MANAGEMENT OF PATIENTS PRESENTING WITH  
KALA-AZAR AT AMUDAT HOSPITAL, AMUDAT DISTRICT**

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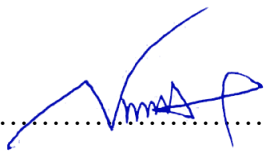


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**Declaration**

I, **KALEPON DANIEL POWON**, hereby declare that this dissertation is my original work and that it has never been submitted by anyone in any university or institution of higher learning for any academic award or publication.

Signature:  .....

Date: **07 FEB 2023** .....

## Approval

This report has been submitted for examination with my approval as the student's supervisor.

Signature : ..........

Date: ..... **07 FEB 2023** .....

**Rev. Canon Evatt M. MUGARURA**

University Supervisor

## **Dedication**

This dissertation is dedicated to my family members and close friends for emotionally, spiritually and financially support. Thank you all for making me see this undertaking of my education.

## **Acknowledgement**

I would like to acknowledge the staff of Uganda Christian University, Mukono Campus especially the Faculty of Public Health, Nursing and Midwifery. My special thanks to Rev. Canon Evatt M. MUGARURA for his academic and emotional support. Thanks goes to the Administration of Amudat Hospital for accepting this research to be carried out there. I would like also to thank the following for their encouragement:-Mr. Edema William, Mr. Mulalu Posiano, Dr. Patrick Sagaki, and my colleagues in the health department of Amudat District Local Government.

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## **Definition of terms**

**Leishmaniasis:** disease caused by protozoan parasites of the *Leishmania* genus transmitted by the sand-fly (World Health Organization 2020).

**Cutaneous leishmaniasis:** form of leishmaniasis disease which affects the skin and mucous membranes(World Health Organization 2020).

**Visceral leishmaniasis:** this is the most severe or deadly form of leishmaniasis disease which affects the viscera (World Health Organization 2020).

**Challenge:** These are tests, obstacles or hindrances to something.

**Nurses:** Are professionally trained and qualified personnel care for sick people.

## Abbreviations

CNE	:	Continuous Nursing Education
HMIS	:	Health Management Information System
ITNs	:	Insecticide Treated Bed Nets
VL	:	Visceral Leishmaniasis
RCT	:	Routine Counselling and testing
IDI	:	In-depth interviews
DND <i>i</i>	:	Drugs for neglected disease <i>initiative</i>
SOPs	:	Standard operating procedures

## **Abstract**

**Introduction:** Visceral leishmaniasis (VL)/Kala-azar continues to be one of the neglected tropical diseases (NTD) of public health threat. The experiences of nurses in the management of the increasing cases of VL infection remains not well understood. The overarching aim for this study was to understand the nurses' experiences in management of Kala-azar as an effort to design strategies to alleviate gaps and ensure quality healthcare to patients at Amudat hospital. **Methods:** We conducted a phenomenological study amongst nurses. We collected nurses' experiences in terms of; motivators, attitudes, skills, knowledge, and policies in the management of Kala-azar patients through in-depth interviews. Data was analysed thematically using Atlas ti, version 8. Major themes of the findings were recorded. **Results:** Nurses' exhibited good clinical practices, positive motivation, used updated case management guidelines, had continuous professional development, received medical supplies, exhibited professionalism and teamwork, and there was Community surveillance for VL. However, they noticed Knowledge gap among patients, inadequate infrastructure, high staff Workload, delayed payments, and little close monitoring. **Conclusion:** The experience and training of nurses is critical in the management of VL. Nurses have considerable knowledge and skills in the management of VL at Amudat Hospital. Nurses face challenges in management of Kala-azar patients including finances, human resource gap, infrastructure, and patients' knowledge gap about Kala-azar infection. **Recommendations:** Nurses' experiences show potential for elimination of the Kala-azar infection in Amudat. We recommend the Uganda's Ministry of Health to accelerate measures to eliminate VL such as; community sensitization about Kala-azar, training traditional herbalists on case definition for Kala-azar infection, construct large Kala-azar ward, recruit more staff, and improve the payment schedules for nurses at Amudat hospital.

## CHAPTER ONE: INTRODUCTION

### 1.1 Introduction

Visceral Leishmaniasis (VL), also known as kala-azar, black fever, and Dumdum fever is the most severe form of leishmaniasis (Christodoulides 2023). Leishmaniasis is caused by a protozoa parasite that has over 20 different species. VL is spread to humans by a bite of infected female phlebotomine sand-fly (Christodoulides 2023; WHO 2015; World Health Organization 2020). Three major forms of leishmaniasis exist. These include; visceral leishmaniasis (VL), Cutaneous Leishmaniasis (CL) and Muco-cutaneous leishmaniasis (ML). CL disturbs the skin and mucous membranes while VL affects the whole body and it causes lethal complications because the parasites damage the immune system (World Health Organization 2020).

Kala-azar has many signs and symptoms including difficulty in breathing, sores on the skin, stuffy nose, runny nose, and nosebleeds, erodes the mouth, tongue, gums, lips, nose, and inner nose, fever, weight loss, among others (CDC 2023). In children, VL always start with cough, diarrhoea, fever, vomiting whereas in adults, VL presents with fatigue, weakness, and appetite loss, among others (Ahmed *et al.* 2016). Globally, VL is the second leading parasitic killer following malaria with roughly 500,000 infection annually world-wide (Rakesh & Pradeep 2013).

Of the Worldwide cases, an estimated sixty per cent (100,000 VL cases) is found in North-east India and its neighbouring areas in Nepal and Bangladesh (Torres-Guerrero *et al.* 2017). However, this could be underestimated according to Epidemiological surveillance figures.

Previous research in West African, countries of Nigeria, Ghana and Ivory Coast, has shown that kala-azar remains a serious public health challenge. For instance, Nigeria has an estimated number of 89,000 visceral Leishmaniasis cases every year, almost comparable to 76,000 cases in Ghana;

Ivory Coast has 54,500 cases every year while Republic of Sudan has 20,000 cases per year. However, Nurses face various severe challenges in the management of patients with Leishmaniasis including unavailability of necessary equipment, drugs, inadequate knowledge about diagnosis and treatment among many other challenges (Ahluwalia et al, 2013).

Similarly, countries within East Africa like Tanzania, Kenya, Tanzania and Uganda, Leishmaniasis is an increasingly serious public health problem and Nurses face serious challenges in the management of patients with this condition. The various challenges include inadequate experience in the management of visceral Leishmaniasis cases, unavailability of equipment to make accurate, reliable and efficient diagnosis, lack of drugs, presentation with multiple signs and symptoms among many others (Danisa 2013).

In Uganda, VL infection is endemic in Karamoja region in the districts of Amudat, Moroto, Kabong, and Kotido. Mostly, children under 15 years and males.

