

**FACTORS AFFECTING ADVERSE DRUG REACTION REPORTING  
AMONG HEALTH WORKERS AND PATIENTS AT LIRA REGIONAL  
REFERRAL HOSPITAL IN LIRA DISTRICT**

**BY**

**KANTONO SHAMIRAH**

**NOVEMBER, 2024**

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**BY**

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**UAHEB/DPHA/002/21**

**KAMPALA INSTITUTE OF HEALTH PROFESSIONALS**

**A Research report submitted to Uganda Allied Health Examination Board in  
partial fulfillment of the requirements for the Award of a Diploma in  
Pharmacy of Uganda Allied Health Examination Board.**

**NOVEMBER, 2024**

**DECLARATION**

I, KANTONO SHAMIRAH hereby declare that this research proposal about ‘factors affecting adverse drug reaction reporting among health workers at Lira Regional Referral Hospital in Lira District is as a result of my independent investigation and it has never been presented to any institution for any academic qualification where it is indebted others, acknowledgment has already been observed inform of references.

**Signature**.....

**Date**.....

KANTONO SHAMIRAH

**(Researcher’s Name)**

## **APPROVAL**

This is to certify that this research proposal about the topic” Factors affecting adverse drug reaction reporting among health workers at Lira Regional Referral Hospital in Lira District” has been produced under my guidance and strict supervision and is hereby submitted for examination with my approval as the institution’s research supervisor.

**Signature**.....

**Date**.....

MUGISHA ECHO

**(Research Supervisor)**

## **DEDICATION**

I dedicate this research report to my beloved mother Mrs.Akello Cissy, who supported me throughout the period for the research especially financially, spiritually and encouraging words.

I also dedicate it to my research supervisor Mugisha Echo for the work he has done towards the completion of this research report.

## **ACKNOWLEDGEMENT**

I first thank the Almighty God for enabling me to complete this task very well and for the support he has provided to me throughout my academic journey.

I also thank the entire Kampala Institute of Health Professionals administration for the effort may the lord award them abundantly.

I also extent my sincere appreciation to the Lira Regional Referral Hospital research committee and the administration for allowing me to collect data from the facility smoothly.

Not forgetting my supervisor Mr Mugisha Echo for being there for me in terms of guidance and for his cooperation.

My dear mother, Stand Tall training center, and others for their financial assistance and all my friends Mirembe Catherine, Ebong Guido and Ayo Precious among others forgiving in all their support to me to be able to reach this ,may the Almighty God bless you all.

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## ACRONYMS AND ABBREVIATIONS

<b>ADRs</b>	:	Adverse Drug Reactions
<b>PV</b>	:	Pharmacovigilance
<b>HCPs</b>	:	Health Care Professionals
<b>NPC</b>	:	National Pharmacovigilance Center
<b>DSC</b>	:	Drug Safety Center
<b>MoH</b>	:	Ministry of Health
<b>ART</b>	:	Anti-Retroviral Treatment
<b>HIV</b>	:	Human Immunodeficiency Virus
<b>SRSs</b>	:	Spontaneous Reporting Systems
<b>Epi</b>	:	Expanded Program on Immunization
<b>SAS</b>	:	Statistical Analytical System

## **OPERATIONAL DEFINITIONS**

<b>Adverse Drug Reactions</b>	:	Are harmful, unintended results caused by taking medications
<b>Morbidity</b>	:	A condition of suffering from a disease or medical condition
<b>Mortality</b>	:	A state of being subject to death
<b>Toxicities</b>	:	The state of being harmful and unpleasant or poisonous
<b>Actuating</b>	:	The state of being moved to Action
<b>Adverse event</b>	:	An undesired effect of a drug
<b>Medicine induced</b>	:	The reaction is provoked by a drug
<b>Surveillance</b>	:	Monitoring of behavior many activities

## ABSTRACT

**Purpose of the study:** The purpose of the study was to determine the factors affecting adverse drug reaction reporting among health workers and patients at lira regional referral hospital, lira district.

**Specific Objectives:** The study was aimed at assessing the health worker related, health facility related and patient related factors affecting adverse drug reaction reporting at lira regional referral hospital.

**Methodology:** A descriptive cross sectional study design was used, using a structured questionnaire amongst 60 respondents who were selected using simple random sampling method as a way of for them to be involved in the study.

**Results:** Regarding health worker related factors, most (41.7%) were much older between 33 and 39 years, the majority (66.7%) worked full time, females (58.3%) with the highest number, 50% were married, 63.3% did not follow up their patients after drug administration, 50% of the health workers had adverse drug reaction filling forms in their offices , 66.7% did not educate their patients on adverse drug reaction and 58.3% of the health workers recorded an adverse drug reaction whenever it was detected, about health facility related factors, the majority 75% were government type health facility, 60% of the facility had valid documents for filling in an adverse drug reaction, 58.3% of the facility had been in existence for a long period of time that is three years and above.

**Conclusion:** From the study findings, the factors affecting adverse drug reaction reporting among health workers and patients at lira regional referral hospital were health workers not having enough time to communicate, interact and counsel patients on medicine related issues due to the heavy patient load at the facility and patients were always in a hurry to leave the hospital to go back to their duties and also health workers did not follow up patients after drug administration.

**Recommendation:** The researcher recommends that the government together with other NGOs concerned with adverse drug reaction reporting should put a lot of emphasis in educating the patients and the general public on adverse drug reactions and how to handle its cases.

## CHAPTER ONE: INTRODUCTION

### 1.0 Introduction

This chapter presents the background of the study, statement of the problem, general objective, specific objectives, research questions, significance of the study, scope of the study and references respectively.

### 1.2 Background

Adverse Drug Reactions (ADRs) are an important contributor to patient's morbidity and hospitalization in Uganda, under reporting of ADRs may increase medicine induced morbidity and motility among patients. This study determines the extent of ADR reporting and associated factors among healthcare providers in Uganda. Barbara *et al.*, (2016)

Although medicines have outstanding edges to the wellbeing of the general public, they still have the potential of actuating adverse drug reactions which are a significant reason for morbidity and motility. This study aims to determine the factors influencing adverse drug reaction reporting among Health workers and patients. Barbara K, (2015)

The role of healthcare professionals among other stakeholders in early detection, assessment, documentation and reporting as well as preventing suspected adverse reactions is very crucial to mitigate drug related problems in Health facilities. Belete *et al.*, (2019)

Spontaneous reporting of adverse drug reactions is a method of monitoring the safety of drugs post marketing, providing a way to discover new, rare or unnoticed adverse drug reactions. Despite its importance there is widespread under reporting of adverse drug reactions by Health care professionals. Yashmayet *et al.*, (2020)

Health care professional's involvement and reporting of adverse drug reactions are essential for the success of a pharmacovigilance program. The aim of this study is to assess Health care professional (medical doctors, pharmacists, nurses, midwives, and paramedics) current knowledge, attitude, practices and barriers regarding pharmacovigilance and adverse drug reaction's reporting in multicentral Health care settings. Zakiret *et al.*, (2023)

Spontaneous reporting systems (SRSs) play an important role in identifying adverse drug reactions. In most of the developed countries, community pharmacists contribute to the pharmacovigilance system to a greater deal. Easwaran *et al.*, (2020)

New adverse events and toxicities are identified as people live longer on ART and availability of numerous new drugs and drug combinations make systematic monitoring of ADR critical in the HIV program. The contribution of Health professionals to adverse drug reaction database is enormously significant but under reporting remains a major drawback of spontaneous reporting and the level of adverse drug reaction reporting. AlemD, (2014).

### **1.3 Statement of the problem**

Adverse Drug Reactions significantly impact patient safety and Healthcare quality. Despite the critical role of Health workers and patients in reporting these reactions, underreporting remains a persistent issue worldwide, globally 37 studies using a wide variety of surveillance methods were identified from 12 countries, these generated 43 numerical estimates of under reporting, the median under reporting rate across the 37 studies was 94% (interquartile range 82% to 98%). There was no significant difference in the median under reporting rates calculated for general practice and hospital based studies. 5 to 10 general practice studies provided evidence of a higher median under reporting rate for all adverse drug reactions compared with more serious or severe adverse drug reactions, (95% and 80%) respectively.

