

**FACTORS INFLUENCING SUBSTANCE ABUSE AMONGST HEALTH CARE  
PROFESSIONALS IN KAMPALA, UGANDA.**

**BY:**

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**DECLARATION**

I, Rebecca Suubi, do hereby declare that the content of this dissertation is my own work and has never been presented to any university or institution in any way. To the best of my knowledge, where other forms of literature have been used, it has been expressively stated.

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22/02/2022

Signature.....

Date.....

## **APPROVAL**

I hereby certify that this research thesis ‘Factors influencing Substance Abuse amongst Health Care Professionals in Kampala, Uganda, is an original research work carried out and written by Rebecca Suubi, REG NO. 2020MPHFT-A05, under my supervision.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>AA</b>	Alcoholics Anonymous
<b>ADAPT</b>	Alcohol and Drug Abuse Prevention and Treatment
<b>ADC</b>	Alcohol and Drug Counselor
<b>ARI</b>	Alcohol-Related Incident
<b>ARM</b>	Alcohol-Related Misconduct
<b>AUD</b>	Alcohol Use Disorder
<b>CDC</b>	Centers for Disease Control and Prevention
<b>CSAP</b>	Center for Substance Abuse Prevention
<b>CSAT</b>	Center for Substance Abuse Treatment
<b>DEA</b>	Drug Enforcement Agency
<b>HCPs</b>	Health Care Professionals
<b>NIDA</b>	National Institute on Drug Abuse
<b>SDGs</b>	Sustainable Development Goals
<b>SPSS</b>	Statistical Package for the Social Science
<b>UDHS</b>	Uganda Demographic and Health Surveys
<b>UNDP</b>	United Nations Development Programme
<b>WHO</b>	World Health Organization

## **OPERATIONAL DEFINITIONS**

### **Substance Abuse:**

A maladaptive pattern of substance (drugs and alcohol) use leading to clinically significant impairment or distress (Addicted to Pills: The Health Risks of Drug Abuse, 2021).

### **Alcohol Abuse:**

A pattern of drinking more than 5 alcoholic drinks for males and more than four alcoholic drinks for females in a sitting on a weekly basis that interferes with day-to-day activities (National Institute on Alcohol Abuse and Alcoholism, 2021).

### **Health Care Professionals:**

Health professionals maintain human health by the use of principles and procedures of evidence-based medicine and caring. (Gupta, 2011). For the purposes of this study, Health Care Professionals will entail doctors, pharmacists, nurses, midwives, hospital administrators and top management of the Health Care Center.

### **Cocaine:**

A white crystalline alkaloid,  $C_{17}H_{21}NO_4$ , which is gotten from the leaves of coca, also used as a local anesthetic in medicine sometimes, but widely abused for its euphoric and stimulating effects. Cocaine is highly psychologically addictive and it is often inhaled through the nose (Dictionary, 2006).

### **Ecstasy:**

It has a chemical compound of  $C_{16}H_{15}NO_2$  which is related to amphetamine. Used mainly for its hallucinogenic and euphoric effects which suppress the sleep centre's of the brain, thus making one to stay awake for a long period of time (Dictionary.com 2006)

**Hallucinogen:**

A psychoactive and volatile substance that leads to an alteration of various sense organs, thus causing hallucinations (Dictionary.com 2006).

**Heroin:**

It is a bitter, white and odorless crystalline compound-( $C_2H_3O_2$ )<sub>2</sub>-which is gotten from morphine and it is highly addictive both physiologically and mentally (Dictionary.com 2006).

**Opiates:**

Substances derived from the natural form of opium which has sedative and addictive effects that leads to abnormal relaxation of the central nervous system and the dulling of the various sense organs (Dictionary.com 2006).

**Sedatives:**

Substances either legal or illegal that have various effects ranging from reduction of stress, anxiety, irritability and tranquilizing effects (Dictionary.com 2006).

**Stimulants:**

Substances that enhance the organic state and physiological state of an individual for a short period of time (Dictionary.com 2006).

**Burn Out:**

A burn out is a physical, physiological and psychological stress reaction syndrome resulting from long-term exposure to intense work-related emotional and interpersonal pressures (Selic P, Stegne-Ignjatovic T, et. al 2012, VF, Filho CF, Valenti VE and et al. 2014).

## ABSTRACT

**Introduction:** Substance Abuse has become a subtle yet growing trend amongst Health Care Professionals and thus the increases the risk of mental illness, suicide attempts through self-poisoning, health care malpractices, and ultimately pre-mature mortality rates among Health Care Professionals. Unfortunately, in developing countries, barely any substantial research targeting the well-being of Health Care Professionals in relation to substance abuse has been carried out, and yet this is a crucial group of individuals in society. This cross-sectional research study addressed the factors associated to substance abuse amongst Health Care Professionals, the prevalence as well as Health Care Professionals' perceptions toward Substance Abuse in Kampala, Uganda.

**Methodology:** Data was collected from 380 respondents of the study directly using self-administered approaches and a pre-tested structured questionnaire adapted from World Health Organization (WHO) Alcohol, Smoking and Substance Involvement Screening Test (ASSIST Tool) version 3 specifically screening for substance abuse. Other factors such as Socio-Demographic factors, Occupational-related factors, and perception of Health Care Professionals towards Substance Abuse were measured. Amongst the intended 383 respondents in this study, 380 complete references were analysed. The relevant bivariate, binary logistics regression and multivariate analysis was run using the Statistical Package for Social Sciences (SPSS)-Version 23.

**Results:** The prevalence for Substance Abuse amongst Health Care Professionals in Kampala, Uganda was 4%. After controlling for Monthly Income, Highest level of Education and Work-related Stress Coping mechanisms, it was evident that there was an association between age and Nationality, in relation to Substance Abuse. Older Adults were 5times more likely to becoming abuse substances compared to Younger Adults (AOR=5.014 95% CI= 1.855 – 13.552). Furthermore, it was found that participants who were Non-Ugandans were less likely to abuse Substances (AOR = 0.159, 95% CI – 0.030- 0.846) compared to Ugandan Health Care Professionals.

**Conclusion:** Based on our findings, 4 out of every 100 Health Care Workers are susceptible to substance abuse; specifically the Ugandan Health Care Professionals who are older adults (above the age of 35years), are at a high risk of substance abuse. Moreover, considering the fact that alcohol was the most abused substance, strict regulations on alcohol consumption, mental health



education and incorporating physical activity as a form of stress-management amongst old-aged Ugandan Health Care Professionals is paramount.

**Recommendations:** The relevant authorities should implement strict regulations on alcohol consumption, mental health education services and improved Occupational Health and Safety Strategies incorporating group physical activity as a stress-coping mechanism.

**Key Words:** Health Care Professionals, Substances, Substance Abuse

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## **CHAPTER ONE: INTRODUCTION**

### **1.1 Introduction**

Substance Abuse has become a growing public health concern in the world today. The United Nations statistics in the World Drug Report Substance Abuse revealed that in 2017, an estimated 271 million people, or 5.5 per cent of the global population aged 15–64, had used substances in the previous year (UN, World Drug Report 2019). This is also prominent amongst not only University students, adolescents, prostitutes, and males (Pagano, Kelly et.al 2011, Hardey, et. al 2019) but amongst other the working class professionals. Substance takers should not be restricted to a specific social group of people. Rather, they can also be found amongst professional communities, athletes, elders and Health Care Professionals (Devcic, S., Bednarik, J., Maric, D., Versic, et. al, 2018). Unfortunately, in developing countries, barely any substantial research targeting the well-being of Health Care Professionals (Health Care Professionals) in relation to substance abuse has been carried out, and yet this is a crucial group of individuals in society. Health Care Professionals have high stress level, increased work load, imbalanced patient: HCP ratio due to high clientele, long working hours and general hospital administrative work, they should have access of services where they too seek help in relation to mental health and substance abuse, counselling services. Despite of the fact that Health Care Professionals are knowledgeable and aware of substance abuse and its consequences to human health and well-being, studies have indicated that Health Care Professionals have failed to confront their work stress and workload as well as failed to balance their personal and professional lives due to physician burnout. A burn out is a physical, physiological and psychological stress reaction syndrome resulting from long-term exposure to intense work-related emotional and interpersonal pressures (Selic, Stegne-Ignjatovic, et. al 2012, Filho, Valenti, et al. 2014). In effect, substance abuse has become a subtle yet growing trend amongst this group and thus increases the risk of mental illness, suicide attempts through self-poisoning, health care malpractices, and ultimately pre-mature mortality rates among Health Care Professionals. This research study addressed the

factors associated to substance abuse amongst Health Care Professionals, with the aim of informing the public and relevant government authorities on the recommendations on how to enhance the wellbeing of Health Care Professionals and thus ensure high quality and safety of future patients' health care. For purposes of this study 'Substance Abuse' referred to both alcohol and drugs commonly abused.

## **1.2 Background of the study**

Substance abuse entails a maladaptive pattern of substance (drugs and alcohol) usage, ultimately leading to one's clinically significant impairment or distress (Addicted to Pills: The Health Risks of Drug Abuse, 2021). Medicine has revealed that while majority of individuals begin substance usage due to peer influence and for recreational purposes, after a period of time, one becomes addicted to the sense of happiness they derive from substances and becomes dependent on them. Additionally, approximately 10%-15% of all medical professionals in the United States will abuse drugs or alcohol at some point during their career. The highest rates of abuse frequently is by Medical professionals since they more likely to abuse prescription medications there are higher rates of abuse frequently seen with benzodiazepines and opioid narcotics.

Globally, Marijuana (Cannabis) is the most commonly used illicit substance. Ironically, the use of Cannabis has been legalized in some countries for both medical and recreational use (NIDA, 2020). Marijuana, hashish, and other cannabis-containing chemicals cause one's body to experience a sense of euphoria, and an increase in visual, auditory and taste perception. Other short-term side effects of drug usage include; dry mouth, slowed reaction time, an exaggerated craving for specific foods at unusual times, and in some it may even cause anxiety attacks. Chronic usage of drugs is highly associated with a decrease in productive and performance at work, a loss of interest in socializing with friends and family, and mental retardation.

Additionally, stimulants such as cocaine, amphetamines, methamphetamines (meth), and others are usually consumed for the main purpose of boosting one's energy, mental focus and also to improve performance at work. However, the long-term effects of stimulant usage are dizziness, nausea or vomiting, arrhythmia, slurred speech, slow movements are also poor coordination.

Substance abuse has become a major public health concern and it worsens with every passing year. Infact, more than One Hundred and Eighty (180) deaths were directly linked to drug use disorder. Global Health Estimates, (2019) Statistics have shown that there are over 42million

illnesses or injuries caused due to substance abuse. Currently, globally, about 0.5 million deaths are attributed to drug use. Additionally, more than 70% of these deaths are related to opioids, with more than 30% of those deaths caused by overdose. In addition, the WHO reports that the abuse of alcohol accounts for the 3.3million deaths globally every year, while 15.3million persons acquire drug use disorders every year (GHE,2019). Specifically, there is an estimated 10% of adult men and 5% of adult women suffering from AUD. These statistics are even more burdensome with the already existing poor health care services and systems.

Substance abuse amongst Health Care Professionals is a critical area of research study in today's world, especially due to the high stress levels and heavy workload their daily lives entail. Health Care Professions (Health Care Professionals) typically study, diagnose, treat and prevent human illness, injury and other physical and mental impairments in accordance with the needs of the populations they serve. Additionally, they have the responsibility to advise on or apply preventive and curative measures, and promote health with the ultimate goal of meeting the health needs and expectations of individuals and any given populations, as well as boosting the health and well-being of the society. Furthermore, some Health Care Professionals are involved in conducting health science research in order to advance evidence-based health care while others are fully engaged in managing and supervising health care administrative and operations at the various health centers (Gupta 2011). Studies have revealed that some of the reasons for substance abuse (prescription drug misuse) amongst Health Care Professionals include to manage emotional and psychological stress, to manage physical pain, for recreational purposes and to avoid any withdrawal symptoms (Merlo, Singhakant, et.al., 2013).

Regionally, studies have shown that 7-32% of Health Care Professionals working and residing in Western countries are involved in substance abuse. Furthermore, a cross-sectional study on the Prevalence and correlates of substance use among health care students in Nepal (Panthee, Panthee, Gyawali, et.al, 2021) found that 42.8% was the overall lifetime prevalence of substance use amongst the health care students and that the majority (8.8%) of the health care students used Marijuana and minor opiates including codeine cough syrups, were the most widely used illegal prescribed drugs (32.4%).

In Uganda cannabis (marijuana) and heroin drug abuse has also been found to be prevalent amongst marginalized groups such as street youth, secondary school and university goers, as well as soldiers respectively. Despite the fact that the prevalence of substance abuse amongst the

mentioned groups of people is known, there is no known prevalence of substance abuse amongst Health Care Professionals (Health Care Professionals).

Despite Uganda's government and partnering bodies' efforts to provide a Minimum Healthcare Package for all Uganda's, Uganda's health care system has been found lacking in multiple areas such as shortage of Health Care Professionals amidst the steady population growth, poor funding for health care leading to health inequalities as well as compromised health care services. Additionally, The Uganda Police narcotic Unit in collaboration with the Ministry of Health (mental health division and psychiatry hospital) is underfunded, underequipped in terms of human resource and has limited infrastructure (M.Koutsoumpa, et.al, 2020). The combination of a broken-down health care system and an inefficient anti-drug enforcement justifies the fact that health care workers are also highly at risk of substance abuse since majority have easy access to most of the drugs, whether designer drugs, stimulants or even opiates. It is upon this basis that more research on Substance abuse amongst health care workers in Uganda urgently needed to be carried out to reduce the chances of compromised health care services Health Care Professionals experiencing Substance-related impairment provide to the patients and general public.