## **1.2 Problem Statement**

Leishmaniasis remains an important and increasingly serious public health challenge and globally, it's the second leading parasitic killer following malaria with roughly 500,000 infection annually world-wide (Rakesh & Pradeep 2013). For effective and quality management of patients with Leishmaniasis, it is imperative that nurses effectively and efficiently identify and diagnose all cases of leishmaniasis for early and more exhaustive case detection (Wasan, Wasan and Gershkovich, 2011). Furthermore, misdiagnosis of kala-azar is fatal with mortality rate as high as 100% if Nurses seem to be facing many challenges in managing the patients with Kala-azar amidst the high cases of Kala-azar (prevalence for Kala-azar in Amudat was estimated at 17.2% in 2013 unattended to medically (MOH Kenya 2017).

In Uganda, VL is endemic in Karamoja region; with Amudat hospital (the only centre for Kala-azar treatment), reporting 3,400 VL patients treated between the years 2000 to 2016 (Odoch & Olobo 2013). Despite the high number of VL patients treated at Amudat hospital, the experiences of Nurses' in the management VL patients remains unknown, yet it's imperative in developing evidence based strategies for better health outcomes.

However, no study has profiled Nurses experiences in Kala-azar treatment in Amudat hospital, yet there exist differences in the socio-economic and demographics characteristics of the participants for studies that have profile nurses' experiences in Managing Kala-azar and the people in Amudat. Therefore, explored the disease management skills among the nurses in order to provide a basis for possible solutions to alleviate these challenges.

### **1.3 Purpose of the study**

To explore Nurses' experiences in management of patients presenting with Kala-azar at Amudat Hospital, Amudat District in an effort to design strategies to alleviate gaps and ensure quality healthcare to Kala-azar patients.

### **1.4 Specific Objectives**

- 1) To determine the experiences of nurses in management of patients presenting with Kala-azar at Amudat Hospital, Amudat District.
- 2) To identify the challenges Nurses face in management of patients presenting with Kala-azar at Amudat Hospital, Amudat District.

### **1.5 Research Questions**

- 1) What are the experiences of nurses in management of patients presenting with Kala-azar at Amudat Hospital, Amudat District?

- 2) What challenges are faced by nurses in managing of patients presenting with Kala-azar at Amudat Hospital, Amudat District?

### **1.6 Study Justification**

This study wished to identify the various experiences of nurses in management of patients presenting with Kala-azar at Amudat Hospital, Amudat District. This will greatly assist the administration of Amudat Hospital in coming up with solutions to mitigate the challenges faced by nurses.

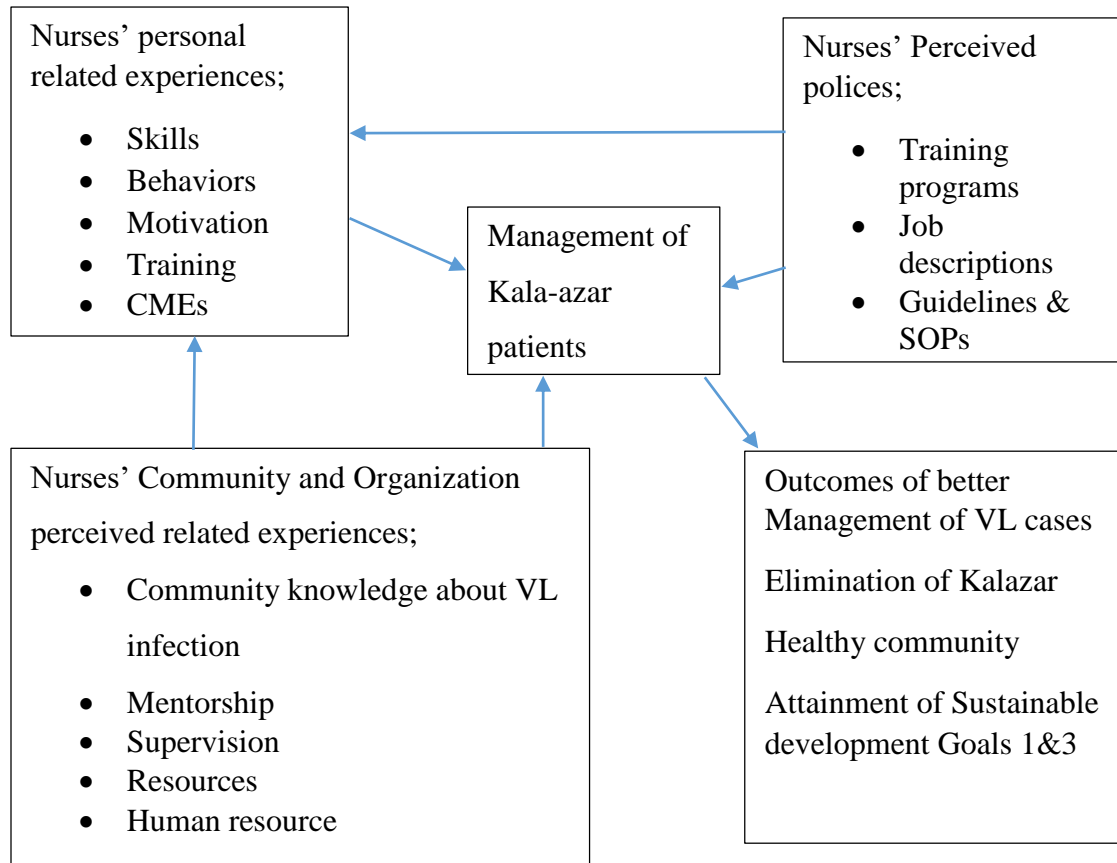
The findings will assist health care planners and Policy makers such as Ministry of health to identify potential areas for improvement and align health programmes aimed at improving health care in Amudat hospital and its catchment areas. Furthermore, the study targeted at alleviating the gaps in management of patients presenting with Kala-azar.

The study will assist Nurses at Amudat hospital to attain CNE on conditions such as Kala-azar and acquisition of skills on diagnosis, management and prevention of Kala-azar.

### **1.7 Theoretical Frame work**

The theoretical Frame work has been developed using the socio-ecological model in line with the literature visited, concerning VL infection as shown in Figure 1(CDC 2018; Dahlberg & Krug 2012)(Rabi Das *et al.* 2021). Management of Kala azar patients is dependent on nurses' personal experiences, and the community and organizational perceived experiences and policies where nurses work. Depending on the way nurses manage, Kala azar patients, different outcomes can be realised as shown in Figure 1.