In comparison, for a five of the eight hospital based studies the median under reporting rate for more serious or severe adverse drug reactions remained high (95%). The median under reporting was lower for 19 studies investigating specific serious or severe adverse drug reactions drug combination but was still high at 85%. Various factors such as lack of awareness, fear of blame, heavy patient work load, inadequate training and complex reporting processes hinder healthcare professional and patients willingness and ability to report adverse drug reactions, this knowledge gap and under reporting compromise the effectiveness of pharmacovigilance systems, potentially leading to delayed identification of safety issues, increased risk of harm to the patient. This study aims to investigate the factors influencing adverse drug reaction reporting among healthcare professionals and patients world wide to inform strategies for improving reporting rates and enhancing patient safety.



Uganda faces significant challenges in reporting adverse drug reactions. According to the National Drug Authority only 12% of suspected adverse drug reactions are reported, resulting in a significant under estimation of the true burden of adverse drug reaction in the country. Lira District in northern Uganda faces a significant challenges in reporting of adverse drug reactions, according to the Lira District Health Office only 5% of suspected cases are reported resulting in a significant under estimation of the true burden of adverse drug reactions in the district.( Lorna Hazell, Saad AW Shakir, 2006)

#### **1.4 Broad objective**

- i. The purpose of this study is to identify the factors affecting adverse drug reaction reporting among health workers at Lira Regional Referral Hospital in Lira District.

#### **1.5 Specific objectives**

- i. To establish the medicine related factors affecting adverse drug reaction among Health workers at Lira Regional Referral Hospital in Lira District.
- ii. To find out the health facility related factors affecting adverse drug reaction reporting at Lira Regional Referral Hospital in Lira District.
- iii. To determine the Health worker related affecting adverse drug reaction reporting at Lira Regional Referral Hospital in Lira District.

#### **1.6 Research questions.**

What are the Health worker related factors affecting adverse drug reaction reporting at Lira Regional Referral Hospital in Lira District?

What are the drug related factors affecting adverse drug reporting at Lira Regional Referral Hospital in Lira District?

What are the Health facility related factors affecting adverse drug reaction reporting at Lira Regional Referral Hospital in Lira District?

## **1.7 Significance of the study**

The findings of the study may be helpful to both public and private Health care providers in making informed decisions on adverse drug reaction reporting.

The study may assist the ministry of Health together with the administration of Lira Regional Referral Hospital to come up with practical solutions to ensure adverse drug reaction reporting is made mandatory and also benefit the patients at large by preventing further damage.

The study would also generate information on the factors affecting adverse drug reaction reporting.

## **1.8 Scope of the study.**

### **1.9 Content scope**

The study covers factors affecting adverse drug reaction reporting at Lira Regional Referral Hospital.

### **1.10 Geographical scope**

The study will be carried out at Lira Regional Referral Hospital in Lira District.

### **1.11 Time scope**

The study takes a period of two weeks to collect data from the respondents and to analyze it.

### **1.12 Justification**

Adverse drug reactions significantly impact patient safety and healthcare quality. Despite the critical role of health workers and patients in reporting these reactions, under reporting remains a persistent issue worldwide. This research aimed to investigate multifaceted factors affecting adverse drug reaction reporting among health workers and patients at large. The study evaluated medicine related factors such as complexity and side effect profiles, that contributed to under reporting. It w also analyzed health facility related factors including reporting systems and support structures, that would affect reporting practices. Additionally the research explored health worker related elements such as knowledge, attitudes and work load, which influenced their likelihood of reporting adverse drug reactions. By identifying these key factors, the study sought to provide insights that would inform strategies to enhance adverse drug reaction reporting rates, ultimately improving patient safety and care quality.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.0 Introduction**

This chapter presents the literature cited by other scholars about factors affecting adverse drug reaction reporting among Health workers. The literature is presented according to the study objectives that include: The medicine related factors, Health worker related factors and Health facility related factors affecting adverse drug reaction reporting among Health workers.

### **2.1 The health worker related factors affecting adverse drug reaction reporting**

In the study on factors affecting adverse drug reaction reporting among Health workers in Ethiopia was conducted on a total of 133 Health care professionals by interview to assess their knowledge, attitude and practices using structured questionnaire. Only 64(48.2%),56(42.1%) and 13(9.8%) Health care professionals have correctly answered the knowledge, attitude and practice assessment awareness questions respectively. Lack of knowledge and awareness on what, when, and to whom to report adverse drug reactions and lack of commitments of Health care professionals were identified as major discouraging factors against adverse drug reaction reporting. (Lense, 2016)

In Trigray region, a study on health care professionals knowledge, attitudes and practices towards adverse drug reaction reporting Ethiopia, a total of 362 questionnaires were distributed and the response rate was 84.8% of all respondents 190(61.9%) were nurses 63(20.5%) were pharmacists and 54(17.6%) were physicians. About 58.3% of HCPs had poor knowledge of ADRs reporting. The majority of the respondents had a positive attitude (59.9%)and only a few (32.1%)respondents had good ADR reporting practices poor knowledge (adjusted=2.63,95% CL:1.26 to 5.45) and lack of training on ADRs reporting AOR=7.31,95% cl,3.42 to 15.62) were both negatively associated with ADRs reporting practice, whereas higher work experience>\_10years,AOR=0.36,95% cl:0.13 to 0.97 was positively associated with ADRs reporting practice.(Kidu G, 2020)

In Saudi Arabia a multicenter cross-sectional study on National Pharmacovigilance Programs was conducted, 480 questionnaires were distributed, and response rate was 70%(n=336). Only 33% of the participants were aware of the National Pharmacovigilance Center (NPC)of those HCPs who were familiar with the NPC and their responsibility to report ADRs, most 50% were pharmacists followed by physicians 24% and nurses 16% and these differences were statistically significant

$p < 0.01$ . 27% of participants were involved in ADR reporting among HCPs 62% were pharmacists, 26% were nurses and 6% were physicians. Most participants 95% favored reporting ADRs caused by antibiotics and new/old drugs. The prominent factors discouraging ADR reporting included fear that the report might be incorrect 46% and lack of time 44%. (Thamir, M. A. 2018).

In a study on rational drug use evaluation based on World Health Organization core drug use indicators in a tertiary referral Hospitals in Northeast Ethiopia out of 120 questionnaires distributed 114 respondents filled and returned giving a 95% response rate from a total 49(43%) were nurses, 26(22.8%) physicians 17(14.9%) pharmacy professionals 12(10.5%) health officers and 10(8.8%) midwives, about 86(75.44%) study participants had an inadequate knowledge towards ADR reporting and of the participants had an inadequate knowledge towards ADR reporting. Nurses (AOR=0.14, 95% CI(0.03-0.64) were found to be less likely to have adequate knowledge on ADR reporting compared to pharmacy professionals. (Belete K. A, 2019).

## **2.2 Health facility related factors affecting adverse drug reaction reporting**

In a study on utilization of over the counter medicines in medical schemes in south Africa 338 questionnaires sent out 297 Health care professionals responded to the questionnaire 87.87% response rate. Half of the participants knew about reporting adverse drug reaction and pharmacists were the most likely group to know to report (82.61%), 97% of the participants who previously received adverse drug reaction training knew how to report them. Patient management, lack of knowledge and the time-consuming requirements or reporting featured as discouraging factors. Although 58.59% of participants had encountered adverse drug reactions, only 16.50% had reported. (Yashmay G, 2020)

A total of 250 Health care providers were included in the study on knowledge, attitudes and practices towards adverse drug reaction reporting and affecting factors among health care providers working in ART clinics of public health facilities by considering a 10% non-response rate. Using proportional allocation to type of facilities from public ART clinics were selected. Data was collected through a self-administered questionnaire from Health professionals selected by simple random sampling methods. Observation was also used to verify existence of reporting forms in the facilities. After the data collection EPI-info software and exported to SPSS for analysis. (Alem D, 2014).

In a study on adverse drug reaction , knowledge, attitudes and practices of physicians towards it in EL Minia University Hospital, a total of 211 doctors working at El Minia University Hospital were included. The questionnaire was structured to obtain the demographics of the doctors, information about their knowledge of ADR reporting, attitude factors that may influence reporting and training on ADR reporting. Only 14(16.1%) of the groups were aware of the existence of a pharmacovigilance center in Egypt and only 6(6.9%) of them had reported ADRs to it, compared to 26(22.8%) and 17(15.9%) of the specialists. Multivariable logistics regression showed that only qualification and average years of experience were associated with satisfactory knowledge among physicians. Average years of experience were associated with satisfactory attitude among physicians as those with more than 10 years of experience were 1.7(1.1-2.6) times more likely to have experience satisfactory attitude compared to less experienced physicians. Nashwa *et al.*,(2014).

