

**SOCIO-ECONOMIC EFFECT OF CHEWING MÛGÛKA AMONG THE YOUTH
IN KIBWEZI WEST SUB-COUNTY, MAKUENI COUNTY, KENYA**

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**A Thesis Submitted in Partial Fulfilment of Requirement for the Award of Master
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DECLARATION

I understand that plagiarism is an offence. I therefore declare that this thesis is my original work and that to the best of my knowledge has not been presented to any other institution for any award.

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DEDICATION

This project is dedicated to my loving family members: My wife Flora and our three amazing God given children and to my departed parents. I thank you in a special way for your practical and emotional support. Without your love and support this project would not have been possible. Finally, I dedicate this project to the youth of Makueni County.

ABSTRACT

Chewing of mûgûka and its effect is well documented in the west. For example, in parts of Europe and America, mûgûka is a banned substance due to its adverse effects. However, it is legal to use mûgûka in the Arab countries. Literature on the use of mûgûka and especially its effect on the youth in Kenya is limited, a knowledge gap that this study aims to fill. The objectives of this study were to: find out the effect of chewing mûgûka by the youth in Kibwezi West Sub-County; establish the effects of chewing mûgûka by the youth on their productivity in the workplace in Kibwezi West Sub-County; describe the effects of chewing mûgûka by the youth on household income and, to examine the problems associated with chewing mûgûka in the society. This study employed a descriptive research design. A sample population of 378 was arrived at by measuring the target population of 23,823 with a 95 percent confidence level. Simple random sampling was used in selecting the respondents. Quantitative data were collected from the general population using questionnaires. Focus group interviews were employed in collecting qualitative data from key informants who were the chewers and sellers in the “bases”. The validity of the research instrument which is the questionnaire was assured by including all the objective questions in the questionnaire. Reliability was attained by pre-testing the questionnaire with 38 young people who did not participate in the main study. To interpret quantitative data, descriptive analysis was used. The study found that chewing mûgûka negatively affects work productivity among youths. Specifically, the research showed that it significantly reduces work productivity, promotes laziness and inability to participate in economic activities among the youths, and increases workplace absenteeism. Also, the study found that chewing of mûgûka may contribute to increased crime levels. On the effect of chewing on household income, the study found mixed results in that household that have members engaging in mûgûka trade may record increased income while those with members abusing the substance had decreased incomes. The study observed that in Kibwezi West sub-county, chewing mûgûka has become a habit in the last 10 years. This means the effects may increase as the period increases and the youth became addicted hence the need to set measures for its mitigation. The study recommends that the government should put in place control measures as they did in the Alcoholic Drugs Act of 2014. There should also be legislation by county governments for increased taxation on this drug. Both levels of government should regulate age at which one is allowed to indulge in chewing mûgûka.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

Mûgûka (*Catha edulis vahl*) is a plant species whose leaves are chewed as a psycho-stimulant. These leaves contain psychoactive substances like cathine and cathinone which cause stimulation effects on the body system of the users (Ngari et al., 2018). According to Kiunga, Lukhoba, Dossaji and Yenesew (2016), more than 10 million people in the world chew mûgûka. In most countries in Europe and the USA, mûgûka is a banned substance. In Arab countries however, it is legal to use the substance. For example, in Yemen, chewing mûgûka is believed to be a strong element of increasing the social fiber, thus strengthening socialization. For Yemenis, mûgûka is considered less of a drug than a way of socialization.

The problem of mûgûka use is not confined to Eastern Africa and Arab countries only but is also a great concern in developed countries like in Europe, where the substance is mostly abused by migrants. According to Manthey (2019), the European Monitoring Centre for Drugs and Drug Addiction claims that there is no evidence showing that this habit will diffuse into the mainstream communities. The Controlled Substance Act in the USA categorizes cathinone as a schedule one drug, effectively banning its production and use. America places mûgûka in the same class as other hard drugs because of its addictive nature (Manthey, 2019).

Mûgûka consumption contributes to laziness and absenteeism, which damage the economy by losing productivity. Staff go to lunch and indulge in chewing sessions and do not come back to work. Interestingly, studies show that the addictive herb chewed by a majority of people in East African countries of Uganda, Kenya, and Tanzania for its stimulating effect has no negative health impact. Its psycho-stimulant effect makes the users want more, hence increasing the rate of use as well as the number of users daily. According to Kisaka (2019), over the last ten years, mûgûka has become a major drug among the youth in East Africa.

According to Carrier (2005), the rate of its use is rapidly increasing among students, who claim that chewing it increases performance in examinations, a claim not backed by any scientific evidence. For example, the low enrolment among schools in Garrisa County has been blamed on mûgûka business (Kithao, 2015). Despite the socio-economic effects of this drug, its farming, sale, and consumption have not been regulated in Kenya. According to Kisilu (2019), the National Agency for the Campaign Against Drug Abuse (NACADA) has classified mûgûka as a substance dangerous to the health of humans.

The youth is the most vulnerable part of the society as far as drug abuse is concerned yet the most critical in the development of any nation. A study conducted in four counties namely Kwale, Isiolo, Marsabit, and Kitui shows that the current consumption of this drug stands at 54% among the youth (Kahuthia-Gathu, Okwarah, Gakunju & Thungu, 2013). Youth empowerment is a key pillar in the attainment of Vision 2030 and so prevention of drug abuse by this segment of the society is critical (Michuki and Kivuva, 2013).

Kisaka (2019) notes that increased consumption of mûgûka has serious socio-economic consequences, such as reduced production in the economy and loss of working hours. Today, this substance has become one of the most abused drugs partly because it is cheaper and available. The influence of mûgûka also makes the authorities nervous, with lawmakers in Mombasa and Kwale counties unsuccessfully campaigning in 2018 against the sale and consumption of the substance over concerns of youth addiction. The campaign had the full backing of the National Authority for the Alcohol and Substance Addiction Initiative.

Additionally, in Kenya, a number of studies have been conducted on the effects of Mûgûka chewing. For instance, a study by Aden et al (2006) found that majority of those who chew Mûgûka have no knowledge of the negative effects it has to their health and socio-economic wellbeing. The study divulged that most of those who chew mûgûka used up to half of their domestic incomes to respond to mood changes when not chewing mûgûka. On the other hand, the same study reveals that about fifty-four percent spent their productive time chewing mûgûka. On the contributing factors leading to mûgûka chewing, family

factors, insomnia and anti-social activity were found to be predominant among the mûgûka chewers.

The adverse health consequences of mûgûka chewing have resulted in decreased economic productivity, reduction of working hours, and malnutrition (MacDonald, Piquero, Valois & Zullig, 2005). A report by NACADA shows that approximately 100,000 people in Makueni County consume the substance. Out of this figure, around 92,000 are young people aged between the ages of 15 and 35. The number of users in Kibwezi West Sub-county is approximately 20,000 young people, making it the leading out of the six sub-counties in the county. There is scanty literature on mûgûka and especially its effect on the youth, a knowledge gap that this study aims to fill. This study focused on the socioeconomic effect of mûgûka chewing among young people in Kibwezi West of Makueni County.

1.2 Statement of the Problem

The wellbeing of the youth is a growing area of concern, especially when associated with drug and substance abuse. This is a worldwide concern as captured by various bodies such as the World Health Organization, governments, and Non-Governmental Organizations (NGOs). The available literature on mûgûka reveals many contradictions brought forth by both western and African studies about its effects, with some citing positive effects such as economic and social cohesion while others cite negative effects on health, social and psychological aspects of human life. There still exist many knowledge gaps regarding this drug. According to Ageely (2008), mûgûka causes harm to the economy by way of loss in production as a result of laziness and absenteeism.

Young people are the most vulnerable segment of the drug-trafficking community, but they represent the future of our country. The achievement of Vision 2030 is related to youth readiness for constructive participation. Without addressing the problem of drugs especially mûgûka among the youth, Vision 2030 may not be achieved. Few empirical studies on the impact of chewing mûgûka by the youth have been done. The youth behave differently while on the influence of this substance whose extent and impact have not been

adequately scientifically analyzed and documented. The abuse of mûgûka, therefore, needs to be examined in order to understand its socioeconomic implications.

Although the County Government of Makueni has tried regulating the use of mûgûka by raising the taxes of suppliers, retailers, and those who grow the drug, the use of the drug among the youth is still on the rise. A report by NACADA shows that approximately 100,000 people in Makueni County consume the substance. Out of this figure, around 92,000 are young people aged between the ages of 15 and 35. The number of users in Kibwezi West Sub-county is approximately 20,000 young people, making it the leading out of the six sub-counties in the county. There is scanty literature on mûgûka and especially its effect on the youth, a knowledge gap that this study aims to fill. The current study focused on the socioeconomic effect of mûgûka chewing among young people in Kibwezi West of Makueni County.

1.3 General Objective

The general objective of this study was to investigate the socio-economic effects of mûgûka chewing among the youth in Kibwezi West Sub-County, Makueni County, Kenya.

1.3.1 Specific Objectives

The specific objectives were to:

- i. Assess the effect of chewing mûgûka by the youth on crime related activities in Kibwezi West Sub-County.
- ii. Establish the effect of chewing mûgûka by the youth on their productivity in the workplace in Kibwezi West Sub-County.
- iii. Describe the effect of chewing mûgûka by the youth on household income in Kibwezi West Sub-County.

1.4 Research questions

- i. What is the effect of chewing mûgûka by the youth on crime related activities in Kibwezi West Sub-County?

- ii. How does chewing mûgûka by the youth affect their workplace productivity in Kibwezi West Sub-County?
- iii. Does chewing mûgûka by the youth affect household income in Kibwezi West Sub-County? If so how?

1.5 Significance of the Study

This study has both theoretical and practical significance. Theoretically, the study will contribute to the growing body of knowledge on the use and abuse of mûgûka as well as make materials available for use by scholars and researchers in this area. On the other hand, the findings of this study could be used by the national and county governments, organizations and agencies such as NACADA, the church, and CBOs in developing policies aimed to address the various challenges faced by Kenyan youth as a result of use and abuse of mûgûka. Currently, mûgûka is not regulated in Kenya, yet it is one of the most abused substances in the country. Its sister substance, khat or miraa, is only recognized as a cash crop under the Miraa, Pyrethrum and Other Industrial Crops Act, 2020. The findings of this study will aid the above agencies in coming up with a mûgûka policy to regulate its consumption. The Kenya Youth Development Policy of 2019 talks about eradicating drug and substance abuse among the youth. It does not, however, specifically mention the use of mûgûka among the youth hence findings of this study may be used to strengthen the policy.

The findings from the study could be useful in formulating youth empowerment programs at the county and national level. Young people are the most vulnerable segment of drug-trafficking in our community, yet they represent the future of our country. The achievement of Vision 2030 is linked to the preparation of the youth for productive involvement and little can be accomplished as far as Vision 2030 is concerned without addressing the challenge of drug abuse, especially mûgûka, among the youth. Goal 1, and particularly target 1.4, of the Sustainable Development Goals (SDGS) can only be fully achieved if the most marginalized communities involved in illicit crop cultivation, production and use are not left behind. The findings of this study could help both national and county governments as well as international agencies come up with policies that can help farmers dependent on

cultivation of drug crops to find alternative ways of earning a living, which will in turn reduce the availability of drugs like mûgûka in the market. This research further intended to advance awareness of mûgûka abuse and use in society and provides deeper insights into the problem and consequences of consumption of mûgûka in the study region, Kenya, and beyond.

1.6 Limitations of the Study

This study investigated the socio-economic effects of chewing of mûgûka among the youth in Kibwezi West sub-county. Clinical studies need to be conducted by health professionals to reveal the physiological effect mûgûka has on its users. Our study has not been conclusive on the same as we concentrated on the cost of healthcare without separating other contributing factors that might have forced the users to frequent health facilities. This will put to an end the debate in Kenya on whether mûgûka should be declared a harmful drug or not. Other studies could also be conducted to establish the other economic variables affected by mûgûka chewing in Kibwezi West.

The major limitation of this study was in the methods used in data collection. As mûgûka chewing is viewed as a social vice, most of the respondents would shy away from answering questions and others give misleading information especially that the study collects the data openly, which may affect the quality of data and thus the conclusions of the study. This limitation was reduced by assuring the respondents that the information they gave would be used for academic purposes only and that it would be treated with the utmost confidentiality and that their identities would never be revealed.

The use of FGDs was also a limitation as the topic could not be discussed in depth. Also, some respondents would not have been honest because they thought that the findings would be used to legislate against the use and consumption of mûgûka. This might have caused them to give misleading information or responses on key issues in the research which might affect the outcome of the study. However, this was reduced by using anonymity in the data collection tools during the data collection exercise.

1.7 Operational Definition of Terms

Base: the social places particularly in towns in the study area where youth sit while chewing mûgûka.

Crime levels: the number of crimes that are committed during a period in a particular place and which may be accelerated by chewing mûgûka.

Kukashika: a slang name for highness used by mûgûka chewers.

Mûgûka: a plant variety whose leaves are chewed while green and is a stimulant that produces a mild high feeling when chewed.

Psychological effects: effects caused by chewing mûgûka on an individual's social and/or psychological aspects. These range from minor reactions to the development of a psychotic illness. Minor reactions include over-talkativeness, over-activity, insomnia, anxiety, irritability, agitation and aggression.

Socio-economic status: an economic and sociological combined total measure of a person's work experience and an individual's or family's economic and social position with others.

Workplace productivity: how efficiently workers accomplish an organization's goals and produce goods or services for customers, which may be affected by chewing mûgûka.

Youth: Young people aged between 15 and 35 years

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter discusses the literature that was relevant to the study based on the study objectives. It discusses the socio-economic effects of mûgûka chewing.

2.2 Impact of Chewing of Mûgûka on Crime Related Activities

Previous studies have recommended the need for longitudinal research to investigate the normal history of substance use and the non-drug users (Pierce, Hayhurst, Bird, Hickman, Seddon, Dunn & Millar, 2017). Although cross-sectional research may provide information on the nature and intensity of the drug-crime association for various subgroups and crimes, the etiological debate requires longitudinal data to assess the timing of events and to obtain knowledge of how the distinctions between users and non-users develop over the lifespan of an individual.

Analysis has concentrated on contrasting offending that occurs before substance usage is initiated with offending that occurs afterward. A common example is a research by Payne and Gaffney (2012), which analyzed the criminal history and clinical data of male methadone patients. Most studies that make this comparison find that offending rates are significantly higher after initiation of substance use (Pierce et al, 2017). This pre/post design does not distinguish the effects of initiation from the effects of other factors that may also be associated with offending, particularly age, which is strongly correlated with offending. Offending rates appear to peak in general population samples during late adolescence, which coincides with the period of initiation of substance use (Sweeten et al, 2013).