**Figure 1: Theoretical Frame work**



## **CHAPTER TWO: LITERATURE REVIEW**

### **4.1 Introduction**

Kala-azar is a parasitic infection caused by leishmania parasites, “*Leishmania donovani*” (Dhariwal *et al.* 2015; WHO 2015) These parasites are transmitted by the sand-fly called *Phlebotomus martini*. There are three forms of Leishmaniasis; cutaneous leishmaniasis (CL), visceral leishmaniasis (VL), also called kala-azar, and muco-cutaneous leishmaniasis (MCL)(WHO 2015). Globally, of the three forms, CL is the most common type, whereas VL is the most severe form and MCL is the most disabling form. However in Uganda, VL is the most common and severe form. The signs and symptoms of Kala-azar include; fever, splenomegaly, weight loss, anaemia, epistaxis, among others. VL is associated with malnutrition, population displacement, poor housing, poverty and weak immune systems(CDC 2023).

### **4.2 The experiences of and challenges faced by nurses in management of patients presenting with Kala-azar**

A study about done in India observes many VL cases unreported (Kumar *et al.* 2011; Rabi Das *et al.* 2021) It further identifies inadequate knowledge and information about the VL, its causes, symptoms and preventive measures the major factor influencing nurses in management of patients with Kala-azar(Kumar *et al.* 2011; Rabi Das *et al.* 2021). Inadequate experience in treating and handling VL cases has been another factor cited in the management of Kala-azar patients in Nepal (Kumar *et al.* 2011; Okwor & Uzonna 2016). (Okwor & Uzonna 2016) further stated that lack of Continuous Nursing Education (CNE) negatively affect the management of VL. However, (Nampoothiri *et al.* 2016). It was further revealed that too much reliance of Kala azar patients on traditional healers instead of formal health care services and poor health care seeking practices among Kala azar patients affect in management of Kala-azar patients (Akram *et al.* 2015; Coulborn

*et al.* 2018). Lack of availability of laboratory equipment necessary for kala-azar diagnosis was found to impede management of Kala azar (Coulborn *et al.* 2018).

However, there are socio-economic and demographics differences in the characteristics of the participants for studies that have profiled nurses' experiences in Managing Kala-azar and the people in Amudat. Therefore, Kala-azar management skills among the nurses in Amudat Hospital remain unknown. Therefore, the current study determined the management skills among nurses in Amudat in-order to provide a basis for possible solutions to alleviate the identified challenges.

## **CHAPTER THREE: METHODS AND MATERIALS**

### **3.1 Design of the Study**

A phenomenological study design was used, aimed at collecting individual nurses' experiences, motivators, attitudes, skills, knowledge, and policies in the management of patients presenting with Kala-azar. Phenomenological study design was chosen because it was the only design, which could enable the collection of the views, perceptions and lived experiences of nurses managing Kala azar patients in Amudat hospital, with minimum bias (Alase 2017).

### **3.2 Study setting and rationale**

The study was conducted at Amudat Hospital, Amudat district. The district is found in the north eastern region of Uganda (Moroto District Local Government 2019). Amudat District has an estimated population of over 120,008 people according to 2014 UBOS Projections. Amudat Hospital is a 100-bed Private not for profit (PNFP) hospital, under Church of Uganda (Moroto District Local Government 2019). It offers a variety of health services ranging from maternal, child health care to general health services among many others (Moroto District Local Government 2019). Amudat Hospital is located approximately 400 kilometres (250 mi), by road, northeast of Kampala City (Moroto District Local Government 2019). The study site was selected because the researcher noted the increasing number of kala-azar as well as the various factors influencing nurses in management of patients with Kala-azar.

### **3.3 Study Population**

The study included experienced nurses offering Kala-azar health care at Amudat Hospital, Amudat District.

### **3.3.1 Number of IDs at which theoretical saturation was attained**

Theoretical saturation was attained with 16 In-depth interviews (IDIs) conducted amongst nurses of Amudat hospital.

### **3.3.2 Sampling procedure**

The researcher utilized purposive sampling procedure to select participants with diverse characteristics. The researcher selected all skilled (expert) nurses in the management of Kala-azar patient. This was continued until theoretical saturation of data was achieved.

### **3.3.3 Inclusion criteria**

The study included only experienced nurses offering Kala-azar health care services to patients at Amudat Hospital who were available during the days data was collected.

### **3.3.4 Exclusion Criteria**

Nurses met the inclusion criterion but due to some problems could not participate, for example; the two nurses who were willing but were sick at the time of data collection.

### **3.4.1 Definition of Variables**

#### **Independent variables;**

Experiences, motivation, attitudes, skills, knowledge, and policies for nurses in management of patients presenting with Kala-azar.

#### **Dependent variables**

Healthcare practice outcomes

### **3.4.2 Nature of questions asked**

The nature of questions asked to participants related to their experiences, the six health system building blocks (essential drugs, health financing, health workforce, health information system, leadership) and challenges faced by the nurses in the management of patients presenting with Kala-azar disease at Amudat hospital

### **3.5 Research Instruments**

UCU REC approved in-depth interview guide containing open-ended questions. The researcher in English asked the questions so that views of respondents were captured beyond interview guide. The interviews were carried out in English because all the study respondents were literate.

### **3.6 Data Collection Procedure**

The researcher collected data from one participant at a time. The researcher obtained data of respondents from the various wards and departments at the hospital without using research assistants. The process was done to improve efficiency and confidentiality during data collection. Data was collected within a period of up to 7 days.

In-depth interviews (IDIs) were conducted in English and in a free atmosphere. Audio recording was done upon seeking for consent from the participants and detailed notes were taken. Transcription of the audio recording was done, and the transcripts were exported into Atlas .ti8 Software version 8, for Organisation of the textual data to generate meaningful themes. Both deductive and Inductive approaches were used during the data analysis.

#### **3.6.1 Data management**

Data was managed with utmost confidentiality. The following were done; Data editing before leaving the area of study, data storage under lock and key and restricted access to data.

### **3.7 Data analysis**

During the in-depth interviews, notes were written. Thematic data analysis was done using *Atlas.ti*, version 8 for data organisation.

### **3.8 Ethical Considerations**

An introductory letter from the Faculty of Public Health, Nursing and Midwifery Uganda Christian University was obtained. Administrative clearance from Amudat hospital administration sought. Consent obtained from study participant. UCU REC cleared the study protocol.

### **3.9 Limitations of the study**

Bias including information and recall bias since respondents were asked about their lived past experiences. However, the researcher probed a lot for the respondents to remember their past experiences.

### **3.10 Dissemination of results**

Final report is to be sent to Faculty of Public health, Nursing and Midwifery, Uganda Christian University, Amudat Hospital. Furthermore, the findings will also be presented in scientific conferences and finally published.

### **3.11 Informed consent**

The study participants were explained to the purpose, procedures, confidentiality, risks, potential benefits, rights to refuse or withdraw compensation and authorization to participate in the study.