### **2.3 Patient related factors affecting adverse drug reaction reporting.**

In the study on factors affecting patient reporting of adverse drug reaction, 1435 citations identified, 21 studies were eligible, studies were primarily conducted in the UK, the Netherlands and Australia, the identified barriers to patient reporting of adverse drug reaction included poor awareness, confusion about who should report the adverse drug reaction. Difficulties were with reporting procedures, lack of feedback on submitted reports, mailing costs. Adverse drug reactions were resolved and prior negative reporting experience. The identified motives for patient reporting adverse drug reactions were preventing others from having similar adverse drug reactions, wanting personal feedback, improving medication safety and informing regulatory agencies.(Rania Al Dweik, Dawn Stacey, Dafna Kohen, Sanni Yaya, 2017)

In a study on factors influencing adverse drug reaction reporting in New South Wales Teaching Hospitals, 4808 questionnaires were distributed and 1125(23%) were retained. Approximately 16% of the respondents reported that they had reported adverse drug reactions at once to the Australian Adverse Drug Reaction Advisory Committee. 82% routinely asked patients about previous adverse drug reactions on admission and 95% of these respondents documented the adverse drug reactions in the medical records. Only 36% knew how to report an adverse drug reaction in their hospital. Many claimed awareness of recognized goals of adverse drug reaction

reporting but many also identified erroneous goals, (Maria Kelly, Karen I Kaye, Sharon R Davis, Gillian M Shenfied, 2004)

In a study on factors influencing the use of a mobile app for reporting adverse drug reaction and receiving information, seven focus group discussion and 13 interviews were conducted. In total 21 health care professionals and 50 patients participated. Identified factors that may influence the use of the app were the type of feedback given on reported adverse drug reactions, how adverse drug reaction reports were stored and the type of drug news. Also mentioned were other functions of the app, ease of use, type of language, the source of safety information provided through the app, security of the app, layout, the operating system on which the app can be used and the cost. (Sieta T de Vries, Lisa Wong, Alastair Sutcliffe, Francois Houvez, Carmen Lasheras Ruiz Peter GM, 2017)

A cross sectional observation on exploring sociodemographic and economic factors that promote adverse drug reaction reporting by patients, a data set of 42 global sociodemographic and economic factors for 44 countries were retrieved, as to analyze statistical associations between these factors and the patient reporting rate of adverse drug reactions. Multivariate logistic regression models were designed to identify the predictive co variables, health investments indicators such as per capital public health expenditure, hospital bed density and under five mortality rate were the relevant factors responsible to discriminate between countries that have higher patient reporting rate. (Marja Airaksinen, Afonso Cavaco, 2018)

## CHAPTER THREE; METHODOLOGY

### 3.0 Introduction.

This chapter discusses the methodology that was used in the study. It is a detailed description of selected methods that was used by the researcher to achieve the objectives of the research. This chapter thus contains the information about the study design, study area, study tools and management, quality control, study limitations, ethical considerations and dissemination of the research report

### 3.1 Study design

The study used a descriptive cross sectional research design to collect quantitative data. The design was used because it enables the researcher to capture wide views from the respondents within the shortest time possible.

#### 3.1.1 Study area

Lira District, with a total area of 2986.47sqkms, lies in the Northern region of Uganda sharing borders with the Alebtong in the East, Agago in the North, Oyam and Gulu in the Northwest, Otuke in the NorthEast, Kole in the West, Kwania in the Southwest, Dokolo in the South, The District Headquarters is in Agweng Municipality Central Division, situated along Kitgum road, Lira City. Lira Central Division serves as an administrative and commercial center. Other urban centers include, Ojwina Division, Adekokwok subconunty, Ngetta among others.

Services offered at Lira Regional Referral Hospital includes Pediatrics, Vaccination, Dental, Gynecology, laboratory and ultrasound services, Antenatal, In-patient and Outpatient service, Pharmacy and General surgery.

#### 3.1.2 Study population

The study population consisted of all Health workers working at Lira Regional Referral Hospital, Lira District.

#### Sample size Determination

The sample size was determined using Buttons formula which states that:

$$N=QR [0$$

Where: N is the sample size

Q is the population size

R number of respondents to be interviewed per day

O maximum time that would be spent on each respondent.

Taking,  $Q=60$  respondents= $20$ ,  $O=20$  minutes.

$$N=(60 \times 20) / 20$$

Therefore 60 respondents will be used in the study.

## **3.2 Sampling technique**

Simple random sampling was used since it gives all the respondents equal chances of being selected to participate in the study.

### **3.2.1 Sampling procedure**

A simple random technique was used to get 24 respondents to participate in the study among Health workers, Chits containing even numbers was tossed and those Health workers who pick chits containing the even numbers were selected to participate in the study.

### **3.2.2 Data collection method**

Data collection was done by the researcher and the assistant using a pretested self-administered questionnaire. This is because they were easily interpreted and less expensive in terms of costs and this made sure that every respondent was comfortable with the study and does not face challenges.

## **3.3 Data collection tools**

The researcher used close ended questionnaire as a data collection tool. The choice was justified by the fact that it was the single best tool in collecting quantitative data from a big number of respondents.



### **3.3.1 Data collection procedure**

The researcher obtained an introductory letter from Kampala Institute of Health Professionals which was used to obtain permission from medical superintendent. Among legible Health workers, participants were selected by simple random sampling after obtaining consent.

All Health workers to participate were given serial numbers. The researcher filled in the individual serial numbers and other information required in the questionnaire form. The respondent was first greeted followed by the researcher introducing his or herself.

He then explained to the respondent the purpose of his or her presence in that place, the benefits of the study to the respondent and the community at large then sought informed consent assuring them of a high level of confidentiality for the information generated. For the respondent who consented, a consent form was given to him or her to be filled and signed.

The researcher made sure that all questions were answered clearly and correctly. The questionnaire form was also properly be filled. After the activity the researcher thanked the respondent for his or her cooperation.

The above procedure was repeated on each respondent until the end of the data collection process and feedback was communicated to the respondents through the facility heads.

## **3.4 Study variables**

### **3.4.1 Dependent variable**

Adverse Drug Reaction reporting among Health workers

### **3.4.2 Independent variable**

**Factors affecting adverse drug reaction reporting.**

## **3.5 Quality control**

Data collection tool was pretested by selecting 10 Health workers randomly from Lira Regional Referral Hospital. The findings was then scrutinized to check the validity of the tools to be used and whether they provided relevant information as regards to the topic especially the specific

objectives. In case of irrelevance, adjustments were made on the tools to suit the study objectives accordingly.

For quality data collection, two research assistants were recruited and trained by the principal researcher. The researcher visited the facility before the study, sought permission from the responsible people, checked on the condition in the area to see if they were relevant to the research study. Available research and information about the study from Health worker at the facility and if the study area qualifies for the research. The researcher later continued and carried out research in that facility.

### **3.6 Data analysis and presentation**

Data was analyzed by the researcher manually by hand tallying, sorting and putting into categories. Microsoft excel software was used to analyze data and it was presented in afrequency distribution tables, bar graphs and pie charts with narrative below to make meaning of the results.

### **3.7 Ethical consideration**

Research topic was approved by the research committee of Kampala Institute of Health professionals and an introductory letter was presented to the medical director of Lira Regional Referral Hospital to seek permission to conduct the study.

Permission was sought from the medical director of Lira Regional Referral Hospital who referedthe researcher to the health workers around to select participants for the study, Health workers who met the inclusion criteria and are willing to participate voluntarily were given a consent form and confidentiality of respondents was ensured.

The findings and ethics of this study was approved by the research committee of Kampala Institute of Health Professionals. The researcher got permission from the relevant authorities to carry out the study. Acknowledgement of authors and scholars whose work was reviewed in this study was done by citations and referencing to avoid case of plagiarism in this study.

### **3.8 Study limitations**

Weather changes such as rain prevented some Health workers from going to the Hospital, sickness of Health workers was a great limitation, the attitudes of some Health workers which may be rude and unfriendly thus affecting the study negatively.