## **1.2 Problem Statement**

Heavy workload is a major contributor to high stress levels and inefficiency at work hence causing a burn-out (Merlo, Trejo-Lopez, et. al, 2013).

In order to compensate and meet their supervisors' demands, Health Care Professionals' may opt for Substance Abuse considering that they are exposed to most of the prescribed drugs such as opioids and stimulants, on a day-to-day basis (Dabney, 2001) and thus becoming more susceptible to making medical errors such as during surgeries, wrong diagnoses, and administration of improper medications such as the case of David Kwiatkowski (Eichenwald, 2015). A study carried out in Uganda on Drug Abuse Among the Youth in Kisenyi, Rubaga Division, Kampala Uganda found that about 30% of the total respondents were drug users, drugs most abused in the area were Khat 52.6%, followed by alcohol abuse 25.6%, marijuana 15.4% and cocaine 6.4% and then use as the least drug abused was heroin at 2 (0.8%) (Nasir, 2013)

Given the increasingly stressful environment due to manpower shortages in the healthcare system in general, substance induced impairment among some healthcare professions is anticipated to grow. While there is a paucity of data on Health Care Workers' substance use, in Uganda, Africa and globally, existing data from high-income countries indicate that alcohol and

some substance use rates frequently match or exceed those seen in the population (Baldisseri 2007). This is contrary to the expectation of some that physicians' and healthcare workers' knowledge of the negative health and social consequences of alcohol and substance abuse would reduce use (Kenna and Lewis 2008). Subsequently, an understanding of the social context and indication of some likely positive health effects of moderate alcohol use, or the negative stresses arising from high workload and from work-life balance issues, may promote substance use and abuse among healthcare workers (Kenna and Lewis 2008).

Substance Abuse does not only harm the Health Care Professional. It also directly negatively impacts patients' care and due to negligence may result in an outbreak of unforeseen infections such as Hepatitis C as seen in Kwiatkowski's case and a case in CDC which reported over 45 patients and 30,000 people contracting hepatitis C over a 14-year period by infected hospital employees using narcotics intended for patients (Schaefer & Perz, 2014). Failure to address substance abuse amongst Health Care Professionals will be detrimental to the Health Care System due to the decreases in the quality in health care and ultimately compromising the safety of patients as seen in the medical errors and negligence of Health Care Professionals and thus ultimately crippling the national health economy.

### **1.3 General Objectives**

The major objective of this research study was to identify factors associated to substance abuse amongst Health Care Professionals in Kampala, Uganda.

### **1.4 Specific Objectives**

- i. To establish the prevalence of substance abuse among Health Care Professionals in Kampala, Uganda.
- ii. To establish socio-demographic factors associated to substance abuse amongst Health Care Professionals in Kampala, Uganda
- iii. To determine occupational-related factors associated to substance abuse amongst Health Care Professionals in Kampala, Uganda
- iv. To evaluate the perceptions towards substance abuse amongst Health Care Professionals in Kampala, Uganda.

#### **1.4.1 Research Questions**

- i. What is the prevalence of Substance abuse amongst Health Care Professionals in Kampala, Uganda?

- ii. What socio-demographic factors are associated to substance abuse amongst Health Care Professionals in Kampala, Uganda?
- iii. What occupational-related factors are associated to substance abuse amongst Health Care Professionals in Kampala, Uganda?
- iv. What are the perceptions towards substance abuse amongst Health Care Professionals in Kampala, Uganda?

## **1.4 Scope of the Study**

### **1.4.1 Subject Scope**

The subjects of interest in this research study were Health Care Professionals (HCPs). This research study selected participants working in either a government health care facility or a privately owned Health care Facility.

### **1.4.2 Geographical Scope**

The research study was carried out at two study sites which are both Centers of health care China-Uganda Friendship Hospital Naguru, located along Naguru Road in Kampala Uganda and Nakasero Hospital, a private, for-profit hospital in Kampala, located along Plot 14 Akii Bua Rd, Kampala. The reason behind the selected Hospitals was that they are some of the main hospitals in Kampala, Uganda, hiring over 350 Health Care Professionals, and also the fact that one of them is Government funded, whilst the latter is Private-For-Profit, creates a foundation for comparing the Health Care Systems and the contrasts between the factors that influence substance abuse in each of them.

## **1.5 Justification of the study**

The global burden of diseases caused from the consumption of tobacco, alcohol and illicit drugs have always been scored amongst the top 20 leading causes of mortality (Murray, Ezzati, Flaxman, 2012). Additionally, Uganda has been rated one of the highest alcohol-consuming and substance abusing countries globally, especially amongst students and youth (WHO, 2004). In spite of the research studies that have been carried out amongst Youth and University Students in Kampala, Uganda on substance abuse, there is hardly any research that addresses substance abuse amongst health care workers. Thus, this research intended to fill in the research gaps in of Substance Abuse amongst our Health Care Professionals.



## **1.6 Significance of the Study**

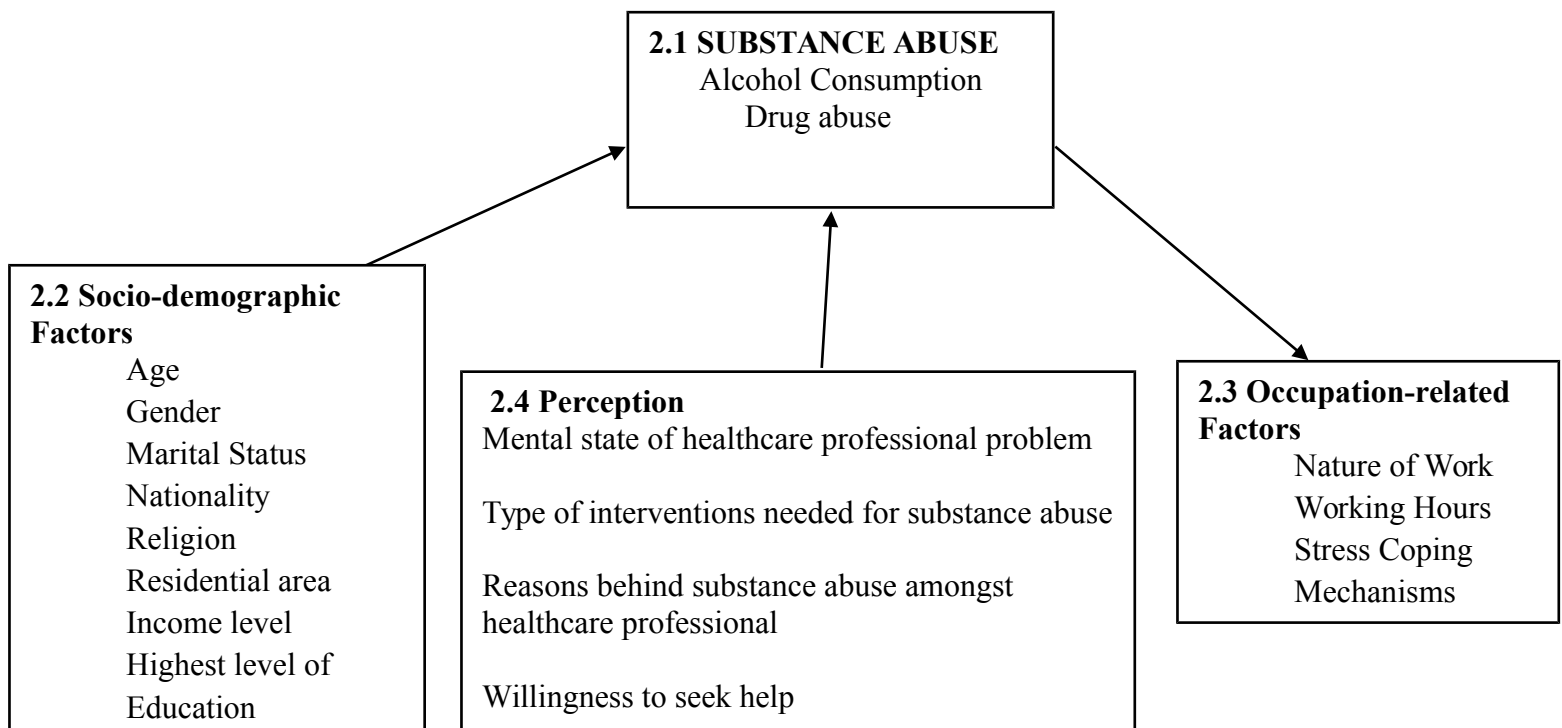
Additionally, this research study may be used as an information resource for the Ministry of Health in Policy making for Health Care workers in both private and government work settings to plan short and Long-Term Health substance abuse intervention programs targeting Health Care workers and thus will improve their employees' health, motivation to work, and ultimately enhance the quality and safety in Health Care Services rendered by the Health Care Professionals to the public.

Having a healthy, productive and innovative nation is the third sustainable development goal (SDG) for Uganda as a Nation (United Nations Development Program, 2013). Considering that this research targeted the mental health and well-being of Health Care Professionals by addressing the factors influencing Substance Abuse, the results obtained would be used to inform the government on the current prevalence of substance abuse, and thus relevant recommendations will be implemented, thus ensuring healthy lives and promote well-being for all at all ages, including the Health Care Professionals across the country.

Specifically, this health science research study aimed at contributing towards SDG 3.5 which aims at strengthening the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol. This research study was a foundation of combating substance abuse amongst Health Care Professionals since the information from this research may inform future researchers and Health Care Professionals by providing data related to substance use to enable them identify the research gaps and limitations that will not be addressed in this research. The cost of Treatment of illnesses due to Substance abuse and Alcohol addiction is relatively high and there are barely any existing treatment programs to keep up with increasing demand of patients. With this, majority of the Substance abuse patients are admitted to the Ugandan National Mental Referral Hospital, which is now overly saturated and needs more funding and support from the government of Uganda (Kisozi, Ssebunnya, et al, 2010). In efforts to reduce Health Care costs on the treatment of diseases and burden brought about by substance-abuse, it is pertinent to ensure that Substance Abuse awareness, also amongst our Health Care Professionals is highlighted and it is through this research that recommendations can now be formulated to enable proper education of Health Care Professionals on how to manage stress more effectively

and avoid or reduce drug dependency for relief. In effect, prevention of future cases of Substance Addiction will heighten and thus reduce Health Care costs on the treatment of Substance abuse and premature mortality due to self-poisoning and suicide attempts amongst Health Care Professionals. The government of Uganda would then be able to invest in innovation and health science research, thereby scaling up the economy and Health services provided heretofore.

## 1.7 Conceptual Framework



### Description of Conceptual Framework

In this research, the independent variables hypothesized were Socio-demographic factors (Age, gender, marital status Nationality, religion, place of residence, income level, Highest level of Education), Occupation-related Factors (Nature of work, working hours and Stress-coping mechanism- number of sleeping hours per day,), Behavioral factors including alcohol consumption (type and weekly intake frequency), substance usage (alcohol, tobacco, cocaine, amphetamine-type stimulants, inhalants, sedatives, hallucinogens, opioids and other drugs), and perceptions (health state of Health Care Professionals who depend on drugs, type of interventions for Substance abuse, reasons behind Health Care Professionals' substance abuse, willingness to seek for help). The dependent variable in this research study will be Substance

Abuse. All these factors will be hypothesized to influence both the exposure and outcome in this study.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.0 Introduction**

The Literature about the factors associated with the substance abuse among Health Care Professionals is not recent and neither is it abundant in academic journals. Rather, it focuses more on Occupational Health Hazards faced by Health Care Professionals and or mental health awareness amongst health care professionals. Hardly any research has been done on the Health Care Professionals in this regard and especially in Kampala, Uganda. Thus, the literature presented in this section is mostly cited from scholarly articles and works outside Uganda. Literature explore covers the mainstream and sub cultural explanations of substance abuse, challenges Health Care workers face in relation to substance abuse perception among Health Care Professionals.

### **2.1 Prevalence of Substance Abuse amongst Health Care Professionals**

In spite of their knowledge of science and medicine as well as their ability to demonstrate healthy lifestyle, rates of substance abuse amongst Health Care Professionals are the same as those amongst the normal population such as the youth and students. In fact, studies reveal that the use of Opioids is significantly higher amongst the Health Care Professionals compared to the general population (Bennett, O'Donovan, 2001).

The Journal of Clinical Nursing reports that approximately, 20% of all nurses and 1 in 10 physicians have an addiction to either drugs or alcohol. In spite of the lower percentage than the overall average, the rate of health care workers who struggle with substance abuse 4.4% and their biggest struggle is the heavy consumption of alcohol (Bush, and Lipari, 2016). Additionally, research studies reveal that opioid dependence, is one of the major drug class of major concern for Health Care Professionals (Kenna and Wood 2004).

Furthermore, the prevalence and correlates of substance use among health care students in Nepal (Panthee, Panthee, Gyawali, et.al, 20217) found that 42.8% was the overall lifetime prevalence of substance use amongst the health care students and that the majority (8.8%) of the health care students used Marijuana and minor opiates including codeine cough syrups, were the most widely used illegal prescribed drugs (32.4%).

