KNOWLEDGE, ATTITUDE AND PRACTICE OF SELF MEDICATION AMONG SECOND YEAR UNDERGRADUATE MEDICAL STUDENTS OF KAMPALA INTERNATIONAL UNIVERSITY WESTERN CAMPUS

LAKER PASKA

DCM/0085/143/DU

A RESEARCH REPORT SUBMITTED TO SCHOOL OF ALLIED HEALTH SCIENCE IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A DIPLOMA IN CLINICAL MEDICINE AND COMMUNITY HEALTH OF KAMPALA INTERNATIONAL UNIVERSITY WESTERN CAMPUS

BUSHENYI

July 2017

DECLARATION

I LAKER PASKA hereby declare that this work presented in this research work is my own and has not been submitted to any institution of higher learning for any academic award any other views of any literature has been acknowledged.

Signature …… Date ……..

APPROVAL

This research proposal write up has been prepared under supervision and approval of my supervisor

Collins Atuheire (MSc. Clinical Epidemiology and Biostatistics, MAK)

Assistant lecturer

Department of public health

School of Allied Health Sciences

Kampala International University Western Campus

P. O Box 71, Bushenyi.

Signature…….. Date……..

DEDICATION

I dedicate this research work first of all to the almighty God who makes it all possible in my life. To my beloved dad the late Mr. COSMAS Alex, and mom the late Mrs. Santinah Alex in loving memory, who would have been very proud of me for having attained this level of education. The resilience, determination, commitment and values you instilled in me will remain a landmark in my life forever. You have and will always remain the shining light to my life.

I also dedicate this work to my beloved brothers and sisters you are the greatest gift I will ever have, thank you for your support, prayers and encouragement. May the almighty God richly bless you?

Finally, I dedicate this work to my supervisor Mr. Collins Atuheire, who has made my academic dream come to reality "May the almighty God bless you too.

ACKNOWLEDGEMENT

I wish to extend my sincere and special thanks to the almighty God who brought me to the world, loved me ,cared for me ,gave me knowledge and above all giving me the gift of life.

In a special way I thank my parents. You did not only give me fatherly and motherly love, care and support but you went extra miles and give me the best of all(education). Thanks for your financial support and guidance in my academic carrier.

MY lovely sisters, brothers and friends, thanks for the support, encouragement and utmost dedication to ensure my success in this project as well as my future life.

Mr. Collins Atuheire (MSc. Clinical Epidemiology and Biostatistics, MAK), my research supervisor. Thank you for being there for me all the time I needed your help and guidance. Your experience, skills, knowledge, human kindness and encouraging counsel awakens my eagerness to learn more in medical field. Thank you for your indebted time you spent while guiding through this piece of work.

Great things remain great in one's life that is why I have to thank my great my brothers OTIM GEOFRY AND OKEMA DENIS .Thank you for being there for me all the time I needed your help.

LISTS OF ABBREVIATIONS

BMS	Bachelor of Medicine & Surgery
DDHO	District Director of Health Officer
KIU-TH	Kampala International University Teaching Hospital
NDA	National Drug Authority
NGOs	Non-Governmental Organizations
OTC	Over the Counter
WHO	World Health Organizations

ABSTRACT

Background: Self-medication particularly with analgesics and antibiotics has been widely reported leading the WHO to call attention to the dangers of self-medication as a cause of antibiotic resistance (Kamat VR and Nichter M., 1998; Abasaeed A et al, 2009; Sarahroodi S et al, 2010; Nalini GK, 2010; Calva J, 1996). In country like Uganda there is a wide range of drugs coupled with inadequate health service result in increased proportion of drug used as a self-medication compared to prescribed drugs (Sharma R, 2005). Assessment of knowledge and practice of self- medication is warranted especially in rural settings.

Methods: This was an anonymous, questionnaire-based, descriptive study. Questionnaires containing closed ended questions were administered to 288 second year under graduate medical students.

Data analysis was performed using STATA 14. Descriptive statistics were performed in terms of frequencies and percentages. Statistical significance was assessed at alpha of 0.05.

Results: The research results indicated that the mean age was (24) and the majority of the students who participated in the study were male(63%). The prevalence of self-medication in my study was found to be markedly high (83.4%).
The most important reason for self-medicating was that it is cheaper (91%) and the majority (92%) of the students reported that they self-medicated because of diarrhea/vomiting with antacids found to be the highly used class of drug (93%). The majority got the information through advertisements with (98%) and (92%) of the students buying medicine from drug shops.

However, even though most of the students feared having the side effects of the medications since they are prescribing by themselves without any experience, so they would wish to visit a qualified medical practitioner for medical assistant when they get ill.

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.0 Introduction

This chapter consists of background of the study, the statement of the problems, general and specifics objectives of the study, research questions, scope of the study and the significance and justification of the study.

1.1 Background of the Study

Self-medication is a major form of self-care. It involves the use of medicinal products by the consumer to treat self-recognized disorder, symptoms, recurrent disease or minor health problems. It is independent of age for both males and females. Medicines for self-medication are often called Over the Counter (OTC) drug, which are available without a Doctor's prescription through pharmacies and drug shops mostly in the less developed countries.

Self-medication is defined as the use of medication by a patient on his/her own initiative or on the advice of pharmacist instead of consulting medical practitioner (WHO guidelines, 2009). Some governments are increasingly encouraging self-medication of minor illnesses. Studies done on self-medication reveal that it is fairly common practice in today's era, but it is confined to a relatively smaller group of medical student. With the emergencies and discoveries of new medicines for the managements of various diseases, the practice of self-medication has been on the rise.

The practice of self-medication in the general population in the form of over the counter drugs have been on rapid rise. Unaware of the appropriate drugs for the particular illness, their doses and adverse effects, the misuse of medications as prescribed by the pharmacist or family member or anyone in general may lead to such people literally playing with their lives at their own mercy. But with illiteracy, there is no stop to this. On the contrary, the situation is entirely different in the case of medical students. As soon as BMS students enters their second year, they have to study the details of various drugs, the diseases where they can be administered, the side effects, the contraindication and their drug interactions in the subject of pharmacology. The study of pathology and microbiology, in addition helps them to understand the pathological basis of the

disease and their causative organisms. This is what actually differentiates them from the general population.

