DETERMINANTS OF HIGH INCIDENCE RATE OF MENTAL DISORDERS AMONG YOUTHS IN CHUKA SUB-COUNTY, KENYA

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DECLARATION AND RECOMMENDATION

Declaration

This research project is my original work and has not, to the best of my knowledge, been presented elsewhere for scholarly purpose or otherwise in any other university.

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Recommendation

This research project has been submitted for examination with our approval as the University Supervisors.

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DEDICATION

This thesis is dedicated to my wife Mary who has been a guide, mentor and a counselor. To my daughters; Maureen, Lizjoy, Bridget and Angel for believing in me. May you have the same urge to further your education and exploit every professional and academic opportunity within your vicinity.

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ABSTRACT

Youth are most vulnerable to mental disorders and psychological disturbances than any other group in the society. Globally, mental disorders amongst the youths have been on increase with one fourth to one-third of the youths and adolescents experiencing these disorders across their lifetime. Kenya mental health policy 2015 – 2030 states that: about 40% of in patients youths in hospitals suffer from mental illness. In Tharaka Nithi County, statistical reports for the year 2014 indicate that there was a total of 1,966 mentally ill persons who visited the health facilities. Chuka sub-county hospital had a total of 806 in-patients diagnosed with mental disorders. Out of the 806 patients, 216 were youths aged 15 – 35 years representing 41%. This high percentage of youths admitted with mental disorders necessitated the study. The current study sought to find the risk factors for mental disorders among the youths in Chuka Sub County. Six locations were conveniently sampled, after which proportion of participants from each selected location was calculated. Individual participants were purposively sampled. The study adopted a cross-sectional survey design to collect data from 384 youths who were sampled through convenience sampling technique. Structured questionnaires were used to collect data. Data was analyzed using Statistical Package for Social Science (SPSS) version 24. Frequencies and percentages were used to present descriptive statistics while Chi Square test of independence was used to test the relationship between the dependent and independent variables. Significant results were then be subjected to logistic regression analysis. Majority of the youths were male, 74%. Those who were aged between 21-25 were 42.5%, 15-20 years were 28%, 31-35 years were 28% and 25-30 years were 0.5%. Majority of the youths had secondary education, 58.8%, followed by college 21.5%, primary 12.2% and university at 7.5%. A big percentage of the youths, 63% were single by the time of study, 34.7% were married and 2.3% had divorced or separated. The following demographic factors were associated with high risk of developing mental disorders; age of the youth ($p=0.022$), level of education of the youth ($p<0.001$), marital status of the youths ($p=0.018$), significant social risk factors included; youth discrimination ($p=0.016$), bullying by fellow students ($p<0.001$), mistreatment while growing up ($p=0.013$), and frequency of family conflicts, on economic risk factors, significant factors included; satisfaction with income earned ($p=0.018$), youth straining to fund social needs ($p=0.046$), and family financial support ($p<0.001$). Significant environmental risk factors included; area of residence ($p=0.025$), youths' participation in societal civic activities ($p=0.020$) and crime rate at the youths' area of residence ($p<0.001$). In conclusion, the study found interplay between social and economic variables which increased the risk of developing mental disorders among the youths. These socioeconomic risk factors compounded with environmental exposures increased the risk of developing mental disorders among the youths. The study recommended, that these interpretations of these findings should be done with caution, as inferences about real cause cannot be made.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

AOD	**:**	Alcohol and Other Drugs
AUD	:	Alcohol Use Disorder
DALY	**:**	Disability Adjusted Life Years
DSM	**:**	Diagnostic and Statistical Manual of Mental Disorders
KEBS	**:**	Kenya Bureau of Standards
KNBS	**:**	Kenya National Bureau of Statistics
MEB	**:**	Mental, Emotional and Behavioural Disorders
MOH	**:**	Ministry of Health
NACOSTI	**:**	National Commission for Science, Technology and Innovation
NGOs	:	Non-Governmental Organizations
PTSD	**:**	Post-Traumatic Stress Disorder
SAMHSA	**:**	Substance Abuse and Mental Health Services Administration
SES	**:**	Social Economic Status
SPSS	**:**	Statistical Program for Social Science
TNC	**:**	Tharaka Nithi County
UNICEF	**:**	United Nations International Children's Emergency Fund
WHO	**:**	World Health Organization

CHAPTER ONE
INTRODUCTION

1.1 Background Information

Having good mental health is important for a person's wellbeing. Research has shown that majority of mental disorders have risk factors associated with differences social classes, whereby these inequalities make a person depressed and increases the risk of developing mental illness (World Health Organization [WHO], 2014).

Youth group is the most vulnerable to mental problems and psychological disturbances than that of any other group in the society (WHO, 2012). According to United Nations Children's Fund (2012) youths engage in drug and substance abuse with interplay of developmental variables. Despite the high prevalence of mental disorders, less than half of the youth with psychiatric disorders currently seek mental health care (Crowley & Sakai, 2015).

As the youth grow to adulthood, a number of factors promote or contribute hinderance of the desired growth. The process promote mental wellbeing are called protective factors while those that increase occurrence of mental illnesses are called risk factors. The presence of these risk factors or absence protective factors contributes to the development of psychiatric illnesses (WHO, 2012).

Mental disorders, emotional disorders and behavioral disorders are the most prevalent disorders and they are quite expensive to treat (Margarita *et al.*, 2015). Examples of such disorders include depression, personality disorders, schizophrenia, bipolar disorders, aggressive-disruptive behaviour, psychosis. Among the aforementioned disorders, disorders related to anxiety are the most prevalent psychiatric disorders followed by behavioral, mood and substance abuse disorders (Merikangas *et al.*, 2009). These disorders cause stress for youths as well as their families, both at school and in the community, and the larger society (Al-Sughayr & Ferwana, 2012). Most mental disorders have begun in neonatal stage, this contributes to poor growth, problems in sustaining social relationships, having reduced psychological well-being, and coupled with financial difficulties during the youthful stage (Margarita *et al.*, 2015).