Since 1971, the United States has spent an estimated \$1 trillion on the drug war. In 2015, the federal government spent an estimated \$9.2 million a day, or more than \$3.3 billion annually, to imprison those charged with drug-related offenses. State governments spent an additional \$7 billion in 2015 incarcerating individuals for drug-related offenses (Pierce et al, 2017). In a study by UN-Habitat (2018) focusing on youth crime and substance

addiction in Nairobi, participants who admitted using drugs said they had stolen money to buy drugs (although 27 percent chose not to respond to this question). Some of the student participants stated that young people in Nairobi used sex to get drugs, alcohol, food, or clothing (36%). Thus, drug abuse including mûgûka seem to contribute to crime related activities and behaviors that are not socially acceptable.

Maalim (2018) argues that habitual mûgûka use is a widespread and culturally acceptable practice in Kenya but lack of awareness of its effects propagate its use in the community. Mûgûka, a psychostimulant, creates several central nervous system effects when ingested such as increased euphoria, motor stimulation, and a sense of excitement and energy. Its long-term effects are debilitating on the user and subsequently on his/her spouse and children. Psychosis, mood swings, depression, anxiety, physiological health problems, lack of intimacy, social isolation, antisocial behavior, are a product of habitual mûgûka use. These negative effects include poor communication, verbal and physical abuse, low productivity, separation and divorce, compromise of family finance, increased risk of psychopathology, and physiological illness.

Self-harm and suicide due to the abuse of mûgûka have been reported by Alem and Shibre (2017), although these are rare. Each has been documented during both chewing and the subsequent intoxication phase. One patient bit himself and repeatedly banged his head against the wall. Another patient took an overdose because of the distress caused by his paranoid symptoms. Suicide has been described by several authors in the context of a withdrawal state. Violent acts, including homicide were also reported Alem et al (2019), usually in the context of paranoid or persecutory delusions. Alem (2017) described a case where a patient murdered one of his wives and his daughter. He was acquitted of murder by the court, as he was deemed not responsible for his actions.

2.3 Impact of Chewing Mûgûka on Workplace Productivity

People chew mûgûka because of its psycho-stimulation effect. This is usually in the form of euphoria combined with excitement, which is a result of the cathinone contents (Kisaka, 2019). According to Ageely (2008), mûgûka causes harm to the economy by way of loss

in production as a result of laziness and absenteeism. Workers who are addicted to this drug will most likely not return after the lunch break as they would rather engage in chewing. In Ethiopia and Djibouti, mûgûka is hurting the economy because as statistics show, nearly every family in the two countries spends an average of a third of its disposable income on purchasing the drug (Aden, 2006).

In Mana district, Jimma Zone, South-Western Ethiopia, Megerssa et al (2013) investigated the socio-economic impact of mûgûka. In order to compare its socioeconomic repercussions in the District, 51 chewers and 51 non-chewers were chosen. The findings revealed that youths were used to chewing mûgûka. On the same note, majority of the young people spent more than 6 hours a day chewing mûgûka, which has adverse effects on their labor productivity. Njuguna, Olieva, Muruka, and Owek (2013) conducted a study on consumption of mûgûka in a rural Kenyan community. Using descriptive research design and questionnaires, 68% of the respondents admitted to chewing mûgûka. However, most these people preferred chewing it in secrecy. Those who were working were three times more likely than those who were unemployed to chew mûgûka (OR = 2.8, 95 percent CI 1.03–7.6). One likely explanation is that they have consistent sources of revenue from which to purchase mûgûka.

The effect of chewing this substance on the health of its users has not been conclusively explored, with some studies showing no adverse health effects while others report completely different findings (Kisaka, 2019). The relationship between the supply of labor and drug use is understudied. Goldsmith et al (2015) using the National Longitudinal Survey of Youth (NLSY), examined the effect of marijuana abuse on the supply of labor by young men. They found a substantial positive effect of marijuana use on total hours worked for all men and especially for the unmarried ones. Walsh (2010) studied the relationship between annual hours of work and current and lifetime drug use. The study found significant negative labor supply effects of current marijuana abuse among both married and single males in their 2008 cross-section. The study showed that the men who had used marijuana for the past thirty days worked fewer hours than those who did not

(Walsh et al., 2010). But the case was different with men in 2004 and women in 2004 and 2008, where the effect was insignificant.

Van Ours and Williams (2015) investigated the effects of marijuana and cocaine use on the number of hours worked and found a significant negative effect in men but not in women. When drug users are under its influence, there is an increased loss of productivity in the workplace, which runs into billions of dollars. Loss of productivity is calculated as work that would be expected to have been completed were it not for drug use because of the reduction in the supply or effectiveness of the workforce. Marijuana and mûgûka are two different substances and the effect may also be different. This means that we cannot rely on the findings on marijuana to draw conclusions on the effects of mûgûka chewing. That is why our study will specifically investigate the effects chewing of mûgûka has on productivity, then compare with the study by Van Ours and Williams (2015).

2.4 Impact of Chewing Mûgûka on Household Income

According to a report by the Institute of Economic Affairs Kenya (2018), large scale farming of mûgûka is big business and a source of employment for youth in Embu. This is an obvious economic effect. Besides the farmers, there are the middlemen- hundreds of men and women who purchase the leaves from the farmers in Embu and Mbeere and sell it to traders across the country who in turn sell it to consumers. Many people earn their living from this plant. In Kibwezi West, many people have taken to mûgûka farming, reporting increased income from this as opposed to the more traditional crops like fruits crops, maize, and beans. However, some of the youth interviewed reiterated the importance of balancing the economic value of the crop versus the moral outlook of planting mûgûka as a promotion of drug abuse.

Yemen earns a lot of foreign revenue on mûgûka at the expense of socio-economic problems. As a result, 28.47 percent of mûgûka growers earned an average annual income of roughly 500 USD per home, while 5.49 percent earned an average annual income of more than 3000 USD per household. This enabled the farmers to generate revenue for their families as a result of the deterrent effects.

Patel (2015) studied the socio-economic effects of mûgûka in Somalia and found that its chewing has adverse socio-economic effects on the various household needs namely education, food, clothing, healthcare among other essentials. His findings reveal that this leads to strained family relationships because of depressed household income available for the essential requirements. This was later confirmed by Nyavanga (2018) who found that the family is hurt because of neglect by the household head, dissipation of the household income as well as inappropriate behaviors from members of the family who abuse this drug, which in many cases lead to conflicts. They further explain that where the habit is increased, there are many cases of divorce as the spouse who does not abuse the drug cannot tolerate it anymore. However, these studies only looked into one socio-economic parameter; the effect of chewing mûgûka on household income. Our study will look into three interrelated socio-economic variables namely household income, criminal activities and workplace productivity in order to get more conclusive results on the effect of chewing mûgûka.

According to Burura and Nyaga (2014), the above is also associated with the farmers in the growing regions. While mûgûka brings a substantial income to the family, most of it is not used right away. The increased income coupled with lack of financial literacy leads husbands to uncontrolled drinking and prostitution, leading to wife battering and sexual unfaithfulness, which results in separation and divorces. Eighty-one percent of the households that grow this plant reported average or below average in terms of family welfare even with the increased household income realized from the sales. Ninety-eight percent of mûgûka money is controlled by the men who are mostly the household heads, with their wives only waiting for handouts from their men or adult sons who rarely care for the family needs.

People with marginal income often spend it on drugs instead of essentials like food, housing, and clothes. With dependence-producing drugs, increased use leads to addiction, resulting in an increased market for the supplier. Poverty may push a person to prefer immediate money coming with greater risks as compared to a stable, albeit delayed income with less risks. However, development-focused programs ought to take into account the

behavior of farmers and especially the poor ones to establish their economic motivations rather than base their assumptions about their behavior on theory or impressions (Burura & Nyaga, 2014). The government can come up with programs to guarantee farmers a stable income from licit crops to encourage them to engage in alternative income generating activities. This should also be done to the poor urban dwellers who do not have farms but are most likely to be involved in the distribution networks.

Several studies focusing on substance abuse and its effect on socio-economic life of communities have been conducted in Kenya and other countries. Collins and colleagues (2007) investigated the links between various types of drug use during marriage and eventual divorce among young people in the United States. When other characteristics were taken into account, more frequent alcohol intoxication during marriage was found to be an independent predictor of divorce later on. The frequency of marijuana usage exhibited a significant bivariate connection with divorce, which was not significant in the multivariate model, according to the study. Mugambi (2016) discovered no link between mûgûka consumption and lack of sleep, as well as consumers' contentment, in a research to examine the impact of mûgûka consumption on the welfare of families in Meru County. Mûgûka use was also linked to customers' educational position, marital instability, bad family connections, addiction, and low investment, according to the research.

A cross-sectional study on socio-economic effects of mûgûka consumption in North Eastern Kenya was done by Aden, Dimba, Ndolo, and Chindia (2006). The study found that more than 80% had Mira chewing habit. Mûgûka use has been linked to strained family connections, anti-social conduct, and health issues including sleeplessness. Despite the negative socio-economic impact of mûgûka in Ijara District, the study revealed that mûgûka drinking is still a common practice. Tabu and colleagues (2018) studied the effects of chewing mûgûka on the Kenyan youths. The study's sought to establish the psychological effects of mûgûka usage on adolescents, as well as to identify the social behavior of mûgûka users and to investigate the physical behavior of mûgûka users on their peers. Youth dropout rates, increasing family squabbles, economic instability, and higher health concerns and violence rates were among the factors identified. Substance abuse has

diverse effects on the individuals as well as the community and this study has given us one the psychological effects of chewing mûgûka. Our study added more knowledge by finding out the socio-economic effects of the same habit.

Minilk and colleagues (2016) studied khat chewers' intentions to cease chewing and related variables in North Eastern Ethiopia, finding that the majority of users wanted to stop chewing. This study showed that majority of the people have the intention of stopping the habit of chewing mûgûka, yet the reality is that the habit is on the rise in Kenya. Furthermore, the study did not find out the effects the substance had on chewers and non-chewers alike, making it difficult for the government to intervene.

Ng'ethe (2012) investigated the factors that influence khat usage and control among young people in Meru County's Igembe South District. The study found that unemployment and family problems led to young people engaging in the vice. This study dwelt on the reasons as to why the youths are engaged in the habit of chewing mûgûka, but did not tell us the effects, a gap the current study aims to fill. We will not be able to deal with the problem of mûgûka chewing until we understand its effect on the community. The debate on the net effect of mûgûka chewing will only be brought to an end and the problems therein resolved only if a study is carried out on its effects.

Although most of the studies have focused on khat, a drug similar to mûgûka in terms of the effects on the drug abuser and the socio-economic implications without focusing on specific segment of the society, the current study focuses on the socioeconomic effects of mûgûka chewing among young people in Kibwezi West Sub-county of Makueni County.

2.5 Problems Associated with Chewing Mûgûka

Drug and drug addiction have far-reaching social, economic, and health consequences. Drug and substance abusers among young people are frequently found to have impaired learning abilities. It is also general known that most persons who consume drugs have very bad health as a result of the drugs' impacts. When a large number of young people are unwell, a community's productivity suffers because the active individuals who should be

delivering services to the community are unable to do so. This results in a population that is retarded and unable to develop. The end consequence is a neighborhood with no growth and, as a result, a community that is impoverished (Johnston et al., 2014).

Psychological disorders, particularly sadness and anxiety, were linked to khat chewing habits. When compared to non-chewers, khat chewers had a 25-fold greater incidence of depression. Similarly, khat chewers were roughly 5 times more likely than non-chewers to experience anxiety. In general, the research area's present khat chewing behaviors are rather high. When khat chewers were compared to non-chewers, the occurrence of reported, perceived psychological disorders, including depression and anxiety, was considerably greater. To reduce the amount of che, measures such as raising knowledge about the harmful effects, providing other recreation options, and developing shared conventions surrounding khat usage, particularly among young generations, are required (Wondemagegn, Cheme, & Kibret, 2017).

According to Omar, Kennedy, and Mbugua (2019), the daily expense of Mûgûka affects household income, making it difficult to meet nutritional food, home improvement, education, or other family demands, resulting in financial difficulties and family breakup. Buying and chewing khat leaves takes up a lot of time, which has an impact on working hours and time. This results in work absenteeism, class absenteeism, low student academic performance, and unemployment. Finally, khat chewers have a much greater death risk from chronic illnesses like heart disease and stroke than non-khat chewers (Birhane, Birhane, & Lebeta, 2014).

Headaches, dizziness, decreased cognitive functioning, fine tremor, sleeplessness, attentiveness, dependency, tolerance, and anxiety are some of the mental side effects of khat eating (Padwa & Cunningham, 2010). According to Wondemagegn et al. (2017), khat chewing behaviors are linked to sleep disruption, anxiety, depression, and sedation. On the same note, another study found that khat chewing habits were linked to a number of negative psychological effects.

2.6 Theoretical Framework

There are two theories underpinning this study namely the social learning theory and the reference group theory. The key principle of social learning theory, according to Siemens, (2014), is that learning is not simply behavioral, rather it is an intellectual process that happens in a social setting. The reference group theory, which is credited to Lyndon and Schupp (2015), posits that men shape their attitudes to reference groups other than their own. The reference groups, according to Lyndon and Schupp (2015), are the groups within which individuals are members or aspire to maintain membership. Such groups provide a form of reference and attitude formation for members.

2.6.1 Social Learning Theory

Social learning theory, proposed by Bandura (1992), emphasizes the importance of observing, modelling, and imitating the behaviors, attitudes, and emotional reactions of others. As indicated by Siemens (2014), the key principle of social learning theory is that learning is not simply behavioral, rather it is an intellectual process that happens in a social setting. Learning can happen by observing behavior and observing the outcomes of the behavior (vicarious reinforcement). Furthermore, learning includes observation, obtaining information from the observations, and settling on choices about the execution of the behavior (observational/modeling). Subsequently, reinforcement is part of learning but it is not exclusively accountable for learning.

Through observational learning, both young and old people become acquainted with the general concepts of situations as well as specific behavior. According to O'Connor and Scott (2013), parents influence their families' behavior and social relationships. This fact explains why consumption of *mûgûka* is entrenched in families. The tenets for behavior in every social setting are developed from what has been seen in watching others and the outcomes of their behavior in the past and what one comprehends about the demands in the present circumstance (Parkay, Anctil & Hass, 2014).