On one hands students become more and more cautious in practicing self-medication, knowing that irrational and inappropriate usage of them might be more harmful the useful, so even in minor illnesses they prefer taking any medication only after consultation from a qualified practitioner. On the other hand, they may become overconfident, regarding their "bookish" knowledge and may start implementing self-care. They may either become successful in this attempt boosting up their confidents levels, hence encouraging them for its continued use. However it is also recognized that self-medication must be accompanied by appropriate health information.

Previous studies have shown that self-medication is influenced by various factors such as education, family, advertisements and society. A high level of education and professional status has been mentioned as predictive factors for self-medication.

Self-medication is a common practice and internationally has been reported as being on rise and can produce a good result and be a convenient practice for patient (Cindy LK et al, 1989; Verma RK et al, 2010). Self-medication particularly with analgesics and antibiotics has been widely reported leading the WHO to call attention to the dangers of self-medication as a cause of antibiotic resistance (Kamat VR and Nichter M., 1998; Abasaeed A et al, 2009; Sarahroodi S et al, 2010; Nalini GK, 2010; Calva J, 1996). In country like Uganda there is a wide range of drugs coupled with inadequate health service result in increased proportion of drug used as a self-medication compared to prescribed drugs (Sharma R, 2005).

1.2 Statement of the problem

The problems associated with self-medication are enormous and its effects cannot be undermined. This is because self-medication constitutes both social and economic problems not only to an individual but the society at large. This however requires urgent attention from various quarters because of the grave consequences this problem might cause if not adequately addressed. According to Burton (2012), self-medication often only gives temporary relief to sickness instead of permanent cure by suppressing and masking the symptoms only, for the sickness to relapse after sometime.

In addition, self-medication creates drug resistance to sicknesses and may lead to drug addiction especially when it is done intermittently. Also, self-medication may also cause delay in diagnosis of illness, as the root cause of illness may not be known if thorough medical investigation is not done. Consistent use of drugs that are not prescribed by doctors can also lead to damage of organs in the body especially when the drugs are not properly administered, or overdose is done (Atohengbe, 2013). According to Atohengbe (2013), consistent use of paracetamol for instance for headache, without proper diagnosis, can cause liver damage which may result to death.

It is also pertinent to mention that, the practice of self-medication may affect the utilization of medical facilities provided to cater for the health of the people in the society. This is because, health facilities provided by the government and the private sector such as hospitals, clinics and dispensaries may be neglected at the expenses of more accessible channels such as pharmacies and drug hawkers, therefore leading to underutilization of health facilities in the society.

From the foregoing, it is evident that the phenomenon of self-medication is really a societal problem and its effects are devastating and generally have negative consequences on development process of the society, hence, the need for research to uncover the various factors influencing the practice.

1.3 Objectives of the study

1.3.1 General Objective of the study

To assess the knowledge, attitude and practice of self-medication among second year undergraduate medical students of Kampala International University Western campus.

1.3.2 Specific objectives of the study

i. To analyze the level of practices self-medication among second year undergraduate medical students of Kampala International University Western campus.
ii. To determine the factors contributing to increasing knowledge level on self-medication among second year undergraduate medical students of Kampala International University Western campus.
iii. To find out the attitude of self-medication among second year undergraduate medical students of Kampala international university western campus.

1.4 Research Questions

i. What are the knowledge of the undergraduate second year medical students of KIU-WC towards self-medication?
ii. How does the attitude of the undergraduate medical students at KIU-WC contribute to the practice of self-medication?
iii. What are the factors contributing to the prevalence of self-medication among undergraduates second year medical student at KIU-WC?

1.5 Scope of the study

1.5.1 Geographical Scope

This study was carried out in Kampala International University Western campus, Bushenyi district which is located in the south western part of Uganda. It is boardered by kakanju from the north, kyeizoba from the east, bumbaire from the west and nyabubare from the south. The study was conducted among undergraduate second year medical students.

The university has a population of 5000 students and of which 400 students are second year undergraduate medical students.

1.5.2 Content scope

The study was conducted to assess the knowledge, attitude and practice of self-medication among second year undergraduate medical students of Kampala international university western campus. It therefore focused on the practices of self-medication, reasons and the illness self-medicated for, the attitude of these groups of people toward self-medication, and their knowledge about self-medication.

1.5.3 Time Scope

The study was conducted for a period of 3 months but drew data from past trends and review related literature in the practice of self-medication. This period of time was deemed appropriate for me the researcher to come up with a well analytical report on the practice of self-medication among the undergraduate second year medical students of Kampala international university western campus.

1.6 Significance and justification of the study

It is hoped that the findings in this research will be used by Ministry of Health and District Director of Health office (DDHO), Nongovernmental Organizations (NGOs), National Drug Authority (NDA) and all other sectors that are responsible for the provision of drugs and treatment of people.

The study will identify the needs in provision of drugs and find the loopholes in the existing structure.

By identifying drug provision alternatives, the research will identify possible areas of intervention which will improve professional medical treatment of the ill.

Data generated will help planners and policy makers to put organizational or institutional arrangements which will improve the provision of professional medical evaluation, management and prescription of drugs to persons.

The data will add to the existing knowledge for academic purposes and will stimulate further research by earmarking the research gaps.