### **3.9 Dissemination of results**

The study findings was in a form of a research report that was disseminated to Uganda Allied Health Examination Board in partial fulfilment for an Award of a Diploma in pharmacy, Kampala Institute of Health Professionals and Lira Regional Referral Hospital.

## CHAPTER FOUR: RESULTS

### 4.0 Introduction

This chapter presents findings from the field as a sample of 60 respondents and it focused on identifying the factors affecting adverse drug reaction reporting among health workers and patients at Lira regional referral hospital, Lira district.

The findings were presented according to the order of the specific objectives as follows.

### 4.1 Health worker related factors affecting adverse drug reaction reporting among health workers and patients at lira regional referral hospital

**Table 1: a table showing all the social-demographic data of health workers and patients**

**(n=60)**

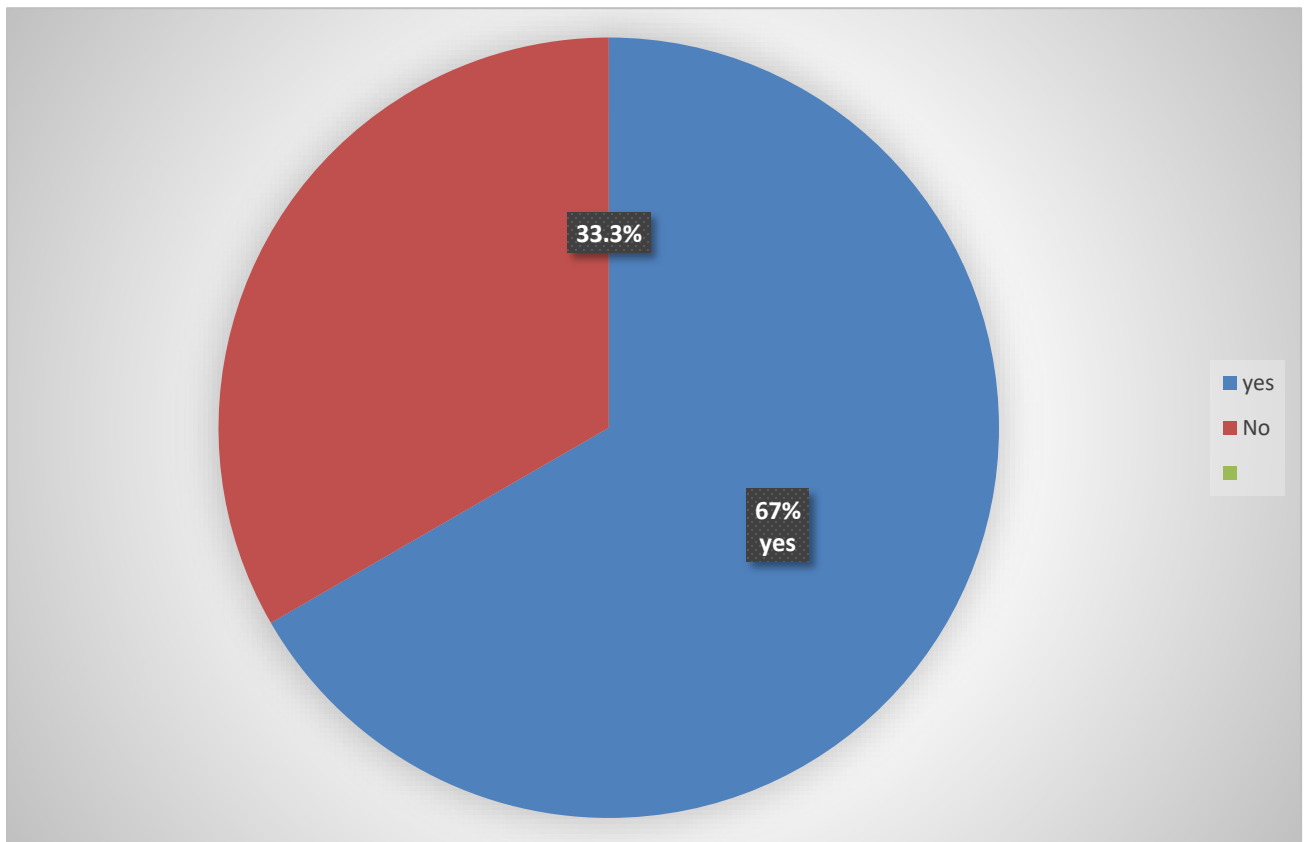
<b>Category</b>	<b>Option</b>	<b>Frequency(n)</b>	<b>Percentage (%)</b>
<b>Age</b>	18-25	10	16.7%
	26-32	20	33.3%
	33-39	25	41.7%
	40 and above	5	8.3%
	Total	60	100
<b>Gender</b>	Female	35	58.3
	Male	25	41.7%
	Total	60	100
<b>Marital status</b>	Single	20	33.3%
	Married	30	50%%
	Divorced	10	16.7%
	Total	60	100
<b>Religion</b>	Moslem	15	25%
	Catholic	20	33.3%
	Anglican	22	36.7%
	Others	3	5%

	Total	60	100
--	-------	----	-----

From the above table, most workers and patients were female 35(58.3%), above 32 years were 41.7% with 30(50%) of them married and at least each of them had a religion they belonged to. The male patients were few in number 25(41.7%), 20(33.3%) were single, 10(16.7%) were divorced.

**Figure 1: a pie chart showing whether the health workers worked full time or part time**

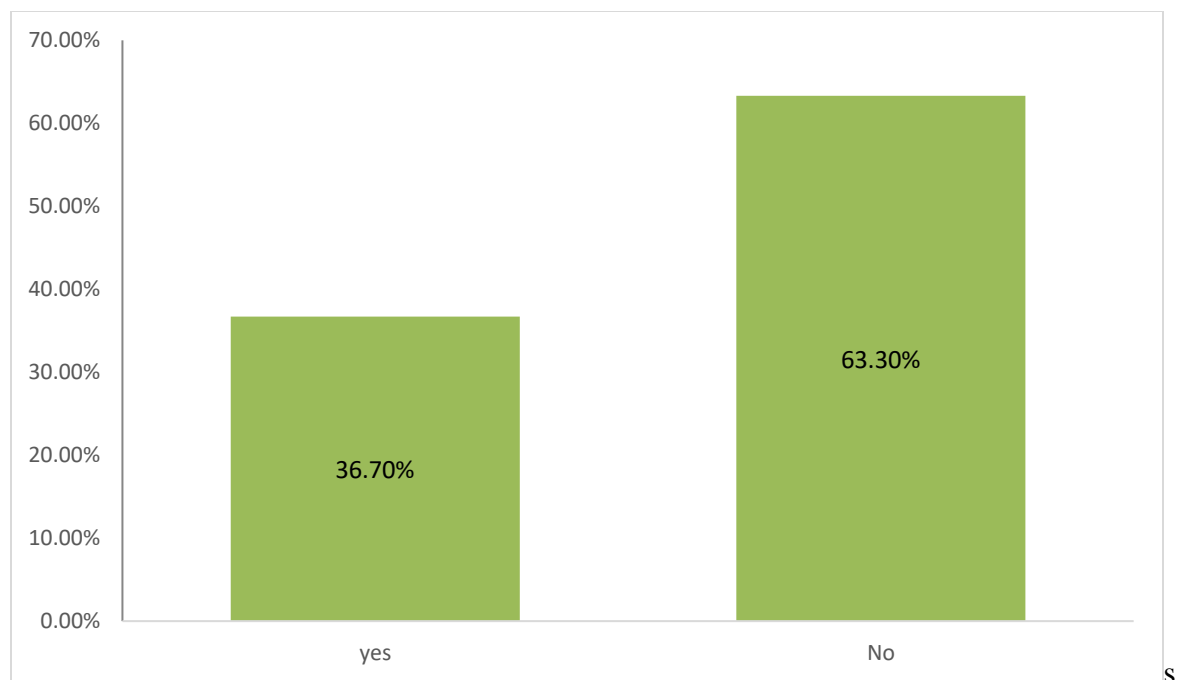
(n=60)



From the above figure, most 66.7% of the health workers worked full time at the facility and this was probably because they had to attend to the patients' needs at all times and were staying next to the facility, 33.3% of the workers did not work full time and this was because they were staying far from the facility.