A study done previously revealed that the prevalences of drug and substance use among youths despite its grave consequences that result is on the rise (Potenza, 2008). Among the commonly abused drugs include alcohol, Bhang (marijuana), cocaine, cigarettes (nicotine), opioids and sedatives (Kaufman *et al.*, 2008). Drug and substance abuse disorders are estimated to affect over 15.3 million people globally (Courtenay *et al.*, 2009).

Mental, emotional and behavioral disorders among the youths are a public health concern. These disorders limit the youth's ability of reaching normal goals for educational and social achievement (Merikangas *et al.*, 2009). Another study on social factors linked to development of mental disorders found smoking history in the family, use of food additives have contributed to psychiatric and social problems (Keyser-Marcus *et al.*, 2015).

Genetic factors have also been cited to contribute to development of mental disorders among youth (Uher & Zwicker, 2017; Liu *et al.*, 2019). Mental illness is more common in people who have blood relatives that also suffer from the ailment (Bradshaw *et al.*, 2014). Only a few people with mental disorders have an affected relative. Genetically, no gene has been consistently associated with mental disorder risk (Torren *et al.*, 2015). Specific genes increase the risks of developing a mental illness, and the individual's current situation may trigger the development (Wille *et al.*, 2008).

Mental health decreases economic productivity, lowers prosperity and growth, thus key for economic growth (Katz, 2015). According to Eapen, (2014) changes in employment status among youths and having increased income and detecting mental disorders early among the youths like youths having suicidal thoughts, and youths who drink heavily drinking will reduce the occurrence of mental illnesses. Mental disorders among the youths increases the likelihood of poverty, severely limits employment opportunities, negatively impacts on work performance, development, social and economic integration (Bradshow *et al.*, 2014). Therefore, it is significant to gaining an understanding of how big the problem is, the risk factors associated, and prognosis of mental disorders among the youth (Al-Sughayr & Ferwana, 2012). Mental health issues in youths who do not receive prompt treatment are associated with low levels of academic achievement, substance abuse, poor reproductive and sexual health, criminality and inadequate personal care (WHO, 2014).

Adverse events in life such as bullying, conflicts, physical harassment, unemployment, death have been associated with the development of severe cases of depression with the most significant risk of onset appearing to occur within the first month after the event (Wille *et al.,* 2008). Other individual factors associated with mental disorders include antisocial behaviour, behavioral disengagement, adverse childhood events, low self-esteem, anxiety and emotional problems (WHO, 2012).

Environmental influence on the development of mental disorders is a unique relation. Whilst many youths are mentally well, however, exposure to poverty, abuse or violence predispose them to mental disorders (Olfson *et al.*, 2015). According to the Kenya mental health policy document (MOH, 2016), 99,840 outpatient visits were mental disorders and 8% increase to the previous year. Kenya mental health policy for the years 2015 – 2030 states that about 40% of inpatients youths in health facilities suffer from mental disorders. In Tharaka Nithi County, statistical reports from Chuka County Referral Hospital annual morbidity report 2016 revealed that there were a total of 1,966 mentally ill persons seen in the health facility. Chuka sub-county had a total of 806 patients with 216 being youths aged 15 – 35 years representing 41% (Chuka District Hospital records, 2016). There is a dearth of information on the prevalence of drugs and substance abuse, socio- economic and environmental risk factors which are known to lead to mental disorder among the youths. Mental disorders among the youths are preventable if appropriate measures are under taken.

Thus, identifying other determinants that predispose youths to mental disorders is essential for effective prevention and management of the problem. The youth stage is one of the rapid biological, psychological and developmental transition stage associated with increased mortality and morbidity related to mental health disorders. Compared to the childhood stage, there is an increased rate of depression and suicides at the youth stage.

1.2 Statement of the Problem

Globally, it is estimated that one-fifth of the world's population are youths and are at a higher risk of developing mental illness as they transit from childhood stage to adult stage. There is an increase in outpatient mental disorders in health facilities globally. In the country, and in Tharaka Nithi County 41% of the mentally ill persons seen in

health facilities are youths. Little was known on the determinants contributing to high mental disorders among the youths in Chuka Sub-county of Tharaka Nithi County. There was also limited information on the prevalence of drugs and substance abuse, socio-economic and environmental risk factors among the youths in Chuka Sub-County which are known to lead to mental disorders. Hence there was need to carry out this study and find out the determinants of increased mental disorders among the youths in Chuka Sub-county. This will help reduce the burden among the nurses in managing these conditions in health care facilities and reduce socio-economic burden of medical care.

1.3 Research Questions

i. What social risk factors contribute to mental disorders among the youths in Chuka Sub-county of Tharaka Nithi County?
ii. What economic risk factors contribute to mental disorders among the youths in Chuka Sub-county of Tharaka Nithi County?
iii. What environmental risk factors contribute to mental disorders among the youths in Chuka Sub-county of Tharaka Nithi County?

1.4 Research Objectives

1.4.1Broad Objectives

The broad objective of the study was to establish the determinants associated with high incidence rate of mental disorders among youths in Chuka Sub-county, Tharaka Nithi County.

1.4.2 Specific Objectives

The specific objectives of the study were;

i. To assess social risk factors contributing to the development of mental disorders among the youths in Chuka Sub-county, Tharaka Nithi County.
ii. To determine economic risk factors contributing to mental disorders among youths in Chuka Sub-county, Tharaka Nithi County.
iii. To access environmental risk factors contributing to mental disorders among the youths in Chuka Sub-county, Tharaka Nithi County.