1.7 conceptual frameworks

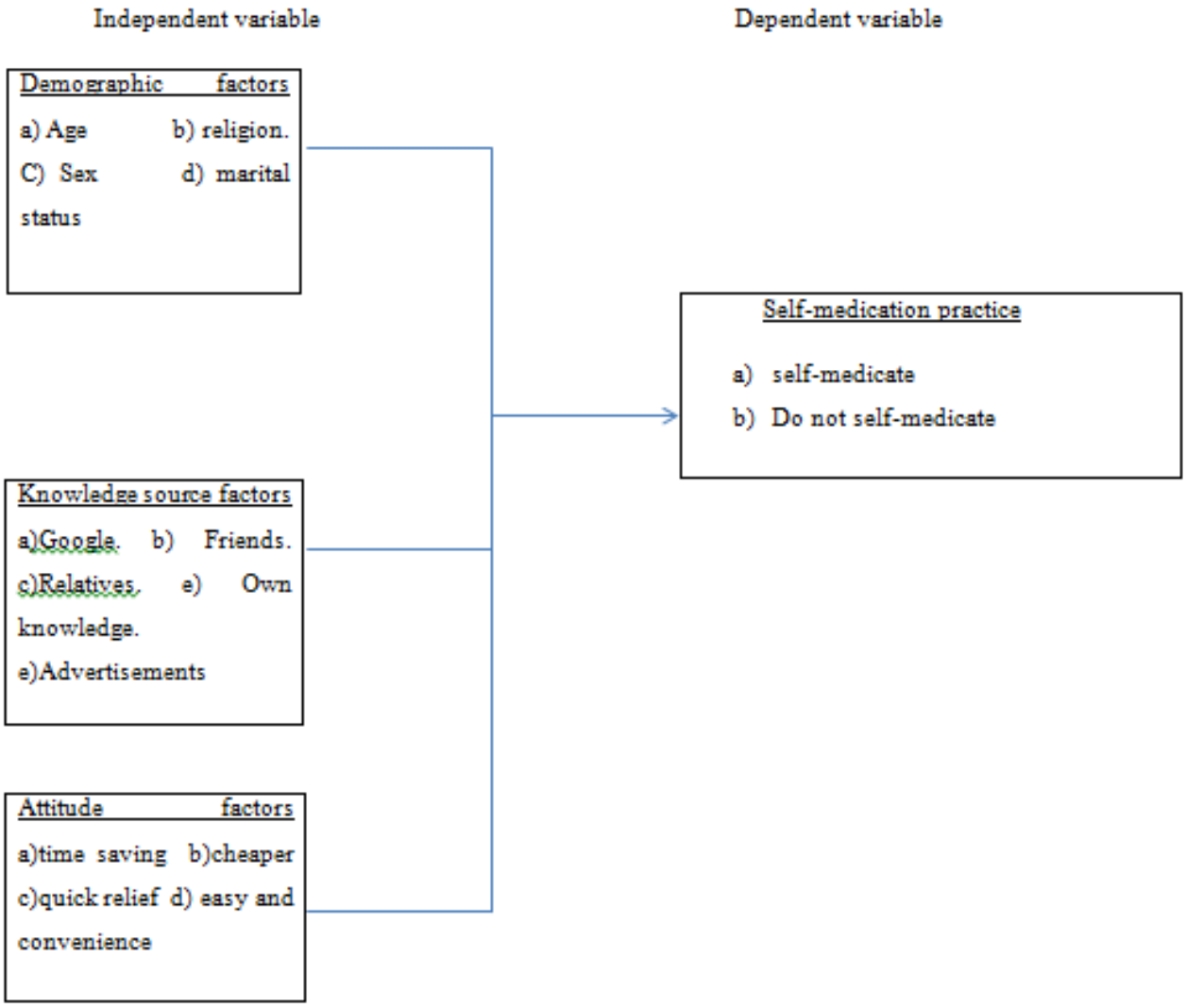
Independent variable
Dependent variable
Demographic factors
a) Age b) religion.
C) Sex d) marital status
Knowledge source factors
a)Google. b) Friends.
c)Relatives. e) Own knowledge.
e)Advertisements
Attitude factors
a)time saving b)cheaper
c)quick relief d) easy and convenience
Self-medication practice
a) self-medicate
b) Do not self-medicate

FIGURE: 1

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

This chapter provides background on other research studies that have been carried out concerning the practice of self-medication and other related literatures. It shall focus on the prevalence of self-medication, those who self-medicate most and for what sickness, factors for the prevalence and the consequences of self-medication.

2.1. Extent and prevalence of Self-Medication

The concept of self-medication which encourages an individual to look after minor ailments with simple and effective remedies has been adopted worldwide (Sinclair HK et al, 2001). People hold the view that medicine should be used in the event of any sickness or discomfort. In the United Kingdom where on the average 50% of health care takes place within the realm of self-medication (Afolabi AO., 2012). Self-medication is very common now a days and it is being used worldwide. In developing countries, where universal access to health care is yet to be achieved, self-medication is one of the common and preferred modes resorted to by the patients. Drugs classified as ‘‘over the counter’’ can be purchased without prescription and many a times might save time and money for the patients. In majority of the hill, tribal regions, and other hard to reach areas where there is a huge shortage of human health work force, patients are still dependent on self-medication practices for minor symptoms (Hughes CM et al, 2001).

In a questionnaire designed to evaluate self-medication rates amongst the population of Khartoum, Sudan, 48.1% of respondents reported self-medicating with antibiotics with, 43.4% reported self-medicating with antimalarial, and 17.5% reported self-medicating with both. Overall, the total prevalence of reported self-medication with one or both classes of anti-infective agents within the past month was 73.9% (Abdelmoneim et al, 2005). Furthermore, according to the associated study, data indicated that self-medication "varies significantly with a number of socio-economic characteristics" and the "main reason that was indicated for the self-medication was financial constraints". Similarly, in a survey of university students in Southern China, 47.8% of respondents reported self-medicating with antibiotics (Pan et al, 2012).

A study in Northern Uganda by Ocan M. et al (2014) found that high proportion of 75.7% of respondents practiced anti-microbial self-medication. Fever, headache, lack of appetite, influenza and cough were the disease symptom most treated through self-medication. The most commonly self-medicated anti-microbial were Coartem with 27.3%, Amoxicillin 21.7%, Metronidazole 12.3%, Cotrimoxazole 11.6%. Drug use among respondents was mainly initiated by self-prescription 46.5%, and drug shop attendants 57.6%. About 76% of respondents reported that antimicrobial self-medication had associated risks such as wastage of money 42.1%, drug resistant 33.2%, and masking symptoms of underlying disease 15.5%. Predictors of self-medication were gender, drug knowledge, drug leaflets, and advice from friend, previous experience, long waiting time and distance to health facility.

2.2. The Practice of self-Medication (who self-medicate most and for what sickness)

According to WHO (2010), Self-medication provide a cheap alternative to people who cannot afford to pay medical practitioners. Hence, self-medication is the first response to illness among people. (Solomon Worku 2000).