In Uganda cannabis (marijuana) and heroin drug abuse has also been found to be prevalent amongst marginalized groups such as street youth, secondary school and university goers, as well as soldiers respectively. Despite the fact that the prevalence of substance abuse amongst the mentioned groups of people is known, there is no known prevalence of substance abuse amongst Health Care Professionals (Health Care Professionals). It is therefore on this basis that there is an urgent need for this research study to be conducted to fill in the current gaps in research on this high-risk population, Health Care Workers.

Health Care Professionals have been found to abuse drugs mainly due to their high stress levels and emotional distress at work (Merlo, Singhakant, et. al, 2013, Reese, 2014).

In addition, A study among nine workers in South Africa, showed that the use of cannabis gives 27.8% of workers strength which enables them cope with stress and heavy workload, gives 5.4% of workers ideas to enable them work and plan better. 1.5% said that cannabis abuse makes their work easier, a proportion of 14% indicated that cannabis abuse help them cope with stress and 13.9% indicated that cannabis abuse was for fun only (Pick et al, 2003).

More research reveals that majority of the Health Care Professionals use opioids, benzodiazepines (Xanax) and other prescribed medications such as anti-depressants to deal with depression, pain symptoms, or to boost their overall work performance. Overtime, the short-term relief results into dependence and eventually addiction (Bush, & Lipari 2015).

## **2.2 Socio-demographic Factors influencing Substance Abuse amongst Health Care Professionals**

Demographic factors have been shown to have associations with Alcohol and other drug use by Health Care Professionals. For example, a study (Abuse, S. 2006) suggested that the prevalence of substance use for the general population decreases with age after peaking in young adulthood. This implies that the older one grows, the lower the chances of substance abuse. Additionally, other studies concerning substance abuse treatment amongst Health Care Professionals suggest that treatment should begin and is more effective during the middle-age groups of an individual compared to a younger age (Bissell, Haberman, et.al 1989); thus age may be a significant factor associated to Substance Abuse. These studies are also in line with (Kenna, et.al 2008) that risk factors of Alcohol and other drug usages by Health Care Professionals was age, whereby

majority of the younger physicians and those who did not socialize with substance abusers (loners) were more likely to struggle with Substance Abuse.

In regards to religion and nationality, there are hardly any studies that reveal an association between the latter factors and Substance Abuse. Rather, a study in Predictors of stimulants use among physicians in a Nigerian tertiary health institution in Sokoto, Northwest Nigeria (Adamu, Ahmad, et.al 2018), found that one of the major factors associated with stimulants consumption amongst physicians were marital status. Married physicians were more likely to use stimulants such as coffee and opioids compared to the single Health Care Professionals.

Whereas there are hardly any research studies that reveal associations between education, income level and substance abuse amongst Health Care Professionals, studies reveal that there are an association between the type of specialty in health profession and type of substance abuse; thus we can only speculate an indirect association of level of Education and income to substance abuse amongst Health Care works. There is a need to study other socio-demographic factors that may influence substance abuse such as number of dependents and gender amongst Health Care Professionals.

### **2.3 Occupational-related Factors influencing Substance Abuse amongst Health Care Professionals**

In a study on Substance use among nurses: differences between specialties, it was found that nurses in women's health, pediatrics, and general practice, emergency nurses were 3.5 times as likely to use marijuana or cocaine compared to the oncology and administration nurses were twice as likely to engage in binge drinking. However, there was no specialty differences appeared for nurses who were using prescription-type drug use (Trinkoff, and Storr., 1998).

Additionally, a study conducted in Switzerland also reported that physicians who are up to the rank of consultants significantly consume more coffee than physicians with lower ranks (Giesinger et al., 2015). This was mainly attributed to the level and work-stress that came with the jobs of the higher-level physicians. Additionally, it is speculated that the since the income levels of the Senior Physicians are higher than younger physicians, they have a higher purchasing power to buy stimulants that may be more expensive (Adamu, , Ahmad, Mudi, et. Al, 2018).

From the literature been reviewed, there is enough evidence to indicate that Health Care Professionals are overworked and are experiencing high stress-levels at work. These reports should be forward to the respective authorities and policy makers in Health so as to cater for their Occupational health and well-being, lest, the Health Care Professionals' dependence on stimulants may only become worse and eventually an addiction.

#### **2.4 Evaluation of perspective of Substance Abuse amongst Health Care Professionals**

There is an on-going silent substance abuse amongst Health Care Professionals and this is attributed to their perspective towards substance abuse. A negative perspective towards patients struggling with Substance Abuse is one of the reasons that there could be a paucity of data on Substance Abuse amongst Health Care Professionals. A systematic review by Van., et.al 2013 on Stigma among health professionals towards patients with substance use disorders Van Boekel,, Brouwers, et.al 2013. Found that majority of the Health Care Professionals generally had a negative attitude towards patients who were suffering from substance use disorders. Results indicated that they perceived violence, manipulation, and poor motivation as factors in the healthcare delivery of these patients. Ultimately in Van,2013 study, it was evident that Health professionals did not have adequate knowledge and skills on how to support these groups of patients. With this research alone, it is inevitable for Health Care Professionals not to be aware of Substance Abuse and know how to intervene both medically or even psychosocially.

Clearly, there is a paucity of research data revealing substance abuse amongst Health Care Professionals in conjunction with the knowledge gap on how to handle victims of substance abuse amongst Health Care Workers. More Health Care Professionals should be involved in many of the research studies so as to express their ideas, feeling and thoughts towards substance use and mental health amongst their own industry.

Last but not least, the most recent COVID-19 Pandemic has placed more pressure and stress on the committed Health Care Workers and in effect, if substance abuse is not addressed amongst this group, there are high chances that there are going to be more cases on Mental-illness, suicide attempts, cardiovascular diseases, and Depression amongst Health Care workers, as most of them might end up resorting to substance abuse to keep up with their daily work stress.

It is more reason for research studies on Substance Abuse to be carried out amongst Health Care Workers, so as to facilitate early detection of Substance Abuse and initiate timely treatment interventions, thereby also reducing the risk of unprofessionalism, negligence, and poor performance while handling patients.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

The research methodology section below describes the chronological way as to how this research study was carried out. The chapter described the research design, study population, sample size, sampling procedure, data collection tools, the research analyses used, and the ethical considerations.

### **3.1 Research design**

This research study employed a cross-sectional study of Health Care Professionals from selected Health Care Centers; a government and a private- using both quantitative and qualitative methods of data collection.

### **3.2 Study population**

The study population included Health Care Professionals who had been employed for more than 6 months in the two purposely selected major health care facilities within Kampala District; Nakasero Hospital and China-Uganda Friendship Hospital a National Referral Hospital.

#### **3.2.1 Inclusion Criteria**

Both Male and female Health Care Professionals were considered for this research study. The Health Care Professionals participating in this study were not limited to only doctors and nurses. Rather, any Health Care Professional who worked with patients directly and those who carry out administrative and managerial roles were considered to participate in this research study.

#### **3.2.2 Exclusion Criteria**

Health Care Professionals on short-term contracts less than 6months within the hospital were not included in this study. The major reason behind this decision is attributed to the fact that during their first six months, health workers are still getting acclimatized to the workplace and are still on probation compared to those who have worked for more than six months and are confirmed employees.

### **3.3 Sample Size Determination**

#### **3.3.1 Sample size**

According to the Uganda Annual health sector performance report 2014/2015, Uganda had a total of 81 982 health workers employed in the health sector. In Nakasero hospital, there are 430 Health Care Professionals whereas in Naguru China Friendly Hospital, there are 356 Health Care Professionals. With this information, the sample size can be determined. The sample size Sample size required will be computed using the Krejcie and Morgan (1970) as follows:

$$S = \frac{X^2 NP (1-P) + d^2(N-1) + X^2 P(1-P)}{d^2}$$

S = required minimum sample size

$X^2$  = the table value for Chi-Square for 1 degree of freedom at the desired confidence level (3.841)

N= population size

P= Population propotion (assumed to be 0.50) since this would provide the maximum sample size

$$Q = 100 - P$$

d = Margin of error Set at 5%

By substitution in to the formula n= 383

Also, to adjust the sample size to fit the target population we use the formula below:

$$nf = \frac{n}{1 + (n-1/N)}$$

Where: nf= desired sample size

n= estimated sample size

N= target population



We find the sample size for China-Uganda Naguru Friendship Hospital by Substituting in the formula above, = 181 HCP respondents.

We find the sample size for Nakasero Hospital by Substituting in the formula above, we have = 202 HCP respondents

Therefore, this study needed 383 Health Care Professionals respondents. The number of HCP respondents selected from China-Uganda Friendship Hospital Naguru was 181, while the 202 Health Care Professionals were selected from Nakasero Hospital, in Kampala, Uganda. This sample size included the sampling insurance response factor of 5% to allow margin of errors and any errors in respondents. This sample size was representative of the number of Health Care Professionals in Kampala, Uganda.

### **3.4 Sampling design**

For this particular study, the selection of the sample was a simple random sampling technique whereby willing participants were randomly selected from each of the departments at the selected hospitals. Departments may include pharmacy, pediatrics, antenatal, nutrition-outpatient, surgery, accident and emergency unit, administration, etc.

### **3.5 Data sources**

This section highlights the various sources of data used.

#### **3.5.1 Primary data**

Primary data was collected from the respondents of the study directly using self-administered approaches and a pre-tested structured questionnaire that was divided into three sections. Section I focused on the Socio-Demographic factors. Section II focused on the Occupational-related factors, Section III entailed questions pertaining to Behavioral factors and Section IV focused on the perception of Health Care Professionals towards Substance Abuse. Section III, was adapted from the World Health Organization (WHO) Alcohol, Smoking and Substance Involvement Screening Test (ASSIST Tool) version 3 specifically screening for substance abuse.

### **3.6 Data Collection instruments**

The tools that were used in this research study included a structured questionnaire adapted from the WHO ASSIST Tool Version 3. This questionnaire followed a self-administered approach and participants were expected to fill in the questionnaire using the English language.

### **3.6.1 Reliability and Validation of research instruments**

The validity of these instruments was based on the usage of a pre-tested well-structured Questionnaire adapted from the World Health Organization (WHO) Alcohol, Smoking and Substance Involvement Screening Test (ASSIST Tool) version 3. In addition, the questionnaire was pre-tested on two randomly selected Health Care Professionals in the selected hospitals. Questions that seemed unclear were adjusted for better comprehension during later interviews. English was the language used in the questionnaire.

## **3.7 Measurement of variables**

### **3.7.1 Independent variables**

These included Socio-demographic factors (Age, gender, marital status Nationality, religion, place of residence, income level, Highest level of Education), Occupation-related Factors (Nature of work, working hours and stress coping mechanisms- number of sleeping hours per day.), Behavioral factors including alcohol consumption (type and weekly intake frequency), substance usage (alcohol, tobacco, cocaine, amphetamine-type stimulants, inhalants, sedatives, hallucinogens, opioids and other drugs), and perceptions (health state of Health Care Professionals who depended on drugs, type of interventions for Substance abuse, reasons behind Health Care Professionals' substance abuse, willingness to seek for help).

### **3.7.2 Dependent variables**

The dependent variable in this research study was Substance Abuse (Alcohol and Drug abuse). After computing the data for analysis, a participant's results was scored as indicated in *APPENDIX THREE: Table 2* scoring in the low risk, moderate risk to high-risk range for a substance. Lower risk Clients with ASSIST Risk scores 'three or less' ('10 or less' for alcohol) are at a lower risk of problems related to their substance use. Moderate risk Clients scoring 'between 4 and 26' ('11 and 26' for alcohol) are at moderate risk and a score of '27 or higher' for any substance suggests that the client is at high risk of dependence or is dependent on that substance.

### **3.8 Methods of Analysis**

Once the data was collected and entered into the database using the Statistical Package for Social Sciences (SPSS) software (version 23), it was cleaned and sorted for analysis.

During the analysis phase, three major types of analysis were carried out in order to interpret the results i.e Descriptive analysis- which was basic description of each variable (Socio-demographics factors, Occupational-related factors, and Behavioral factors on Substance abuse) as collected in terms of frequency and percentages, as well as means, for those whose information was continuous. The overall prevalence was calculated by computing the mean scores dividing them by the highest scores and multiplying by 100%.

Additionally, descriptive analysis was carried out for the each of the substances abused amongst the respondents using measures such as Mean Scores, Standard deviation, maximum scores on the reference scale and prevalence. The results of the scores were then placed into the ASSIST Score sheet and were categorized into Low-Risk, Moderate and High-Risk. Lower risk participants were regarded to be at a lower risk of problems related to their substance use. Moderate risk participants were regarded to be at a moderate risk of health and other problems. Continuing use in this way indicated a likelihood of future health and other problems, including the possibility of dependence; and finally the High-risk participant was one who is at high risk of dependence or is dependent on that substance and is probably experiencing health, social, financial, legal and relationship problems as a result of their substance use. Furthermore, participants injected drugs in the last three months more than an average of 4 times per month were regarded most likely to be at high-risk substance abusers.