1.5 Significance of the Study

Analyzing the determinants leading to the development of psychiatric disorders among youths in Chuka Sub-county, Tharaka Nithi County is vital in addressing the public health concern. Mental illnesses among the youth are a national challenge that has detrimental effects on wealth, health and security of nations and families. This study was critical as it enhanced the understanding of mental health illnesses among the youths. The study generated relevant information needed by policymakers and the Government of Kenya on the current situation for appropriate measures to be undertaken. The research findings also provided a solid foundation for healthcare providers and policymakers to develop strategies to curb the increased incidences of mental health conditions as well as carry out further researches on the area of practice. The study findings can equally be used to intensify awareness campaign to sensitize the public, families and community on mental issues affecting youths and take up their active roles to contain the menace. Results will be used to challenge both the national and county governments, the Faith Based Organizations (FBO'S) and NGO's to avail resources for management of affected population and facilitate future planning in mental health care service delivery.

1.6 Assumption of the Study

The study was based at Chuka Sub-County, thus excluding other sub-counties. It was assumed that all the respondents gave their honest responses and that the population that participated in the study represented the general youths in Chuka –Sub County.

1.7 Study Limitations

The study only focused on youths from Chuka Sub-County, study was therefore limited in generalization of results to other Sub-Counties and even the whole country where the same risk factors are experienced but will give insight knowledge to stake holders the effective approach on mental health. The study limited to one month of data collection.

1.8 Study Delimitations

The study was bound to all sampled respondents who reside in Chuka Sub-County. This gave the researcher an opportunity to examine respondents' experiences and factors that had an association with their mental health status. These study results came from youths residing in Chuka despite their cultural backgrounds. Some youths originated from

different counties but were residing in Chuka by the time of study. Therefore, their responses might be dependent on where they grew up in and not necessarily in Chuka Sub- County.

1.9 Scope of the Study

The researcher sampled participants randomly from Chuka town, and its surrounding villages. This involved getting participants at least from each location in Chuka Sub-County.

1.10Operational Definitions of Terms

Drug and Substance Abuse: The misuse of medications and drugs that are either legal or illegal. An abuse of these is when the user takes an amount that can harm their health

Individual Factors: These are behavioral determinants, biological determinants, socio-economic determinants and environmental determinants that influence a person's state of health.

Mental Disorders: Also called psychiatric disorders or mental illnesses. A wide range of mental health conditions/ disorders that affect the mood, thinking and behaviour causing a significant distress or impairment of personal functioning

Mental Health: Ability of a person to realize their potential to cope with daily stress and work productively.

Risk Factors: Variables that increase the likelihood of developing mental disorder

Economic Risk Factors: These are income related factors that influence occurrence of mental disorders among youths

Environmental Risk Factors: These are factors related to the residence area or area where a youth is raised up that contribute to development of mental disorders among youths.

Social Factors: These are things that affect lifestyle such as religion, wealth or health. They are determinants of health and impact on quality of life outcomes.

Youth: A time of life when one is young, and often represents the time between childhood and adulthood. The Kenyan National Youth Policy identifies youths to be aged between 15-35 years

CHAPTER TWO
LITERATURE REVIEW

2.1 Prevalence of Mental Disorders among the Youths

Mental-ill health conditions occur commonly among youths and adolescents. One fourth to one third of the youths and adolescents suffer from mental disorder in their lifetime (WHO, 2012). Research found that youths are at a higher risk of developing mental disorders like depression as they transit from childhood to adulthood (Bradshaw *et al.*, 2014).

Previous investigations found that most of the mental disorders witnessed in adulthood began in childhood and adolescence stages. In a group of four youths, one of them is likely to meet criteria for a Diagnostic and Statistical Manual of Mental Disorders (DSM) mental disorder. This highlights the importance of estimating how big the problem is, risk factors associated with mental disorders, and progression of these mental disorders among youths (Al-Sughayr & Ferwana, 2012). Therefore, there is need to add knowledge base about the prevalence of these conditions, and stability of such disorders among youths. This helps to correctly assess the magnitude of mental disorders (Volkow, 2014).

Al –Sughayr et al. (2012) stated that several other previously carried out studies on mental disorders among the youths, it is clear that youth are at higher risk of developing mental health disorders due to harsh and unconducive living conditions, being discriminated by friends or exclusion based on social class and inaccessibility to quality support and quality services. Youths with chronic illness, especially autism disorders or intellectual conditions are likely to develop mental disorders (Eapen *et al.,* 2014). Other factors that increase prevalence of mental disorders include; early pregnancies, early parenting and forced to be married, being orphans and youths from discriminated groups. Fazel et al. *(*2012) stated that vulnerable to mental disorders are youths who suffer social exclusion, discrimination, stigma associated with health care seeking behavior, educational and training difficulties, risk taking behavior, physical illness and violation of human rights.

2.2 Individual Risk Factors

2.2.1 Gender Role in Causation of Mental Illness

It is evident from previous studies that various demographic variables are affected differently when it comes to mental disorders and mental illness. Depression is more common in female than in male, the reason for this is unclear (National Institute for Clinical Excellence, 2003). Women and children are vulnerable in situations of familial violence and abuse. In a study by Olaya et al. (2010) the researchers reported that mothers exposed to intimate partner violence were more likely to protect sons and punish daughters whereas fathers were more likely to display great emotional distress and punish and reject children. These gendered behaviours tended to increase the risk of posttraumatic stress disorder, depression or mood disorder, self-harming behaviour and functional impairments for children. Age of the youth was also associated with development of mental disorders, with increase in age having more odds of mental illness development (Smitha *et al.*, 2015). Cadmium exposes a male child a higher risk of emotional stress than female child, this study suggested that gender needs to be investigated on how it is interrelated with environmental factors that cause mental disorders (Sioen *et al.*, 2013).

Mental ill-health have adverse effects on people across the globe. This is varied according to positioning in the life stage of lifetime, experience of traumatic events and levels of managing the post trauma experiences (Miller (ed) 2010). Although there have been insignificant differences reported between male and female in relation to development of mental disorders, it seems men and women react differently to stress. When men are depressed or stressed up they engage in excessive drinking or abuse substance and drugs, while women on the other hand seem to internalize their emotions, making them have higher chances of developing depression (Dzator, 2013).