**Figure 2: A graph showing whether health workers followed up their patients after drug administration**

(n=60)



From the above figure, most of the health workers 63.3% did not follow up their patients after drug administration maybe because they had a lot of other things to attend to and hence no time following up patients and a few health workers followed their patients 36.7%.

**Table 2: A table showing information concerning adverse drug reactions**

**(n=60)**

Category	Response	Frequency(n)	Percentage %
Whether health workers educate their	Yes	20	33.3%
	No	40	66.7%
	Total	60	100

patients about adverse drug reactions			
Whether health workers had adverse drug reaction reporting forms in their offices	Yes	30	50%
	No	30	50%
	Total	60	100
Whether health workers always recorded an adverse drug reaction when detected.	Yes	35	58.3%
	No	25	41.7%
	Total	60	100
Whether they had strategies to help them towards adverse drug reaction reporting.	Yes	40	66.7%
	No	20	33.3%
	Total	60	100

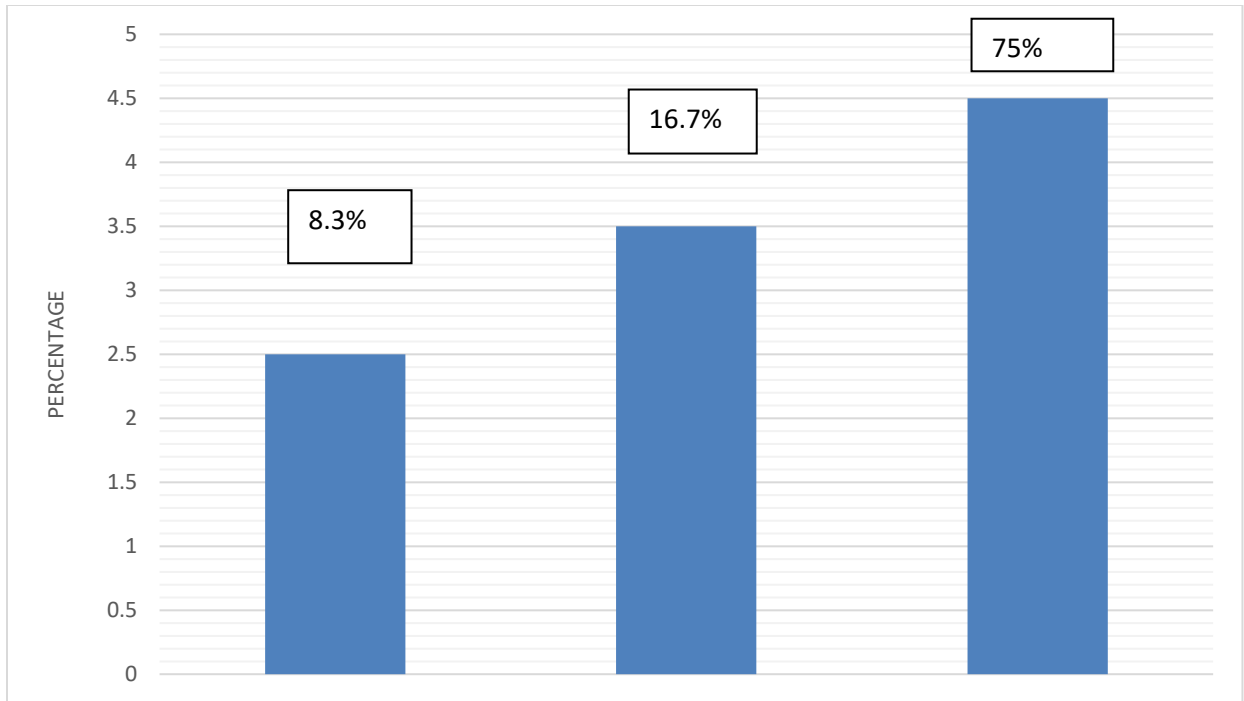
From the above table, most health workers (66.7%) did not educate their patients about adverse drug reactions and 33.3% of the health workers educated their patients, and 50% of the health workers had adverse drug reaction reporting forms in their offices, 58.3% of the health workers always recorded an adverse drug reaction whenever it was detected, 41.7% did not always record, 66.7% of the health workers had strategies towards adverse drug reaction reporting and 33.3% did not have.

#### **4.2 Facility related factors affecting adverse drug reaction reporting among health worker and patients at lira regional referral hospital.**

**Figure 3: a graph showing the type of health facility.**

**(n=60)**

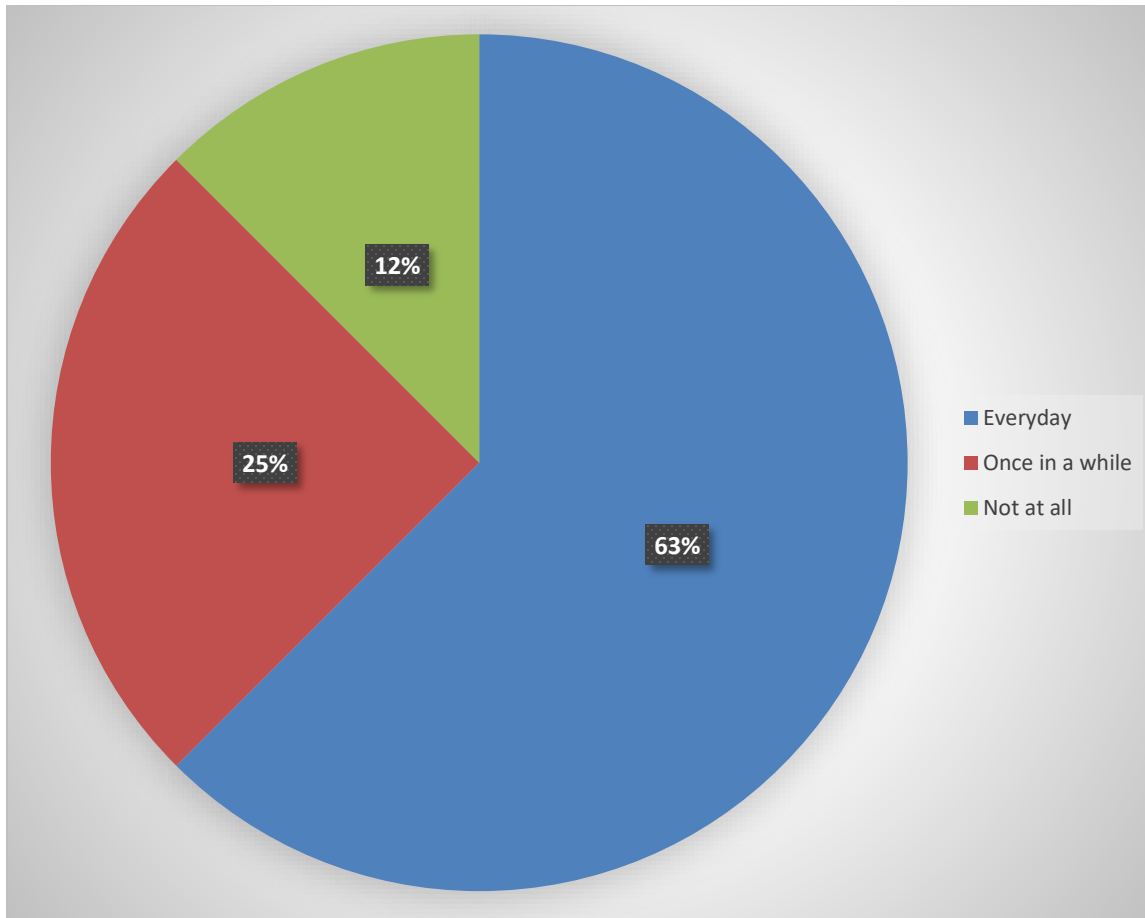




From the above figure, the government facility has the highest percentage 75% that is it is the most utilized facility due to the affordability of services at facility and accessibility, then private not for profit with 16.7% and finally private health facility which was the least used (8.3) because they tend to be expensive for most pat

**Figure 4: showing whether the health facility educated the health workers on adverse drug reactions**

**(n=60)**



From the above, 50% of the health facility educated its workers everyday concerning adverse drug reaction because it understood the importance of knowing about adverse drug reaction and its dangers, 33.3% educated their workers once in a while and 16.7% did not educate their health workers at all about adverse drug reaction due to lack of knowledge and information on adverse drug reaction and its dangers.