Bivariate Analysis was also carried out focusing on the nominal variables being measured against the categorical dependent variable (Substance Abuse) the Chi-square value. Only variables with a (p-value <0.05) at bivariate were considered significant and were then re-categorized into a dichotomous format at the Binary Logistic regression analysis, so as to accurately determine the statistical associations and likelihood (Crude Odds Ratio) of their association to Substance Abuse.

Finally, the multivariate level of analysis was carried out to identify the level of associations between the various interrelationships between significant variable against the Substance Abuse,

- while controlling any confounding variables whose P-value  $<0.05$  at 95% CI with odds ratio. These were considered statistically significance.

### **Ethical considerations**

Prior to carrying out this research study, the researcher sought approval from the Clarke International University-Research Committee for an ethical review as evidenced by the assigned CIU-REC No. - CLARKE-2021-134. Additionally, the researcher attained ethical clearance from the selected Hospitals Research Ethical Committees prior to involving the participants. Last but not least, all healthcare workers who participated in this research study signed a consent prior to responding to the questionnaire. Data collection employed uttermost confidentiality and privacy of all respondents and all data collected was voluntary. No respondent, at any one point was forced to answer the questionnaire thus the fact that it will be imperative for the respondents to sign an informed consent form (See Appendix 1) to as proof of their acceptability to participate in this study. Each questionnaire had a unique code for the participant and thus no name was required, so as to protect the participants' information. Finally, results obtained were direct reflection of what the respondents respond to in the questionnaires.

## CHAPTER FOUR: RESULTS

The results presented below have been organized according to each of the specific objectives of the research.

### 4.1 To establish the prevalence of substance abuse among Health Care Professionals in Kampala, Uganda.

Prior to calculating the Prevalence of Substance Abuse, Substance Abuse Behavioral Characteristics were measured in this research study. It was found that Alcoholic beverages had been consumed by majority of the participants who said ‘Yes’ to having taken any substance. Additionally, the highest number of participants who said ‘Yes’ to having consumed any substances reported that it was mainly for recreation / relaxation (8.4%) as clearly indicated in Table 1.

<b>Table 1: Showing the frequency distribution on Behavioral-related information on substance use</b>		
<b>Respondents in this study n=380</b>		
<b>In your life have you ever taken any of the following substances?</b>		
	<b>Yes</b>	<b>No</b>
• Tobacco	7 (1.8%)	373 (98.2%)
• Alcoholic beverages	49 (12.9%)	331 (87.1%)
• Cannabis	7 (1.8%)	373 (98.2%)
• Cocaine	15 (3.9%)	365 (96.1%)
• Amphetamine	4 (1.1%)	376 (98.9%)
• Inhalants	5 (1.3%)	375 (98.7%)
• Sedatives/sleeping pills	0	0
• Hallucinogens	4 (1.1%)	376 (98.8%)
• Opioids	2 (0.5%)	378 (99.5%)
• Others		
<b>Variables</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>For what purposes did you consume the substances you mentioned above?</b>		
• To stay Alert	5	1.3

• Recreation/relaxation	32	8.4
• To overcome stress	14	3.7
• To manage body pain	6	1.6
• For endurance	2	0.5
• Peer influence	12	3.2
• Not applicable	309	81.3

Using the ASSIST Score sheet as well as the descriptive statistics for each of the substances (mean scores, standard deviation as well as the prevalence), the general prevalence of Substance Abuse amongst the Health Care Professionals was then established in this research study. As indicated in *Table 4*, it is evident that Alcohol scored the highest maximum score on the reference scale, the highest mean and prevalence as compared to other substances assessed. After computing the mean scores divided by the highest scores and multiplied by 100%, it was found that the overall prevalence of substance abuse was approximately 4%. This implied that 4 out of every 100 Health Care Professionals, were substance abusers as shown in Table 2.

**Table 2: Showing the summaries of the descriptive statistics for substance abuse among the study respondents**

Substances	Maximum score on reference scale	$\bar{X}$ (CI)	$\pm$ SD	Prevalence (%)
Tobacco	16	0.11 (0.00 $\pm$ 0.21)	1.028	0.69
Alcohol	33	0.96 (0.58 $\pm$ 1.35)	3.833	2.9
Cannabis	25	0.15 (0.00 $\pm$ 0.30)	1.512	0.6
Cocaine	26	0.33 (0.11 $\pm$ 0.54)	2.162	1.27
Amphetamines	26	0.18(-.01 $\pm$ 0.37)	1.892	0.69
Inhalants	6	0.04 (0.00 $\pm$ 0.08)	0.406	0.67
Sedatives	26	0.28 (0.06 $\pm$ 0.49)	2.162	1.08
Hallucinogens	0	0	0	0
Opioids	19	0.10 (-.03 $\pm$ 0.23)	1.28	0.526
Other Drugs	0	0	0	0
<b>TOTAL DRUG ABUSE</b>	<b>61</b>	<b>2.14</b>	<b>7.217</b>	<b>3.5 ~4%</b>

Specifically, the results also indicated that majority of the Health Care Professionals were at a Low-risk of substance abuse. 11.1% were shown to be moderate-Highly at risk of substance abuse, implying that there were at a moderate risk of health and other problems as well as susceptible to future health, including the possibility of high-risk of dependence as shown in Table 3.

<b>Table 3: Showing the frequency distribution of the Substance Abuse among the Health Care Professionals of this research study</b>		
<b>Respondents in this study n=380</b>		
<b>Variables</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
• Low Risk	338	88.9
• Moderate/ High- at risk	42	11.1
<b>Substance Abuse sub-totals</b>	<b>380</b>	<b>100</b>

#### **4.2 To establish socio-demographic factors associated to substance abuse amongst Health Care Professionals in Kampala, Uganda**

##### 4.2.1 Univariate Analysis for the Socio-demographic factors

Generally, from the total planned study subjects (383), response rate was obtained for 380 (99.2%).

Out of the sample population of 380, majority of the respondents (107) were between the ages 26-30years (28.2%). Additionally, slightly more than half (52.1%) of the study population was Female and the highest number of participants were married (56.3%). By nationality, 9 out of every 10 respondents were Ugandans and at the same time majority of the participants were Catholics accounting for more than one-third of the total respondents (38.9%) compared to other religions. The highest number of participants (333) – 87.6% in this study reported to live in the urban areas. Furthermore, majority (33.7%) of the respondents earned a monthly income of 1million-1.5million UGX. Lastly, it was also found that 33.9% of the participants in this study were Diploma holders as indicated in Table 4 below.

<b>Table 4: Showing the demographic characteristics of the respondents</b>		
<b>Respondents in this study n=380</b>		
<b>Variables</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>Respondents' Age (in years):</b>		
• <25	39	10.3
• 26-30	107	28.2
• 31-35	65	17.1
• 36-40	57	15.0
• 41-45	77	20.3
• >45	35	9.2
<b>Age sub totals</b>	<b>380</b>	<b>100</b>
<b>Gender:</b>		
• Male	182	47.9
• Female	198	52.1
<b>Gender sub totals</b>	<b>380</b>	<b>100</b>
<b>Marital Status:</b>		
• Single	133	35.0
• Married	214	56.3
• Cohabiting	10	2.6
• Divorced	16	4.2
• Separated	5	1.3
• Widowed	2	0.5
<b>Marital Status sub totals</b>	<b>380</b>	<b>100</b>
<b>Nationality:</b>		
• Ugandan	372	97.9
• Non-Ugandan	8	2.1
<b>Nationality sub totals</b>	<b>380</b>	<b>100</b>
<b>Religion:</b>		
• Born-again	95	25.0
• Pentecostal	47	12.4
• Catholic	148	38.9
• SDA	24	6.3



• Muslim	30	7.9
• Anglican	31	8.2
• Others	5	1.3
<b>Religion sub totals</b>	<b>380</b>	<b>100</b>
<b>Residential Area:</b>		
• Urban	333	87.6
• Rural	47	12.4
<b>Residential Area sub totals</b>	<b>380</b>	<b>100</b>
<b>Monthly income (UGX):</b>		
• <500,000	46	12.1
• 500,000- 1 million	80	21.1
• 1 million- 1.5 million	128	33.7
• 1.5- 2 million	89	23.4
• >2 million	37	9.7
<b>Monthly income sub totals</b>	<b>380</b>	<b>100</b>
<b>Educational attainment:</b>		
• Diploma	132	34.7
• Bachelors	129	33.9
• Masters	87	22.9
• PhD	32	8.4
<b>Education attainment sub totals</b>	<b>380</b>	<b>100</b>

#### 4.2.2 Bivariate Analysis for the Socio-demographic factors

Following dichotomous re-categorization of the study variables, a bivariate analysis using Chi-square test of socio-demographic variables was conducted. According to the Chi-square analysis conducted for the socio-demographic characteristics, variables such as age (  $X^2=23.290$ ,  $p<0.0001$ ), Marital Status (  $X^2=19.397$ ,  $p=0.002$ ), Nationality (  $X^2=5.814$ ,  $p=0.016$ ), monthly income (  $X^2=13.996$ ,  $p=0.007$ ) and Highest level of Education (  $X^2=9.515$ ,  $p=0.023$ ) variables were statistically significantly associated to Substance Abuse. Respondents that were between 31-35 years of age had the highest likelihood (38.1%) of being at risk of substance abuse as compared to those in their 20's and those above 35 years. The same was seen amongst respondents who were single (42.9%) and married (40.5%). From the results, it can be

suggested that both single and married individuals, have higher the chances of the abusing substances compared those who are Cohabiting, Separated, Divorced or widowed.

Nationality variable was also significantly associated to Substance Abuse (  $\chi^2=5.814$ ,  $p=0.016$ ), reflecting that 9 out of 10 Ugandan Health Care Workers were more likely to abuse Substances compared to Non-Ugandans. Additionally, monthly income also had a significant association to Substance abuse in that people who were earning 1million ugx – 1.5 million ugx as well as below 500,000ugx were most likely to abuse Substances compared to those earning above 1.5million Uganda Shillings monthly. Lastly, Bachelor Degree Holders (47.6%) were most likely to be involved in Substance abuse, followed by the Diploma Degree Holders (40.5%) compared to those with Masters and PhDs. It is evident that undergraduates were most likely to abuse substances compared to Graduates. By contrast, socio-demographic characteristics such as Gender ( $p= 0.772$ ), Religion ( $p= 0.172$ ), and residential area ( $p= 0.370$ ) did not have and statistical significant association to Substance Abuse as indicated in Table 5.

<b>Table 5 shows bivariate statistical associations between socio-demographic characteristics and a Moderate-High Substance Abuse score measured against Lower-risk substance abuse</b>				
<b>Socio Demographic Variables</b>	<b>Moderate/High-Risk</b>	<b>Percentage (%)</b>	<b>Chi-square value</b>	<b>P-value</b>
Age Categories				
26-30	14	33.3	23.290	<b>0.000*</b>
31-35	16	38.1		
36-40	3	7.1		
41-45	2	4.8		
>45	1	2.4		
<25	6	14.3		
<b>Age sub-totals</b>	<b>42</b>	<b>100</b>		
Gender				
Male	21	50	0.084	0.772
Female	21	50		
<b>Gender sub-totals</b>	<b>42</b>	<b>100</b>		
Marital Status				
Single	18	42.9	19.397	<b>0.002*</b>
Married	17	40.5		
Cohabiting	3	7.1		
Divorced	1	2.4		
Separated	3	7.1		
Widowed	0	0.0		
<b>Marital Status sub-totals</b>	<b>42</b>	<b>100</b>		

Nationality				
Ugandan	39	92.9	5.814	<b>0.016*</b>
Non-Ugandans	3	7.1		
<b>Nationality Sub-totals</b>	<b>42</b>	<b>100</b>		
Religion				
Born-Again	9	21.4	9.031	0.172
Pentecostal	6	14.3		
Catholic	15	35.7		
SDA	5	11.9		
Muslim	1	2.4		
Anglican	4	9.5		
Others	2	4.8		
<b>Religion Sub-totals</b>	<b>42</b>	<b>100</b>		
Residential Area				
Urban	35	83.3	0.805	0.370
Rural	7	16.7		
<b>Residence Sub-Totals</b>	<b>42</b>	<b>100</b>		
Monthly Income Level				
<500,000 ugx	12	28.6	13.996	<b>0.007*</b>
500,000ugx-1million ugx	10	23.8		
1million ugx – 1.5 million ugx	12	28.6		
1.5million ugx – 2million ugx	6	14.3		
2million ugx – 2million ugx	2	4.8		
>2million ugx				
<b>Monthly Income Sub-totals</b>	<b>42</b>	<b>100</b>		
Highest Education Level				
Diploma	17	40.5	9.515	<b>0.023*</b>
Bachelors	20	47.6		
Masters	5	11.9		
PhD	0	0.0		
<b>Highest Education Level Sub-totals</b>	<b>42</b>	<b>100</b>		

#### 4.2.3 Logistic regression for the socio-demographic factors

A binary logistics regression analysis of the socio-demographic characteristics variable was carried out. Thereafter, the variables were re-categorized into dichotomous format and each of them was run under the analysis against Substance Abuse. Variables that remained significantly

associated to Substance included Age (COR=5.589, P value <0.0001), Nationality (COR = 0.195, p = 0.029,) Monthly income (COR=2.280, P value = 0.044) and Highest level of Education (COR= 3.766, P value = 0.007)

These results implied that Non-Ugandans were less likely to abuse substances compared to Ugandans who had an 81% likelihood of Substance Abuse.