In their research study on Self-Medication practices in Rural Districts of Eastern Uganda, Dr. Alele Peter M, Prof. Phillipa Musoke & Dr. Nabukeera Nicolette (2015) reported that approximately 28% of the people received information guiding their drug use from previous visits to health centers, while another person in the community provided guidance to 24% of the respondents. Radio/TV adverts and drug peddlers provided 19.7% and 18.2% respectively of guidance on drug choice to the people respectively. The majority administered drugs purchased from local drug shops 54%. However 17.5% used left over drugs from previous prescriptions and 11.7% acquired medicines from local clinics. Only 5% of the respondents obtained drugs from a pharmacy.

However, Moses Ocan et al (2014) in their study of factors predicting home storage of medicines in Northern Uganda acknowledged that the most common medicines that were found in households includes antibacterial (40.1%), analgesic (19.6%), and antimalarial (15.6%) which were used for self-medication. The majority of households had antibacterial drugs such as cotrimoxazole (trimethoprim-sulfamethoxazole), metronidazole, ciprofloxacin and antimalarial (coartem). Sharing of drugs among household members was also a common practice of self-medication in Northern Uganda due to previous success of the drugs.

Usually, self-medication is indicated for trivial symptoms perceived by the patient. It is favored for fever, skin condition, general health care, aches and pain, problems of the eye, mouth, gastrointestinal and respiratory tract (Ibrahim M., 1996).

Despite a growing research interest in self-medication, little information has been available about its major determinants. Individual self-care in illness is shaped in the social environment – a major determinant of the type and amount of health care services used (Khantzian E.J., 1985). The socio demographic determinants are age, gender, occupation, education, marital status, religion, race, income and culture. The socio-medical factors may be related to the female reproductive role (pregnancy, breast feeding, and menstruation), psychiatric disturbance, medical states like asthma, migraine and so on.

The younger age group engaged in self-medication than the older ones (Agbor M.A. & Azodo C.C., 2011; Martins A.P. et al, 2002; RaO J.K et al., 1997; Antonov K and Isaacson D., 1996; Sonam Jain et al, 2011 & Tse M.H., Chung J.T., Mungo J.G., 1989). However, some studies revealed no association between age and self-medication (Saeed A., 1988; Afolabi A.O., 2007; Pucynski M.S., Gonzalez J., O'Keefe J.P., 1988 & Rodriguez-Benito U. et al, 1994).

Women have higher knowledge about drugs and risks of self-medication compared to men. They also had a much higher probability of using supplements, OTC tranquilizers and analgesics for self-medication than men who on the other hand commonly use more stimulants (Casner P.R and Guerra L.G., 1992). Self-medication with drugs to relieve depressive symptoms was far more likely in men than women (Weiss R.D., Griffin M.L., Mirin S.M., 1992). Factors related to general health status and women's reproductive role influences gender differences in self-medication. During breastfeeding, self-medication was dictated by the mother and her infant's disorder. In addition, women with pre-menstrual symptoms use caffeine as a form of self-medication to relieve the symptoms. However, some studies revealed no association between gender and self-medication (Afolabi A.O., 2012).

Various studies consistently showed that self-medication was associated with educational level. For instance, there is a positive correlation between level of education and self-medication (Saeed A., 1988; Abosede O., 1984; & Afolabi A.O., 2008). The trend of consulting patent medicine dealers for prescription decreases with acquisition of more formal education (Carpetier

L. et al, 1995). While studies showed no correlation between self-medication and occupational status others revealed some association. For instance, employment status affected the pattern of OTC and prescription drugs. Specialist in anaesthesiology, emergency medicine, general and family practice self-medication than other medical specialist probably due to habitual overwork and unrestricted access to drugs (Chambers R., 1992)

The relationship between race and self-medication had been documented from various studies. Nonwhites had a higher probability of using tranquilizers than whites (Bell R., 1984) and whites likely than blacks to consume supplements (Subar A.F and Block G., 1990). Among the elderly, fewer blacks reported the use of OTC medications than non-blacks (Hanlon J.T et al., 1992). While some studies found little or no association between self-medication and social status (Szyllejko O, 1984), others reported that among school aged subjects, social classes of parents has a direct relationship with drug consumption among their children. The influence of culture is common in health related states and was related to female reproductive roles like childbirth, and in the treatment of morbidity and mortality in children. Athletes consume sex hormones to alter their menstrual cycle so as not to disturb the training schedule and competitive programme while some use anabolic steroids to enhance their performance (Afolabi A.O., 2012).

2.3. Factors leading to Self-Medication

Craving for medicine and self-medication has been part of mankind from one generation to another. People generally hold the view that medicines should be used in the event of any sickness or discomfort (Haak H, 1988). Consumers are being called upon to assume more responsibility for their health promotion and disease prevention practices. This challenge has motivated them to embrace the concept of self-medication (Afolabi A.O., 2012)

It is a common knowledge that there are not enough Doctors and Pharmacists in Africa and other developing countries to direct and guide everyone who become ill on the correct use of medications. Drug manufacturers have not helped matters as their chief concern is to promote the sale of their medicines without giving adequate information to the public on such drug if possible in the local language. This is compounded by high illiteracy level, poverty and inadequate health facilities and personnel. Self-medication offers a way out as people begin to sense the positive benefits of multiplying their options in health care. In the developed countries with sufficient

health manpower, many people still buy non-dangerous medications without a doctor's prescription (Menard G. et al., 1993; Casner P.R. & Guerra L.G., 1992).These are the over-the-counter (OTC) drugs whose sales statistics reflect the pattern of self-medication (Wessling A., 1989).

Modern consumers (patients) wish to take a greater role in the maintenance of their own health and are often competent to manage (uncomplicated) chronic and recurrent illnesses (not merely short-term symptoms) after proper medical diagnosis and with only occasional professional advice, e.g. use of histamine H_2-receptor blocker, topical corticosteroid, antifungal and oral contraceptive. They are understandably unwilling to submit to the inconvenience of visiting a doctor for what they rightly feel they can manage for themselves, given adequate information (Bennett PN & Brown MJ, 2003). Self-medication is very common and a number of reasons could be enumerated for it (Chang FR & Trivedi PK, 2003; Worku S & Miriam A., 2003). Urge of self-care, feeling of sympathy towards family members in sickness, lack of health services, poverty, ignorance, misbelieves, extensive advertisement and availability of drugs in other than drug shops are responsible for growing trend of self-medication (Phalke VD et al, 2006)

There are some other reasons like wider availability of medicine, greater choice of treatments, ease of access (Basak SC & Sathyanarayana D, 2010), an active role in his/her own health care and self-reliance in preventing or reliving minor symptoms or condition, ailment was minor and financial constraint (Omolase CO, Adeleke OE, Afolabi AO, Afolabi OT., 2007).