In their study, Akers and Silverman (2014) outlined an application of the social learning theory of crime and deviance to violent behavior ranging from personal, individual

violence to collective, terrorist violence, defined as illegal or illegitimate acts of physical threat and harm against persons and places by individuals or non-state collectivities. The study found that the principles of the theory apply to both conforming and deviant behavior. The principal concept of the social learning theory is that increased associations with deviant peers increases the likelihood that an individual will adopt attitudes and values favourable to criminal conduct through the mechanism of rewards and punishments. The theory is premised on the idea that it is association with others (family and friends) that contributes to the learning and subsequent acceptance of deviant conduct. However, young people may develop these deviant attitudes and values without prior exposure to it and then seek out peers with similar attitudes and behaviours (Siegel & McCormick, 2006).

This theory is important for understanding why people indulge in mûgûka consumption and other mûgûka consumption related behaviors. Most people learn from their social environment and according to the interpretation of what they consider worthwhile. This is where families and other social environments play a major role in practicing the learned behavior. Social learning theory is also applicable to this study because it emphasizes people learning through observation. This explains the use of other substances such as alcohol and bhang during mûgûka chewing sessions. Precisely, as they grow up, there is a tendency to develop a positive attitude towards the consumption of mûgûka especially if they have a role model who consumes mûgûka.

Given the fact that mûgûka growing is the economic mainstay in some parts of Kenya especially Mbeere subcounty, the people in this environment associate wealth and prestige to mûgûka growing, thus reinforcing its consumption (O'Connor & Scott, 2013). Consumption of mûgûka is a legal and socially acceptable behavior in Kenya. This fact explains why family members chew mûgûka irrespective of age and gender, while traditionally mûgûka chewing was a preserve of the elderly after a hard day.

2.6.2 Reference Group Theory

This theory is credited to Lyndon and Schupp, (2015). According to Lyndon and Schupp, (2015), men shape their attitudes to reference groups other than their own. The reference

groups, according to them, are the groups within which individuals are members or aspire to maintain membership. Such groups provide a form of reference and attitude formation for members. The basic assumptions of reference group theory are that a person's demeanor and attitudes are molded by the group with which they are a part of our identity and that self-examination and the correlative sentiments and behavior are a result of the person's position in a specific group within a social hierarchy. This point is collaborated by the psychology of groups, which states that in a group environment, individuals will conform to the norms of the group to have a sense of belonging (Parent, DeBlaere & Moradi, 2013).

Reference group theory is considered relevant to this study in that people could get involved in chewing mûgûka habits, to fit in their peer groups or for identity purposes. Furthermore, mûgûka consumers acquire a sense of belonging and identity as they consume mûgûka. Mûgûka consumers consider it a prestigious commodity to the community for its socio-economic benefits. This encourages others to emulate reference groups for identity and solidarity purposes. Mûgûka consumption activities are done in groups and mostly in the company of family members, business associates, relatives, and friends (Parent et al, 2013). Following this line of argument, we can deduce that mûgûka consumption is a practice, which is learned from individuals or reference groups. A few individuals from a group may withdraw from the modular example of behavior just because of their synchronous membership in different groups.

Hoffman and Novak (1998) explored differences in regard to computer access and use between European Americans and African Americans. One of the authors' main research questions was rather race, income, or education impacted computer access and use. Study results indicated that European Americans are more likely to have computers in their homes, and use the World Wide Web than African Americans. The researchers also reported that regardless of race, the higher the household income, the more likelihood of that household owning a computer. The authors maintained that if access to technology is more readily available to African Americans, the number of African Americans using computers will increase.

The choice of a reference group according to these authors is based on simple assumptions about motivation and maintenance of social patterns that are of value to the group members. In their view, group members have their own set rules and they understand their limits. However, the theory only explains the behaviour but does not suggest any means to control it. It only explains how an individual is influenced by a reference group, but it does not explain how the reference group is influenced by his entry into the group.

2.7 Conceptual Framework

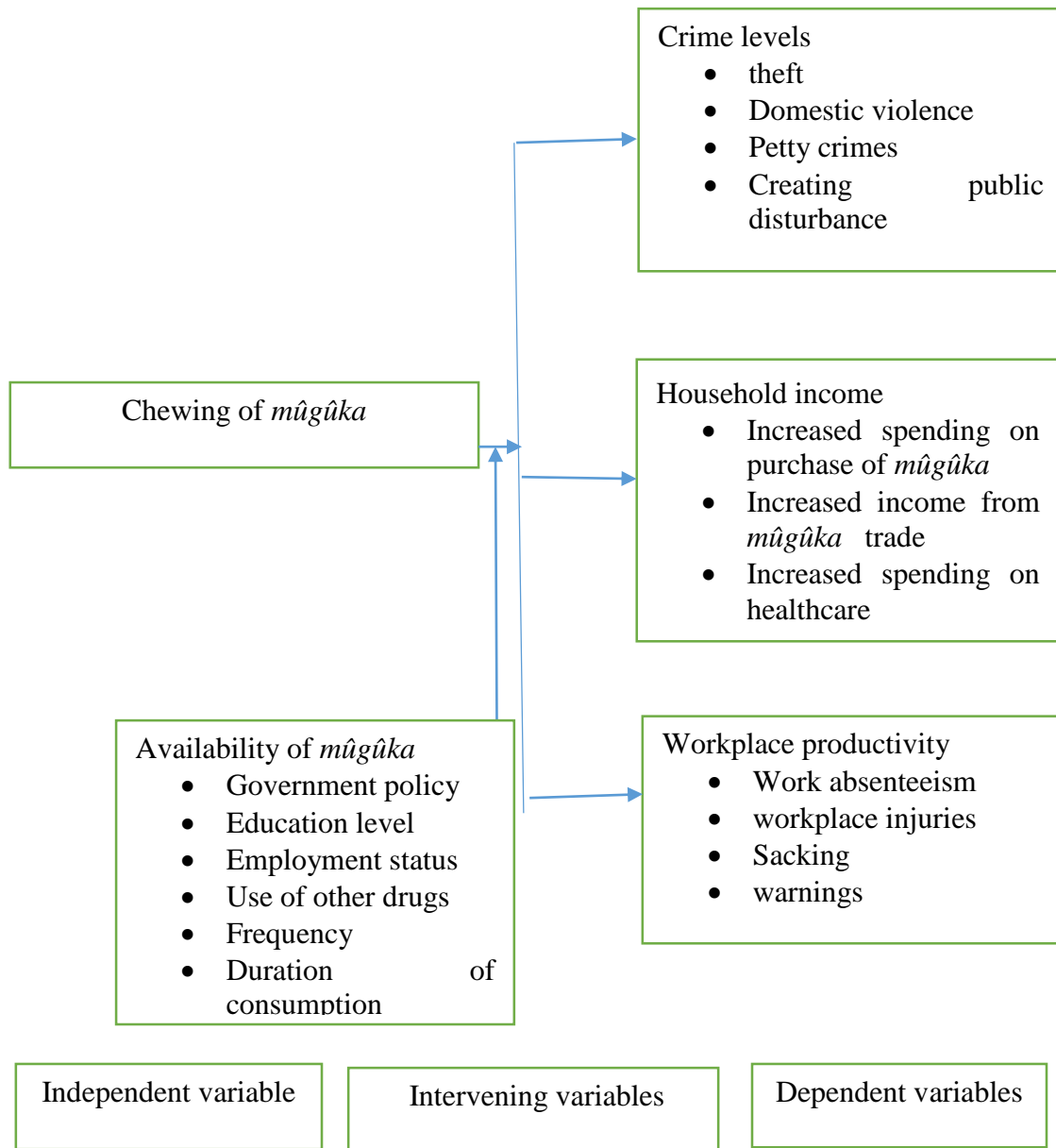


Figure 2.1: Conceptual Framework showing the independent, intervening, and dependent variables and how they relate to one another.

(Source: Researcher)

The conceptual framework is developed from the reviewed literature and the related theory. It shows the relationship between dependent and independent variables.

The conceptual framework shows how the variables of the study interact with each other in a social environment where mûgûka is extensively consumed. A conceptual framework is a diagrammatic representation of the relationship between variables. In this conceptual framework, the relationship between the independent and dependent variables is presented as shown. The independent variable is chewing mûgûka while the dependent variables are crime activities, workplace productivity, and household Income.

The intervening variables are government policy, employment status, education level, duration of consumption and the availability of the drug accelerate the rate at which the chewing of mûgûka affects the socio-economic statuses of the youth. In areas where mûgûka is sold its availability for consumption is greatly increased. Hence an indicator of money spent on mûgûka and frequency of use. Education level, employment status, use of other drugs dynamics determines the availability of mûgûka to consumers. Its consumption impacts the social, economic, health, and psychological health of the youth. Specifically, such youths' wellbeing aspects as total incomes, access to basic needs such as food and shelter, and access to medication are determined by how their income is spent. Thus, this study will attempt to fill the knowledge gaps that are pertinent to youth development and empowerment in the context of mûgûka consumption.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methods, employed in conducting the research. The research design, target population, sampling procedure, sample size, and data analysis are also discussed in this chapter.

3.2 Research Design

The study employed a descriptive research design. According to Creswell (2009), a descriptive research design aims at determining the what, where, and how of a phenomenon. Descriptive studies are concerned with accurately and systematically describing a phenomenon, population or situation. Descriptive research design usually describes the state of affairs or issues as it exists at present. The choice of this research design is premised on the fact that the researcher intends to describe people's responses to questions about phenomena or situations to understand the respondent's perception. In this study, the phenomenon of interest is the effect of chewing mûgûka.

A descriptive study employs a variety of both quantitative and qualitative methods to study one or more variables. As such, this study collected primary data and secondary data respectfully. Quantitative data were collected from the general population while qualitative were obtained from mûgûka chewers who were the key informants. The design was employed in illustrating the outcomes of a given issue or occurrence. A descriptive approach was the most suitable for this study since the study purposed to inquire into the effects of mûgûka chewing on youths.

3.3 Location of the Study

The site for the study was Kibwezi West Subcounty, one of the six sub-counties making up Makueni County. The sub-county is comprised of six wards namely Makindu, Nguumo, Kikumbulyu North and South, Emali/Mulala, and Nguu/Masumba. Kibwezi West has a population of approximately 197,000, according to the latest census results, and an area of 1184.2 square kilometers. This is a semi-arid, and the main economic engagement for the

people is small-scale farming. Kibwezi town, one of the market centres being focused on by this study, is the headquarters of Kikumbulyu South Ward.

Makindu town, located on the Nairobi-Mombasa highway, is the headquarters of Makindu Ward. This town lies about 175 kilometers southeast of the capital city Nairobi and about 356 kilometers northwest of Mombasa. The third market center, Emali is the biggest and most populous of the three. Like the rest, it is located along the Mombasa-Nairobi highway further north. A small part of Emali town is in Kajiado County (Wangu et al, 2020). Kibwezi West was picked for the study because it is the subcounty leading in mûgûka use in Makueni County, with the three townships leading. These three were picked because they are the biggest and most populous markets in the sub-county, and with the highest number of people chewing mûgûka, which was assumed they were the most negatively affected by this habit. It would also therefore be expected that it is in this same centres where the effect is more pronounced.

3.4 Target Population

A population is simply a group of individuals or items from which we obtain the sample for measurement (Mugenda & Mugenda, 2009). The population of this study was all the people living in Kibwezi West Sub-County. The recent population census shows that the three towns of Kibwezi, Makindu, and Emali have a total population of 23,823 with Kibwezi having 6132, Emali 8345, and Makindu 9346. Therefore, our target population is 23,823 people. The study targeted the whole population instead of mûgûka chewers only because substances affect both the users and non-users alike. It would therefore be important to seek the views of those who abuse the substance as well as those who do not. Targeting the users only would also create some bias and the information would not be reliable or representative enough.

3.5 Sample Size and Sampling Techniques

The population characteristic is as summarized in Table 3.1.

Table 3.1: Target Population

Town	Target Population	Percentage
Kibwezi	6132	26
Emali	8345	35
Makindu	9346	39
Total	23823	100

Source: Kenya National Bureau of Statistics (2020).

The sampling technique specifies the study's sampling unit, sampling frame, sampling processes, and sample size. The sampling frame enumerates all of the population units from which the sample was drawn (Cooper & Schindler, 2003). Using the formula below from Mugenda and Mugenda (2012), a sample population of 378 was calculated using the target population of 23,823 with a 95 percent confidence level and an error of 0.05. From normal distribution, the population proportion can be estimated to be

$$n = \frac{Z^2 P Q}{\alpha^2}$$

Where: Z is the Z – value = 1.96

P Population proportion 0.50

Q = 1-P

α = level of significance = 5%

$$n = \frac{1.96^2 \times 0.5 \times 0.5}{0.05^2}$$

n= 384

Adjusted sample size

$$n.' = 384 / [1 + (384/23823)]$$

Approx = 378

Table 3.2: Sample Size

Town	Frequency	Ratio	Sample size
Kibwezi	6132	0.01586702	97
Makindu	8345	0.01586702	133
Emali	9346	0.01586702	148
Total	23823		378

Research Data (2020)

The study used simple random sampling in selecting the 378 representatives. A simple random sample is a subset of a population chosen at random. The reason why simple random method was used is because each member of the population has an exact equal probability of being chosen in this sampling procedure hence reduction biasness. This approach is the simplest of all the probability sampling methods since it just takes a single random selection and minimal advanced demographic knowledge. Any research conducted on this sample should have excellent internal and external validity due to the randomization (Liamputtong, 2019).

3.6 Research Instruments

The researcher collected both primary and secondary data. Quantitative data were collected from the general population using questionnaires. According to Mugenda and Mugenda (2009), questionnaires are instruments used in collecting information. In the closed-ended questions, a five-point Likert scale was used where respondents were required to fill in according to their level of agreement with the statements.

Focused group interviews were used in collecting qualitative data from mûgûka chewers. In the market place, there is what young people call “base” or “ivia” where mûgûka is sold and chewed. There were five focused group discussion groups of 10 to 12 people each. Here, the seller is also a consumer and the group attentively listens to one of the members as he or she tells a story about current events or an experience he/she has had before. A written guide with questions was used in the focus group discussion.