2.2.2 Age Role in Causation of Mental Illness

Children and young people are particularly vulnerable to stress at moments of change and transition in family and social life. Rothon et al. (2011) found that appropriate forms of social support can ameliorate the effects of school bullying of young people. Notably young men who were bullied were more likely to exhibit depressive symptoms than young women. Although the support of family and friends were protective factors, the authors argue that a more active approach for educational professionals was necessary.

A World Health Organization report (2010) on the social determinants of health and well-being amongst young people in Europe found important factors associated with mental ill-health in these populations. Whilst young men tended to act out and engage in a range of risky behavours, young women were more likely to internalize worried or express psychosomatic symptoms and health problems.

2.2.3 Hereditary Factors Role in Causation of Mental Illness

Hereditary factors have also been cited as risk factors for mental disorders. Though many risk factors for psychiatric disorders are external, there are also individual factors that contribute to the initiation of mental disorders. Genetics contributes to the increased likelihood that an individual will develop the disorder and to what extent the problem may escalate. Mental illness is more common in people who have blood relatives that also suffer from the ailment (Carvalho *et al.,* 2019). Specific genes increase the risks of developing a mental illness, and the individual's current situation may trigger the development. Depression and other mental disorders related to depressive state of a person were also associated with genetics (Lohoff, 2010).

According to studies carried previously on association of family history and development of mental health disorders, Polit (2012), found a positive association between family history and occurrence of mental disorders. However, only minority of people with mental disorders have a relative with mental disorder and no single gene have been identified to be associated with inheritance of such disorders (Torren *et al.,* 2015).

Epidemiological research has shown an association between biological and psychological risk factors for some mental disorders. MC Donald (2014) stated that biological factors include bad obstetric events and abuse of cannabis during pregnancy. Adversity in childhood and young adulthood like parental separation, child abuse and victimization, stress and social exclusion have been identified as some of the environmental risk factors contributing to the development of mental disorders among the youths (Crowley, 2015).

2.3 Social Risk Factors for Development of Mental Disorders among the Youths

2.3.1Drug and Substance Abuse Role in Causation of Mental Illness

Over the last two decades, in Sub-Saharan Africa, there has been a rise in the rate of drug and substance abuse among the youths (Wille *et al.,* 2008). Youths and adolescents are at risk to be involved in substance abuse as they may lack abstract thinking due to age factor (Katz *et al.,* 2014). More so, the youth stage is the experimental stage putting them at a higher risk of developing drug and substance abuse disorders. The result is an increase in the cases of mental and behavioral disorders.

According to Thatcher & Clark (2008) youths and adolescents were diagnosed to be having mental disorders related to alcohol consumption were also found to be using cigarettes and marijuana. Some youths were introduced to alcohol use in early childhood and high risk of developing mental disorders in adulthood. Torrens et al. (2015) found that 3.3 percent of the adults were suffering from a mental disorder resulting from substance abuse, about 340 000 being children aged between 12-17 years who had a major depressive episode and substance use disorder.

Crowley (2015) in his study on substance abuse found out that harmful use of substance is a major concern in many countries with prevalence of binge drinking among youths starting at thirteen percent with males most at risk. Harmful substances abuse increases further risk taking behavior such as unsafe sex leading to sexually transmitted diseases, unwanted pregnancies and subsequent related mental disorders (Wille *et al.*, 2008). Frequent experiences of family conflicts increase the likelihood of low education attainments, injury, increased involvement in crime, or death. In the same study, conflicts among youths and their friends or family was second leading cause of mortality of youth. (Volkow, 2014).

According to Crowley (2015) stated that some of the social factors driving youths to drugs and substances abuse included peer pressure, celebrations, rapid urbanization, conflicts, role modeling social attitude, cultural and religious reasons and easy availability. Different proportions of youths involved in alcohol use and abuse of other drugs of addiction face a higher risk of developing suicidal thoughts, committing homicide, causing accidents and suffering from physical illness. Courtenay et al. (2009) describes that youths suffer trauma, violence, unsafe sexual practices, nutritional

deficiencies and organ system damage due to substance and drugs abuse. Besides personal and family distress youths also increases the burden of health care costs and loss of future productivity on the community (Fazel *et al.*, 2012).

Alcohol is one of the most commonly abused substances among the youths. Moderate to heavy consumption is associated with an increased social confidence, euphoria, mood liability and decreased impulse control. On the other hand, alcohol induces dementia that causes irreversible brain damage even with sobriety and cigarette smoking has also been associated with a major risk factor for the development of cardiovascular conditions among the users (Kaufman, *et al*., 2008). Alcohol impairs judgment youths are more likely to engage in unsafe sexual practices when they are drunk. This risks them to sexually transmitted diseases, early pregnancies and subsequent prone to mental disorders (Volkow, 2014). Cocaine leads to long-term changes in the functional brain structure that are accompanied by long-term problems with concentration, memory, and psychotic symptoms (Goldstein *et al.*, 2009).

With continuous abuse marijuana also known as bhang or cannabis leads to the development of frank and visual distortions hallucinations. The hallucinations are usually visual as compared to the schizophrenic type of hallucinations that are auditory. People who abuse the substance experience marked distortion of their feeling and time of depersonalization. Marijuana abuse is also associated with the development of drug-induced paranoia, delusions and panic states (Budney *et al*, 2007). The same study indicated that marijuana use results in psychosis, depressive states, and exacerbations of pre-existing mental conditions. Marijuana use which is prevalent among youths also interferes with short term memory, leaning, and psychomotor skills. Motivation and psychosexual / emotional development also may be affected.