### **3.12: Pre-testing of data collection tool**

The researcher pre-tested data collection tools to assess suitability in order to improve on the quality of questions asked to achieve validity.

## CHAPTER FOUR: RESULTS

### 4.0 Introduction

Of the participants, 11 (68.75%) were females. The majority of the participants; 14 (87.50%) were aged 20 to 39 years. Of the total participants, 15 (93.75%) reported to have attained a certificate level, and 1 (6.25%) attained a diploma. Majority of the participants 13 (81.25%) were married, 2 (12.5%) were single, while 1 (6.25%) was widowed.

The experiences of the nurses have been categorized as their perceived facilitators and challenges faced by nurses in the management of Kala azar patients and perceived solutions to challenges identified.

### 4.1 Facilitators to Nurses' management of Kala-azar patients

Among the facilitators of Kala azar Management, the nurses experiences fell into eight (8) themes discussed below;

**Good clinical practices** was an enabler to the proper management of Kala azar patients by the nurses in Amudat Hospital. This was evidenced by the proper and safe storage of documents. For example, a participant said that; *"...So the key and lock, because we keep the information, when you're working there, key and lock MUST be on your tips..."*

**Positive motivation** of various kinds kept the nurses to manage the kala azar patients well. Such forms of motivation included; Salary payment, availing to them updated case management guidelines, support from DNDi, continuous professional development and support from government of Uganda among others. Various participant shared their experiences including; *"...I wait for my salary..."*, *"...We were getting top ups, so you get salary from Amudat hospital..."*,

and “...*We have the guidelines; those books are there...*”, and “...*I remember they took us to Africana for some training ...*”

Availability of **medical supplies** ranging from drugs to laboratory diagnostics was a revelation to the successful story of nurses in management of Kala azar. A participant said; “...*we have AmBisome as one of the medicines, we have SSG, we have Paramomycin...*”

**Free services** offered to Kala azar patients was another factor towards reaching proper management of Kala azar patients. Such services include; free transportation of Kala azar patients to and from Amudat hospital, free food to Kala azar patients while at the facility and upkeep to the patients while on their way back home. According to the nurses, these incentives positively motivated the Kala azar patients to attend the clinics. One of the participant said that; “someone may not afford to stay here and so if they are giving them food, they can still keep around, which has positive impact on them”.

**High level of professionalism** exhibited by the health worker as regarding to the counselling and guidance, identification of the signs and symptoms of Kala azar to treatment of Kala azar patients. For example, a participant said that; “...*So when you're caring for those patients, you have to do a lot of observations; vital observations; BP, Temperatures, you monitor and so when we were there, you monitor...*”and another participant said that “*You have to see the signs of Kala azar, you have to examine also, before the Doctor*”. Another participant said; “...*those are hard people, if someone has got nose bleeding, instead of coming to the nurse, they go and bleed in from some corner until you notice. In the home, it's happening here, because they believe, it's God's ...*”

The **teamwork spirit** has bred a culture of task shifting and referring patients which has yielded positive results. For example, a patient said that; *“...we work together, because of vitals, nurses do vitals if there are procedures, the nurses know what to do , this one the nurses know what to do. That is how we work. So after that procedure, you are supposed to monitor that patient closely. Those patients are sent for tests in the laboratory, frequent tests, that is HB, CBC and others to see whether they qualify for the treatment...”*

**Community surveillance** by Amudat hospital. Amudat hospital sends a community mobilizer to screen patients within the entire Karamoja region. Screening, identification of infected people, then referral including contact tracing has been made possible within the entire Karamoja region due to this intervention.

**Existence of infrastructure** within and without Amudat hospital was reported as key contributor to management of Kala azar patients in Amudat hospital. Other Kala azar treatment sites identified included; Kacheliba hospital in Kenya. A participant said; *“they also started knowing that there was some nini Kacheliba, then in Turkana, there was some health centre, they started seeing that they are managing and people are improving before even reaching Kacheliba”*

#### **4.2 Challenges faced by Nurses in the management of Kala-azar patients**

In the journey of managing Kala azar patients as nurses, they experienced the following challenges which have been categorized into four major themes;

**Knowledge gap** among patients has impeded seeking health services from health facilities as they claim that Kala azar is rooted by witch craft. As a result, the witch doctors further widen the gap by not referring the patients to health facilities in time. Thus, many patients have died due to delayed treatment or failure to access right treatment. A participant attests that; *“they do come*

*when they have done those local witchcraft, they have cut cut their stomach” and another participant said; “they cut after cutting then they apply their local drugs and they smear there”.*

Furthermore, another participant said that “...*They give the person the local herbs to take. They try to slaughter an animal and to perform the rituals...*”

There is **inadequate infrastructure** including the Kala azar ward as some patients have nowhere to sleep. This has been seen to compromise treatment as some IV take long before completion. For example, a participant said; “*recently that ward was full; was having 100 and something; pokots, Turkana, Karamojong’s; we need that ward to also be extended”*

There are **shortages of supplies** including mattresses, bedding, and drugs among others. Participants say this has frustrated the management of Kala azar patients given that these drugs are very expensive and rear in Uganda. For example, a participant said that; “*...sometimes even the mattresses cannot be enough for them...*”

**Workload** due to low staffing level was yet another frustration to the works of the nurses as they the few available ones are made to overwork. For example, “*...that Doctor is in theatre but again is supposed to do splenic aspirate, bone marrow sorry, because splenic aspirate is no longer there...*” and another participant said that; “*...in that ward actually it needs back up...*”

**Low morale** that manifests in terms of delayed payments and seldom continuous professional development among the health workers was another thorn to the works of the nurses in Managing Kala azar patients in Amudat hospital. One of the nurse said; “*... You earn after three months...*”, and another participant asserted that “*...seldom offering Continuous Professional development...*”

**Little close monitoring** was reported to lead to the staff reluctant and fail to attend to their duties which perplexes the health care delivery to the Kala azar patients. A participant said that; “...we are not seeing close monitoring...”

#### **4.3 Perceived solutions to the challenges faced by Nurses management of Kala-azar patients**

Based on their various experiences in the management of Kala azar, the nurses suggested various remedies including;

**Improvement of infrastructure** such as expansion of Kala azar ward and supplies such as Mattresses and beddings at Amudat hospital. A respondent stated that “to see a way of extending the ward to put everything right even to add more mattresses, and the beddings”

**Training of traditional herbalists** on Kala azar case detection, disease diagnosis, referral and reporting, and their incorporation into the health care system as some participant asserted that “...Some trainings for the new herbalists to tell patients to know what is really happening...”.

Once the traditional herbalists are trained, they can also offer health education on hygiene and sanitation since they stay in the community. A participant stated that: “we needed daily education about hygiene”

**Improvement on the Amudat hospital staffing level for health** through recruitment of more health workers to handle the workload as a participant asserted that; “...sometimes a doctor is taken over like is in theatre, there is something to be done there. That Doctor is in theatre but again is supposed to do splenic aspirate, bone marrow sorry...”