**Table 3: a table showing whether the health facility had valid documents for adverse drug reaction reporting**

(n=60)

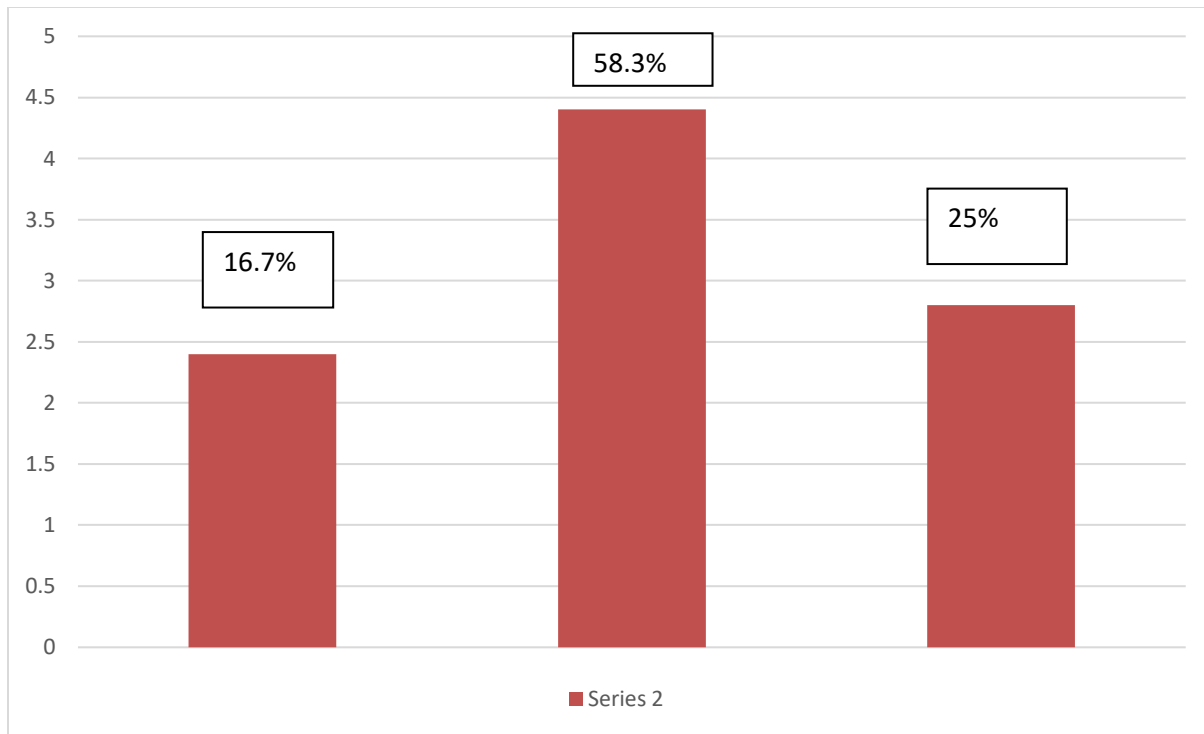
Category	Response	Frequency(n)	Percentage(%)
Whether the facility had valid documents	Yes	36	60%
	No	24	40%
	Total	60	100

for adverse drug reaction reporting			
If no, why?	Not enough resource	12	20%
	Health workers don't know how to use them	8	13.3%
	Not necessary	4	6.7%
	Total	24	100

From the above table, the highest number 60% had valid documents for adverse drug reaction reporting, and for the ones that did not have had no resources for accessing the documents (20%),13.3% of the health workers did not know how to use the documents for adverse drug reaction and finally 6.7% did not see it necessary to have those documents.

**Figure 5: a graph showing how long the health facility has been in existence.**

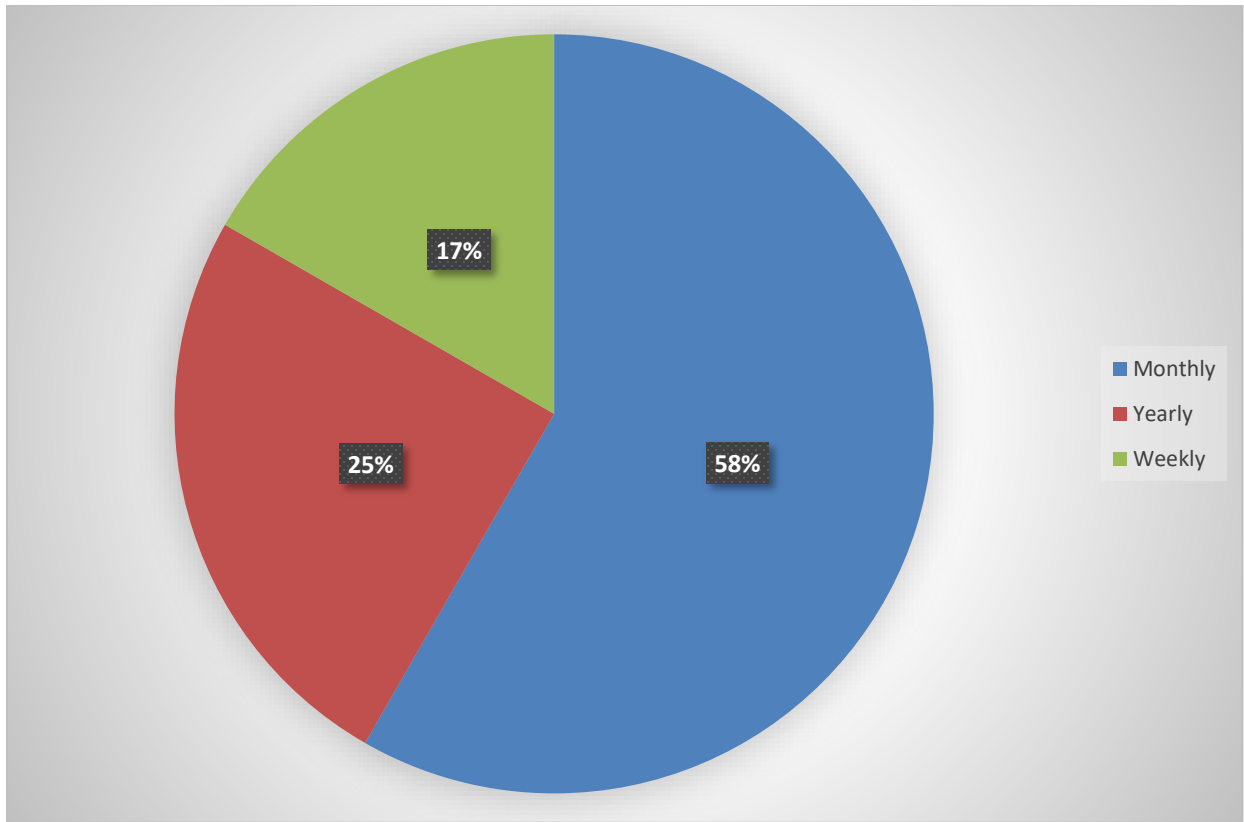
**(n=60)**



From above figure, the facility had been in existence in years with 3 and above years having the highest percentage with 58.3%, 2 years with 25% and finally 1 year had the lowest which was 16.7% hence the facility had been in existence for a long time and therefore had good information, knowledge and had understood adverse drug reaction and its consequences.

**FIGURE 6: Showing how often the health workers reported adverse drug reactions.**

**(n=60)**



According to this figure, most health workers reported adverse drug reaction on a monthly basis 35(58.3%), 15(25%) of the health workers reported annually and 10(16.7%) reported on a weekly basis in order to take the necessary measures towards reducing the occurrence of an adverse drug reaction.