2.4. Consequences of Self-Medication

Expected health benefit from self-medication depends on perceived effectiveness of self-medication. In a world of scarce government and in many countries scarce individual resources, responsible self-medication should be a cornerstone of healthcare provision and health policy. Responsible self-medication can help to prevent and treat symptoms and ailments that do not require a doctor; reduce the pressure on medical services where health care personnel are insufficient; increase the availability of health care to populations living in rural or remote areas and enable patients to control their own chronic conditions.

These benefits translate into patient and consumer wellness and productivity, economic gain for employers, and cost savings to healthcare budgets through reduced medicine budget cost and

reduced physician visits. These conditions aim at ensuring the safety of taking self-medicated drugs which includes; the drugs used are those indicated for conditions that are self-recognizable; the user should know how to take or use the drugs; the effects and possible side effects of the drugs as well as ways of monitoring these side effects are well communicated to the user; possible interactions with other drugs is known by the user; duration of the course of the drugs is known by the user and, when the user must seek professional intervention (Sonam Jain et al, 2011).

Medications are an essential asset to health and an important therapeutic tool in the hands of doctors, dentists and other health professionals. Nevertheless, their irrational use, the consequences of this use and the practice of self-medication are one of the main causes of adverse reactions to medications (Arrais PSD, 2005; De Loyola A & Uchoa E, 2002). The problems associated with self-medication are enormous and its effects cannot be undermined. This is because self-medication constitutes both social and economic problems not only to an individual but the society at large (Sonam Jain et al., 2011).

According to A.O. Afolabi (2012); Self-medication is of public health concern because of the problem of drug misuse and abuse and its attendant medical (drug resistance and hypersensitivity), social (juvenile delinquency) and psychological (addiction and physical dependence) problems. In addition, lack of knowledge of possible side effects of self-administered medication and possibility of selling potentially dangerous drugs as over-the-counter in developing countries could have a deleterious effect on the general health of the public.

According to Claudio M (2011)there is a growing concern about the consumption of self-medications, since the majority of the side effects developed frequently are more serious than the original disease itself. In addition, the momentary relief of symptoms may mask the underlying disease and could aggravate it. Therefore, various medications that should be used only on medical prescription are indiscriminately sold by the drugstore, due to the fact that in Uganda, the pharmacies and drug shops are not recognized as a health unit, but as a retail outlet of medications and correlated products.

Meanwhile, Trostle J (1996) asserts that modern medicine have become absorbed rapidly in to the local custom throughout the world, their ubiquitous distribution, powerful marketing and poor control mean that they are used and misused for a wide range of applications. This is partially due to the fact that patient knowledge of appropriate treatments for infections may be inconsistent with available evidence of effective treatment (McKee MD et al, 1999). For instance; there is widespread use of antibiotics for primarily viral self-limiting respiratory infections. Investigators have reported that resistance of common pathogens is positively correlated with exposure to antibiotics. One of the factors that contributes to excessive exposure of pathogens to particular antibiotics is use without prescription. This sometimes leads to inappropriate use of the drugs ranging from too low a dose for effectiveness, use for very long or short periods, wrong choice of drugs, and use in situations where there is absolutely no indication, to instances of wrong combinations (Jacqueline N, Sarah N, Michael B, Samantha K, Norman M & Adriane K, 2011).

Joseph A. Oluyemi et al (2015) also noted that it is pertinent to mention that, the practice of self-medication may affect the utilization of medical facilities provided to cater for the health of the people in the society. This is because, health facilities provided by the government and the private sector such as hospitals, clinics and dispensaries may be neglected at the expenses of more accessible channels such as pharmacies and drug hawkers, therefore leading to underutilization of health facilities in the society.

In addition, self-medication creates drug resistance to sicknesses and may lead to drug addiction especially when it is done intermittently. Also, self-medication may also cause delay in diagnosis of illness, as the root cause of illness may not be known if thorough medical investigation is not done. Consistent use of drugs that are not prescribed by doctors can also lead to damage of organs in the body especially when the drugs are not properly administered, or overdose is done (Atohengbe, 2013). According to Atohengbe (2013), consistent use of paracetamol for instance for headache, without proper diagnosis, can cause liver damage which may result to death.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter involves description of study design, study site, study population, study variables, study tools, sampling frame, sample size determination, sampling methods, data collection, data management, data analysis, data presentation, quality control, study limitation, ethical considerations, and dissemination of study results.

3.1 Study design

The study design was descriptive cross sectional study using random sampling method until 50 respondents are got. Questionnaires were used for data collection. Second year under graduate medical students at Kampala international university western campus in Ishaka-Bushenyi were selected by convenient sampling. Data was collected through face to face interviews using interview guides and pre-tested semi-structured questionnaires.

3.2 Study area

The research was conducted in Kampala international university western campus in Ishaka municipality, Bushenyi district, located in western part of Uganda and is approximately 326km from Kampala, the capital city of Uganda. Bushenyi-Ishaka municipality is composed of 3 divisions i.e. Ishaka, Nyakabirizi and central division and each division is divided into wards which are further divided into cells.

3.3 Study population.

The targeted population for the study was undergraduate second year medical students of Kampala international university western campus in ishaka

3.3.1 Study tools.

Semi-structured questionnaires was designed and distributed among the second year undergraduate medical students of kampala international university western campus.

3.4 Study variables.

Dependent variables included the practice of self-medication

Independent variable included socio-demographic data, attitude, and knowledge of self-medication among second year undergraduate medical student of Kampala international university western campus

3.5 Selection criteria.

This included both inclusion and exclusion criteria.

3.5.1 Inclusion criteria.

The study participant were both females and males and who were second year undergraduate medical students of kampala international university western campus in ishaka who consent to the study

3.5.2 Exclusion criteria.

Those with chronic illness and those who were absent were excluded.

The second year medical students below the age of 18years old were also excluded.

Second year medical student who were mentally unwell

3.7 Sample size estimation.

In view of the time allocation for data collection, non-probability sampling method (convenience sampling) was employed to select subjects for the study.