Furthermore, Health Care Professionals that were earning 1.5million Uganda shillings and below were approximately two times more likely to abuse Substances whereas respondents at the Undergraduate level (Diploma holders and Bachelor Degree Holders) were more likely almost four times more likely to abuse substances compared to those at the Graduate Level (Masters and PhD. Degree holders).

Other variables such as Gender, Religion, and Residential Area as well as Highest level of Education (which was previously significantly associated), all shone through as statistically insignificant factors associated to Substance Abuse amongst Health Care Professionals. Results of the binary logistics analysis for these socio-demographic factors are shown in Table 6.

<b>Table 6 shows the Binary Logistics regression analysis of Socio-demographic characteristic variables after re-categorization into dichotomous format to reveal the Crude Odds Ratio and the P-Value.</b>			
<b>Socio Demographic Variables</b>	<b>Frequency n=380</b>	<b>Crude Odds Ratio C.O.R (CI)</b>	<b>P-Value</b>
<b>Age</b>			
Young – Adults (< 35 yrs)	211	5.589	<b>0.000*</b>
Old Adults (Above 35yrs)	169		
Age Sub-Totals	380		
<b>Gender</b>			
Male	182	1.099	0.772
Female	198		
Gender Sub-Totals	380		
<b>Marital Status</b>			
Single	156	1.675	0.116
Married	224		
Marital Sub-Totals	380		
<b>Nationality</b>			
Non-Ugandan	372	0.195	<b>0.029*</b>
Ugandan	8		
Nationality Sub-Totals	380		

<b>Religion</b>			
Christians	345	0.736	0.624
Non-Christians	35		
Religion Sub-Totals	380		
<b>Residential Area</b>			
Urban	35	0.671	0.372
Rural	7		
Residential Sub-Totals	380		
<b>Monthly Income Level</b>			
1.5 million ugx and below	254	2.280	<b>0.044*</b>
> 1.5million ugx	126		
Monthly Income level Sub-Totals	380		
<b>Highest Education Level</b>			
Undergraduate	261	3.766	<b>0.007*</b>
Graduate	119		
Education Sub-Totals	380		

### **4.3 To determine occupational-related factors associated to substance abuse amongst Health Care Professionals in Kampala, Uganda**

#### 4.3.1 Univariate Analysis for the occupational-related factors

Occupational-Related Factors in this study included the type of Profession, duration of work experience at the hospital, number of working hours daily, stress coping mechanisms and number of sleeping hours per day. It was found that majority of respondents were Administrators (31.6%) and that they had worked for a period of 3-5years (29.5%). Results also showed that almost half of the participants worked for 8-12 hours daily at the hospital (47.1%) and slept for 6-8 hours on a typical day. In regards to how participants usually coped with stress (work-related politics) the majority of participants (44.5%) reported that they usually talked to their peers as indicated in Table 7.

<b>Table 7: Showing the frequency distribution on the Occupational-related factors</b>		
<b>Respondents in this study (n=380)</b>		
<b>Variables</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>Profession</b>		
• Doctor	58	15.3
• Nurse	85	22.4
• Midwife	61	16.1
• Administrator	120	31.6
• Technologist	56	14.7
<b>Profession Sub-totals</b>	<b>380</b>	<b>100</b>
<b>How long have you been working for the hospital?</b>		
• <6 months	41	10.8
• 6months-1 year	59	15.5
• 1-3 years	95	25.0
• 3-5 years	112	29.5
• >5 years	73	19.2
<b>Work Duration sub-totals</b>	<b>380</b>	<b>100</b>
<b>Number of working hours per day at the hospital</b>		
• 5-8hrs	162	42.6
• 8-12hrs	179	47.1
• >12hrs	39	10.3
<b>Working hours sub-totals</b>	<b>380</b>	<b>100</b>
<b>How much time do you usually spend sleeping on a typical day?</b>		

• <3hrs	12	3.2
• 3-5hrs	102	26.8
• 6-8hrs	237	62.4
• >8hrs	29	7.6
<b>Sleeping hours sub-totals</b>	<b>380</b>	<b>100</b>
<b>How do you usually cope with work-related office politics?</b>		
• Eat more	40	10.5
• Drink more	6	1.6
• Sleep	27	7.1
• Exercise	84	22.1
• Swallow relaxing medication	54	14.2
• Talking about it with peers	169	44.5
<b>Coping with stress sub-totals</b>	<b>380</b>	<b>100</b>

#### 4.3.2 Bivariate Analysis for the occupational-related factors

After running the bivariate analysis, it was evident that the Stress coping mechanism (p-value = 0.000) had a significant association to the outcome (Substance Abuse). In this study, it was shown that the highest percentage (28.6%) of those who abused substances were those who used Talking with Peers as a coping mechanism whereas the lowest percentage of participants (7.1%) who abused substances used either eating food or Sleep as a stress coping mechanism.

Other Occupational-Related Factors such as Type of Profession (p-value=0.671), Duration of working at the hospital (p-value=0.127), Number of Daily working hours (p-value=0.370), and Number of Daily Sleeping hours (p-value=0.304) did not have and statistical significant association to Substance Abuse as indicated in Table 8.

<b>Table 8 shows bivariate statistical associations between Occupational-Related characteristics and a Moderate-High Substance Abuse score measured against Lower-risk substance abuse</b>				
<b>Occupational-Related Variables</b>	<b>Moderate/High Risk</b>	<b>Percentage (%)</b>	<b>Chi-square value</b>	<b>P-value</b>
Type of Profession				
Doctor	5	11.9	2.354	0.671
Nurse	9	21.4		
Midwife	5	11.9		
Administrator	14	33.3		
Technologist	9	21.4		
<b>Profession Sub-totals</b>	<b>42</b>	<b>100</b>		
Duration of working at the hospital				
<6 months	6	14.3	7.180	0.127
6 months – 1 year	10	23.8		
1-3 years	6	14.3		
3-5 years	9	21.4		
>5 years	11	26.2		
<b>Duration Sub-totals</b>	<b>42</b>	<b>100</b>		
Number of Daily working hours				
5-8 Hrs	15	35.7	1.988	0.370
8-12 hrs	24	57.1		
>12 hrs	3	7.1		



<b>Working Hours Sub-totals</b>	<b>42</b>	<b>100</b>		
Number of Daily sleeping hours				
<3 Hrs	0	0		
3.-5 hrs	13	31	3.634	0.304
6-8 Hrs	28	66.7		
<b>Sleeping hours Sub-totals</b>	<b>42</b>	<b>100</b>		
Stress Coping Mechanism				
Eat More	3	7.1		
Drink Alcohol	6	14.3		
Sleep	3	7.1	53.225	<b>0.000*</b>
Exercise	9	21.4		
Swallowing relaxing medication	9	21.4		
Talking about it with peers	12	28.6		
<b>Stress-coping Sub-totals</b>	<b>42</b>	<b>100</b>		

#### 4.3.3 Logistic regression for the occupational-related factors

A binary logistics regression analysis of the Occupation-Related Factors was carried out after the variables were re-categorized into dichotomous format and each of them was run for under the analysis against Substance Abuse (Moderate/High-risk). Work-related stress coping mechanisms remained strongly and significantly associated (P value=0.011) with Substance Abuse and had a (COR=2.341), whereby participants who ate more, Drank Alcohol, and swallowed relaxing medication were two times more likely abuse Substances compared to those who used exercise, talking to peers and sleeping as a stress coping mechanism. All other Occupation-related factors remained statistically insignificant at Binary Logistics regression analysis as indicated in Table 9.

<b>Table 9 shows the Binary Logistics regression analysis of Occupation-Related characteristic variables after re-categorization into dichotomous format to reveal the Crude Odds Ratio and the P-Value.</b>			
<b>Occupation-Related Characteristic Variables</b>	<b>Frequency n=380</b>	<b>P-Value</b>	<b>Crude Odds Ratio C.O.R</b>

<b>Type of Profession</b>			
Non-Clinicians	176	0.246	1.464
Clinicians	204		
Profession Sub-Totals	380		
<b>Duration of working at the hospital</b>			
>3years	185	0.884	0.953
3 years and below	195		
Duration Sub-Totals	380		
<b>Number of Daily working hours</b>			
8 Hours and Below	162	0.338	0.722
>8 hrs	218		
Working Hours Sub-Totals	380		
<b>Number of Daily sleeping hours</b>			
<6 hours	114	0.886	1.052
6 hours and above	266		
Sleeping hours Sub-Totals	380		
<b>Work-related Stress Coping Mechanism</b>			
Un-recommended	100	<b>0.011*</b>	2.341
Recommended	280		
Nationality Sub-Totals	380		

#### **4.4 To evaluate the perceptions towards substance abuse amongst Health Care Professionals in Kampala, Uganda.**

The perception towards Substance Abuse amongst the Health Care Professionals was established in this research study. Results showed that three quarters (71.3 %) of the Health Care Workers thought that most health care professionals have Optimal Mental Wellness. It was also found that most respondents (62.1%) reported that Mental Health Education would be the most effective type of interventions needed to prevent substance abuse amongst health care workers while majority (71.8%) of the participants believed that HCPs who struggle with substance abuse would be willing to seek help. Lastly, less than half of the number of respondents, which constituted the majority (43.4%), believed that the main reason behind substance abuse amongst healthcare professionals was Peer Influence (*refer to table 10*).

**Table 10: Showing the frequency distribution of the perception towards substance abuse among the Health Care Professionals of this research study**

<b>Respondents in this study n=380</b>
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Variables	Frequency (n)	Percentage (%)
<b>What do you think is the current mental health state of most of healthcare professional?</b>		
• Optimal Mental Wellness	271	71.3
• Moderately Mental Wellness	78	20.5
• At-risk of Mental Illness	31	8.2
Mental health state sub-totals	380	100
<b>What do you think is the most effective type of interventions needed to prevent substance abuse amongst health care workers?</b>		
• Mental Health Education	236	62.1
• Individual Counseling Services	91	23.9
• Shorter Working Hours	46	12.1
• Others	7	1.8
Most effective intervention sub-totals	380	100
<b>Do you think Health Care Professionals who struggle with substance abuse would be willing to seek help?</b>		
• Yes	273	71.8
• No	107	28.2
Willingness to seek help sub-totals	380	100
<b>What do you think is the main reason behind substance abuse amongst healthcare professionals?</b>		
• Peer Influence	165	43.4
• Long Working Hours	86	22.6
• High Stress Levels	122	32.1
• Others	7	1.8
Drivers of Substance Abuse sub-totals	380	100

#### 4.3 Multivariate Analysis

A multivariate analysis was carried out using logistic regression (since the outcome was categorical in two forms – Lower Risk Substance Abuse vs. Substance Abuse). The variables that were carried over to the multivariate analysis included Age, Nationality, Monthly Income, Highest level of Education as well as Work-related Stress Coping Mechanisms. After controlling for Monthly Income, Highest level of Education and Work-related Stress Coping mechanisms, it was evident that there was an association between age and Nationality, in relation to Substance Abuse (Moderate/High-risk). The Age category reference group were the Young-adults (<35yrs) with (AOR =1). Comparing with Old Adults (above 35 years of age), our research found that Older Adults were 5times more likely to becoming abuse substances compared to Younger Adults (AOR=5.014 95% CI= 1.855 – 13.552). Clearly, Old Adults are a risk group for

Moderate/High substance abuse. With Ugandans being the Nationality reference variable (AOR=1) in this multivariate analysis, it was found that participants who were Non-Ugandans were less likely to abuse Substances (AOR = 0.159, 95% CI – 0.030- 0.846) compared to Ugandans as shown in Table 11.

<b>Table 11 shows a Multivariate analysis for factors associated with Moderate/High risk Substance Abuse amongst Health Care Professionals</b>				
<b>Variables</b>	<b>Adjusted Odds Ratio</b>	<b>95% CI</b>		<b>P-Value</b>
		<b>Lower</b>	<b>Upper</b>	
<b>Age</b> Young – Adults (< 35 yrs) Old Adults (Above 35yrs)	1 5.014	1.855	13.552	0.001*
<b>Nationality</b> Ugandan Non-Ugandan	1 0.159	0.030	0.846	0.031*
<b>Monthly Income Level</b> 1.5 million ugx and below > 1.5million ugx	1 0.839	0.329	2.138	0.713
<b>Highest Education Level</b> Undergraduate Graduate	1 2.060	0.693	6.119	0.193
<b>Work-related Stress Coping Mechanism</b> Un-recommended Recommended	1 1.690	0.843	3.386	0.139

## **CHAPTER FIVE: DISCUSSION**

### **5.1 Main Findings**

The main purpose of this study was to identify factors associated to substance abuse amongst Health Care Professionals in Kampala, Uganda so as to propose intervention entry points on the improvement of mental health specifically through a reduction of Substance Abuse amongst Health Care Professionals as well as to improve health care safety and quality. This study was carried out at two selected hospitals in Kampala mainly Nakasero Hospital and China-Uganda friendship Hospital in Naguru, Kampala – Uganda, amongst a total study population of 380 Health Care Professionals. During this study, various socio-demographic factors, occupational-related factors, Behaviors towards Substance Abuse characteristics, and perceptions of Health Care Professionals towards substance abuse were further assessed and analyzed. After analysis, this study was compared to a number of studies that had been done before, to clearly identify and address the loop holes and put forward relevant recommendations that other hospitals (both private and government), and firms with similar work settings like the Health Care Industry, can incorporate in their Occupational-Health Safety policies.