3.7 Data Collection Procedures

According to Liamputtong (2019), data collection involves gathering empirical evidence to gain new insights about a situation and answer questions that prompt understanding of the research. The researcher ensured that the objectives of the study were followed by obtaining both primary and secondary data. The collection of primary data involved the following steps: a questionnaire as a tool of collecting data was used to the selected population. To ensure that few questionnaires were rejected, the research assistant assisted the respondents with the filling up of the questionnaires. The research assistant also helped administer questionnaires to guardians /parents, until the desire sample size was arrived at. The reason for using the questionnaire to collect quantitative data is that questionnaires are inexpensive and that the data is collected in the shortest time possible. Also, the researcher conducted in-depth face-to-face interviews in the focused group discussions to collect qualitative data. These groups are found in the chewing zones and comprised the chewers as well as the seller.

The reason for using FGD is because these members have good knowledge of chewing mûgûka and its impact. Chewing mûgûka directly affects them. The other advantage is that the research assistant would clarify areas where the group members did not understand in order to obtain the right information. Also, the research assistant was able to read non-verbal information from the members. The focused group discussion groups were five in number, two each in Emali and Makindu and one in Kibwezi. They comprised 10-12 members each. The FGDs were randomly selected from among the chewing zones in each town. Two research assistants were recruited and trained on the steps to take before administration of questionnaires and facilitating the FGD discussion which included seeking consent from management and the respondents, explaining to the respondents the purpose of the research and its objectives, assuring the respondents that the information they will provide will be treated with the utmost confidentiality and that their identity will not be disclosed in any report of the study.

3.8 Validity and Reliability of the Research Instrument

Validity is the degree to which an instrument measures what it is designed to measure. It estimates how accurately the data in the study represents a given variable or construct in the study. It simply measures the objectivity of the research instruments. This study adopted a content validity technique in testing the validity of the research instruments. The content validity technique was established through the careful definition of the questions in the research instruments based on the reviewed literature. Besides, the research sought insights from research experts in the field under study especially the supervisors and lecturers. The suggestions made by the research experts facilitated the necessary revision and modification of the research instruments thereby enhancing their validity.

Reliability is a measure of the degree to which a research instrument yields consistent results. Reliability aims at measuring the internal consistency of questions/items used in the research instruments. This means that if the questions or items in the research instruments are used repeatedly to measure the same concept, they should produce the same results. Treiman (2009) noted that reliability is increased by including many similar items on a measure, by testing a diverse sample of individuals, and by using uniform testing procedures.

Reliability and validity were attained by pre-testing the questionnaire with 38 young people who did not participate in the main study. Cronbach's alpha coefficients (α) were used to determine the average internal consistency (reliability) of items that were on multiple likert scales. The higher the (α) coefficient the more reliable was the construct. As a rule of thumb, the acceptable range of the Cronbach alpha coefficient is between 0.60 and 0.90 or higher depending on the type of research. A Cronbach alpha coefficient of 0.60 or more is acceptable for exploratory or descriptive research while 0.80 and 0.90 are acceptable for basic research and applied sciences respectively. Therefore, the researcher conducted Cronbach alpha test for items that were on a five-Likert scale using the questionnaires that were obtained from the pretesting exercise with 38 respondents. The Cronbach alpha threshold was 0.6.

3.9 Data Processing and Analysis

Data analysis is a process of bringing order, structure, and meaning to the information collected (Saunders, Lewis, & Thornhill, 2012). It is an important process that allows the researcher to make comprehensive conclusions and decisions about what is being studied. The questionnaire was checked during the validation phase to see if the sample obtained in terms of proportion was correct and acceptable. The instruments were then double-checked for accuracy. The information gathered was verified, confirmed, modified, and coded. The researcher used Statistical Package for Social Sciences (SPSS) version 20.0 to analyze quantitative data. The findings were presented in frequencies tables, pie charts and graphs. The qualitative data obtained from the FGDs was transcribed. Major themes were identified and the data organized and interpretation carried out. The findings are reported verbatim or as quotations.

3.10 Ethical Considerations

Research ethics involve requirements on the protection of the privacy and dignity of informants and the publication of the information in the research. Informed consent is the major ethical issue in conducting research (Armiger, 2016). In this study, the researcher ensured that informants gave out their information voluntarily. The researcher undertook to observe all ethical principles in the course of the study. The researcher informed respondents about the intention of the study and their consent was obtained before they participated in the study. The methods employed to protect anonymity and confidentiality were also timely revealed to the respondents. This included omitting writing of names of respondents in the questionnaire and guaranteeing the respondents that their identity would not be revealed in any way.

A research permit was also obtained from the National Council of Science Technology and Innovation (NACOSTI) to proceed to the field. On ethical requirements, the study sought clearance from SEKU postgraduate board.

Data, especially from the chewers, was collected as early as possible in the day when they are not too high or have withdrawal symptoms so that they understood the kind of research

they are consenting to. It was not only important to get their consent but also to make sure they had the capacity at that time. The other thing is that the researcher made sure the respondents comprehended what they are consenting to. Comprehension is important and independent of capacity.

In the field, the researcher had the authorization letter from SEKU postgraduate board, research authorization letter, and a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI). Participation was an exercise of one's own choice without manipulation. The respondents were informed on the nature and importance of this study. They were made adequately aware of the purpose and objectives of conducting this study. The researcher ensured that they had a full understanding of all the details about this study. Informed consent forms were issued to be signed as an indication of voluntary participation.

The researcher ensured the confidentiality of the information which was collected. Sharing information about a respondent with others for other purposes than the research is unethical (Kumar et al, 2011). The collected data was maintained in a secure place and was not used for purposes other than for this study. Confidentiality offered had a positive impact on more open and honest responses. Protecting the rights and welfare of the participants was a major ethical obligation of all parties that were involved in the study (Mugenda & Mugenda, 2012). Similarly, the identity of the participants was not disclosed on the questionnaires and also to other parties that were not involved in the research. This was achieved by the use of codes on the questionnaires.

CHAPTER FOUR

4.0 DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

4.1 Introduction

This chapter presents the analysis and interpretation of the study findings that were obtained from the primary data collection exercise. The study was aimed at determining the socio-economic effects of chewing mûgûka among the youth in Kibwezi west sub-county, Makueni County. Data were obtained using structured questionnaires and it was analyzed using data analysis software (SPSS) version 23.0. The analysis results are presented in the form of tables, charts, and figures. The interpretation of the key findings is based on the research objectives.

4.2. Response rate

The study targeted a sample of 378 respondents. Out of the 378 questionnaires that were administered, only 276 were duly filled and returned to the researcher, giving a response rate of 73%. According to Mugenda (2012), a response rate of 70% and above is sufficient in any research study. The response rate of this study was good considering that a big percentage of the respondents completed the questionnaires as required.

4.3 Demographic characteristics of the respondents

In the effort to scrutinize the socio-economic effects of chewing mûgûka among the youth in Kibwezi west sub-county, Makueni County, the study sought to establish the demographic characteristics of the respondents in terms of their age, marital status and highest education level. Demographic characteristics like religious affiliation and employment status have been left out because it was assumed the majority of mûgûka chewers who are the youth belong in the same employment and income group. Also, mûgûka is a cheap substance that was assumed to be abused by mostly those of low income level regardless of employment status. It was assumed that religious affiliation has no direct influence on chewing mûgûka. Over 90% of the population are affiliated to the Christian faith and this is another reason religious affiliation was assumed to be irrelevant here.

4.3.1 Distribution of respondents by age

The findings on the age of the respondents is as shown in Figure 4.1 below. Most of the respondents (67%) were aged between 18 and 35 years. This implies that most of the sampled people were youth who are also the most active in chewing mûgûka hence the targeted age group for the study. This also provides a worrying trend where a majority of the people affected by mûgûka chewing are the youths who are key providers of their families.

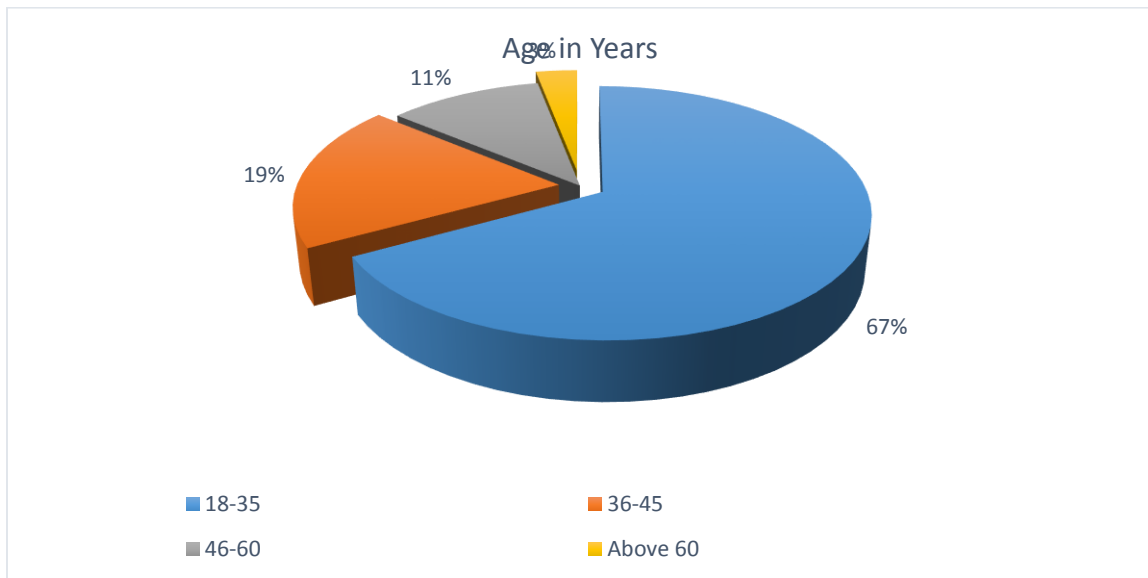


Figure 4. 14: Age of the Respondents

4.3.2 Distribution of Respondents by Gender

The study findings on the gender of the respondents indicated that 247(89.5%) of the respondents were male. This shows that the dominant consumers of mûgûka are male with the female category being influenced by their peers to join them in chewing mûgûka.

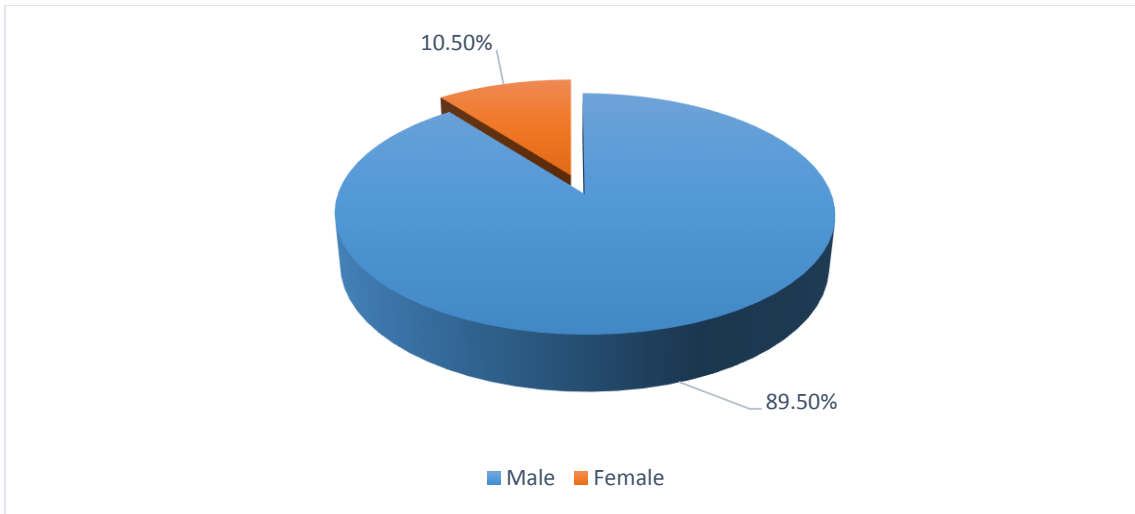


Figure 4. 15: Gender of the Respondents

4.3.3. Educational level of the Respondents

Study findings of the highest level of education of the respondents are as shown in Figure 4.2. The majority of the respondents, 58%, had attained the secondary level of education.

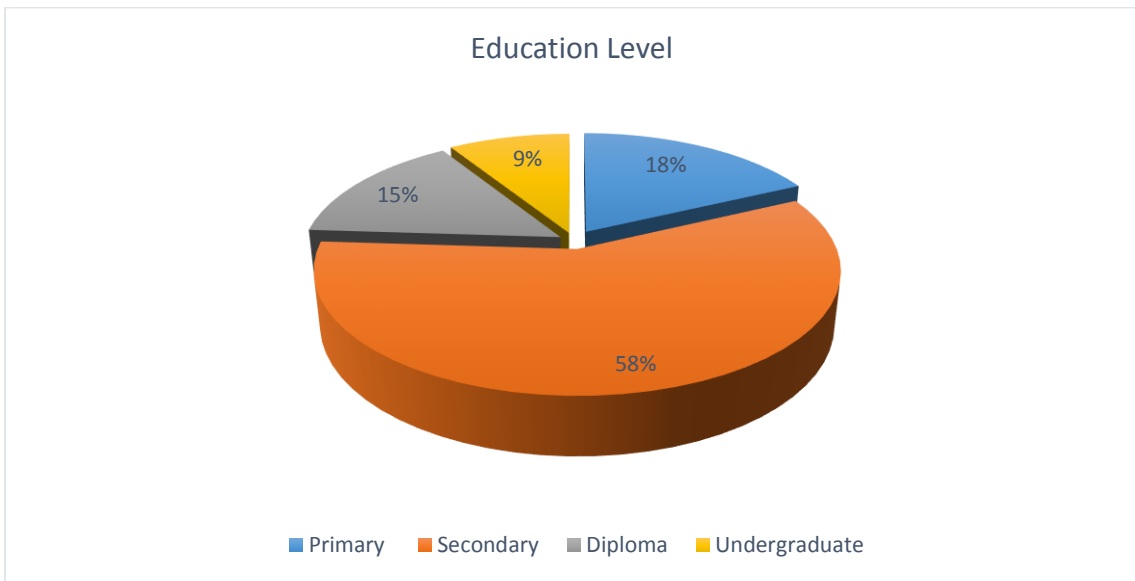


Figure 4. 16: Highest Level of Education of the Respondents

4.3.4 Response on knowing anyone who chews Mûgûka

The study sought to establish whether the respondents knew anyone who chews mûgûka and found that 100% of the respondents were in unison that they knew someone who chews mûgûka. This confirms a significant number of people are chewing mûgûka in Kibwezi west.

Additionally, the study sought to establish the relationship between those who chew mûgûka and the respondents. The respondents categorized the people whom they knew were chewing mûgûka in form of family members, neighbors, friends, and colleagues. The results indicated that most of these people chewing mûgûka at 55% were friends to the respondents, as indicated in Figure 4.4 below.