**Motivation of staff** for example through continuous Professional development such as training the health workers. A participant said; “*we needed continuous trainings*” and another participant said that “*motivation could be more important because we are hard to reach area*”.

Another way to avert the identified challenges to Kala azar management is through holding **Kala azar planning meetings**.

## **CHAPTER FIVE: DISCUSSION OF THE FINDINGS**

### **5.1 Introduction**

In Uganda, VL is endemic in North Eastern Uganda (Karamoja sub region). In this chapter we have discussed the socio-demographics of participants, the experiences of health workers in managing patients with Kala azar. These experiences have been identified as their perceived facilitators and barriers to Kala-azar treatment, and possible solutions.

### **5.2 Socio-demographics of Participants.**

From this study, most of the participants' socio-demographics differed from other studies done within the similar settings. For example, in the current study, most of the study participants were between 30 and 39 years (50%) and most of the participants were females (68.75 %). These findings differ from a study done by (Kumar *et al.* 2015). In Kumar's study whose mean age of the health care providers was 46.8. This discrepancy in the findings could be attributed to differences in the study population. Whereas Kumar included all health workers, the currently study only focuses on nurses. Among the reviewed literature, no study with similar study population and end point (primary aim) to ours, has been found. This further justifies the existence of the knowledge gap regarding nurses' experiences in management of Kala azar patients.

### **5.3 Facilitators of management of Kala azar patients by nurses**

Whereas numerous studies point out the need for professionalism and correct knowledge regarding treatment of Kala azar patients, a study done by (Kolaczinski, J. 2008) found that knowing about VL symptoms was protective against VL infection. Our results were in line with some of these findings. (Rakesh & Pradeep 2013) states that Kala-azar presents with numerous signs and symptoms including; breathing difficulty, Skin sores, stuffy nose, runny nose, and nosebleeds, swallowing difficulty, ulcers and wearing away (erosion) in the mouth, tongue, gums, lips, nose,

and inner nose, fever, weight loss, mucosal ulcers, fatigue, anaemia, and substantial swelling of the liver and spleen. The nurses' experiences from the current study supports such findings. Nurses exhibited high level of professionalism such as provision of counselling and guidance, identification of the signs and symptoms of Kala azar to treatment of Kala azar patients.

The differences between our findings and findings from other study could be explained by differences in the nature of questions administered in the data collection tool, education level differences among the two study populations and also the geographical differences in the settings of the study populations (Alvar *et al.* 2012; Pan American Health Organization 2016).

The nurses experience augmented findings by (Kolaczinski *et al.* 2008; Odoch & Olobo 2013); the sand-flies were said to reside within termite mounds found around the patients homestead especially in the dry areas; such as in Karamoja and Turkana regions of Kenya. In Kolaczinski *et al.* 2008 study, significant association was found between home steads having termite moulds and VL infection.

Furthermore, the study findings point out good clinical practices as a contributor to the successful management of Kala azar patients. Some reviewed studies partly agree with our findings. For example, WHO (2015) states that proper documentation is key for better management of Kala azar patients.

The findings are no different from results from other related studies, where positive motivation reinforces the practice of good management of Kala azar. When nurses' needs are assured, they treat the patients as well as stated by. The supportive partner; DNDi completes the works of Uganda government.

Essential medicines is cited as a key building block of the health care system. Our findings augment such findings by determining that medical supplies ranging from drugs to laboratory diagnostics are inputs for successful management of Kala azar.

Provision of transportation fares to and fro hospital, and the availability of food for feeding the patients while at the hospital has been found to result into positive health seeking behaviours of patients. This could be attributed to the food insecurity coupled with scorching poverty levels in Karamoja. This arguments findings that malnutrition levels have been on the rise in the 8 years as the Global Acute Malnutrition levels for Karamoja region have been worsening from 12.8% in 2014 to 13.8% in 2017(IBFAN 2017) to 10.7% in 2021(IBFAN 2021).

In instances where staffing levels are low, task shifting has been regarded as the best way of overcoming inefficiencies that could otherwise result due to low human capital. The nurses are dependent on other health cadres for other services such as carrying out bone marrow aspirates, laboratory tests.

Amudat hospital carries out community surveillance for Kala azar. It screens patients within the entire Karamoja region. Screening, identification of infected people, then referral including contact tracing has been made possible within the entire Karamoja region due to this intervention. These findings argument findings by. All this is possible with support from DNDi.

Treatment of any kind of illness requires a clean conducive environment. The existence of infrastructure within and without Amudat hospital contributed to management of Kala azar patients, the same way it has done elsewhere such as in.

#### **5.4 Challenges to management of Kala azar patients by the health workers.**

Our findings indicate that patients' inadequate knowledge and information about Kala-azar, its causes, symptoms and preventive measures limited the nurses' ability to manage Kala azar effectively. These findings augment results from a study to determine serious under reporting of visceral leishmaniasis (Singh, Reddy, Rai and Sundar, 2015). The knowledge gap is seen to result into low morale of patients seeking health services from health facilities. Instead of going to health facilities, they go to traditional herbalists since they perceive it to be rooted in witch craft. The herbalist utilize the patients' knowledge gap to their advantage, constraining the patients financially and often leading to delayed referrals and treatment. Therefore, patients with incorrect knowledge about VL infection remain untreated which lead to a reservoir of the infection in the community.

Furthermore, our findings show that both health workers and the community has incorrect knowledge about the causative agent of Kala azar. This is likely to increase the likelihood of VL infection. This could also imply that they have limited knowledge of VL transmission; a major pillar for people to guard themselves against acquisition of VL infection. Findings from this study argument findings from other studies that have assessed the association between knowledge of VL and VL infection in similar contexts. For example, a case-control study carried out in December 2006 in Pokot territory of Kenya and Uganda found that knowing the signs and symptoms of VL were associated with a protective effect (Kolaczinski *et al.* 2008). People with incorrect knowledge about VL infection remain untreated which lead to a reservoir of the infection in the community.

In adequacies in infrastructure, leadership, supplies, staff, and finances affect the functionality of a health system since they are its building blocks. The study findings reveal shortage of these pillars due to a growing population size with static budgetary allocation to Amudat. In addition,

Kala azar Programme, just like any other donor funded Programme faced a setback following COVID 19. Therefore, the study findings is no different from other studies in related contexts measuring the same end point.

## **CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 Conclusion**

The nurses' experiences in the management of Kala azar in Amudat hospital uncover existing challenges and enablers to their work as they manage the Kala azar patients at Amudat hospital.