### 5.1.1 Prevalence of Substance Abuse amongst Health Care Professionals

The research study established that the overall prevalence of substance abuse was approximately 4%. This implied that 4 out of every 100 Health Care Professionals, were found to abuse substances. Specifically, our findings revealed that Alcohol scored the highest maximum score on the reference scale, and highest prevalence as compared to other substances assessed.

Our prevalence and most abused substance (alcohol) findings are similar to Bush et. al research study results whereby the rate of health care workers who struggled with substance abuse was 4.4% and their biggest struggle was attributed to the heavy consumption of alcohol (Bush and Lipari, 2016). More research therefore needs to be carried out to assess why Health Care Workers would opt for alcohol rather than other substances.

By contrast, a study carried out by Panthee and Gyawali et.al, 2017 amongst Nepal Health Care Students found that majority of the Health Care students used most Marijuana and opiates (Panthee, Panthee, Gyawali, et.al, 2017) as well as Bennette .J. O'Donovan, 2001 and Wood's 2004 studies where Opioids use and abuse were significantly higher amongst the Health Care Professionals compared to the general population (Bennett. J. O'Donovan, 2001).

Additionally, while Cannabis (marijuana) and heroin drug abuse is prevalent amongst most specific marginalized groups such as street youth, secondary school, university goers, and soldiers specifically in Uganda, our study findings revealed that Alcohol is the most abused substance amongst Health Care Professionals in Kampala, Uganda. Having identified the mostly abused substance, further research is needed to evaluate policies regarding Safe Alcohol Consumption Practices amongst Health Care Workers to guide future Health recommendations.

Similar to Pick *et.al.*, (2003) research findings amongst nine workers in South Africa overall lifetime Prevalence of substance use was 13.9%, our study found that the Overall lifetime Substance use amongst Health Care Professionals was 18.7% Bush, & Lipari, 2015).

Despite the fact that the prevalence of substance abuse amongst marginalized groups such as university students, soldiers, people living with HIV/AIDs and prostitutes in Uganda is known, there was no research data available for prevalence of substance abuse amongst Health Care Professionals (Health Care Professionals). It was therefore on this basis that our research was conducted and can now be used as a source of information by other researchers, other stakeholders and policy makers in the Health Care Industry. Our results imply that substance

abuse, though still low, has a potential to increase in the next few years if regulations are not put in place to manage the consumption of alcohol.

### **5.1.2 Associations of socio-demographic characteristics to Substance Abuse amongst Health Care Professionals**

#### **Age**

As predicted, age was statistically and strongly significant at the bivariate level as well as the multivariate level of analysis with p-values of 0.000 and 0.001 respectively. Results showed that Health Care Professionals between 31-35 years of age had the highest likelihood (38.1%) of being moderately-highly at risk of substance abuse as compared to those in their 20's and those above 35 years. The same was seen amongst respondents who were single (42.9%) and married (40.5%). After categorizing age (Below 35 and 35 and above) and running a multivariate analysis, it was found that in fact found that Older Adults were 5 times more likely to becoming abuse substances compared to Younger Adults (AOR=5.014 95%CI= 1.855 – 13.552).

Our same hypothesis was contradicted by Abuse.S 2006 as well as Kenna, G,2008 studies who found that the prevalence of substance use for the general population decreases with age after peaking in young adulthood implying that the older one grows, the lower the chances of substance abuse. Additionally the latter research found that younger physicians and those who did not socialize were more likely to struggle with Substance Abuse respectively.

Based on our results, a plausible explanation as to why Health Care Professionals above the age of 35 years are 5 times more likely to abuse substances may be attributed to life's responsibilities, dependents and other work-related stress factors and putting the old adults at risk for Moderate/High substance abuse. Evidently, the role of age is key in influencing Substance Abuse specifically amongst older adult Health Care Professions and therefore more research should be further scrutinized for the driving factors. Additionally, it is important that the relevant authorities within the public health sector look further into sensitizing old adults on the dangers of substance abuse.

#### **Marital Status**

The influence of Marital Status on Substance Abuse remains a controversial issue in the world of Psychology and Mental Health. One particular study on the Predictors of stimulants use among

physicians in a Nigerian tertiary health institution in Sokoto, Northwest Nigeria (Adamu, Ahmad, et.al 2018), found that marital status was significantly associated with Substance Abuse in such a way that married physicians were more likely to use stimulants such as coffee and opioids compared to the single Health Care Professionals. Our research study findings were slightly similar to this study in that Marital status was indeed a strong significant factor associated to Substance Abuse among Health Care Professionals (p-value = 0.002), at the Bivariate Level of analysis whereby Health Care Professionals who were single (Single, Divorced, Separated) were more likely to abuse Substances compared to the married Health Care Professionals.

After controlling for all other socio-demographic variables, Marital Status ceased to be a significant factor associated to Substance Abuse (p-value= 0.116).

Marital Status probably a significant confounding variable to other factors that are associated to Substance Abuse, specifically amongst Health Care Professionals. Considering this, additional research on the true influence of Marital Status upon a Health Care Professional's quality of life (Substance usage and abuse) ought to be executed.

### **Nationality**

While there were hardly any studies that revealed an association between Nationality and Substance Abuse, our study completely revealed a statistically strong association between Nationality and Substance Abuse both at bivariate and at multivariate level of analysis. Ugandans being the Nationality reference variable (AOR=1) at the multivariate analysis, it was found that participants who were Non-Ugandans were less likely to abuse Substances (AOR = 0.159, 95% CI – 0.030- 0.846) compared to Ugandans. A clearer and more in depth understanding on the role of Nationality on a Health Care Professionals' susceptibility to substance abuse should be carried out. According to the World Population Review Report on Alcohol Consumption by Country in 2021, Uganda was ranked amongst the Top 10 (8<sup>TH</sup> position) countries in the world in 2019 consuming about 12.48liters of pure alcohol per capita. This ranking also suggested that Uganda is the only African Country amongst the Top 10 Highest Alcohol consuming Countries. The World Health Organization attributes a country's alcohol consumption on laws and culture. It is therefore not a surprise that Ugandans, in this research were more likely to abuse Substances compared to non-Ugandans. With this, Ugandans, regardless of their profession have to be sensitized on the dangers of Alcohol abuse and the consequences of their quality of life.



### **Monthly Income Level**

In the literature review, we barely found any researches directly pointing out income level as a factor associated to substance abuse amongst Health Care Professionals. We however only speculated indirect relationship between income level and Substance abuse. Our speculation was based on the findings of other studies that showed associations between the type of specialty in health profession and type of substance abuse. Adamu et. al 2018 speculated that since the income levels of the Senior Physicians were higher than younger physicians, they had a higher purchasing power to buy stimulants that may be more expensive (Adamu, Ahmad, Mudi, et. Al, 2018).

Upon analysis, our results showed that monthly income also had a strong significant association to Substance abuse ( $p$ -value = 0.007) in that people who were earning 1million ugx – 1.5 million ugx as well as below 500,000ugx were most likely to abuse Substances compared to those earning above 1.5million Uganda Shillings monthly. Furthermore, the binary logistics regression analysis revealed that Monthly income was also a significant factor associated to Substance Abuse ( $P$  value = 0.044), in that individuals that were earning 1.5million Uganda shillings and below were approximately two times more likely to abuse Substances (COR=2.280).

These findings are contradicting Adamu,et.al 2018 research findings and speculations. It is instead more plausible to conclude that Monthly Income served as a cofounding variable given that at the Multivariate level of analysis, upon controlling for other factors, Monthly income level ceased to be significant.

Further research focusing on the market trends and price of these substances (specifically alcohol) may be carried out to confirm whether the price of substances is a driver of the high number of purchases of alcohol and other substances.

### **Highest Education Level**

Whereas there were hardly any research studies that reveal associations between education, income level and substance abuse amongst Health Care Professionals, other studies revealed that there are an association between the type of specialty in health profession and type of substance abuse. It is based on this deduction that we speculated and hypothesized an indirect association of level of Education and income to substance abuse amongst Health Care works.

Our hypothesis was indeed true. Results showed a significant association between the level of Education and Substance abuse scoring a p-value of 0.023 at the bivariate level of analysis. We found that Health Care Professionals who were Bachelor Degree Holders and Diploma Degree Holders were more likely to be involved in Substance abuse as compared to those with Masters and PhDs. It is evident that undergraduates were most likely to abuse substances compared to Graduates. These findings lay a good foundation for other researchers to look further into the associations between Education and Substance Abuse; especially amongst Health Care Professionals.

Considering that there were hardly any researches revealing any associations between gender, residential area and religion to Substance abuse amongst Health Care Professionals, we hypothesized the same. Our results also agreed with this hypothesis. Socio-demographic characteristics such as Gender ( $p= 0.772$ ), Religion ( $p= 0.172$ ), and residential area ( $p= 0.370$ ) had no significant association to Substance Abuse both at the bivariate level using Chi-square test and when using the Binary logistics regression.

### **5.1.3 Associations of Occupational-related factors to Substance Abuse amongst Health Care Professionals**

Our research explored whether the Type of Health Profession was associated to Substance Abuse amongst the Health Care Professionals. We hypothesized that it would, assuming that the professionals involved in direct patient care would have more susceptibility to Substance Abuse. This hypothesis was in agreement with Trinkoff and Storr's study in 1998 where it was found that nurses in women's health, pediatrics, and general practice, emergency nurses were 3.5 times as likely to use marijuana or cocaine compared to the oncology and administration nurses were twice as likely to engage in binge drinking (Trinkoff and Storr 1998). Similarly, Giesinger, et. al 2015 study reported that physicians who are up to the rank of consultants significantly consume more coffee than physicians with lower ranks (Giesinger et al., 2015). This behavior was mainly attributed to the level and work-stress that came longer working hours, shorter sleeping hours with the jobs of the higher-level physicians.

After comparing the literature reviewed to our findings, there were inconsistencies. Results showed that neither Type of Profession (Non-clinicians or Clinicians), Duration of working at the hospital, number of working hours, or even sleeping hours were associated to Substance abuse.

We cannot however, completely rule out their roles in this research study. It is highly plausible that these are intervening factors, in that the Type of Profession and number of working hours (extra time) may have contributed towards the monthly income, which too was a significant factor in this research study.

The Occupational-related factor that was associated to Substance Abuse was the Work-related Stress Coping mechanisms. After running the bivariate analysis, it was evident that the Stress coping mechanism ( $p$ -value = 0.000) had a statistically strong and significant association to the outcome (Substance Abuse). In this study, it was shown that the highest percentage (28.6%) of those who abused substances were those who used Talking with Peers as a coping mechanism whereas the lowest percentage of participants (7.1%) who abused substances used either eating food or Sleep as a stress coping mechanism. Although Work-related stress was significant at bivariate analysis, it did not emerge as statistically significant at the multivariate level of analysis.

From our findings, it is evident that the way in which Health Care Professionals cope with Work-related stress influences their Behaviors towards recreation / relaxation. If majority of the respondents who abused Substances used Talking with Peers as a coping mechanism, and simultaneously, majority of the Health Care Professionals (43.4%) believed that the main reason behind substance abuse amongst healthcare professionals is Peer Influence, then it is possible that during the time when HCPs are relaxing with peers substances are consumed in excess.

More research should be carried out to study the human behaviors during the recreation with peers and the nature of conversations, whether truly this will influence their levels of Substance usage. Our findings are also a good platform for the germane stakeholders in Occupational Health Safety and mental health to design programs and strategies of stress-management amongst peers, while deterring them from using substances to cope with life's challenges.

#### **5.1.4 Perception towards Substance Abuse amongst Health Care Professionals**

Considering that having a healthy, productive and innovative nation is the third sustainable development goal (SDG) for Uganda as a Nation (United Nations Development Program, 2013), it was appropriate to evaluate the perceptions of Health Care Professionals towards substance

abuse prior to suggesting any recommendations on Substance Abuse amongst the target population.

Our results found that majority (71.3%) of the Health Care Workers thought that most health care professionals have Optimal Mental Wellness. It was also found that most respondents (62.1%) reported that Mental Health Education would be the most effective type of interventions needed to prevent substance abuse amongst health care workers while majority (71.8%) of the participants believed that HCPs who struggle with substance abuse would be willing to seek help. The willingness to seek help is a clear indicator that Health Care Professionals have a positive attitude towards Substance Abuse interventions in this research study. The fact that 71.8% of participants were willing to seek help also indicates prospective acceptability of both plan short and Long-Term Health substance abuse intervention programs targeting Health Care workers designed by the Ministry of Health. This positive attitude however contradicts a systematic review by Van. et.al 2013 on Stigma among health professionals who were found to have a negative attitude towards patients with substance use disorders (Van Boekel, Brouwers, et.al 2013).

Evidently, further investigations are needed to understand the drivers of the variations in attitude and sensitization of these are paramount.

Lastly, majority of the Health Care Professionals that participated in this study (43.4%) believed that the main reason behind substance abuse amongst healthcare professionals is Peer Influence. Our findings can be used as an information resource for the Ministry of Health in Policy making for Health Care workers in both private and government work settings to in order to improve the employees' mental health, motivation to work, and ultimately enhance the quality and safety in Health Care Services rendered by the Health Care Professionals to the public.