#### **4.3 Patient related factor affecting adverse drug reporting among health workers and patients at lira regional referral hospital**

**Table 4: A table showing the patient related factors affecting adverse drug reaction**

(n=60)

Category	response	Frequency(n)	Percentage(%)
How often the patients visited the facility for medication	Once in a while	15	25%
	Regularly	10	16.7%
	When necessary	35	58.3%
	Total	60	100
Whether patients were familiar with adverse drug reactions	Yes	10	16.7%
	No	45	75%
	Not so much	5	8.3%
	Total	60	100
What patients did when they had issues with drugs they were taking	Stop taking the drug	20	33.3%
	Get another drug	20	33.3%
	Call the facility and repot.	20	33.3%
	Total	60	100%
How was the relationship between the patients and health workers	Close	15	25%
	Very close	10	16.7%
	Not close	35	58.3%
	Total	60	100%
How many drugs the patients took	1	5	8.3%
	2	15	25%
	3 and above	40	66.7%
	Total	60	100%
How often the patients got counselling from health when being given medicines	Every time	15	25%
	Sometimes	35	58.3%
	Don't get at all	10	16.7%
	Total	60	100%

From the above table, the results revealed that most patients 58.3% visited the health facility when it was necessary, 25% visited once in a while, 16.7% visited regularly. 75% did not know anything about adverse drug reaction, 16.7% knew about adverse drug reactions and 8.3 of the patients did not know much. 58.3% of the patients were not close to the health workers, 25% were close and 16.7% very close to the health workers, 25% of the patients got counselling whenever they were being given medicines, 58.3% got sometimes and 16.7% did not get at all.

## **CHAPTER FIVE: DISCUSSION, CONCLUSION, RECOMMENDATIONS**

## **5.0 Introduction**

This chapter presents the discussion, conclusion of the study findings and recommendations to help solve the problem. Data was gathered using questionnaires. The discussion is presented in relation to the specific objectives of the study and it commences with the health worker related factors, health facility related factors and patient related factor affecting adverse drug reaction reporting among health workers and patients at lira regional referral hospital.

## **5.1 Discussion**

### **5.1.1 Health worker related factors affecting adverse drug reaction reporting at lira regional referral hospital.**

The objective of the study to determine the health worker related factor affecting adverse drug reaction reporting among health workers and patients at lira regional referral hospital. Data analysis and interpretation revealed the following major findings under this objective.

The study showed that most health workers were between 33 and 39 (41.7%) years, with female workers having the highest number 35(58.3%), most of the health workers were married 30(50%) and Anglicans by religion of most of them with 22(36.7%).

The study showed that most (66.7%) of the respondents worked full time. This was probably because the health workers were staying near the health facility or the health facility provided shelter or houses for them to stay in so as to attend to the needs of the patients whenever need be, this was inconsistent with the study by Lense Temesgen Gurmesa (2016) where lack of knowledge and awareness on what, when and to whom to report an adverse drug reaction was a major problem.

Furthermore, the study revealed that the majority (66.7%) of the health workers did not educate their patients about adverse drug reactions and what to do whenever they occurred. This was because the health workers did not have enough time to interact with patients due to the heavy patient load at the hospital each day and also perhaps health workers were not being motivated to do their work may be due to poor working environment. This study finding were consistent to the study by Lense Temesgen Gurmesa (2016) where lack of communication of health care professionals was one of the major problem facing adverse drug reaction reporting.



The study also revealed that 50% chances that almost all the clinical offices had adverse drug reaction reporting forms for filling in an adverse drug reaction when detected, this was because the health workers tried their best to advocate for these forms probably for accountability and credibility purposes and prevent further injuries caused by the adverse drug reaction. This study finding was inconsistent with the study by Thamir M Alshammari (2018), where fear that the report might be incorrect 46% and lack of time 44%.

Further more the study also revealed that the majority (58.3%) of the health workers always recorded an adverse drug reaction whenever it was detected. This was because the adverse drug reaction forms were made available and provided at all times. The study finding was inconsistent with the study by Thamir M Alshammari (2018) where fear that the report might be incorrect 46% and lack of time 44%.

The study also revealed that the majority (66.7%) of the health workers had strategies to help them towards adverse drug reaction reporting. This was probably because the health worker understood the importance of adverse drug reaction reporting incase it was detected. The study finding was inconsistent with study by Kidu Gidey (2020) where about 58.3% of the health workers had poor knowledge on adverse drug reaction reporting.

To continue with, the study also showed that majority (63.3%) of the health workers did not follow up their patients after drug administration, this was probably because of the heavy patient workload they had to attend to daily and hence lacked enough time for patient follow up. The study finding was in line with the study by Thamir M Alshammari, (2018) where fear that the report might be incorrect 46% and lack of time 44%.

### **5.1.2 Health facility related factors affecting adverse drug reaction reporting**

The objective of the study was to determine the health facility related factors affecting adverse drug reaction reporting at lira regional referral hospital. Data analysis and interpretation revealed the following major findings under this objective.

The study revealed that the most (75%) type of health facility used was government health facility, this was probably because of the convenience and affordability of the health services at the facility and availability of many health workers at the facility to provide the services. The study findings was in line with the study by Alem Denekew (2014) where 9 public health facilities from ART clinic were selected.

Further more the study also showed that the majority (60%) of the health facility had valid documents for adverse drug reaction reporting. This was probably because the health facility had good knowledge, attitude and understanding towards adverse drug reaction reporting and hence laid strategies on how to keep records of such events or an event incase it occurred and prevent further complications. This study finding was in line with the study by Nashwa N Kamel, Emad G Kamel, (2014).

The study also revealed that the health facility educated their health workers about adverse drug reaction frequently (50%). This was because probably the cases of adverse drug reactions were increasing daily and also to sensitize the health workers about adverse drug reactions and its consequences. This was in line with the study by Yashmay Gordhon, (2020) where health workers were aware and fully trained on adverse drug reaction and its reporting.

The study showed that the health facility has been in existence from three years and above (58.3%) that is it has been in existence long enough to and has seen cases of adverse drug reaction and the health workers made a monthly report mostly (58.3%) on adverse drug reactions in order to see the level of adverse drug reaction occurring at a given period of time. The study finding was inconsistent with the study by Lense Temesgen Gurmesa (2016) where lack of knowledge and awareness on what, when and to whom to report an adverse drug reaction was a major problem.

### **5.1.3 Patient related factors affecting adverse drug reaction reporting**

The objective of this study was to determine the patient related factors affecting adverse drug reaction reporting at lira regional referral hospital. Data analysis and interpretation revealed the following major findings under this objective.

The study showed that the patients with the highest percentage (58.3%) visited the hospital whenever it was necessary hence there was not enough time for interaction between patients and health workers at the facility and this was because most of the patients feared going to the hospital or swallowing medicines.

The study revealed that most patients (75%) did not know anything about adverse drug reactions and this was probably because there was no enough time for health workers to interact with patients and explain to them about adverse drug reactions and how to go about it in case it is detected due to heavy patient or workload and most patients also never had enough time to stay in hospital. This study finding was in line with the study by Thamir M Alshammari (2018) where fear that the report might be incorrect 46% and lack of time 44%.

Further more, the study also revealed that most patients (33.3%) stopped the medicine, others called their doctor for consultation and others changed the medicine by themselves depending on what they thought was right at the time, therefore there was a 50% chance for each option for the patient when an adverse drug reaction occurred during the time when they were taking the medicine.

The study also revealed that the patients did not share a close (58.3%) relationship with the health workers due to lack of time by the health workers and patients who always wanted to leave the hospital as fast as they could due to phobia or other unknown reasons. The study finding was in line with the study by Lense Temesgen Gurmesa (2016) where lack of communication was a major problem.

The study also revealed that most patients (58.3%) got counselling sometimes from the health workers whenever they were being given medicines. This could probably be due to lack of time due heavy patient load or lack of knowledge on what to say to the patient after giving them

medicine. The study finding was in line with the study by Belete Kassa Alemu (2019) where lack of adequate knowledge about adverse drug reaction was a major problem.

## **5.2 conclusion**

The study specifically sought to determine the factors affecting adverse drug reaction reporting among health workers and patients at lira regional referral hospital, majority of the health workers knew what to do and had prior knowledge on adverse drug reactions.

Relating to the health facility, the health facility did its part of training the health workers on adverse drug reactions and its importance and also provided the necessary tools to aid in adverse drug reaction reporting.

Patient related factors, mostly patients visited the health facility whenever it was necessary and the majority did not know anything about adverse drug reactions and how to go about it in case it was detected.

## **5.3 Recommendations**

The government together with NGOs responsible for adverse drug reaction reporting ( pharmacovigilance center ) should put a lot of emphasis in educating patients and the general public about adverse drug reactions and how to handle it in case it is detected or suspected .

To the government, a lot of emphasis should be put on the patient related factors affecting adverse drug reaction reporting by creating more health workers who will have time to attend to the patients and explain to them about medicines and its use.