From the results, the experiences of nurses in management of patients presenting with Kala-azar at Amudat Hospital, Amudat District include; exhibition of good clinical practices, positive motivation inform of Salary payment, updated case management guidelines, support from DNDi and Uganda government, and continuous professional development, Availability of medical supplies such as laboratory diagnostics, drugs, existence of Free services & transport, High level of professionalism by the nurses, teamwork spirit amongst nurses, Community surveillance by Amudat hospital and Existence of infrastructure such as Kala azar wards within and without Amudat hospital.

From the results, the challenges nurses face in the management of Kala azar patients include; Knowledge gap among patients that Kala azar is witch craft; inadequate infrastructure such as wards, shortages of supplies including mattresses, beddings, and drugs, high Workload attributed to low staffing level, low morale due to delayed payments and seldom continuous professional development and Little close monitoring .

### **6.2 Recommendation**

The findings reveal the catchment area of Amudat Hospital to be an endemic area for Kala azar, and the nurses experiences show potential for elimination of the disease. We therefore recommend the following;

1. We recommend that challenges faced by nurses be addressed and plan put in place for Kala azar elimination by the different key players such as Health office of Amudat district and the Ministry of Health.
2. Sensitization of the community about the causative agent of Kala azar and the different habitats for sand flies by Amudat district health office.
3. Ministry of health, Uganda and other donors to ensure No stock out of VL drugs, construct large Kala azar ward, recruit more staff, and improve the payment schedules for nurses from quarterly payment to monthly payment at Amudat treatment Centre.

## References

- Ahmed, M. A. A., Ahmed, A. A., Omar, S. M., Adam, G. K., Abdallah, T. M., & Ali, A. A. A. (2016). Epidemiology of visceral leishmaniasis among children in Gadarif hospital, eastern Sudan. *BMC Public Health*, **16**(1), 1–4.
- Akram, A., Khan, H. A. A., Qadir, A., & Sabir, A. M. (2015). A cross-sectional survey of knowledge, attitude and practices related to cutaneous leishmaniasis and sand flies in Punjab, Pakistan. *PLoS ONE*, **10**(6), 1–8.
- Alase, A. (2017). The Interpretative Phenomenological Analysis (IPA): A Guide to a Good Qualitative Research Approach. *International Journal of Education and Literacy Studies*, **5**(2), 9.
- Alvar, J., Vélez, I. D., Bern, C., ... de Boer, M. (2012). Leishmaniasis worldwide and global estimates of its incidence. *PLoS ONE*, **7**(5). doi:10.1371/journal.pone.0035671
- CDC. (2018). BRIEF ON, 1–3.
- CDC. (2023). Parasites - Leishmaniasis.
- Christodoulides, M. (2023). *Vaccines for Neglected Pathogens : Strategies , Achievements and Challenges*.
- Coulborn, R. M., Gebrehiwot, T. G., Schneider, M., ... Mulugeta, A. (2018). Barriers to access to visceral leishmaniasis diagnosis and care among seasonal mobile workers in Western Tigray, Northern Ethiopia: A qualitative study. *PLoS Neglected Tropical Diseases*, **12**(11), 1–24.
- Dahlberg, L., & Krug, E. (2012). Violence: A Global Health Problem. *World Report on Violence and Health*, 1–56.
- Danisa, K. (2013). *Clinical pharmacology in Nigeria. Clinical Pharmacology and Therapeutics*, Vol. 16. doi:10.1002/cpt1974163part2595

- Dhariwal, A., Gupta, R., Roy, N., & Raina, V. (2015). Operational Guidelines on Kala-Azar (Visceral Leishmaniasis) Elimination in India -2015, (October), 20.
- IBFAN. (2017). Food Security and Nutrition Assessment in Karamoja Sub-Region NAPAK DISTRICT REPORT, (July).
- IBFAN. (2021). Overview of the Ipc Acute Malnutrition Analysis Ipc Acute Malnutrition Analysis, (September).
- Kolaczinski, J., et al. (2008). Risk factors of visceral leishmaniasis in East Africa: A case- control study in Pokot territory of Kenya and Uganda. *International journal of epidemiology*, 344–52.
- Kolaczinski, J. H., Reithinger, R., Worku, D. T., ... Brooker, S. (2008). Risk factors of visceral leishmaniasis in East Africa: A case-control study in Pokot territory of Kenya and Uganda. *International Journal of Epidemiology*, **37**(2), 344–352.
- Kumar, N., Singh, S. P., Mondal, D., ... Boelaert, M. (2011). How do health care providers deal with kala-azar in the Indian subcontinent? *Indian Journal of Medical Research*, **134**(9), 349–355.
- Kumar, N., Singh, S. P., Mondal, D., Joshi, A., Das, P., & Sundar, S. (2015). How do health care providers deal with kala-azar in the Indian subcontinent ?, (September 2011), 349–355.
- MOH Kenya, M. of H. K. (2017). PREVENTION, DIAGNOSIS AND TREATMENT OF VISCERAL LEISHMANIASIS (KALA-AZAR) IN KENYA Republic of Kenya Ministry of Health. Retrieved from [https://www.who.int/leishmaniasis/burden/Kala\\_Azar\\_Kenya\\_2017.pdf?ua=1](https://www.who.int/leishmaniasis/burden/Kala_Azar_Kenya_2017.pdf?ua=1)
- Moroto District Local Government. (2019). Advocacy brief on strengthening nutrition governance for multi-sectoral response.

- Nampoothiri, R. V., Sreedharanunni, S., Chhabria, B. A., & Jain, S. (2016). Visceral leishmaniasis: Kala-azar. *Qjm*, **109**(5), 347–348.
- Odoch, W. D., & Olobo, J. O. (2013). Prevalence of kala-azar infection in Pokot county, Amudat district, Northeastern Uganda. *Open Journal of Epidemiology*, **03**(04), 203–208.
- Okwor, I., & Uzonna, J. (2016). Social and economic burden of human leishmaniasis. *American Journal of Tropical Medicine and Hygiene*, **94**(3), 489–493.
- Pan American Health Organization. (2016). Epidemiological report in the Americas, (July).
- Rabi Das, V. N., Siddiqui, N. A., Bhunia, G. S., ... Das, P. (2021). Improved kala-azar case management through implementation of health facilitybased sentinel sites surveillance system in Bihar, India. *PLoS Neglected Tropical Diseases*, **15**(8), 1–27.
- Rakesh, N. R., & Pradeep, S. (2013). Comparative genomic studies and in-silico strategies on *Leishmania braziliensis*, *Leishmania infantum* and *Leishmania major*: Conserved features, putative functions and potential drug target. *International Journal of Applied Sciences and Biotechnology*, **1**(2), 62–66.
- Torres-Guerrero, E., Quintanilla-Cedillo, M. R., Ruiz-Esmenjaud, J., & Arenas, R. (2017). Leishmaniasis: a review [version 1; peer review: 2 approved]. *F1000Research*, **6**(F1000 Faculty Rev), 750.
- WHO. (2015). Kala-azar elimination programme. *World Health Organization*; ISBN 978 92 4 150949 7, (February), Report of a WHO consultation of partners Geneva, S.
- World Health Organization. (2020). Leishmaniasis key facts. *World Health Organisation*, (March), 6.