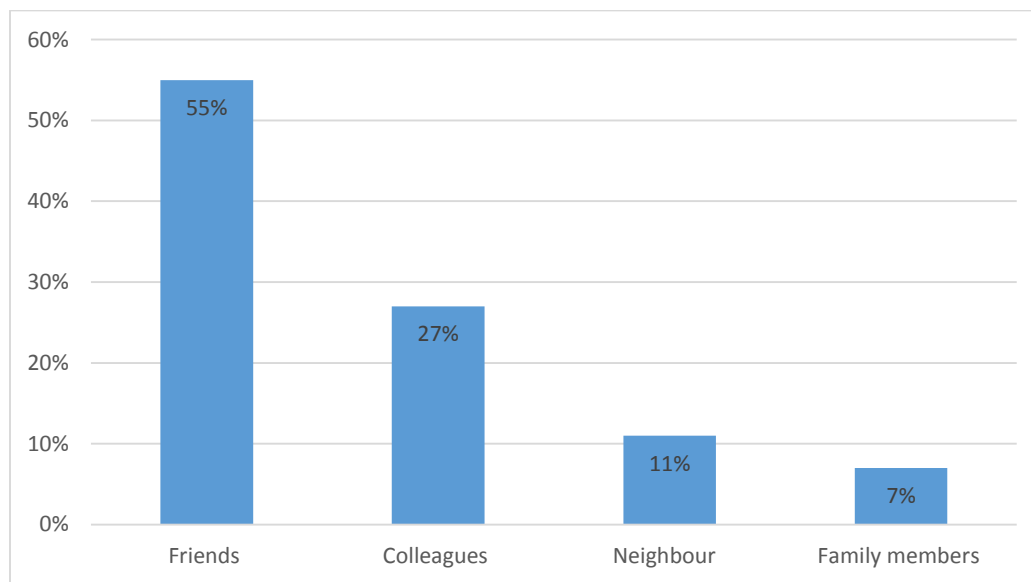


Figure 4. 17: Relationship with People Chewing Mûgûka

4.3.5 Whether the Respondents Chews Mûgûka

The study sought to establish the proportion of those who chew mûgûka among the respondents. Out of the 276 study participants, only 39 confirmed that they chew mûgûka. Since the questionnaires were randomly distributed, it is worth noting that about 1 in every 15 people chew mûgûka in Kibwezi West Sub-County. The findings are presented in Figure 4.5. below.

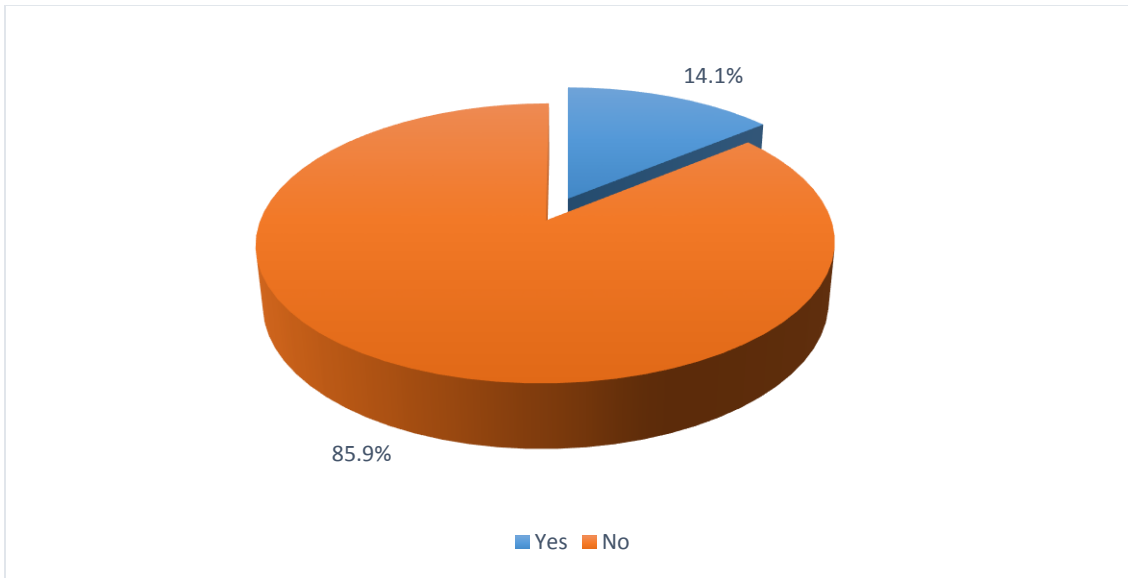


Figure 4. 18: Whether the Respondents Chew Mûgûka

The respondents were further asked to indicate how often they chew mûgûka and the study found that the majority of the respondents, 63%, chew mûgûka on a daily basis. The study suggests that chewing mûgûka is largely a daily affair; many youths are joining mûgûka chewing due to influence from friends.

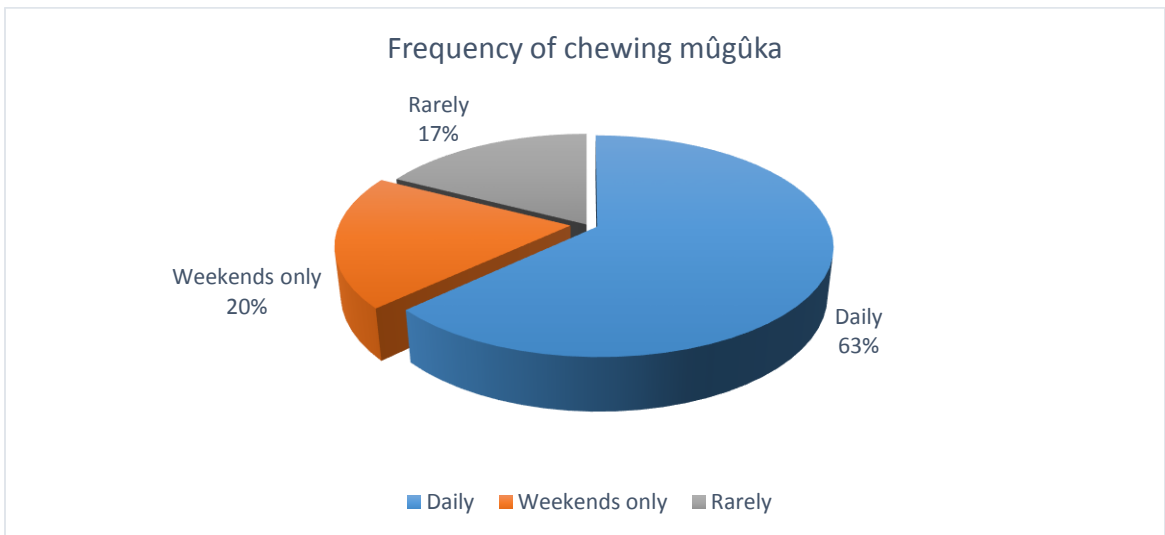


Figure 4. 19: Frequency of chewing Mûgûka among the respondents

4.3.6. Duration/ Period of chewing Mûgûka among the Respondents

The respondents were tasked to indicate the period that they had been chewing mûgûka and the results showed majority of the respondents (43%) had been chewing mûgûka for a period of between 2 to 5 years. This was a clear indicator that the majority of the youth have used mûgûka or are using mûgûka as indicated in Figure 4.7 below.

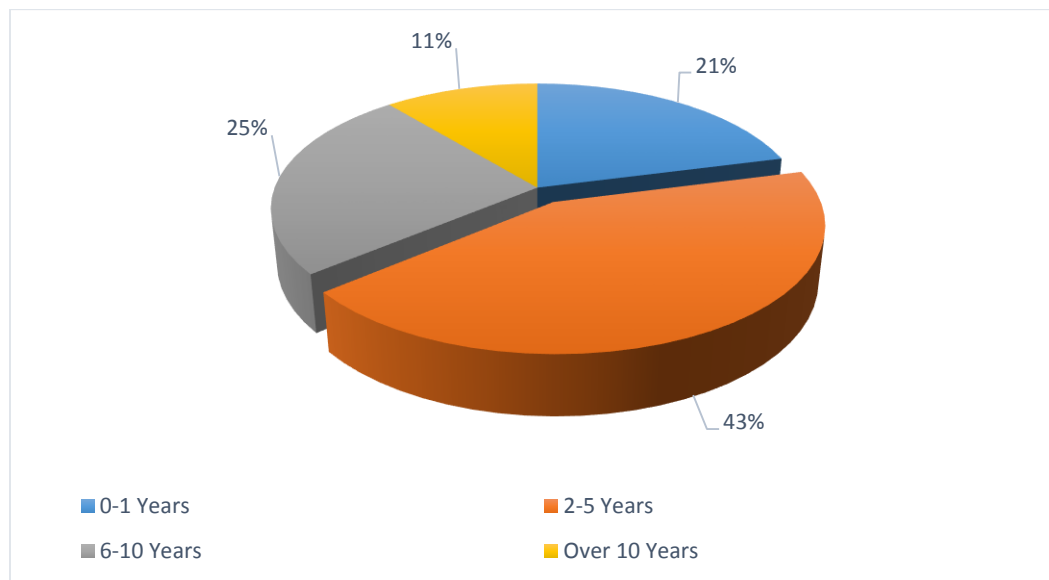


Figure 4. 20: Period of chewing Mûgûka among the respondents

4.4. Ways in which the respondents started chewing Mûgûka

The study sought to determine the ways and how the respondents started chewing mûgûka. The findings indicated that the respondents who were chewing mûgûka started due to influences that emerged from either parents, friends, or other family members. This means they began experimenting with the substance to have a feeling of what their parents or peers were feeling. The availability of the substance at home was also another influence. However, the number of respondents who learned chewing mûgûka from friends was higher as compared to those who learned from parents and family members. Likewise, the number of respondents to learn chewing mûgûka from other family members was higher compared to the percentage of those learned from parents. According to Figure 4.8, majority (54%) of the respondents learned chewing mûgûka from friends.

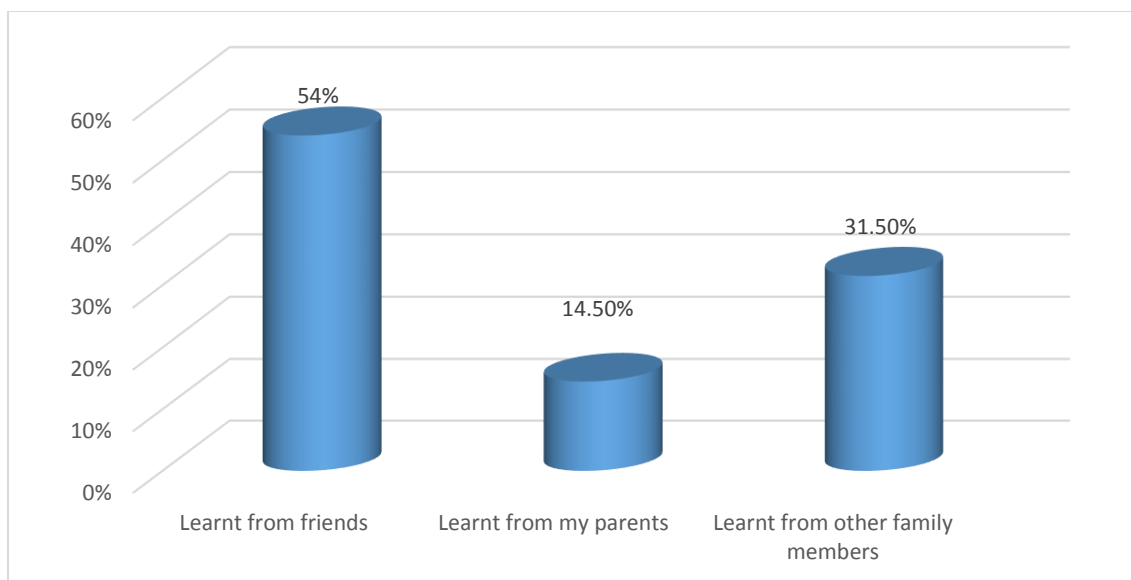


Figure 4.21: Origin of chewing Mûgûka

4.4. Reasons for chewing Mûgûka

Here, the question was directed to the 39 participants out of the 276 who said that they chew mûgûka. The respondents presented various reasons to habit the behavior of chewing mûgûka. Some indicated that mûgûka makes them feel active, others chewed mûgûka because their friends were chewing it while others said they chewed mûgûka as a dose to reduce stress. From table 4.1, the number of respondents who gave feeling active as their reason for taking mûgûka were the majority at 73.2%.

Table 4.1: Reasons for chewing Mûgûka

	Frequency	Percent
It makes me feel active	29	73.2
All my friends chew	7	18.1
To reduce stress	3	8.7
Total	39	100.0

4.6. Possibilities of working while chewing Mûgûka

On the questions of interest was whether respondents could chew mûgûka while at work. The results of this question indicated that the majority of the respondents (203 or 73.6%)

did not chew while they were working. The results indicated even though the number that chewed while working is less, those even at work were still affected by the mûgûka hence lowering their productivity. Figure 4.9 below illustrates the percentages of respondents who chewed while working against those who did not chew while working. The figure indicates that 41% chewed while working while 59% did not chew mûgûka while working.

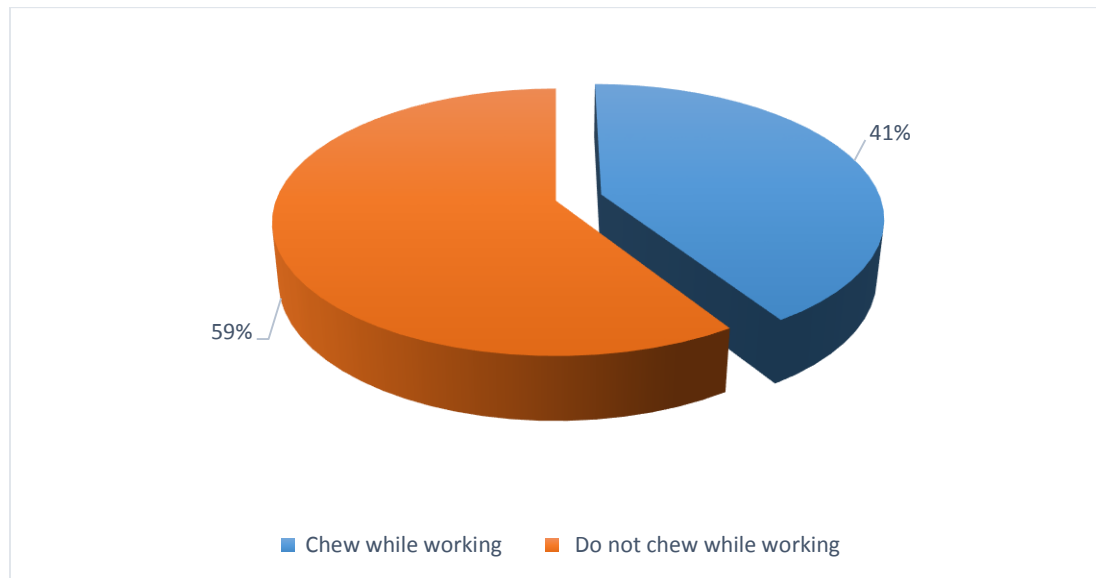


Figure 4. 22: Chewing while Working

Consequently, 41% of the respondents who confirmed to chew mûgûka while working were asked to indicate the type of work that they engaged in. The study found that the majority (59.1%) were in casual employment. It is worth noting that those who in non-formal employment had the highest number of chewers in their population at 91.7%. This suggests that the little income they got was spent on purchasing mûgûka hence little was left to provide for their family or support other family members who could be in need.