#### **5.1.5 Strengths of the study**

- The selection of the participants was using Random sampling Technique. This enabled us to attain a representative sample size of the population.
- The study sample size had an acceptable response rate 99.2% (380/383).
- All measures used i.e. the instruments (Questionnaire adapted from the World Health Organization (WHO) Alcohol, Smoking and Substance Involvement Screening Test (ASSIST Tool) version 3. In addition, the questionnaire was pre-tested on two randomly selected Health Care Professionals in the selected hospitals.

- Despite the fact that the prevalence of Substance Abuse for each of the substances studied in this research were low, general the Prevalence of Substance Abuse amongst the Health Care Professionals was established in this research study and was approximately 4%. Clearly out of every 100 Health Care Professionals, 4 are susceptible to Substance Abuse. This is a significant prevalence due to the known consequences of Substance Abuse amongst Health Care Workers such as ill-health, financial problems, crime and even worse, negligence while at work and thus compromising the quality of health care provided to patients.
- This study was also able to determine strong significant associations between Age, Nationality and work-stress coping mechanisms to Substance Abuse and this information may be used to policy (Occupational-Health Safety) and other researchers who may want to further study these particular factors in relation to substance abuse amongst Health Care Professionals.
- This study has painted a clear picture of the perception of most Health Care Professionals towards Substance abuse in regards interventions, willingness to seek help and the main reason behind substance abuse amongst them. It is this perception that can further be explored to guide Educational interventions, mental health and individual counseling services for this group of workers.
- The Ministry of Health, the Government of Uganda, together with institutions can use the data collected to design wellness programs specifically targeting the wellness needs of Health Care Professionals as they continue rendering services to patients.

#### **5.1.6 Weaknesses of study**

- The methodology (cross-section) of study design did not allow for any causal interpretation about the independent variables, confounding, and outcome. It only implies associations.
- There was a possibility of reporting bias with questions that were sensitive (Substance Abuse related questions).
- This study only covers a total of 380 respondents, which, when compared to other studies on Substance Abuse amongst Health Care Professionals, does not reveal a wide variation and therefore shows a number of statistically insignificant associations.

- The fact that this study was done particularly in two selected Hospitals in Kampala, there was no variation or in-depth study of other Health Care Professionals in other parts of Kampala.

### **5.1.7 Implications for interventions and research**

- After identifying groups of Health Care Professionals at risk for Substance Abuse (Ugandans and Old Adults), possible interventions that address mental health and Substance Abuse should be designed and implemented by the Ministry of Health. Additionally, revisiting Occupational Health Safety and Wellness policies for these Health Care Professionals at risk and incorporation of wellness packages for Health Care Professionals and other groups with similar working conditions and characteristics is vital.
- There is essential need for further assistance in Mental Health Education Services and stress management, specifically focusing on substance abuse amongst Health Care Professionals (n=236, 62.1%). Further research on stress-coping mechanisms in relation to work-productivity could emerge from this research. This research will be an opportunity for further researches on psychosocial and mental health in the aim to improve stress management and the overall wellness of Health Care Professionals in the workplace.
- Regulation of Alcohol consumption by the gatekeepers and other stakeholders in the food and beverage industry in Uganda is imperative. Health Care Professionals should not have easy access to Alcohol during working hours. Health Care Professionals, with support from the Ministry of Health, should be sensitized on safe alcohol consumption and stress management strategies. This may not only apply to only Health Care Professionals working in the Health Care Centers, but all other Health Care Professionals working in community setting. Further understanding of the impact of Alcohol Abuse on the quality and safety of Health Care Services is paramount.

## **CHAPTER SIX: CONCLUSION**

### **6.1 Conclusion**

In conclusion, our research study found that Age and Nationality were statistically significant factors associated with Substance Abuse amongst Health Care Professionals, in Kampala, Uganda. Specifically, Ugandan Health Care Professionals who are older adults (above the age of 35years), are at a high risk of substance abuse. These associations persisted even after the multivariate level of analysis and in subgroups analyses. Additionally, the research study revealed that 4 out of every 100 Health Care Professionals in Kampala, Uganda abuse drugs. A 4% prevalence of Substance Abuse amongst Health Care Professionals in Kampala, Uganda – although low suggests that this may become a public health concern in a few years to come with the rise of legalizing of substance usage in African countries. It is therefore paramount for the relevant Public Health Offices in both Private and Government entities to critically consider the Occupational Health Safety packages for the Health Care Professionals and ensure to educate

them on not only the dangers of Substance Abuse but to also avail health avenues on how these professionals can cope with stress better. Furthermore, our results depict an urgent need for mental health education for our Health Care Professionals so as they can be empowered and well-equipped on how to identify victims at risk of substance abuse.

Lastly, taking into account the potential medical and psychosocial problems related to alcohol abuse, recommendations on alcohol use should be made not only for the Health Care Professional but also for other Ugandans at large.

Further research is needed to explain the role of factors such as marital status and education in relation to substance abuse and the quality of one's life.

## 6.2 Recommendations

Based on the research findings, the following recommendations will be necessary to both Ministry of Health, Health Care Centers and other authorities in government in efforts to curb the prevalence of Substance Abuse amongst Health Care Professionals, and thus improve the quality of Health Care services availed to the public:

- Ministry of Health should develop policies that require Health Care Centers to incorporate Health and Wellness packages in their Occupational Health Safety strategies that promote safe health stress coping mechanisms such as physical exercises for example brisk walking and dance fitness for Older Ugandan Health Care Professionals.
- Ministry of Education and Sports in partnership with the Ministry of Health should deliberately ensure that mental health education is introduced in the National Council for Higher Education Curriculum for Health Science Students and continual education should be accessible and implemented for Health Care Professionals. These refresher courses will be a source of information and an early screening tool for individuals who might need mental health therapy.
- Strict regulation of Alcohol consumption by the Health Care Professionals in Uganda is imperative. The government of Uganda, through the Uganda National Bureau of Standards (UNBS) should place restrictions on the amount of alcohol that Health Care Professionals should consume especially during working hours. Additionally, Health Care Professionals should continually be sensitized on safe alcohol consumption and stress management strategies.



- Despite the fact that this research study is focusing on Health Care workers, it is pertinent for the government of Uganda to apply these recommendations to marginalized groups in the community as so to ensure a safer, healthier and happier Uganda as well as general improvement of the quality of life for Ugandans.
- Finally, further understanding of the impact of Alcohol Abuse on the quality and safety of Health Care Services is paramount.

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## **APPENDICES**

### **ANNEX 1: RISK MANAGEMENT PLAN**

*REBECCA SUUBI*

#### **TITLE OF THE PROPOSAL/PROTOCOL**

*'FACTORS INFLUENCING SUBSTANCE ABUSE AMONGST HEALTH CARE PROFESSIONALS IN KAMPALA, UGANDA'*

#### **Introduction**

The COVID-19 is a disease that is transmitted by people carrying the virus. The disease can be spread by person-to-person through respiratory droplets expelled from the nose and mouth when a person coughs or sneezes. It can also be transmitted when humans have contact with hands or surfaces that contain the virus and touch their face, mouth or nose with the contaminated hands. There is currently no vaccine or treatment for COVID-19. Due to the rapidly increasing number of cases in the country, there is a great danger posed among communities to have cross infection

from either symptomatic or asymptomatic individuals if mitigation or prevention measures are not well observed. The research team engaging study participants using face to face approach to collect data may be at high risk of infection which may potentially increase the risk of transmitting COVID-19 between study participants, their household members, participant to study staff and vice versa. This Plan is therefore designed to ensure the health and safety of research teams, support staff, participants (Health Care Professionals) against COVID-19.

To ensure the protection of study participants and the research team, the following protocol will be observed:

1. All persons involved in the study (principal investigator and research assistants) will put on masks and covering the mouth and the nose properly and consistently.
2. All research assistant/s will be given alcohol-based sanitizer to be used during training and collection of data.
3. Social distance of two meters will be maintained at all times during training of research assistants and during data collection.
4. All research assistants must undergo screening for COVID-19 through temperature check at all check points at the study sites and should present Vaccination Cards.
5. Study participants without masks will not be recruited in the study
6. There will not be any exchange of papers, sharing of pens, books and other items during data collection with the study participants or amongst the research assistants.
7. The research team will be trained on risk prevention and identification of COVID-19 disease symptoms prior to data collection
8. The study team will on a daily basis conduct reviews of risk prevention and management procedures based on need of risk awareness, identification, documentation and communication.
9. In order to prevent transmission, the research assistants disseminating the questionnaires will be stationed in one place for Health Care Professionals to come and collect their Questionnaires instead of the research assistants moving around the wards and offices
10. Each Research Assistant will be given a pair of gloves to wear when handing out the questionnaires and each participant receiving the questionnaire will need to first sanitize their hands before picking the forms. There will also be a designated area for filling in the forms that does not allow more than 20 people to convene. This area will be out-doors to ensure proper aeration and social distance. Chairs will be placed 2-meters apart from each other and each

participant's chair will be sanitized after he/she sits on it to allow another participant to use the same.

11. There will be emergency masks for participants whose masks look a little worn out or who do not come with masks at all.

## **ANNEX 2: INTERVIEWEE CONSENT FORM**

I am asking you to take part in a research study called: *'Factors Influencing Substance Abuse amongst Health Care Professionals in Kampala, In Uganda'*. The person who is in charge of this research study is Rebecca Suubi. The research will be conducted in Naguru China-Uganda Friendship Hospital and Nakasero Hospital in Kampala District of Uganda.

### **Purpose of the study**

The purpose of this study is to;

1. To determine the prevalence of Substance abuse amongst Health Care Professionals in Kampala, Uganda
2. To establish socio-demographic factors associated to substance abuse amongst Health Care Professionals in Kampala, Uganda
3. To establish occupational-related factors associated to substance abuse amongst Health Care Professionals in Kampala, Uganda

4. To evaluate the perceptions of Health Care Professionals towards substance abuse and mental health.

### **Study Procedures**

You are being asked to participate in this study, as you are a Health Care Professional help us to better understand the factors associated with Substance Abuse amongst Health Care Professionals. If you take part in this study, you will be asked to:

1. Take part in a one-time, one-on-one, semi-structured interview;
2. The interview will take approximately fifteen minutes;
3. The interview will take place at a location most convenient to you as the participant within the Health Care Facility
4. The survey will be self-administered so as to ensure privacy and confidentiality in this particular subject topic.

### **Benefits**

There may be no direct benefits associated with your participation in the study, but the information you will provide will be useful in the following ways:

1. May be used as an information resource for the Ministry of Health in Policy making for Health Care workers in both private and government work settings to plan short and Long-Term Health substance abuse intervention programs targeting Health Care workers and thus will improve their employees' health, motivation to work, and ultimately enhance the quality and safety in Health Care Services rendered by the Health Care Professionals to the public.
2. May contribute towards improving the general lifestyles, health, and performance at work among Health Care Professionals, and consequently improve the national social economy- bringing us one step closer to achieving Uganda's third SDG.

### **Risks or Discomfort**

This research is considered to be moderately risky in that the information being shared is sensitive. However, all respondents should be assured that no personal information will be shared with their bosses or their supervisors. Aside from the confidentiality, there are no known additional risks to those who take part in this study.



## **Compensation**

No research participants will be compensated

## **Privacy and Confidentiality**

We will keep your study records private and confidential. Certain people may need to see your study records. By law, anyone who looks at your records must keep them completely confidential.

The only people who will be allowed to see these records are:

The research team, including the Principal Investigator and those involved with the study. I may publish what I have learnt from this study. If I do, I will not include your name. I will not publish anything that would let people know who you are.

Additionally, strict confidentiality measures will be taken in that the participant will not have to sign their names or give any detail of their identity except willing participants with their initials. Additionally this research study is self-administered and therefore will reduce any contact with the participants. For participants who do not wish to avail their initials, an alternative waiver consent form will be requested by the research from the CIU REC if the need arises since the information being shared is highly sensitive and requires minimal exposure.

## **Voluntary Participation / Withdrawal**

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study.

## **You can get the answers to your questions, concerns, or complaints**

If you have any questions, concerns or complaints about this study, or experience an adverse event or unanticipated problem, contact the principal researcher on **Ms Rebecca Suubi** on **0788002444**. If you have questions about your rights as a participant in this study, general

questions, or have complaints, concerns or issues you want to discuss with someone outside the research, call the CIUREC Chairperson Dr. Samuel Kabwigu on (0312307400) & the executive secretary of UNCST on (0414 -705500) respectively

**Assessment of understanding**

Please check which box best describes your assessment of understanding of the above informed consent document:

I have read the above informed consent document and understand the information provided to me regarding participation in the study and benefits and risks. I give consent to take part in the study and will sign the following page.

I have read the above informed consent document, but still have questions about the study; therefore, do not give yet give my full consent to take part in the study.