## Appendices

### Appendix 1; REC Approval letter



# UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

03/08/2022

To: DANIEL KALEPON

UGANDA CHRISTIAN  
UNIVERSITY0782607325

**Type:** Initial Review

**Re: UCUREC-2022-313: EXPERIENCES OF NURSES IN MANAGEMENT OF PATIENTS PRESENTING WITH KALA-AZAR AT AMUDAT HOSPITAL, AMUDAT DISTRICT, one, 2022-05-08**

I am pleased to inform you that the Uganda Christian University REC, through expedited review held on **31/07/2022** approved the above referenced study.

Approval of the research is for the period of **03/08/2022** to **03/08/2023**.

As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the REC for re-review and approval **prior** to the activation of the changes.
3. Reports of unanticipated problems involving risks to participants or any new information which could change the risk benefit: ratio must be submitted to the REC.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by participants and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.

5. Continuing review application must be submitted to the REC **eight weeks** prior to the expiration date of **03/08/2023** in order to continue the study beyond the approved period. Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study.
6. The REC application number assigned to the research should be cited in any correspondence with the RECOF record.
7. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.

The following is the list of all documents approved in this application by Uganda Christian University REC:

No.	Document Title	Language	Version Number	Version Date
1	Data collection tools	English	one	2022-05-08
2	Informed Consent forms	English	one	2022--08
3	Protocol	English	one	2022-05-08

Yours Sincerely



Peter Waiswa  
For: Uganda Christian University REC

**Appendix 2: Post Viva correction Compliance report**



# UGANDA CHRISTIAN UNIVERSITY

**A Centre of Excellence in the Heart of Africa**

UGANDA CHRISTIAN UNIVERSITY

SCHOOL OF RESEARCH & POSTGRADUATE STUDIES

DISSERTATION CORRECTION COMPLIANCE REPORT BY THE CANDIDATE (POST VIVA FORM)

Date: .....23<sup>rd</sup>, March, 2024.....

Name of Candidate: ... Kalepon Daniel Powon.....Reg. No...RJ19M21/301.....

Title of Dissertation ..... Experiences of Nurses in the Management of Patients presenting with Kala-Azar at Amudat Hospital, Amudat District.

	COMMENTS BY EXTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	<p>Abstract</p> <p>The 1<sup>st</sup> sentence under methods should be repackaged. “Study design among collecting individual nurses’ experience,” should be rephrased to have better messaging information. Under results in the abstract, “positive motivation to inform salary,” the latter should be in form of salary not “inform”</p> <p>The conclusion at, “to present them from escalating into</p>	<p>The first sentence under methods has been corrected to, “We conducted a phenomenological study amongst nurses. We collected nurses’ experiences in terms of; motivators, attitudes, skills, knowledge, and policies in the management of Kala-azar patients through in-depth interviews.</p> <p>Under results, “positive motivation inform of salary” has been rephrased.</p> <p>The abstract has been revisited to improve on grammatical errors.</p>	<p>Addressed under Abstract, found on Page x</p>

	public health, what?" Revisit the abstract to improve the grammatical reporting.		
2	<p>Chapter 1: Introduction &amp; background</p> <p>Well covered and informative from global, regional and national information.</p> <p>The nurses rather than the doctors, and clinical officers have been put at the center of the problem statement with respect to the diagrams on page 4. The letter aspect is a sole responsibility of clinical officers and doctors at least in Uganda. Repackage the post statement to be in line with the stated purpose of the study.</p> <p>The justification of the study is initially wrongly in that the candidate is talking of what the study found out not what he was going to do and find out. That would be beneficial.</p> <p>The theoretical framework should be elaborated/explained with respect to the dependent variable.</p>	<p>In Amudat hospital, diagnosis of Kala azar is part of nurses' responsibilities during the management of Kala azar patients.</p> <p>The initial statements of justification have been rephrased to bring out what the study was going to find out.</p> <p>The theoretical framework been elaborated/explained with respect to the dependent variable.</p>	<p>Addressed under Section 1.2; Problem statement on Page 2.</p> <p>Addressed under Section 1.6; Justification of study on Page 3.</p> <p>Addressed under Section 1.7; Theoretical framework on Page 4.</p>
3	<p>Chapter 2: Literature Review</p> <p>This should not be covered under only, "introduction heading"</p>	This has been done	Addressed under Chapter 2; Literature review on Page 5.

	<p>There should be more headings and sub-titles. Also, at the end of literature coverage, there should be a summary to show the “research gap that provoked,” the researcher to do this work.</p>		
4	<p>Chapter 3: Methodology</p> <p>“data prevention,” this should be presented in detail. What did data prevention involve under study design?</p> <p>On page 19, the dependent variables should be written in past tense.</p> <p>The authority that approved the data instruments should be stated under 3.5</p> <p>The candidate should state what was done to reduce effects of limitations of the study under 3.9, how he addressed the issues of “reliability of study tools etc”</p>	<p>All the concerns here have been addressed.</p>	<p>Addressed under Chapter 3; Methods and Materials on Pages 6-9.</p>
5	<p>Chapter 4: Results</p> <p>The 1<sup>st</sup> section of qualitative reportage in results should be under methods section stating what was done (first 3 paragraphs in the results section)</p> <p>Check correct use of grammar and tenses especially on page 24. Under 5.2 Kumar’s study should present 46.8 as years not left blank.</p>	<p>All the comments have been addressed.</p>	<p>Addressed under Chapter 4; Results on Pages10-13.</p>

	Discussion well referenced and use proper grammar on page 31. Correct the line “both health workers and the community has incorrect knowledge “		
6	<p>Chapter 6: Conclusion and Recommendations</p> <p>The first statement is in plural so replace, uncovers to uncover. The sentence for recommendation no.1 should be written fully and more meaningful.</p> <p>In recommendation no.2, the elimination activities should be stated.</p>	All the comments have been addressed.	Addressed under Chapter 6; Results on Pages18-19.