2.3.2 Social Relationships Role in Causation of Mental Illness

Children who grow up in an environment where their parents and relatives abuse drugs are more likely to use the same substances later in their life predisposing them to mental disorders. Adverse experiences in the child's early life predispose them to mental disorders (Pinto *et al.*, 2014). On individual level the inverse relationship between social class and mental disorders can be seen as a dynamic feedback system (Brashaw *et al.*, 2014).

Stress affects social relationships by disrupting social interactions and the environment in a manner that increases susceptibility to psychological torture, or exacerbates the effects of the existing stressors (Eapen, 2014). In many cases, perpetrators of bullying and violent events have an increased risk of suffering from mental-health illnesses (WHO, 2012). Family stressors, losses and breakups which include loss of a sibling or parent and even separation and divorce are traumatic experiences. It takes time for a youth to adjust to such changes brought about by these events. Jennifer (2015) stated that how grief is handled can affect youths negatively leading to development of mental health disorders. Influence, peer pressure makes youths act and behave in certain bad ways. According to Thatcher (2008), youths may be pressurized to mob psychology so as to fit in the group for social relations.

In the developing countries, bullying is a problem for many school-aged youths. It is one of the most common form of harassment experienced by school going children. Most depressive episodes over 50 percent are preceded by a traumatic life event. The psychological troll also claimed by stress also plays a significant role in causing mental health disorders such as anxiety and PTSD (Pinto *et al.,* 2014). Depression results from a minor or a major stressful event and the accumulation of the stressors increases the severity of the condition.

2.3.3 Physical and Sexual Abuse Role in Causation of Mental Illness

Negative judgment, stigma, social discrimination and shame are some of the experience disorder by youths with mental disorders, worse if it is from relatives and the community members, it worsens the existing mental disorder or lead to development of another mental disorder (Fisher, 2012). Physically, socially, psychological, sexually or verbally abused youths are more likely to experience mental disorders since they cause feeling of low self-esteem, make them lack own confidence, get depressed, go into isolation and get angry impairing youth chance to lead a happy life (Katz, 2014).

2.4 Economic Risk Factors Role in Causation of Mental Illness

According to Jennifer (2015) economic shock makes public service budgets unstable and affect learning system and health care systems. While the economic crisis may lead to mental health illness, mental disorders among the youths have increasingly impacted the economy negatively (Thatcher, 2008). For ages poverty reduction has consistently

been a policy thing. Poverty puts youths at risk for several health issues, including mental health (Engel, 2017)

2.5 Environmental Risk Factors Role in Causation of Mental Illness

Generally, environmental stressors results in a threat to population but are inter-generationally downward. (Bradshaw *et al.,* 2014). Most studies have shown that several biological and environmental factors have also been proposed as risk factors for mental disorders (Wille *et al.,* 2008). Environmental factors minerals that interact with genetic factors have been reported to induce severe psychiatric disorders among youth. (Lee, 2013).

Kolko et al. (2014) indicated the environmental has risk factors that may contribute to development of mental disorders and such studies has put the environment in the fore front of research regarding mental disorders. Torrens (2015) stated that various environmental factors such as migration, urbanicity, environmental agents of infection, and psychosocial factors increase the risk of developing mental disorders among the youths.

Supportive environmental in the family, in training, and in the area of residence are also important. Newton et al. *(*2015) in their study found out that multiple factors determine the mental health status of a youth. The more the risk factors, the youth are exposed to, the greater the chances of developing mental illness. Factors which do contribute to mental disorders among the youths includes desire for independence, pressure to conform with peers status and to identify with the group, and increased access to and use of technology (Pinto, 2014).

Quality of homelife and relationship peers also determine the mental state of the youth. If the disorders are not recognized and attended to in childhood, they extend to adulthood. This impairs both physical and mental health and limits opportunity to lead fulfilling live as an adult (Newton, 2015). An environment that promotes psychological well-being and protecting youths from traumatic experience and risk factors which may impact their potential to thrive are not only critical for their well-being as youths, but also for their physical and mental health in adulthood (Polit, 2012).

Mental disorders in youth have negatively affect them, their children and families (Marcus *et al.*, 2015). Polit et al., in their study, they stated those direct or indirect threats in continuity of environmental interference and the cognitive process have got impact on the youth's mental development ability. Young people living in poorer households were more likely to be exposed to psychsocial stress, but where they could more easily communicate with parents and were supported through peer or school-based relationships, they were less likely to have physical and psychological complaints (WHO, 2010).

2.6 Theoretical Frameworks

2.6.1 Ecological Theory.

Research has proved that socioeconomic status of a person impacts not only physical and mental wellbeing, but also social mobility (Kraus & Tan, 2015). A person born poor background struggles to get out of the economic inequality and this causes stress and depression whenever they fail to (Benjamin et al., 2012). Mazumder (2004) found that economic status can run down a family tree for a lifetime. Youths living in low-income community have a higher likelihood of experiencing problems to finance their academics and end up dropping out of school (Wyatt-Nichol & Brown, 2011). The relationship between financial stressors and a struggle for social mobility through education and the workforce, increases poor health outcomes for youths (American Psychological Association, 2016).

2.6.2 Social Causal Theory of Mental Illness

This section will describe and analyze a range of social perspectives and models which inform the way that mental illness and health can be understood. The section explains how social theories became increasingly influential in the way mental health services were perceived, designed and delivered from the mid-century on. It then draws upon the tripartite division of perspectives described by Rogers and Pilgrim (2010) in their text: *A Sociology of Mental Health and Illness*, and then summaries the critical realist position on mental health and illness.

Sociological approaches can help us to critically analyze situations and deconstruct ideologies and discourses about the past traumatic events, and in doing so reveal

association between the power of professionals and hegemony of the state and other institutions.

Just as we can examine the history of mental health services through a critical sociological lense, so too can we be considering the way that contemporary ideas, discourses and practices are constructed. The tripartite division of perspectives described by Rogers and Pilgrim (2009) are helpful in this respect. These perspectives are:

Social Causation – this explains the association between social problems and development of mental disorders. An example of this was a study by Brown and Harris (1978) established a link between the problems experienced by mothers who are not married and living in poor housing conditions and an increased chance of developing depression.