**Signature of Person Taking Part in Study** \_\_\_\_\_ **Date** \_\_\_\_\_

**Leave this space for the CIUREC stamp**

\_\_\_\_\_  
**Signature of Person Obtaining Informed Consent/ Research Authorization Date**

Male	
Female	

**ANNEX 3: DATA COLLECTION TOOL**

**FACTORS INFLUENCING SUBSTANCE ABUSE AMONGST HEALTH CARE WORKERS  
IN KAMPALA, UGANDA**

<b>Consent and Interview Language</b>	<b>Response</b>						
<table border="1"> <tr> <td><b>Consent has been read and</b></td> <td></td> </tr> <tr> <td>Yes</td> <td></td> </tr> <tr> <td>No</td> <td></td> </tr> </table>	<b>Consent has been read and</b>		Yes		No		<p>If No, END</p>
<b>Consent has been read and</b>							
Yes							
No							

Socio-Demographic Information

Response

1. Sex (record as observed)

Below 25 years	
26-30	
31-35	
36-40	
41-45	
Above 45	

2. Marital Status

Single	
Married	
Cohabiting	
Divorced	
Separated	
Widowed	

3. Age  
(Completed Years)

4. Religion

Ugandan	
Non-Ugandan	

Urban	
Sub-urban	
Rural	

Pentecostal	
Catholic	
Seventh Day Adventist	
Muslim	
Anglican	
Others	

If Others, please specify

.....

5. Nationality

6. Residential Area

7. Highest level of Education

Below 500,000 UGX	
500,000-1,000,000 UGX	
1,000,000-1,500,000 UGX	
1,500,000 – 2,000,000 UGX	
Above 2,000,000 UGX	

Certificate	
Diploma	
Bachelor's	
Masters	
Others	

If Others, please specify

.....

8. How long have you been working for the hospital?

Less than 6 months	
6months-1year	
1year -3years	
3years -5years	
More than 5years	

9. Monthly Income level

10. Profession

Doctors	
Nurses	
Midwives	
Administrators	
Others	

If Others, please specify

.....

### 11. Number of working hours

5-8hrs	
8-12hrs	
Above 12hrs	

### Occupational- Related Information

The next section asks about stress. By stress, I mean – any disturbance (emotional, social, physical or mental) from the usual environment.

### CORE: STRESS LEVELS

1. How much time do you usually spend sleeping on a typical day?

Less than 3hrs	
3-5hours	
6-8hours	
Above 8hours	

2.

I am

your

Eat more	
Drink Alcohol	
Sleep	
Exercise	
Swallow relaxing medication	
Others	
-----	

How do usually cope with stress?

**SUBSTANCE USAGE**

going to ask you some questions about your experience of using these substances across lifetime and in the past three months.

These substances can be smoked, swallowed, snorted, inhaled, injected or taken in the form of pills (show drug card). Some of the substances listed may be prescribed by a doctor (like amphetamines, sedatives, pain medications).

Note: We will not record medications that are used as prescribed by your doctor. However, if you have taken such medications for reasons other than prescription, or taken them more frequently or at higher doses than prescribed, please let me know. While we are also interested in knowing about your use of various illicit drugs, please be assured that information on such use will be treated as strictly confidential.

<b>In your life, which of the following substances have you ever used? (NON-</b>	No	Yes



<b>MEDICAL USE ONLY)</b>			
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0		3
b. Alcoholic Bevarages (beer, wine, spirits, etc)	0		3
c. Cannabis (marijuana, pot, grass, has, etc)	0		3
d. Cocaine (coke, crack, etc)	0		3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0		3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc)	0		3
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc)	0		3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc)	0		3
i. Opioids (heroin, morphine, methadone, codeine, etc)	0		3
j. Other -specify:	0		3

If "NO" to all items, stop interview.

If "Yes" to any of these items, ask Question If "Yes" to any of these items, ask Question 2 for each substance ever used.

<b>In THE PAST THREE MONTHS, how often have you used the substances you mentioned (FIRST DRUG, SECOND DRUG, ETC)</b>	<b>Never</b>	<b>Once or Twice</b>	<b>Monthly</b>	<b>Weekly</b>	<b>Daily or almost daily</b>
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	2	3	4	6
b. Alcoholic Beverages (beer, wine, spirits, etc)	0	2	3	4	6
c. Cannabis (marijuana, pot, grass, has, etc)	0	2	3	4	6
d. Cocaine (coke, crack, etc)	0	2	3	4	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	2	3	4	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc)	0	2	3	4	6
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc)	0	2	3	4	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc)	0	2	3	4	6
i. Opioids (heroin, morphine, methadone, codeine, etc)	0	2	3	4	6
j. Other -specify:	0	2	3	4	6

QUESTION 2

If "Never" to all items in Question 2, skip to Question

If any substances in Question 2 were used in the previous three months, continue with Questions 3, 4 & 5 for each substance Questions 3, 4 & 5 for each substance each substance used.

QUESTION 3

During THE PAST THREE MONTHS, how often have you had a strong desire or urge to use (FIRST DRUG, SECOND DRUG, ETC)	Never	Once or Twice	Monthly	Weekly	Daily or almost daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	3	4	5	6
b. Alcoholic Beverages (beer, wine, spirits, etc)	0	3	4	5	6
c. Cannabis (marijuana, pot, grass, has, etc)	0	3	4	5	6
d. Cocaine (coke, crack, etc)	0	3	4	5	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	3	4	5	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc)	0	3	4	5	6
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc)	0	3	4	5	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc)	0	3	4	5	6
i. Opioids (heroin, morphine, methadone, codeine, etc)	0	3	4	5	6
j. Other -specify:	0	3	4	5	6

QUESTION 4

During THE PAST THREE MONTHS, how often has your use of (FIRST DRUG, SECOND DRUG, ETC) led to health, social, legal, or financial problems?	Never	Once or Twice	Monthly	Weekly	Daily or almost daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	4	5	6	7
b. Alcoholic Beverages (beer, wine, spirits, etc)	0	4	5	6	7
c. Cannabis (marijuana, pot, grass, hash, etc)	0	4	5	6	7
d. Cocaine (coke, crack, etc)	0	4	5	6	7
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	4	5	6	7
f. Inhalants (nitrous, glue, petrol, paint thinner, etc)	0	4	5	6	7
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc)	0	4	5	6	7
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc)	0	4	5	6	7
i. Opioids (heroin, morphine, methadone, codeine, etc)	0	4	5	6	7
j. Other -specify:	0	4	5	6	7

QUESTION 5



During THE PAST THREE MONTHS, how often have you failed to do what was normally expected of you because of your use of (FIRST DRUG, SECOND DRUG, ETC) ?	Never	Once or Twice	Monthly	Weekly	Daily or almost daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	5	6	7	8
b. Alcoholic Beverages (beer, wine, spirits, etc)	0	5	6	7	8
c. Cannabis (marijuana, pot, grass, has, etc)	0	5	6	7	8
d. Cocaine (coke, crack, etc)	0	5	6	7	8
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	5	6	7	8
f. Inhalants (nitrous, glue, petrol, paint thinner, etc)	0	5	6	7	8
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc)	0	5	6	7	8
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc)	0	5	6	7	8
i. Opioids (heroin, morphine, methadone, codeine, etc)	0	5	6	7	8
j. Other -specify:	0	5	6	7	8

Have you ever used any drug by injection?	No, Never	Yes, in the past 3 months		Yes, but not in the past three months
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)	0	2		1
<del>a. Tobacco products (cigarettes, chewing tobacco, cigars, etc)</del>	<del>0</del>	<del>0</del>	<del></del>	<del>0</del>
b. Alcoholic Beverages (beer, wine, spirits, etc)	0	6		3
c. Cannabis (marijuana, pot, grass, has, etc)	0	6		3
d. Cocaine (coke, crack, etc)	0	6		3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc)	0	6		3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc)	0	6		3
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc)	0	6		3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc)	0	6		3
i. Opioids (heroin, morphine, methadone, codeine, etc)	0	6		3
j. Other -specify:	0	6		3
<del>j. Other -specify:</del>	<del>0</del>	<del>6</del>	<del></del>	<del>3</del>
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc)	0	6		3
i. Opioids (heroin, morphine, methadone, codeine, etc)	0	6		3
j. Other -specify:	0	6		3

Ask Questions 6 & 7 for all substances ever used (i.e those endorsed in Question 1)

QUESTION 6

QUESTION 7

QUESTION 8



S

**OBJECTIVE V: PERCEPTION ON SUBSTANCE ABUSE INFORMATION**

QUESTION 1: What do you think is the mental health state of most of healthcare professional?

<b>Optimal Mental Wellness</b>	
<b>Moderately Mental Wellness</b>	
<b>At-risk of Mental illness</b>	

QUESTION 2: What do you think is the most effective type of interventions needed to prevent substance abuse amongst health care workers?

<b>Mental Health Education</b>	
<b>Individual Counseling Services</b>	
<b>Shorter working hours</b>	
<b>Others</b> <b>If Others, please specify .....</b>	

QUESTION 3: Do you think Health Care Professionals who struggle with

substance abuse would be willing to seek help?

<b>YES</b>	
<b>NO</b>	

QUESTION 4: What do you think is the main reason behind substance abuse amongst healthcare professionals?

<b>Peer influence</b>	
<b>Long working hours</b>	
<b>High stress levels</b>	
<b>Others</b>  <b>If Others, please specify</b>  .....	

**THANK YOU FOR FEEDBACK IN  
OUR RESEARCH STUDY  
QUESTIONNAIRE**

**ANNEX 3 Table 2 – ASSIST SCORE SHEET**

**ASSIST RISK SCORE**

**Range**

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Tobacco	0-39
Alcohol	0-39
Cannabis	0-39
Amphetamine type-Stimulants	0-39
Inhalants	0-39
Sedatives or Sleeping Pills	0-39
Hallucinogens	0-39
Other Drugs	0-39


**ANNEX III: Table 3 – ASSIST INTERPRETATION**

<b>ASSIST SCORE</b>	<b>INTERPRETATION</b>
Lower risk	0-10 0-3 (For Alcohol)

Moderate risk	4-26 11-26 (Alcohol)
High risk	27 and Above

**ANNEX 5: APPROVAL DOCUMENTS**


**A. RESEARCH PAYMENT RECEIPTS FOR THE SELECTED HEALTH CENTERS**



## NAKASERO HOSPITAL

Plot 14A Aki-Bua Road Nakasero, P.O. BOX 16595, Kampala-Uganda,  
Tel: +256 312531400  
Email: info@nhl.co.ug, www.nakaserohospital.com


  

Received from <u>Rebecca Suubi</u> <u>Patience</u>	<b>RECEIPT</b>	
The sum of <u>One hundred thousand</u> <u>shillings</u>	Date <u>27/09/2021</u>	No. <b>74521</b>
Being Payment of <u>2nd Degree Research</u>		
Cash/ Cheque No. <u>Cash</u>	Balance	
SHS <span style="border: 1px solid black; border-radius: 15px; padding: 5px 20px;"><u>100000</u></span>	 <b>For: NAKASERO HOSPITAL</b>	

THE REPUBLIC OF UGANDA  
**GENERAL RECEIPT**      Y 2454971      T.F. 1002  
(Revised June 2003)

Vote No. 176  
Ministry/Agency CyH-0  
Station/Department Accts

RECEIVED from Rebecca Suubi  
sum of Shillings One hundred fifty thousand only  
received in respect of Research



**POSTING INSTRUCTIONS**

Account Name	Fund Code	Fund Source Code	Vote Code	Cost Centre Code					Project Code	Functions (GFS) Code			MTEF Code			Account Code				Type of Entry Dr/Cr	Amount (Shills.)	
				Directorate/Department	Unspecified	Unspecified	Unspecified	Unspecified		Project/Sub-Project	Function Sector	Sub-Function Sector	Objective	Output	Activity	Class	Item	Sub-Item	S/Sub-Item			S/Ssub-Item
				0	0	0	0	0	0		0	0	0	0	0	0					D C	150,000/-
				0	0	0	0	0	0		0	0	0	0	0	0					D C	
				0	0	0	0	0	0		0	0	0	0	0	0					D C	
				0	0	0	0	0	0		0	0	0	0	0	0					D C	
				0	0	0	0	0	0		0	0	0	0	0	0					D C	
				0	0	0	0	0	0		0	0	0	0	0	0					D C	
				0	0	0	0	0	0		0	0	0	0	0	0					D C	150,000/-

ORIGINAL—to payer. DUPLICATE—to be filed. TRIPLICATE—to remain in the Book

Signature of Revenue Collector: [Signature]
Cashier Title: Cashier

**B. RESEARCH APPROVAL LETTERS FROM SELECTED HEALTH CENTERS**



**CHINA-UGANDA FRIENDSHIP HOSPITAL, NAGURU**  
P. O. Box 20145,  
Nakawa, Uganda  
Tel: Hospital Director: +256-41289741  
General Line: +256-414289740



29<sup>th</sup> September 2021

Rebecca Suubi  
Clarke International University  
**KAMPALA-UGANDA**

Thru: Hospital Director

*Authorised*  
*Signature*

HOSPITAL DIRECTOR  
CHINA-UGANDA FRIENDSHIP  
HOSPITAL NAGURU  
P.O. BOX 20145, NAKAWA (U)  
Date: 6/10/2021  
Sign: .....

**PERMISSION TO CONDUCT RESEARCH**

Reference is made to your letter dated 16<sup>th</sup> August 2021 requesting this hospital to grant you permission to conduct a study. The study topic is **Factors influencing substance abuse among health care professionals in Kampala Uganda**

This is to inform you that permission has been granted and you will work under the supervision of **Head of Medicine**.

At the end of the study, the Researcher must share the research findings with the hospital by providing a copy to the Research Committee; and will be provided with a letter confirming completion of the study.

*Signature*

Dr. Wanyama John  
**CHAIRMAN RESEARCH AND ETHICS COMMITTEE**

Cc: Head of Medicine.

*AS*  
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