SN	COMMENTS BY INTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	This abstract is much longer than the recommended maximum of 300 words!	The abstract was indeed having more than 300 words. It has been summarized to 272 words.	Addressed under Abstract, found on Page x
2	We conducted a phenomenological study design among collecting individual nurses' experiences, motivators, attitudes, skills, knowledge, and policies in the management of patients presenting with Kala-azar.study in which nurses experiences were identified.	This has been rephrased to; "We conducted a phenomenological study design among nurses. We collected individual nurses' experiences, motivators, attitudes, skills, knowledge, and policies in the management of patients presenting with Kala-azar infection."	Addressed under Abstract, from line 7 to 9, found on Page x
3	Results: Nurses experiences included; exhibition of good clinical practices, positive motivation inform of Salary payment, updated case management guidelines, support from Drugs for Neglected Diseases <i>initiative</i> (DNDi) and Uganda government, and continuous professional development, Availability of medical supplies, existence of Free services & transport, High level of professionalism by the nurses, teamwork spirit amongst nurses, Community surveillance by Amudat hospital and Existence of infrastructure such as Kala azar wards within and without Amudat hospital. The challenges nurses faced in the	The nurses' experiences included; "what enabled them to manage kala-azar infection, how they had managed Kala-azar infection and what had failed them to manage Kala-azar infection."  That is why the results were presented in such a manner.	Addressed under Abstract, from line 9 to 11, found on Page x

	management of Kala azar patients included; Knowledge gap among patients, inadequate infrastructure, high staff Workload, Delayed payments, seldom continuous professional development and little close monitoring.		
4	good background but please say a little more about areas in Uganda where the disease is prevalent!	In Uganda, VL infection is endemic in Karamoja region in the districts of Amudat, Moroto, Kabong, and Kotido. Mostly, children under 15 years and males.	Addressed under Section 1.1; Introduction, Paragraph 6, found on Page 2.
5	Is the responsibility for diagnosis in the hands of the nurses?	In a study done by <i>Wasan, Wasan and Gershkovich, 2011</i> , it was the nurses who at times could diagnose.	Addressed under Section 1.2; Problem statement, lines 4-6, found on Page 2.
6	Is it increasing? When you give a statistic 15-34, you need to show some trend over the past few years to support your statement of increasing cases- OR you could cite peer reviewed or MOH literature showing increasing case of the disease in the region.	Indeed this was an oversight. However, the statement has been revised to , “Nurses seem to be facing many challenges in managing the patients with Kala-azar amidst the high cases of Kala-azar (prevalence for Kala-azar in Amudat was estimated at 17.2% in 2013)”	Addressed under Section 1.2; Problem statement, lines 7-8, found on Page 2.
7	Which theory did you adapt? Cite!  Your framework is suited to guide a quantitative design!	The study was not a quantitative, but rather a qualitative study.  However, socio-ecological model guided the design of this framework in line with the literature visited, concerning VL infection.	Addressed under Section 1.7; Conceptual Framework found on Page 4.

8	I would recommend that you start with more general information about the disease- cause, symptoms, epidemiology, types, diagnosis, management– globally and then locally- similar to what you did in the background!	Thank you so much for this observation. The literature review has been aligned as guided.	Addressed under chapter 2; Literature review, found on Page 5.
9	Please start on a new page – each new chapter!	This was an oversight. Methodology has been started from its new page.	Addressed under chapter 3; methods and materials found on Page 6.
10	It would add value if you could explain what a phenomenological design is why you saw it fit for use in this study! What are its advantages and weaknesses! Why not any other design?	Phenomenological study design was chosen because it was the only design which could enable the collection of the lived experiences nurses had in managing Kala azar patients in Amudat hospital.	Addressed under Section 3.1; Study design, found on Page 6.
11	IS IT PUBLIC OR PUBLIC NOT FOR PROFIT?	Thank you so much for the observation. It has been corrected to read, “Private not for profit ”	Addressed under section 3.2; Study setting and rationale, line 4, found on Page 6.
12	First you say purposive and then again convenience? These two do not mean the same thing!  First you say purposive and then again convenience? These two do not mean the same thing! Then it was not purposive!!  This section should be re-written- convenience is not	I have rectified this to reflect what I exactly did as shown below; “The researcher utilized purposive sampling procedure to select participants with diverse characteristics. The researcher selected all skilled (expert) nurses in the management of Kala-azar” patients. This was continued until theoretical saturation of data was achieved.	Addressed under section 3.3.2; Sampling procedure, found on Page 6-7.

	acceptable! You may not get valid data!!		
13	Should be part of methodology  Methodology./chapter three	This segment in the text referred to has been moved to chapter 3	Addressed under chapter 3.
14	So – are these the barriers? If so- create a subheading here- as well as above for the facilitators!	The sub-headings for the facilitators and barriers have been created	Addressed under chapter 4; found on pages 10 -13.
15	Conclusion is not put here. It is towards the end of discussion and BEFORE recommendations! Please shift this.	The conclusion has been moved towards the end of discussion and BEFORE recommendations.	Addressed under chapter 6; section 6.1; Conclusion found on pages 18.
16	Start each new chapter on a new page please	This has been rectified throughout the dissertation	Addressed in the chapters 1 to 6; found on pages 1 to 19.
17	Be consistent- at the beginning of the above chapter, you said:  “The experiences of the nurses have been categorized as their perceived facilitators and barriers to Kala azar treatment, and possible solutions”  Use the same terms- challenges and barriers may not mean the same!	Consistence has been adhered to throughout the document.	Addressed in the chapters 1 to 6; found on pages 1 to 19.
18	“Endpoint” Meaning?	End point as used in this study meant, the primary aim of the study.	Refer to section 5.2; Socio-demographics of Participants,

			line 8 found on page 14.
19	Arguments	This has been checked and corrected	Refer to entire document.
20	This was not part of your objectives and I do not see it in the findings! “However, our data are not in agreement with the presentation of some of the VL symptoms in the above study. For example, from our study, we noted some complaints which had not been reported in the above study, namely; headache, night sweats and fatigue ”	The segment has been dropped from the dissertation.	Refer to entire document
	COMMENTS BY SUPERVISOR	ACTION TAKEN	INDICATOR
21	Chapter 6: Recommendations  The recommendation:  No.3.Involvement of the Amudat community in the destruction of the habitats of sand flies around their homesteads. AND  No.4. Train traditional herbalists on case definition for VL in order to refer patients for early diagnosis and treatment by Amudat district health office. “be deleted”	This has been checked and deleted	Addressed under Chapter 6; Results on Pages 18-19.

SN	COMMENTS BY VIVA VOCE PANNEL	ACTION TAKEN
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1	What is the Nurses role in the management of the condition?	Given the human resource gaps in Amudat hospital, an official role of nurses of taking care of the Kala azar patients too play a critical role in the diagnosis of Kala azar patients.
2	This study is working in an area which is not in the focus recommendations to the specific stakeholders.	The recommendations have been tailored to the respondent stakeholder.
3	Refine the methods section in terms of the phenomenology design	The methodology section has been refined to suite phenomenology design.

KALEPON DANIEL POWON

Candidate's Name & Signature

REV. CANON EVATT M. MUGERURA

Supervisor's Name & Signature