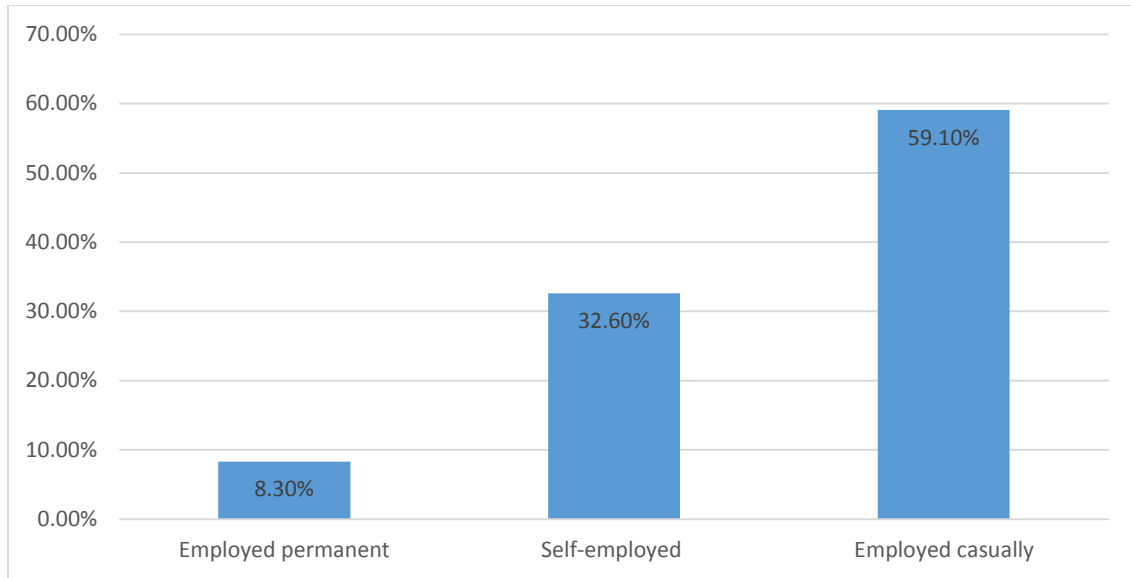


Figure 4. 23: Employment Categories

Additionally, 59% of the respondents who indicated that they did not chew mûgûka while working were asked to give reasons as to why they do not work. The researcher assumed that those who are addicted to mûgûka could find it hard to avoid chewing while at work. Thus, those who could not chew while working and not working at all. Figure 4.11 present the result in detail. The results show that 37.7% of the respondent are satisfied with their financial level and they felt no need to work.

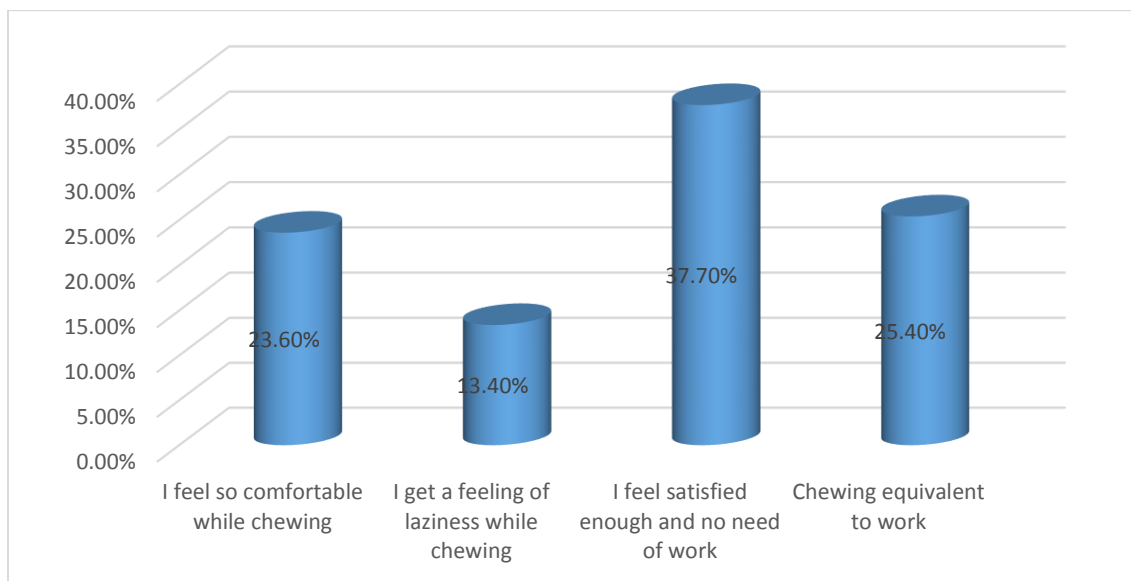


Figure 4. 24: Reasons for not working

4.7. Eating habits after chewing Mûgûka

Mûgûka just like other substances required the users to have proper meals after chewing to maintain good health. Therefore, the respondents were asked to illustrate whether they took food after chewing mûgûka. A higher percentage of the respondents (53%) of said they ate well after chewing mûgûka.

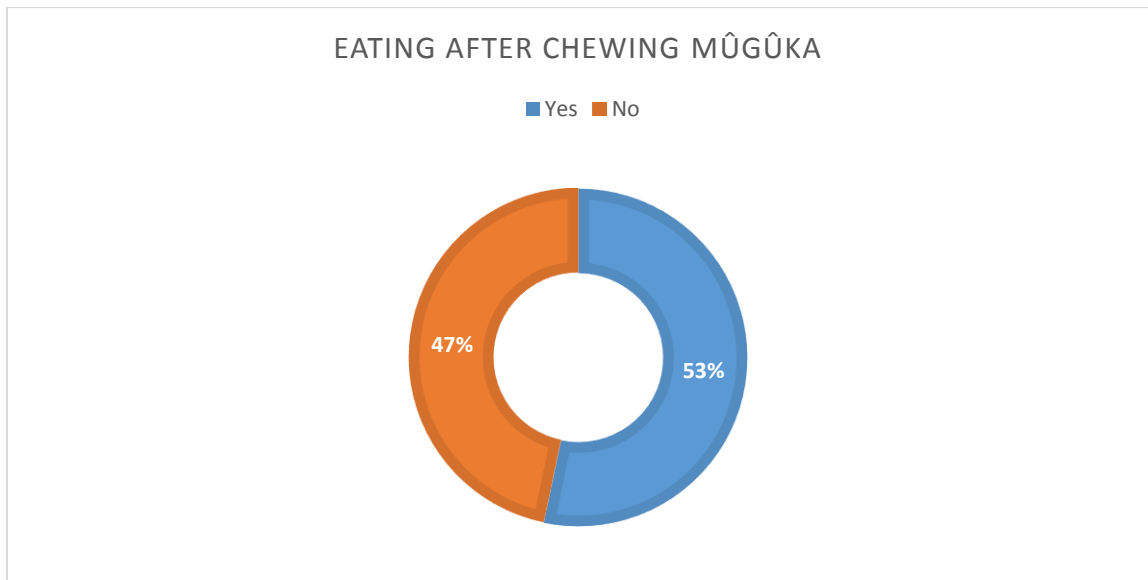


Figure 4. 25: Eating well among the respondents after chewing Mûgûka

The 47% of the respondents who indicated that they could not eat well after chewing mûgûka were further asked to give the reasons for not eating after chewing mûgûka. The findings in Figure 4.13 indicated that the majority or 56.5% of the respondents said that they could not eat after chewing mûgûka since they felt satisfied after chewing mûgûka.

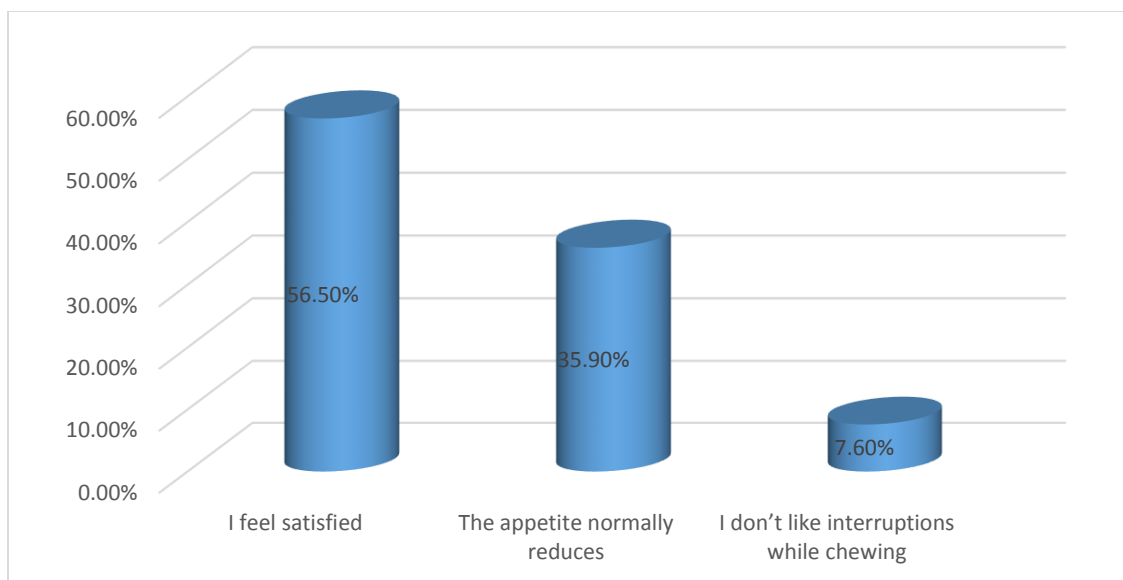


Figure 4. 26: Reasons for not eating after chewing Mûgûka

4.5. Socio-Economic effects of Chewing Mûgûka

In an effort to establish the socio-economic effects of chewing mûgûka among the youth in Kibwezi west sub-county the study sought to establish from the respondents the effects of chewing the substance on crime levels, household income and workplace productivity.

4.5.1. Effects of Mûgûka Chewing on Crime Levels

The study sought to establish the respondents' level of agreement with the following statement on the effects of mûgûka chewing on crime levels. The results were shown in Table 4.2 below.

Table 4.2: Probe for Social and Psychological Health Effects

Statements	N	Mean	Std. Deviation
Youth who abuse mûgûka are more likely to engage in criminal activities	276	4.0145	.91043
Youth who abuse mûgûka are more likely to be incarcerated	276	3.7971	1.40988
Youth who abuse mûgûka are more likely to engage in violence	276	3.8710	1.10333
We have seen a rise in criminal activities in our area as a result of the increased use of mûgûka by the youth	276	3.2609	1.14609
We have seen a rise in violent activities in our area as a result of increased use of mûgûka by the youth	276	3.8623	1.30003
We have seen a rise in incarcerated youth in our area as a result of the increased use of mûgûka	276	3.5797	1.18359

The results in table 4.2 revealed that the youth who abuse mûgûka were thought to be more likely to engage in criminal activities (Mean=4.014, STD=0.910). However, the informants remained neutral on whether they had witnessed a rise in criminal activities in their area as a result of chewing mûgûka by the youth (Mean=3.261, STD=1.146). The findings showed that chewing mûgûka was a major contributor to crime and violent activities among its consumers majority of whom were the youth.

Table 4.3: Correlation between mûgûka chewing and crime levels

		<i>Mûgûka</i> Chewing	Crime Levels
<i>Mûgûka</i> chewing	Pearson Correlation	1	-.794**
	Sig. (2-tailed)		.000
	N	276	276
Crime levels	Pearson Correlation	-.794**	1
	Sig. (2-tailed)	.000	
	N	276	276

** . Correlation is significant at the 0.01 level (2-tailed).

From the correlation result for the study model in Table 4.3, crime levels had a strong positive correlation ($r=0.794$, $\alpha<0.01$) with chewing of mûgûka among the youth.

Besides, the in-depth with the FGDs revealed that mûgûka chewing had affected crime level among youth in Kibwezi County.

For instance, KI 1 had the following to say: “The majority of youth who chew mûgûka are the ones involved in crime around this area.”

KI 2 also responded as follows: “The idleness of mûgûka chewers especially youth has increased, which has highly contributed to the high level of crime.”

KI3 added: “The rise of crime in Makueni county is a result of youth engaging in mûgûka chewing and other drug abuse.”

This shows that the rise in crime related activities in the Sub-county are as a result of the chewing of mûgûka by the youth.

4.5.2. Effects of chewing *Mûgûka* by the youth workplace productivity

The current research intended to determine the extent to which the respondents agreed to the statements given and the findings are displayed in table 4.7.

Table 4.4: Effects of chewing *Mûgûka* on work productivity

Statement	N	Mean	Std. Deviation
Chewing <i>Mûgûka</i> is likely to lead to decreased workplace productivity	276	3.7283	0.77540
Youth who abuse <i>Mûgûka</i> become lazy and are unable to engage in economic activities	276	3.8514	0.64887
Youth who abuse <i>Mûgûka</i> are more likely to be absent from work	276	3.1232	1.35204
Youth who abuse <i>Mûgûka</i> are more likely to report late to work	276	3.2754	1.29439
Youth who abuse <i>Mûgûka</i> will not get the time to engage in innovative activities	276	2.6051	1.39174

Majority of the respondents agreed with the statement that chewing *mûgûka* was likely to lead to decreased workplace productivity (Mean=3.728, STD=0.775). The outcomes indicated that the respondents had mixed reactions especially regarding the effect of chewing *mûgûka* on work absenteeism, engagement in innovative activities at work, and time they report to work.