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## APPENDICES

### APPENDIX 1: INFORMED CONSENT FORM.

My name is Kantono Shamirah, a student at Kampala Institute of Health Professionals carrying out a research on the factors affecting adverse drug reaction reporting among Health workers at Lira Regional Referral Hospital in Lira District. The research has been approved by the school administration and the research supervisor. You have been identified as a potential study participant and an appeal is being extended to you now to read /listen to the information contained in this document with an aim of giving your consent on whether you will agree to participate in the study.

#### **The purpose of this study.**

It is to assess and evaluate the factors affecting adverse drug reaction reporting among Health workers. Therefore, you are being asked to join in the study to help the researcher understand these factors.

#### **Expectations in the study.**

The information you will give is highly confidential. No special benefits will be given to you in change of the information you provided. However, even when you don't involve in the study the quality of care and routine management will not change.

#### **You are also reminded to follow the instructions below.**

Your name will not be taken on the answering manual for confidentiality.

Answer all questions or only those that you have knowledge about appropriate to you.

You may need to seek clarity incase you don't understand any of the questions or regulations of the study.

Tick the alternative response that applies.

**Statement of consent.**

I have been explained to, read and understood the terms and the benefits involved in the study and agree to participate.

Participant's signature/thumbprint.....

Researcher's signature.....

Tel no: 0775577178.



## APPENDIX II: QUESTIONNAIRE

A questionnaire for a study on factors affecting adverse drug reaction reporting at Lira Regional Referral Hospital , Lira District.

Iam Kantono Shamirah a student at Kampala Institute of Health Professionals. I have come here to collect data about the stated topic. This will help in addressing the issue related to adverse drug reaction reporting among Health workers and also to accomplish my course of Diploma in Pharmacy I honestly request for your cooperation and honesty in providing the required information, confidentiality will be highly observed.

Respondents consent number..... Signature.....

Instructions,

Please tick in the box below.

### Section A: HEALTH WORKER RELATED FACTORS AFFECTING ADVERSE DRUG REACTION REPORTING

- 1) Do you work here full time?  
a) Yes                      b) No
- 2) Do you always educate your patients about adverse drug reaction?  
a) Yes                              b) No
- 3) Do you always follow up your patients after drug administration?  
a) Yes                              b) No
- 4) Are there adverse drug reaction reporting forms for filling in your office?  
a) Yes                              b) No
- 5) Do you always record an adverse drug reaction when detected?  
a) Yes                              b) No
- 6) Do you have strategies that help you towards adverse drug reaction reporting?  
a) Yes                              b) No

### Section B: HEALTH FACILITY RELATED FACTORS AFFECTING ADVERSE DRUG REACTION REPORTING.

- 7) What is the type of the health facility?
  - a) Government health facility
  - b) Private health facility
  - c) Private not for profit health facility
- 8) Does the facility have valid documents for adverse drug reaction reporting?
  - a) Yes
  - b) No
- 9) And if no, why?
  - a) Not enough resources
  - b) Health workers don't know how to use them
  - c) Not necessary at all

10)How often does the facility educate the workers  
about adverse drug reactions?

- a) Every day
- b) Once in a while
- c) Not at all

11)How long has the facility been in existence?(year)

- a) 1
- b) 2
- c) 3 and above

12)How often do the workers report adverse drug reaction?

- a) Weekly
- b) Monthly
- c) Yearly

**Section C: PATIENT RELATED FACTORS AFFECTING ADVERSE DRUG REACTION REPORTING**

13) How often do you visit the facility for medication?

- a) Once in a while
- b) Regularly
- c) When necessary

14) Are you familiar with adverse drug reactions

- a) Yes
- b) No
- c) Not so much

15) What do you do incase you have issues with the drugs you are taking?

- a) Stop taking the drugs
- b) Get another drug
- c) Call the health facility and report

16) How is the relationship between you and the health workers?

- a) close
- b) very close
- c) Not close

17) How many drugs do you take per dose?

- a) 1
- b) 2
- c) 3 and above

18) How often do you get counseling from health workers when being given drugs?

- a) Every time
- b) Sometimes
- c) I don't get at all

THANK YOU SO MUCH FOR YOUR COOPERATION

**APPENDIX III: Approval form.**

**Section A:** Study topic approval

Name of Candidate KANTONO SHAMIRAH .Reg No UAHEB/PHA/002/21

Research topic FACTORS AFFECTING ADVERSE DRUG REACTION REPORTING AMONG HEALTH WORKERS AND PATIENTS AT LIRA REGIONAL REFERRAL HOSPITAL

Approved by: Chairperson of the research committee

Name.....Signature.....

Date.....

**Section B:** Approval of Research Proposal.

Research Topic.....

Approved by: Chairperson of the Research Committee

Name.....Signature.....

Date.....

**Section C:** Approval of the Research Report

Research Topic FACTORS AFFECTING ADVERSE DRUG REACTION REPORTING AMONG HEALTH WORKERS AND PATIENTS AT LIRA REGIONAL REFERRAL HOSPITAL

Approved by: Chairperson of the Research Committee

Name.....Signature.....

Date.....

**Principal**

Name.....Signature.....

Date.....

**APPENDIX IV: Supervisor's Acceptance**

Name of Candidate KANTONO SHAMIRAH Reg No UAHEB/PHA/002/21

Title of Research Topic FACTORS AFFECTING ADVERSE DRUG REACTION REPORTING  
AMONG HEALTH WORKERS AND PATIENTS AT LIRA REGIONAL REFERRAL  
HOSPITAL

I ..... here by agree to supervise the above named  
candidate.

Signature..... Date.....

**Approved by:** The Research Committee.

Chairman..... Date.....

**APPENDIX V: Proposal and Report Approval Form**

**(a) Proposal Approval**

Print Name of Candidate KANTONO SHAMIRAH

Title of Research study| project FACTORS AFFECTING ADVERSE DRUG REACTION REPORTING AMONG HEALTH WORKERS AND PATIENTS AT LIRA REGIONAL REFERRAL HOSPITAL

I hereby accept this proposal for the research study\project and approve it for submission to KAMPALA INSTITUTE OF HEALTH PROFESSIONALS School and other concerned organization’s Institution Review Board| Research and Ethics Committee.

**Approved by**

Supervisor (Signature)..... Date.....

Principal (Signature)..... Date.....

**(b) Report Approval**

Title of the Research study FACTORS AFFECTING ADVERSE DRUG REACTION REPORTING AMONG HEALTH WORKERS AND PATIENTS AT LIRA REGIONAL REFERRAL HOSPITAL.

I hereby accept this research report for the above Research study and approve it for submission to UAHEB and other concerned Organizations.

**Approved by**

Supervisor (Signature)..... Date.....

Principal (Signature)..... Date.....

## APPENDIX VI: ACCEPTANCE LETTER

TELEPHONES:

General lines 0473420023  
Hospital Director 0372280238  
FAX 0473420139  
E-Mail: lrrrh@gmail.com

In any correspondence on this  
Subject please quote Ref. No:



THE REPUBLIC OF UGANDA

MINISTRY OF HEALTH  
LIRA REGIONAL REFERRAL  
HOSPITAL  
P.O. BOX 2, LIRA

25<sup>th</sup> June, 2024

The Principal,  
Kampala Institute of Health Professionals,  
P.O. Box 8843,  
**KAMPALA.**

Dear Sir/ Madam,

**KANTONO SHAMIRAH - DIPLOMA IN PHARMACY TECHNOLOGY.**

The above student from your institution has requested to carry out his research titled: **“Factors Affecting Adverse drug reaction reporting among Health workers** at Lira Regional Referral Hospital.

This letter is to confirm that she has been granted permission to carry out her research in Lira Regional Referral Hospital from **26<sup>th</sup> June 2024 to 9<sup>th</sup> July 2024** under the supervision of the Officer in charge.

Thank you.

A handwritten signature in blue ink, appearing to read 'Juliet Atoo'.

Ms. Juliet Atoo

For: **HOSPITAL DIRECTOR**



cc: Head of Unit  
cc: Human Resource Office – LRRH  
cc: Kantono Shamirah  
cc: File



APPENDIX VII: A MAP OF UGANDA SHOWING LIRA DISTRICT



**APPENDIX VIII: A MAP OF LIRA DISTRICT**