The sample size was determined using the formula

$S=Z^2*pq/d^2$

Where;

S=the sample size

Z= is the confidence interval. Where z is 1.96 if the degree of confidence is 95%

d= the error you are prepared to accept, it is measured as a proportion of the standard deviation.

P= an estimate of the proportion of the people falling into the group in which you are interested in the population.

q=1-p

Therefore our sample size was;

If z=1.96, p=25 %(0.25), q=75 %(0.75), and d = 5%(0.05)

$n=1.96^2*(0.25*0.75) /0.05^2$

n=288

From the above formula the sample size had 288 subjects (males and females aged 18 years and above.

3.6 Study frame

This was from the names of second year undergraduate medical students of kampala international university western campus which was obtained and used as study frame.

3.9 Sampling procedure

Convenience simple sampling was used in selecting students of Kampala International University Western campus, Bushenyi district, to take part in the study where both male and female students will be selected by use of convenient simple sampling.

3.10 Data collection

Data was collected solemnly by the researcher with the help trained research assistants, checklist was used to interview the respondents.

3.11 Data management.

Questionnaires were kept out of reach of other people .The soft copy was password protected; backups were kept on flash disks.

3.12 Data analysis

Data was sorted manually and scientific calculator use to compute figures and results will be displayed in percentages, proportions, tables, graphs and charts to display findings.

3.13 Quality control.

The quality of data was enhanced by using questionnaires and a trained research assistants.

I ensured questionnaires were filled correctly by allowing enough time for filling the questionnaires. I explained technical terms to participants. Questionnaires were printed and pre-tested before administrating in a full study to ensure reliability and validity.

3.14 Ethical considerations

An introductory letter was obtained from KIU-TH Faculty of Allied health after approval of the proposal by Research and Ethics Committee of the Department of Health Studies, KIU-TH.

Informed consent was obtained from the respondents after explaining the nature and purpose of the study. It was emphasized that participation is voluntary and that they can withdraw from the study at any time without penalty.

The interviews were conducted privately and the respondents were assured that their information was treated as being strictly confidential.

The principle of autonomy was practiced where by all participants received enough information about the study and this enabled them to exercise their rights during decision making whether to participate or not. Students (respondents) were thanked for their contribution.

3.15 Dissemination of results

Copies of final research report was given to Uganda Allied Health Examination Board, Ministry Of Health, Kampala international university school of Allied health sciences and a copy will remain with the researcher

CHAPER FOUR

4.0 data analysis and research findings

This chapter contains data analysis and research findings. Data was collected and entered in Microsoft office excel, analyzed and presented in form of tables and pie charts.

4.1 Table showing the result of socio-demographic data of knowledge, attitude and practice of self-medication among second year undergraduate medical students of Kampala international university western campus.

The median age from the respondents was 24 as in the table below.

The majority of the respondents were male 63% and then the females were 37%.

Of the respondents, as shown in the table below, the highest percentage of 35% were Catholics, followed by 22% which were protestants, then 13% were Muslim, 18% were born again and 1% were other religion.

As in the table below, the greatest percentage of 64% were single, followed by 35% who were married and 1% was divorced.

Variable	Summary measure
Median age(IQR)	24(23-26)
Religion n (%)	
Catholic	102(35)
Protestant	64(22)
Muslim	38(13)
Adventist	32(11)]
Born again	51(18)
Others	2(1)
Marital status n (%)	
Single	184(64)

Married	102(35)
Divorced	3(1)
Gender n (%)	
Male	181(63)
Female	108(37)

TABLE: 1

4.2 A pie chart showing the Proportion of self-medication among second year under graduate medical student at Kampala international university western campus.

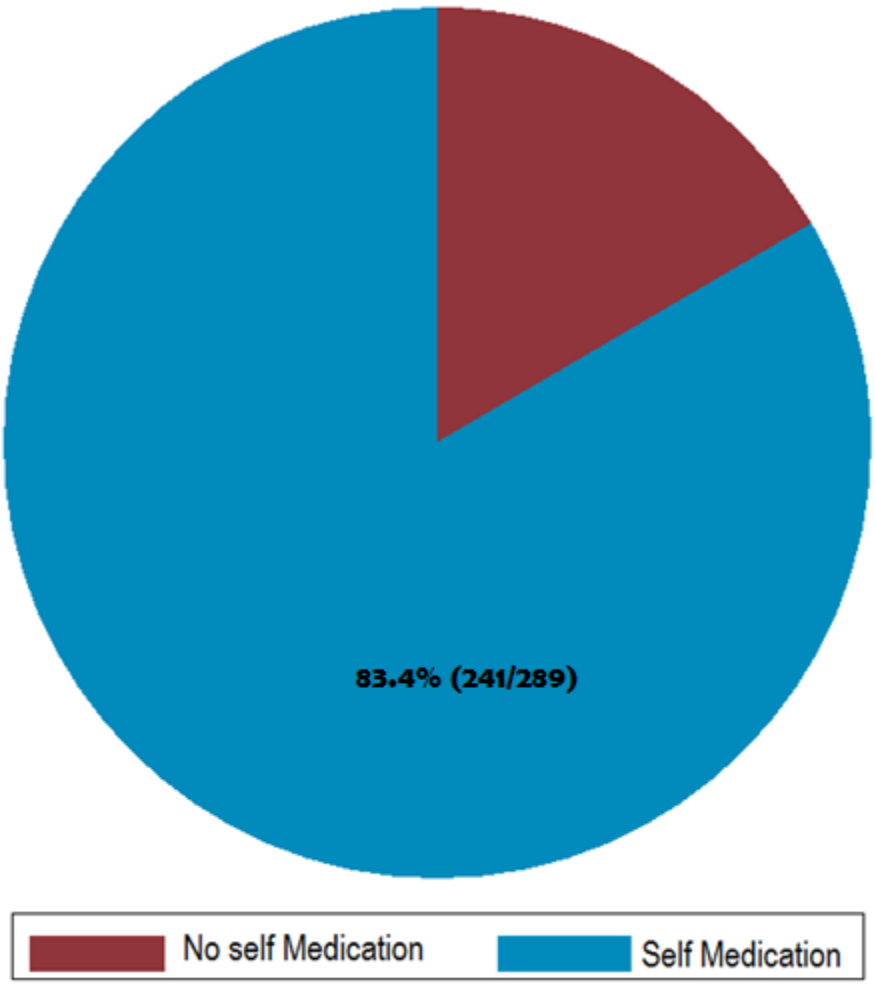

FIGURE: 2

From the above pie-chart it can be noted that the highest percentage 83.4% of the students were involved in the practice self-medication and only 16.6% of the student did not practice self-medication.