Table 4.5: Correlation between chewing mûgûka and workplace productivity

		<i>Mûgûka</i> Chewing	Workplace Productivity
Chewing <i>Mûgûka</i>	Pearson Correlation	1	-.626**
	Sig. (2-tailed)		.002
	N	276	276
Workplace productivity	Pearson Correlation	-.626**	1
	Sig. (2-tailed)	.002	
	N	276	276

** . Correlation is significant at the 0.01 level (2-tailed).

From the correlation result for the study model in table 4.8, workplace productivity had a strong negative correlation ($r=-0.626$, $\alpha<0.01$) with chewing of mûgûka among the youth. The in-depth interviews in the FGDs also revealed the effects of chewing mûgûka on the youth's workplace productivity. For instance, KI 1 had the following to say: “The majority of the youth who abuse mûgûka have left their jobs due to job misconduct and absenteeism. They concentrate on chewing mûgûka more than their job. Some have no time to look for job opportunities.

KI 2 also responded as follows: “In terms of workplace productivity, most youth are below average since they have concentrated on chewing mûgûka hence less innovative and, to some extent, they are not innovative at all.

KI3 added:

“Mûgûka chewers have no time to engage in development and economic activities hence their productivity is low”.

From the above responses, it can be concluded that chewing of mûgûka affects the workplace productivity of the youth.

4.5.3. Effects of Chewing Mûgûka by the Youth on Household Income

Additionally, the researcher sought to determine the level at which the respondents agreed to the statements, which determined their income habits in terms of spending, saving, and earning. The findings are displayed in table 4.9 below.

Table 4.6: Statement on Mûgûka Chewing on household Income

Statement	N	Mean	Std. Deviation
Mûgûka trade brings significant income to the family	276	4.1174	0.54090
Mûgûka farming brings significant income to the family	276	4.2565	0.52730
Mûgûka trade is a major source of income to the youth	276	4.3341	0.73314
chewing Mûgûka does not affect household income among consumers	276	1.3297	0.63262
chewing Mûgûka negatively impacts household needs	276	2.1783	1.65460

On the whether chewing mûgûka affected household income, the majority of the respondents said that mûgûka trade brought significant income to the family (Mean=4.117, STD=0.541). This means that despite mûgûka business being a major source of household income among traders and farmers, it negatively affects households of those chewing it suggesting that chewing mûgûka depletes household income.

Table 4. 7: Correlation between chewing Mûgûka and household income

		<i>Mûgûka</i> Chewing	household Income
Mûgûka	Chewing	Pearson Correlation	1
		Sig. (2-tailed)	-.260**
		N	.007
household	Income	Pearson Correlation	276
		Sig. (2-tailed)	-.260**
		N	1
			276

** . Correlation is significant at the 0.01 level (2-tailed).

From the correlation result for the study model in table 4.7, household income had a weak negative correlation ($r=-0.260$, $\alpha<0.01$) with chewing of mûgûka among the youth.

In-depth interviews in the FGDs supported the foregoing study findings. For instance, KI1 had the following to say when asked to briefly explain how mûgûka chewing had affected the household income:

Mûgûka chewing has a negative effect when it comes to family income since the youth engaged in chewing mûgûka have no time to invest assets for their families. Most of the income they get goes to purchasing the substance.

Some of the group members responded as follows:

“Mûgûka at some point contributes to household income especially for young farmers who practices mûgûka farming and businessmen who sell mûgûka to the consumers.”

4.6. Focused group discussion analysis

The focused group discussion (FGDs) participants were made up of mûgûka users and had a clear understanding of what mûgûka is. The participants appreciated the fact that the leaves generate a feeling of being high and that it often caused sustained hangovers and that it is addictive. This is in agreement with the general definition of mûgûka by scholars.

The chewers had a general opinion that the government had not done enough in regulating the drug, which they said should continue to be available because mûgûka is not a harmful drug like bhang or heroine. Another reason for opposing the banning of the substance is that chewing mûgûka is one of the few inexpensive and harmless ways the youth can relax after a hard day's work. Most of the respondents in the groups explained that mûgûka did not affect the cost of their healthcare.

The respondents agreed that their chewing habits took a heavy toll on their incomes. Most of their income is not only spent on buying mûgûka but also on "accompaniments" such as chewing gum, cigarettes, sodas, and alcohol. This put a strain on family relationships because they were unable to cater to their family's needs. Another reason for the strained family relationships of the chewers was due to the long hours spent in chewing dens. Most of the chewers, the majority of whom are men, spent little or no time with their families. The respondents did not think chewing mûgûka led to criminal behaviour. They claimed that they were law-abiding citizens and that their craving mûgûka when broke did not lead them to steal to buy the substance. This was at variance with the commonly held perception that mûgûka users are involved in criminal activities.

4.7. Challenges associated with chewing Mûgûka

The respondents were asked to state some of the problems that are associated with mûgûka chewing and their responses were varied. The majority of the respondents mentioned family feuds occasioned by the economic drain on family resources and constant absence from home. There was also reduction in workplace productivity, tardiness, and the depressed mood of the mûgûka chewers. Others users were pre-occupied with finding the substance while neglecting other important family activities. Some mûgûka chewers spent a lot of time outside their family and homes resulting in marital problems and neglect of the family.

Another problem mentioned was related to poor health. A majority the users in the FDGs indicated having insomnia, mental problems, digestion difficulties, lack of appetite, sexual dysfunction, teeth problems, and high blood pressure. Two important resources, time and

money, have been wasted by mûgûka chewing youth. This affected their productivity in doing household chores or working to provide for the family. The majority of the chewers like idle chatting, listening to music or playing games, and other non-constructive pleasurable activities while chewing mûgûka.

Other challenges and problems associated with chewing mûgûka are that many mûgûka users developed a sense of fear and had distorted perception of things. Therefore, mûgûka harms people mentally particularly for those who combine it with other substances. Social problems including family breakdown and family violence, poor social integration, social isolation, and withdrawal, diverse physical health effects such as gastrointestinal problems and dental problems, adverse mental health effects among them mood swing, disturbed behavior, and psychotic symptoms were all mentioned.

CHAPTER FIVE

5.0 DISCUSSION OF THE FINDINGS

5.1 Introduction

The key results from the analysed data are discussed in this chapter. Conclusions are drawn informed by the results and recommendations are made. The demographic results show the age distribution, gender, and level of education of the respondents. From the study findings, youths were the majority. The study also found majority of the respondents were male indicating that male dominates mûgûka chewing. The study also revealed that majority of the participants have a secondary level of education. All the respondents indicated that they knew people who chew mûgûka, with the majority being friends and colleagues.

The fact that the majority of those who chew mûgûka do it daily indicates that mûgûka chewing is a social problem. The fact that most of those who chew mûgûka have been doing it for more than two years suggesting that more people are entering the phase of addiction, which may negatively impact their socioeconomic welfare.

Family such as parents have been found to have motivated the majority of the substance abusers. This means chewing mûgûka behaviour is learned from the immediate surroundings and it is in these surroundings that the problem will seek to be addressed. Despite greater peer influence, there is also parental influence at the family level. The biggest motivation to chewing these leaves has been found to be the feeling when chewing, with the chewers feeling high and active as they indulge. Others chew because their friends do so, while only 8% do so to alleviate stress.

The study further found that the majority of the respondents do not chew mûgûka while at work. This could be attributed to the fact that most employers do not tolerate mûgûka chewing at the workplace. Those who did not chew mûgûka at work associated it with laziness, uncomfortable, satisfaction, and no need to work, and lastly some feel that mûgûka chewing is equivalent to work.

Slightly less than half of the respondents were not eating well after chewing mûgûka because they normally feel satisfied and reduced appetite. This is in agreement with the Kenya Medical Research Institute's (2015) findings that chewers of these leaves are less likely to be obese or develop heart problems related to their diets because their appetite is normally suppressed. The respondents further indicated that they used other drugs such as alcohol and cigarette.

On the effect of mûgûka chewing on crime levels, study found that chewing mûgûka by the youth significantly influences crime levels. The respondents confirmed that the youths who chew mûgûka are more likely to engage in criminal activities, engage in violence, and be incarcerated. There was a strong negative correlation ($r=-0.794$, $\alpha<0.01$) between the chewing of mûgûka and crime levels. This implies that chewing of mûgûka contributes to criminal activities and violence among the youth. The study findings are in agreement with the findings of a study by the UN-Habitat (2018) focusing on youth crime and substance addiction in Nairobi. In this study, the participants who admitted using drugs said they had stolen money to buy drugs (although 27 percent chose not to respond to this question). Some of the student participants stated that young people in Nairobi used sex to get drugs, alcohol, food, or clothing (36%).

The cross-sectional studies significantly offered authoritative information on the levels of drug-crime connections, highlighting the status for varying subgroups and crimes. As highlighted in the literature review, the study by Pierce et al. (2017) affirmed that offending levels are fundamentally higher post drug use initiation. Finding of that chewing mûgûka substantially leads to increased crime rates in an area. Moreover, the study focused on the youths because they are the central subgroup of the population that chews mûgûka. Accordingly, the literature reveals that late adolescence age remains the peak for engaging in offenses and time for drug-use initiation.

Similarly, the study found that chewing mûgûka negatively affects work productivity among youths; it significantly reduces work productivity, promotes laziness and inability to participate in economic activities among the youths, and increases worm absenteeism.

Correlation analysis shows that there was a strong negative correlation ($r=-0.626$, $\alpha<0.01$) between the chewing of mûgûka and workplace productivity. This implies that chewing of mûgûka contributes to criminal laziness at the workplace and absenteeism, which negatively affects productivity. The findings of the study are extensively in agreement with the literature review advancements. From the literature review, drug abuse is substantially linked to the negative impact on the labor supply. This is in agreement with Register and Williams (2008) who found that marijuana abuse is highly connected to the negative impact on youths' ability to provide labor.

Moreover, Walsh (2010) demonstrated that marijuana had an unfavorable impact on the married and single males' labor supply and that men who abused marijuana in the last thirty days registered fewer working hours compared to individuals who did not. Generally, individuals under the influence of drugs register augmented wastage of productivity in the workplace, which accounts for billions of dollars. The survey conducted by NACADA in 2015 reveals that 3.8% of the public sector employees mûgûka use and that drug abusers are highly likely to receive a warning from their employers for workplace offenses non-users. Specifically, mûgûka users are more vulnerable to workplace offenses and work absenteeism due to overnight chewing. The findings are in consonance with Aden, Dimba, Ndolo, and Chindia (2006) findings that mûgûka chewers typically start the habit during the day, implying a waste of time for productive work and drug-affected work performance negatively.

The study determined that chewing mûgûka had a positive impact on the household income for the families engaged in mûgûka business, including farming. Specifically, the study found a strong connection that mûgûka trade and farming offer substantial income to the families, and farming is undoubtedly a significant income source for the youths. Correlation analysis shows that there was a weak negative correlation ($r=-0.26$, $\alpha<0.01$) between the chewing of mûgûka and household income. This relationship can be said to have been a result of having both positive and negative effects of mûgûka on household income. Therefore, despite the benefits of mûgûka to a few families trading and farming the plant, it negatively affects the majority of the household who consume it. The findings

of the study are in agreement with the positions advanced in the literature review. For instance, the Institute of Economic Affairs Kenya (2018) reported that large-scale farming of mûgûka is a large business and employment source for youths in Embu and Kenya at large. Apart from farmers, the mûgûka business entails businessmen and women who purchase the leaves from farmers in Embu and Mbeere and sell them to traders who in turn sell to chewers throughout the country.

In Kibwezi West, many people join mûgûka farming due to its lucrative returns compared to other crops like maize and fruits. However, mûgûka chewing has detrimental effects on the households of consumers. The findings are in tandem with Patel (2015) that chewing mûgûka has adverse socio-economic effects on the various household needs namely education, food, clothing, healthcare, among other essentials. Chewing mûgûka contributes to strained family relationships because of depressed household income available for the essential requirements. Nyavanga (2018) also confirmed that mûgûka chewing hurts families because of neglect by the household head, dissipation of the household income as well as inappropriate behaviors from members of the family who abuse this drug, which in many cases leads to conflicts. Alem (2019) also found out that the effects of mûgûka leads to violent tendencies. Abusers may batter their wives, and in some cases this may lead to fatalities. Abusers of this substance may also harm themselves, and in rare cases lead to suicide. All these have detrimental effects to household members, with children being the most affected.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter presents conclusions drawn from the study and makes recommendations based on the study findings. The study sought to establish the effect of chewing Mûgûka on the youth in Kibwezi West Sub-county. The objectives were to find out the effect of Mûgûka chewing by the youth on crime levels, their productivity, and household income as well as the problems associated with chewing Mûgûka by the youth.

6.2 Summary of Findings

There is a high rate of chewing of Mûgûka in this area, with most of the chewers using the substance daily, apart from the fact that they have been doing it for more than 2 years. This well explains the high percentage of daily consumption as it has become a habit/addiction among the majority of the respondents.

The study sought to understand the motivation behind the respondents' indulgence in mûgûka, the findings show that they learned from friends and other family members while 14% said they had learned it from their parents. The study further found that the majority of the respondents do not chew mûgûka while at work. This could be attributed to the fact that most employers do not tolerate mûgûka chewing at the workplace. Those who did not chew mûgûka at work associated it with laziness, uncomfortable, satisfaction, and no need to work, and lastly some feel that mûgûka chewing is equivalent to work.

According to the study findings, chewing mûgûka by the youth significantly influences crime levels. The respondents confirmed that the youths who chew mûgûka are more likely to engage in criminal activities, engage in violence, and be incarcerated. The cross-sectional studies significantly offered authoritative information on the levels of drug-crime connections, highlighting the status for varying subgroups and crimes.

Similarly, the study found that chewing mûgûka negatively affects work productivity among youths; it significantly reduces work productivity, promotes laziness and inability

to participate in economic activities among the youths, and increases worm absenteeism. The study determined that chewing mûgûka had a positive impact on the household income for the families engaged in mûgûka business, including farming. Specifically, the study found a strong connection that mûgûka trade and farming offer substantial income to the families, and farming is undoubtedly a significant income source for the youths. Correlation analysis shows that there was a weak negative correlation ($r=-0.26$, $\alpha<0.01$) between the chewing of mûgûka and household income. This relationship can be said to have been a result of having both positive and negative effects of mûgûka on household income.