The Societal Response perspective was founded on the early work of Goffman (1961) and (Scheff, 1966) to explain how stigma contributes to discrimination. The study described how both patients and professionals performed expected roles which became their daily norms. Patient identity was negatively ascribed and continue to be negative and depersonalizing, reinforced by forms of institutionalized stigma which proves difficult to challenge and erase. They further indicated that not only the patients are stigmatized but also their families (Corrigan *et al* (2011). These can only be solved or attended to by policy makers.

The third perspective, **Social Constructionism**, challenges the assumption that an objective existence can automatically be attributed to a notion of mental illness without first considering the meanings ascribed by professionals, policy makers and the wider public. For example in psychiatric classification (DSM II), they included homosexuality as mental disorder in the 1950s and 1960s, this is viewed to be discriminatory today. Different communities perceive mental illness in diverse ways depending on cultural norms and interpretations of behaviour. For this reason it is imperative that mental health professionals should avoid making uniform assumptions when intervening in the lives of clients from different communities (Robinson, 2013) These three perspectives are useful in helping us think more critically about how we describe and operationalize ideas of mental illness, but this is a rapidly developing area of knowledge which is in

constant flux and interpretation, caught between traditional, modern views of the social world and late and post-modern theories which continue to challenge discourses and practices.

2.7Conceptual Framework

The framework illustrates various inter-relationships between variables. The dependent variable is the development of mental disorders. Independent variables individual factors, social, environmental and economic factors, and drug and substance abuse.

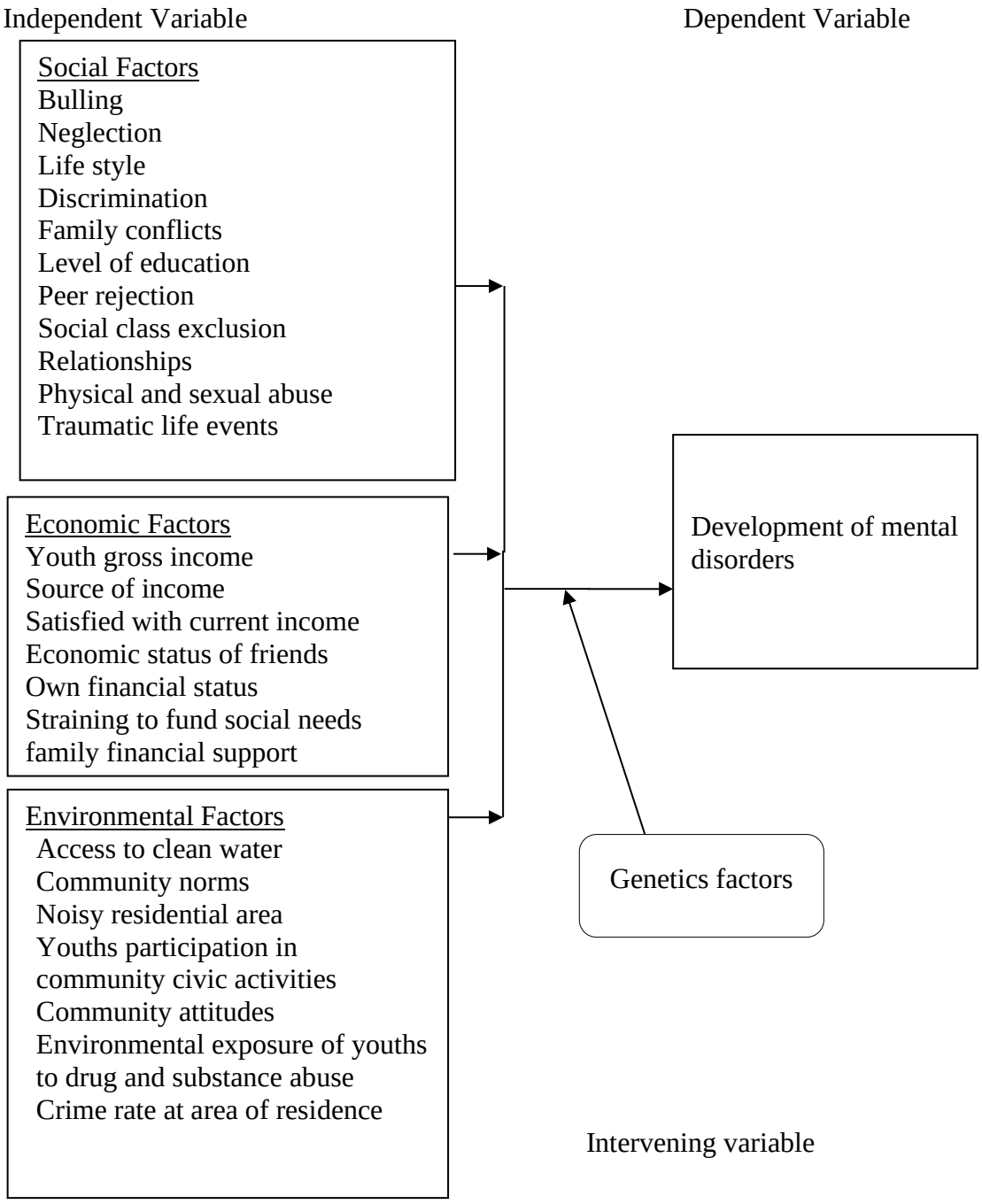

Figure 1: Conceptual Frame Work

CHAPTER THREE
METHODOLOGY

3.1Study Area

The study was conducted at Chuka Sub-county, Tharaka Nithi County. Chuka sub-county lies on the eastern slopes of Mount Kenya and it is within Tharaka Nithi County which is approximately 200 Kms East of Nairobi. The sub-county is one of the five Sub-County which make up Tharaka Nithi county and it covers an area of 169.6 km^2 with a population density of 362 persons per square Km. It borders with Embu county on western side, Kitui County on southern side and Meru County on Eastern side.