4.3: A table showing practices of self-medication among second year under graduate medical student at Kampala international university western campus.

From the table below, 92% of the students self-medicated because of diarrhea/vomiting, 91% was because of flue/cough/sore throat, 91% was because of fever/headache, 91% was because of abdominal pain, and 89% was because of other symptoms.

It was found that 93% used antacids, 92% used antihistamine, 91% used antibiotics, and also 91% used analgesics.

As indicated in the table below, 92% of the students bought from drug shops, 91% from pharmacies, 86% got from friends, and 86% got from their relative.

Variable	**Self-medication**			
	N0 (n=48)	Yes(n=241)	Chi-square(X^2)	P-value
Symptom indicated for self-medication.				
Flue/cough/sore throat n (%)	16(9)	160(91)	18.37	<0.001
Fever/headache n (%)	14(9)	145(91)	15.54	<0.001
Diarrhea/vomiting n (%)	6(8)	74(92)	6.63	0.01
Abdominal pain n (%)	9(9)	86(91)	5.20	0.023
Others n (%)	15(11)	122(89)	6.03	0.014
Drug used for medication				
Antibiotic n (%)	18(9)	185(91)	29.52	<0.001
Analgesic n (%)	17(9)	168(91)	20.43	<0.001
Antihistamine n (%)	9(8)	99(92)	8.53	0.003
Antacids n (%)	6(7)	83(93)	9.04	0.003
Source of drug				
Drug shops n (%)	15(8)	184(92)	37.97	<0.001
Pharmacies n (%)	15(9)	154(91)	17.58	<0.001
Friends n (%)	8(11)	64(89)	2.09	0.15

Relatives n(%)	4(11)	32(89)	0.90	0.34

TABLE: 2

4.4: A table showing knowledge of self-medication among second year undergraduate medical student of Kampala international university western campus.

The major source of information was through advertisements with 98%, then own knowledge with 92% followed by friends with 91% and Google with 88%, as in the table below.

According to the collected data as indicated in the table below, 91% of the students went for self-medication because it is cheaper, 89% went because it is time saving, 89% went because it is easy and convenience,89% went because they wanted to avoid hospital crowding, 87% went because it gives quick relief and 84% went because of adventure

Variable	**Disagree**	**Agree**	**P-value**
Source of information			
Own knowledge n (%)	12(8)	130(92)	<0.001
Friend's n (%)	15(9)	151(91)	<0.001
Advert n (%)	1(2)	45(98)	0.004
Google n()%	7(12)	49(88)	0.34
Reason for self-medication			
Time saving n (%)	25(11)	205(89)	<0.001
Cheaper n (%)	16(9)	168(91)	<0.001
Adventure n (%)	11(13)	73(87)	0.304
Quick relief n (%)	22(16)	114(84)	<0.001
Easy & convenience n (%)	25(11)	204(89)	<0.001

Avoid hospital crowding n (%)	23(11)	193(89)	<0.001

TABLE: 3

4.5 A table showing attitude of self-medication among second year undergraduate medical student of Kampala international university western campus.

As indicated in the table below, 77% of the students blamed those who practice self-medication, 6% agreed that Students should be dismissed from school if found self-medicating, 93% agreed that students must visit qualified medical practitioner when ill, 81% were sympathetic for students who get side effects of drugs after self-medicating, 31% believed that Students should be allowed to practice self-medication after 2year, 72% were worried about students who practice self-medication.

	Response n (%)
Blame those who practice self-medication	Yes 223(77.16) No 66(22.84)
Student must visit qualified medical practitioner when ill	Yes 269(93.1) No 20(6.92)
Student should be dismissed from school if found self-medicating	Yes 17(5.88) No 272(94.12)
Feel sympathetic for students who get side effects	Yes 234(80.97) No 55(19.03)
Students should be allowed to practice self-medication after 2year	Yes 91(31.49) No 198(68.51)
Am worried about students who practice self-medication	Yes 209(72.32) No 80(27.68)

TABLE: 4

CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1: DISCUSSION.

Several studies have been previously done on self-medication, but there are very few studies that have been done on second year undergraduate medical students.

A study which was carried out in Bahrain on self-medication in 2004 was however done on first year medical students, and another study which was done in 2009 in Jimma university was performed on students from school of medicine, school of pharmacy and laboratory technology as a whole selected by lottery method.

5.1.1 DEMOGRAPHIC DATA

A total of 288 second year undergraduate medical students of Kampala international university western campus were involved in the study. The highest percentage of the participants was Catholics with (23%) and majority of the respondents were single with a percentage of (64%). Of the respondents in this study, 63% were male and 37% were female, indicating the proportion of male respondents were more compared to female respondents but the difference was minimal (26%) my finding was different from the study by Lukovic et al., who reported that female respondents were more than males. A similar study by Thadani S, Salman MT, Ahmad A, in 2013 however did not show any significant association of self-medication with gender

In my study finding, the mean age group was 24(23-26) years which is of some small different from the previous study conducted by Supriya Thadani,Mohd.Tariq Salman, Ali Ahmad where the mean age of the student in years was (20.5).

5.1.2: Factors contributing to increasing knowledge level on self-medication among second year undergraduate medical students of Kampala International University Western campus.

The present study was conducted to assess the knowledge, attitude and practice of self-medication among second year undergraduate medical students of Kampala International University Western campus. The prevalence of self-medication in my study was found to be markedly high (83.4%). Other similar study on second year undergraduate medical student by Thadani S,Salman MT, in 2013 showed that the prevalence of self-medication was high (79.4%) similar to the study conducted by Nithin Kumar; Tanuj Kanchan in Coastal South India where, the prevalence of self-medication among medical students was shown to be very high (78.4%).

The majority (92%) of the students reported that they self-medicated because of diarrhea/vomiting with antacids found to be the highly used class of drug (93%). However Thadani S,Salman MT, in 2013, headache was found to be the most common cause for taking self-medication (41.2%) and analgesic was the highly used class of drug (62.9%).