6.3 Conclusion of the Study

Mûgûka chewing is both a social and public health problem. The disastrous socio-economic and health consequences of the youth indulging in mûgûka chewing are enormous. Consumption of mûgûka is something that most youth in Kibwezi West are engaging in, and is affecting their social and economic life. Mûgûka chewing has also brought out another problem with other substances as the majority of those who abuse mûgûka will also end up abusing either alcohol or marijuana. Although those who trade in mûgûka supplement their household income, it can be said that for the chewers, who are the majority, there is a significant effect on household income in that a huge part of their income goes to purchasing the substance and other accompaniments. This in agreement with authors like Patel (2015) and Nyavanga (2018) who also found out that mûgûka chewing leads to the dissipation of household income, leading to increased poverty.

It can also be concluded that mûgûka chewing has led to a substantial reduction in workplace productivity. From the findings, it can be concluded that most of the youth who abuse mûgûka are engaging in criminal activities in order to sustain their habit. It has been found that the more the youth engage in the habit of chewing the substance, the lazier they become and are not able to engage in economic activities. This effectively creates more people dependent on the few actively involved in economic activities. With time, and if this habit is not checked, there is likely to be recorded decreased national economic activities with a reduced GDP and more people slipping through the cracks into poverty.

Several other studies including Goldsmith et al (2015) and Magerssa et al (2013) have also found that chewing of mûgûka leads to reduced productivity because the chewers are engaged in the habit instead of working.

Additionally, the overall effect of mûgûka chewing reduces household income. This means that the government should stop actively promoting the growth and trade of mûgûka but should rather begin controlling the same. This is because with more youth and adults indulging in the habit, the government's efforts of pulling out more people from poverty will not succeed. This will also lead to more negative effects like increased crime, poor healthcare, and decreased focus on development as more resources are focused on mitigating the effects. However, criminal activities related to mûgûka chewing are not widespread as indicated by Alem and Shibre (2017) when they investigated mûgûka induced psychosis and its medico-legal implication in Ethiopia. This is also the case in Kenya.

6.4 Recommendations of the Study

It has been found that there are no adverse socio-economic effects on mûgûka chewing so far. This is even though we have only looked into a limited number of socio-economic variables. This does not mean the government, parents and other stakeholders in society should not be concerned about the increasing rate of mûgûka uptake among the youth. In Kibwezi West sub-county, mûgûka chewing has become a habit in recent years and as has been seen, most of the youth have been chewing this herb for less than five years. This means the effects may increase as the period increase and the youth become addicted hence the need to intervene. The study recommends that proactive campaigns should be conducted to create awareness on the side effect of chewing mûgûka and drive away from the youth into more beneficial activities and dissuade them from mûgûka chewing.

The fact that most of those who chew these leaves do it daily is a worrying trend. It is recommended that the government considers chewing of mûgûka in public areas, just like was done for alcohol. This means that the youth will have time to engage in other useful economic or recreational activities instead of chewing. As has been seen, the majority of

those who chew mûgûka are also highly likely to indulge in alcohol, bhang, or cigarette smoking. It has been seen that hard drugs are also getting their way into these chewing joints. The government as well as other stakeholders must move forward in controlling this vice before it gets out of control because more mûgûka chewing might lead to increased alcoholism and more hard drugs amongst our youth, worsening an already worse situation. Efforts must also be made to prevent hard drugs like cocaine and heroin from reaching mûgûka chewers. The government must double its efforts in the fight against drug trafficking.

The government must provide incentives that discourage the youth from abusing mûgûka. As has been seen, the majority of those who indulge in this habit are employed as casuals, meaning they are likely to be earning less and not working full time. More, better opportunities must be provided to this group. Those who earn their living from mûgûka farming must be incentivized to grow alternative crops while those who engage in its trade diverting to other trades less harmful to society.

The study confirmed that the youths who chew mûgûka are more likely to engage in criminal activities, engage in violence, and be incarcerated. The study recommends that the government and other authorities carry out a mass campaign to discourage the use mûgûka and set up heavy penalties for those found involved in crimes.

The research showed that mûgûka chewing significantly reduces workplace productivity, promotes laziness and inability to participate in economic activities among the youths, and increases worm absenteeism. The study recommends that employers should discourage an employee from involving in drugs abuse and punish those who are involved in drugs. The study found a strong connection that mûgûka trade and farming offer substantial income to the families, and farming is undoubtedly a significant income source for the youths. The study recommends that the government should support the small scale traders and farmers with both financial and skill support to boost the farming techniques and sales volume. They will also help them get a global market for their product.

Parents perhaps have the main duty of controlling their children from engaging in this vice. This includes diverting their children to other activities that help in positive development. Parents should not be too busy to monitor what their children are doing. Other stakeholders like church leaders and community organizations among others should constantly engage the youth in forums that point out the harmful effects of drug and substance abuse. This may also involve holding sports activities that divert the youth from harmful activities. When everyone in the community does their part, then few if any young people will be involved in chewing mûgûka.

6.5 Suggestions for Further Study

The study was done with a focus on the effect of mûgûka among the youth in Kibwezi West Sub County. The researcher recommends that a similar study be done on a broader scope, for example covering a whole county of Makueni or a number of counties to assess how representative these findings are.

This study focused on youths. Future studies should incorporate all levels of analysis in mûgûka consumption and be done in either rural or urban areas where mûgûka is consumed and should involve a sample population of non-youths. Whether the results established from the study would be consistent in other areas or not, can only be verified through further research. A follow-up study to shed more light on the current trend and future expectation of mûgûka consumption is necessary to provide a link between this study and the earlier ones.

Similarly, a comparative study on the effects of mûgûka consumption and other substances such as bhang, heroin, and alcohol should be done to determine the effects of each of the substances on the youths. Further studies need to be carried out to determine the social, economic, and environmental factors associated with mûgûka chewing in other counties in Kenya.

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APPENDIX I: QUESTIONNAIRE

My name is Justin Musyoka Julius, a Master of Arts student in the Department of Sociology Anthropology and Community Development of South Eastern Kenya University. I am doing a research on the socio-economic effects of *Mûgûka* chewing among the youth in Kibwezi West Sub-county. I have chosen you as one of the informants to respond to a few questions that am going to ask you. The information that you will share with me will be treated with utmost confidentiality and will be used only for the purposes of this study. Your participation in this study is voluntary and there will be no monetary compensation. You can discontinue the interview at any time and there will be no penalties. I, however, encourage you to participate in the entire interview.

Do you consent to this interview?

Yes []

No []

Part A: Demographic Information

1. Age (years)

18-35 []

36-45 []

46-60 []

Above 60 []

2. Gender

Male []

Female []

3. Highest Level of Education

Primary []

Secondary []

Diploma []

Undergraduate []

Other (state).....

Section B: General Information on *Mûgûka*

1. Do you know anyone who chews *Mûgûka* ?

a. Yes []

No []

b. If yes, who are they to you?

Family member []

Neighbor []

Friend []

Colleague []

2. Do you chew *Mûgûka* ?

a. Yes () No ()

b. If yes above, how often do you chew *Mûgûka* ?

Daily [] weekends only [] rarely []

c. If yes in 2 (a) above, how long you have been chewing *Mûgûka* (years)

0-1 []

2-5 []

6-10 []

Over 10 years []

d. How did you start chewing *Mûgûka* ?

Learnt from friends []

Learnt from my parents []

Learnt from other family members []

Others (specify) -----

e. Why do you chew *Mûgûka* ?

It makes me feel active []

All my friends chew []

To reduce stress []

Other (specify) -----

f. Do you work while chewing *Mûgûka* ?

a. Yes [] No []

b. If yes, what work do you do?

Self-employed []

Employed permanent []

Employed casual []

c. If no, why do you not work?

- I feel so comfortable while chewing []
- I get a feeling of laziness while chewing []
- I feel satisfied enough and no need of work []
- Chewing is equivalent to work []

g. Do you eat well after chewing *Mûgûka* ?

a. Yes [] No []

b. If no, why don't you feel like eating?

I feel satisfied []

The appetite normally reduces []

I don't like interruptions while chewing []

Other (specify) -----

h. Do you use other drugs apart from *Mûgûka* ?

a. Yes [] No []

b. If yes, tick appropriately

Cocaine []

Heroin []

Bang []

Other, specify-----

c. Why do you use other drugs?...

To supplement the feeling []

It's an internal urge []

Other (specify) -----

a. Do you take alcohol while or after chewing *Mûgûka* ?

b. Yes [] No []

c. If yes, what kind of alcohol user are you?

Occasional drinker []

Social drinker []

Addict []

a. Do you smoke while or after chewing *Mûgûka* ?

b. Yes [] No []

c. If yes, what kind of smoker are you?

- Occasional drinker []
- Social drinker []
- Addict []

Part B: Socio-Economic Effects of *Mûgûka* Chewing

1. Effects of *Mûgûka* Chewing on Crime Levels

Indicate the extent of your agreement on the effect of *Mûgûka* chewing by the youth on crime levels. 1=strongly disagree 2=slightly disagree 3= neutral 4=agree 5=strongly agree

Statement	1	2	3	4	5
Youth who abuse <i>Mûgûka</i> are more likely to engage in criminal activities					
Youth who abuse <i>Mûgûka</i> are more likely to be incarcerated					
Youth who abuse <i>Mûgûka</i> are more likely to engage in violence					
We have seen a rise in criminal activities in our area as a result of increased use of <i>Mûgûka</i> by the youth					
We have seen a rise in violent activities in our area as a result of increased use of <i>Mûgûka</i> by the youth					
We have seen a rise in incarcerated youth in our area as a result of increased use of <i>Mûgûka</i>					

2. Effects of *Mûgûka* Chewing by the youth Workplace Productivity

Indicate the extent of your agreement on the effect of *Mûgûka* chewing by the youth on workplace productivity. 1=strongly disagree 2=slightly disagree 3= neutral 4=agree 5=strongly agree

Statement	1	2	3	4	5
<i>Mûgûka</i> chewing is likely to lead to decreased workplace productivity					
Youth who abuse <i>Mûgûka</i> be come lazy and are unable to engage in economic activities					
Youth who abuse <i>Mûgûka</i> are more likely to be absent from work					
Youth who abuse <i>Mûgûka</i> are more likely to report late to work					
Youth who abuse <i>Mûgûka</i> will not get the time to engage in innovative activities					

3. Effects of *Mûgûka* Chewing by the youth on household income

Indicate the extent of your agreement on the effect of *Mûgûka* chewing by the youth on household income. 1=strongly disagree 2=slightly disagree 3= neutral 4=agree 5=strongly agree

Statement	1	2	3	4	5
<i>Mûgûka</i> trade brings significant income to the family					
<i>Mûgûka</i> farming brings significant income to the family					
<i>Mûgûka</i> trade is a major source of income to the youth					
<i>Mûgûka</i> farming is a significant source of income for the youth					
The government has provided alternatives to <i>Mûgûka</i> business					

4. What are the challenges/problem associated with *Mûgûka* Chewing? Mention those you know.

.....

.....

.....

.....

APPENDIX II: FOCUS INTERVIEW GUIDE

Introduction

My name is Justin Musyoka Julius, a Master of Arts student in the Department of Sociology Anthropology and Community Development of South Eastern Kenya University. I am doing a research on the socio-economic effects of *Mûgûka* chewing among the youth in Kibwezi West Sub-county. I have chosen you as one of the informants to respond to a few questions that am going to ask you. The information that you will share with me will be treated with utmost confidentiality and will be used only for the purposes of this study. Your participation in this study is voluntary and there will be no monetary compensation. You can discontinue the interview at any time and there will be no penalties. I, however, encourage you to participate in the entire interview.

General Information

- 1) How would you describe *Mûgûka* ?
- 2) Do you think *Mûgûka* is a drug?
- 3) Do you think the government has done enough to regulate *Mûgûka* chewing?
- 4) Do you support the banning of *Mûgûka* ?
- 5) How does chewing *Mûgûka* affect the cost of healthcare?
- 6) In what ways does *Mûgûka* chewing affect household income?
- 7) Does *Mûgûka* chewing affect family relationships?
- 8) Do you think there is a connection between *Mûgûka* chewing and rising crime levels?
- 9) Does *Mûgûka* chewing affect the consumer's workplace productivity and how?

APPENDIX III: SEKU INTRODUCTION LETTER



SOUTH EASTERN KENYA UNIVERSITY
OFFICE OF THE DIRECTOR
BOARD OF POST GRADUATE STUDIES

P.O. BOX 170-90200

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Our Ref: C58/WTE/20735/2016

DATE: 7th December 2020

Justin Musyoka Julius
Re g. No. C58/WTE/20735/2016
Master of Arts in Sociology
C/O Dean, School of Education, Humanities and Social Sciences

Dear Julius

RE: PERMISSION TO PROCEED FOR DATA COLLECTION

This is to acknowledge receipt of your Master of Arts in Sociology Proposal document titled: ***“Socio-Economic Effects of Chewing Muguka among the Youth of Kibwezi West Sub-County, Makueni County, Kenya”***.

Following a successful presentation of your Masters Proposal, the School of Education, Humanities and Social Sciences in conjunction with the Directorate, Board of Postgraduate Studies (BPS) have approved that you proceed on and carry out research data collection in accordance with your approved proposal.

During your research work, you will be closely supervised by Prof. Harrison Maithya and Prof. Jonathan Mwanja. You should ensure that you liaise with your supervisors at all times. In addition, you are required to fill in a Progress Report (*SEKU/ARSA/BPS/F-02*) which can be downloaded from the University Website.

The Board of Postgraduate Studies wishes you well and a successful research data collection exercise as a critical stage in your Master of Education in Educational Administration and Planning.

Prof. David M. Malonza
Director, Board of Postgraduate Studies

Copy to: Deputy Vice Chancellor, Academic, Research and Students Affairs (Note on File)
Dean, School of Education, Humanities and Social Sciences
Chairman, Dept. of Sociology, Anthropology and Community Development
Director, Wote Campus
Prof. Harrison Maithya
Prof. Jonathan Mwanja
BPS Office - To file

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APPENDIX IV: RESEARCH PERMIT



REPUBLIC OF KENYA

Ref No: 127052



NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION

Date of Issue: 15/December/2020

RESEARCH LICENSE



This is to Certify that Mr. Justin Julius Musyoka of South Eastern Kenya University, has been licensed to conduct research in Makueni on the topic: SOCIO-ECONOMIC EFFECTS OF CHEWING MUGÛKA AMONG THE YOUTH OF KIBWEZI WEST SUB-COUNTY, MAKUENI COUNTY, KENYA for the period ending : 15/December/2021.

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