3.2 Research Design

The study utilized a cross-sectional survey design to establish the determinants associated with high incidence rates of mental disorders among youths in Chuka Sub-county, Tharaka Nithi County. The design was useful because it gave a picture of the situation under study from a youthful population at one point in time (Polit & Beck, 2012).

3.3 Study Population

According to data from the Kenya National Bureau of Statistics (KNBS, 2009) Chuka Sub-county has a population of 61,449 residents. The number of youths aged between 18-35 years is 17,820 representing 29% of the total population. The study population was youths aged 18-35 years who reside in Chuka Sub-county.

3.4 Sampling Techniques

3.4.1 Sample Size Determination

The sample size determination method was adopted from Fisher's formula (1998) method;

$$n = \frac{\mathrm{z}^2 \mathrm{p}\ (1 - \mathrm{p})}{(d^2)}$$

Where;

n=Desired sample size.

Z= Standard error of the mean which corresponds to 95% confidence level. (1.96)

p= Prevalence of mental disorders. Since the information on the prevalence of mental disorders is not available, 50 % (0.5) is assumed to get the possible maximum sample size.

d =level of significance which is 0.05 for 95% confidence level

Therefore, by substitution;

$$n = \frac{z^2 \text{ xp } (1 - p)}{d^2} = [1.96^2 \; x \; 0.5 \;\; (0.5)/0.05^2]$$

n = 384 respondents

3.4.2 Sampling Method

Convenient sampling method was used to identify the six locations to be involved in the study in table 1. Probability proportional sampling was employed in the study to determine number of participants per selected location in Chuka Sub County. In each location purposeful sampling was employed to get individual youths who participated in the study. From the whole population, only the eligible study participants meeting the criteria and consent took part in the study.

Table 1: The Sample Matrix Indicating Locations Sampled

Locations in Chuka Sub-county	Population KNBS, 2010	Youths KNBS, 2010	Number of youths sampled
Kiang'ondu	14,688	4,260	92
Mugwe	10,536	3,055	66
Muiru	5,060	1,467	32
Karingani	18,194	5,276	114
Gitareni	8,590	2,491	54
Kithangani	4,382	1,271	28
Total	61,450	17, 820	386

3.5 Data Collection Tools/Instruments

3.5.1 Interviewer Administered Questionnaires

A formulated questionnaire (**Appendix I**) was used to collect data. The questionnaire had four parts with both closed and open questions. Part A focused on demographic data of the participant, part B; had 24 items assessing social risk factors for development of mental disorders, part C had 14 items assessing economic risk factors for development of mental disorders and part D had 10 items assessing environmental risk

factors for development of mental disorders. This facilitated the collection of quantitative. The questionnaires were researcher administered. This ensured that the participants correctly understood the questions asked without assisting in responding to the question. The youths were screened using Mini Kid questionnaire v 6.0. The questionnaires were administered to youth as they became available.

3.6 Inclusion Criteria

Resident youths (18-35 years) in Chuka Sub-county, Tharaka Nithi County who consented to participate in the study and qualified to participate.

3.7 Exclusion Criteria

Youths in Chuka Sub-county Tharaka Nithi County who were not willing to participate in the study. Youths who were not of sound mind at the time of the study.

3.8 Pretesting of Instrument

Before the actual data collection, the instrument was pretested among 38 youths in Magumoni Sub-county, necessary modifications were made following the pretest.

3.9 Validity Test

Validity was ensured by expert review of the instruments (questionnaires) and peer proof reading before commencement of the study for content validity. The study research ensured that the instrument was clear, and easy to understand. Training of research assistants was done to ensure a proper understanding of the operational definition of the study and uniformity in the questioning skills. To avoid more than one interview being done on the respondents during subsequent visits, interviewed respondents were assigned codes which were marked against their questionnaire after the interview.

3.10 Reliability Test

Reliability of this instrument was the degree to which the instrument produced consistent results when it was repeated. Reliability coefficients were calculated to find out if research questions were sufficiently included to answer the study objectives and whether the meaning of the questions was similar to all the participants. The pretested questionnaires were split into two halves using Odd-even split method. Spearman

Brown prophecy formula was then used to calculate the reliability coefficient as indicated in the equation:

$$Reliability\ of\ scores\ on\ total\ test = \frac{2\times reliability\ for\frac{1}{2}tests}{1+reliability\ for\frac{1}{2}tests}$$scores on total test=2×reliability for1/2tests/1+reliability for1/2tests

The coefficients of Cronbach's alpha was found to be at (α =0.78) which was accepted. All the 384 respondents completely filled the questionnaires. After which necessary adjustments were made. Adequate supervision throughout the data collection process was ensured.

3.11 Data analysis and Presentation

Quantitative data obtained was cleaned, coded and entered into SPSS version 24 for analysis. Frequencies and percentages were used to describe the quantitative data. Chi Square test of Independence was used to test the relationship between the variables of study. Those factors that had significant correlation were then subjected to independent Chi-square analysis. The significant variables per objective were then subjected to logistic regression analysis to check the variables degree of association.

3.12 Ethical Considerations

The researcher wrote a letter of introduction to participants, **Appendix II**. The study also sought authorization from deputy sub-county commissioner Chuka Sub-county **Appendix III**. Also, permission was sought from the location administrative offices. Informed consent (**Appendix IV**) from subjects was sought and confidentiality was assured to the participants. The study obtained research permission from Chuka University Research Ethics Committee **Appendix V** and National Commission for Science Technology and Innovation (NACOSTI), **Appendix VI**. Respondents were informed to fill an informed consent form as prove of their acceptance and availability to participate in the study. After obtaining the consent, the study researcher urged the participants to feel free and express their discontent anytime they felt like as well as withdraw from the study when they wished to do so. Privacy, anonymity and confidentiality was maintained throughout data collection, by ensuring no personal identification details (e.g. names) were linked to the subject and plagiarism was avoided by appropriately referencing cited materials.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Demographic Characteristics of the Study Participants

The study gathered information on the demographic characteristics of the targeted youths concerning their age, gender, education level, occupation and marital status of youths from a sample of 386 youths in Chuka sub-county.