The students perceived several factors, and believes that contributed to their knowledge of self-medication of which in the finding, was the source of information factors where the major got the information through advertisements with (98%), My study finding agreed to the finding In research study on Self-Medication practices in Rural Districts of Eastern Uganda, Dr. Alele Peter M, Prof. Phillipa Musoke & Dr. Nabukeera Nicolette (2015) reported that Radio/TV advertisements (19.7%) were the major source of information for self-medication.

According to this study, the majority, 91% of the students went for self-medication because it is cheaper. This was in disagreement to similar observations which were reported in a few studies from India by Tamil Nadu, where most students practiced self-medication as it was time saving, whereas in Punjab, the most common reason for self-medication was for quick relief. Students are prone to make unsupervised health-related decisions especially students of health sciences who feel confident of their knowledge about the drugs.

5.1.3; Attitude of self-medication among second year undergraduate medical student of Kampala international university western campus.

In this study, the highest percentage of students (93%) agreed that students must visit qualified medical practitioner when ill and (81%) were sympathetic for students who get side effects of drugs after self-medicating, this was in agreement to Thadani S, Salman MT, in 2013, who conducted a similar study on second year undergraduate medical students and found out that majority of the student acceded to first visit a qualified practitioner whenever they fell ill (67%)

5.2; CONCLUSION

The results of our study which was conducted among second year undergraduate medical students at Kampala international University provide evidence that majority of the respondents practice self-medication. The findings in this study revealed that indications and drugs used for self-medication, attitudes towards self-medication, factors and advantages that led the respondents to self-medicate, sources for obtaining information and potential risks for self-medication as reported by the respondents all showed some highly significant results

The study showed that medical students after studying microbiology and pharmacology in their second year in the medical school, they become more aware about drugs and their uses, side effects contraindications. So this helps them practice self-medication and thus promoted this practice. Antacids were the most commonly used drugs followed by antihistamines.

However, even though most of the students feared having the side effects of the medications since they are prescribing by themselves without any experience, so they would wish to visit a qualified medical practitioner for medical assistant when they get ill.

5.3; RECOMMENDATIONS

This study demonstrates the need to raise awareness regarding the right way to self-medicate and the dangers of self-medication. becoming more conscious during any drug utilization and the advisory role of pharmacists. However, through this study, i found that medications are easily accessed by the students. On that account, i highly suggest that the university use of health insurance cards so that the students are able to get free medical treatment whenever they get ill and avoid the over the counter cheap medication.

I also highly suggest that the marketing process of OTC unprescribed drugs should be monitored and followed-up by the WHO and Ministry of Health to control the illegal marketing methods and to enhance the medical schools and the public at large on pharmaceutical education.

In addition, i highly suggest that it would be of interest to evaluate the changes in the self-medication pattern while students' progress through the medical school.in that case, Further research should be conducted in regards to the changes in the self-medication pattern while students' progress through their medical school.

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APPENDICES

APPENDIX I: A MAP SHOWING THE LOCATION OF ISHAKA IN BUSHENYI DISTRICT AND THE NEIGHBORING DISTRICTS.

APPENDIX 2: CONSENT FORM

Dear respondent,

I am Laker paska, a third year student of Kampala international university pursuing Diploma in Clinical Medicine and Community Health. I am carrying a research on the knowledge, attitude and practice of self-medication among second year undergraduate medical students of Kampala international university western campus. I hereby request you to participate willingly in providing information about this research topic to have it completed. Any information provided will be treated with utmost confidentiality and will be used for academic and health service delivery.You are however, free to participate or withdraw from this study at any time during the course of the interview.

Consent:

This consent form has been read to me and all relevant details explained to me

I therefore willingly agree to take part in this study.

Name of Respondent……..,
Signature…… Date ……..

APPENDIX 3: QUESTIONNAIRES

Instructions

i. Tick the correct option in the box provided

ii. Where required, fill in the blank space provided

PART I: BIODATA

1. Gender of Respondents

Male ☐ Female ☐

2. Age in yrs ……..

3. Religious affiliation of Respondents

Religion	1.Catholic	2.Protestant	3.Muslim	4.Adventist	5.Born Again	6.Others
Opinion						

4. Marital Status of Respondents

Marital Status	1.Single	2.Married	3.Divorced

5. Nationality…….

PART 2: SELF-MEDICATION INFORMATION

1. Have you ever bought any drug without prescriptions?

Yes ☐ No ☐

2. For what disease symptoms have you bought the medications?

Flu/Cough/Sore throat ☐

Fever/Headache ☐

Diarrhea/Vomiting ☐

Abdominal pain ☐

Others (Specify) ……

3. which drug did you use for the medication
   i. Antibiotic 1. Yes ☐ 2. No ☐
   ii. Analgesic 1. Yes ☐ 2.No ☐
   iii. Antihistamine. 1.Yes ☐ 2.No ☐
   iv. Anti-acids.1.Yes ☐ 2.No ☐
4. If yes, where have you got the information from?

Own knowledge ☐

Friends/Relatives ☐

Advertisements ☐

Google ☐

5. Where do you usually get the drugs for self-medications from?

Drug Shops ☐

Pharmacies ☐

Friends ☐

Relatives ☐

PART 3: KNOWLEDGE ON SELF-MEDICATION

6. Why do you go for self-medications?

Reasons for self-medication	Agree	Disagree
Time saving		
Cheaper		
Trust my knowledge		
Chance for a learning opportunity by trying it myself		
Quick relief		
Easy and convenience		
Avoid hospital crowding		

PART 4: ATTITUDE OF SELF MEDICATION

6. Any student who takes a wrong drug have only themselves to blame

Yes ☐

No ☐

7. All students must visit a qualified medical practitioner whenever they get ill for medical attention but not treat themselves.

Yes. ☐

No. ☐

8. Students should be removed from the school if found self-medicating

Yes ☐

No ☐

9. I feel more sympathetic towards students who get side effects of drugs after self-medicating.

Yes ☐

No ☐

10. Students should be allowed practice self-medication if they have finished second year of their medical school

Yes ☐

No ☐

11. Are you worried about the students who practice self-medication?

Yes ☐

No ☐

APPENDIX 4: THE APPROVAL LETTER FOR DATA COLLECTION