4.1.1 Age of the Respondents

Figure 2 indicates that the age distribution of the youths was rounded up in complete years and it was found that the youths had varied ages. Majority (46.3%, n=179) had an age below 20 years, 33.7% (n=130) had an age between 21-25 years, 12.7% (n=49) had an age between 26-30 years and 7.3% of the youths had an age of between31- 35 years. There was no available information or reason for this big gap in terms of number of respondents in this age category.

The age of the youths was summarized in figure 2.

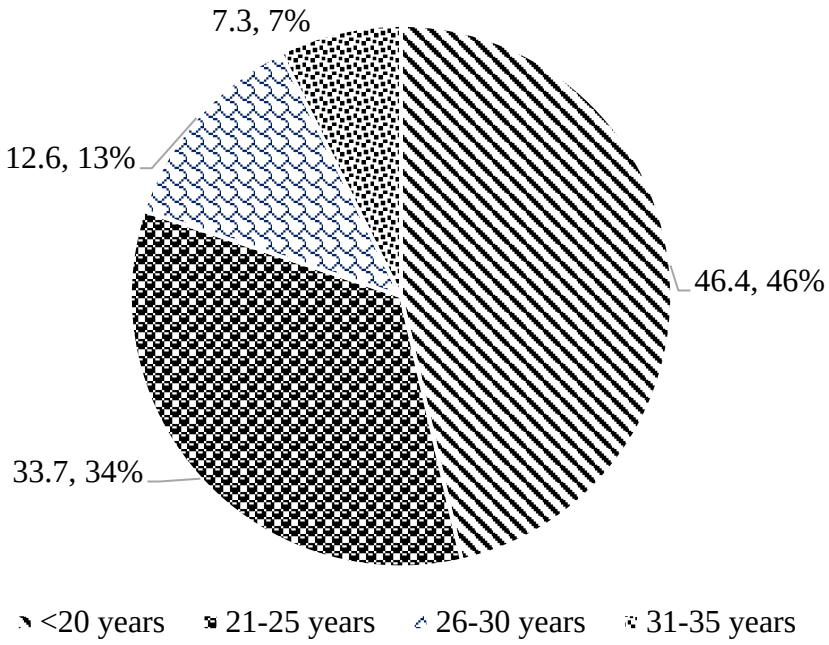

Figure 2: Age of Respondents

The risk of developing mental disorder was measured using Mini Kid questionnaire v 6.0 (**APPENDIX I**).

Table 2: Association between Age of the Youth and Risk of Developing Mental Disorder

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Age	<20 yrs	140	39	179
	21-25 yrs	102	28	130
	26-30 yrs	31	18	49
	31-35 yrs	26	2	28
Total		299	87	386

χ^2 (1, N=386) = 9.590, p=0.022

On assessing the relationship between age and risk of developing mental disorder, out of 179 youths who were in the age bracket of below 20 years, 39 of them were at risk of developing mental disorder. In the age group between 21-25 years, out of 130 participants, 28 of them were at risk of developing mental disorder. The risk of developing mental disorder is higher for the age's brackets of 26-30 whereby out of 49 respondents, 18 were at risk of developing the mental disorder. The risk was found to reduce between the ages of 31-35 years whereby 2 out of 28 participants were at risk of developing mental disorder. These results were found to be significant at χ^2=9.590, Fishers exact test p value of 0.022.

4.2.2 Gender of the Respondent

The study determined the gender distribution among the youth. The results were presented in figure 3.

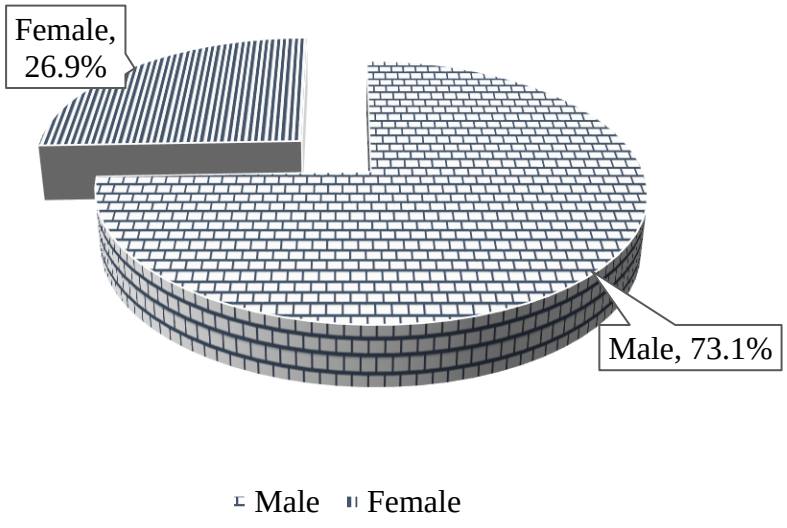

Figure 3: Gender of Respondents

The results indicate that 73.1% of the youths sampled were male while 26.9% of the youths were female. The male youths were 283 while the female youths were 103.

Table 3: Association between Gender and Development of Mental Disorders

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Gender	Male	224 (218.44%)	58 (63.56%)	283
	Female	75 (80.56%)	29 (23.44)	103
Total		299	87	386

χ^2 (1, N=386) = 2.330, p=0.127

Risk of developing mental disorders varied with gender; among the 282 male participants, 58 were at risk while among 104 female participants only 29 of them were at risk of developing mental disorder. The risk of a male participant was 1.493 times more likely than that of a female participant. However, when the results were computed, there were no significant associations between gender and the risk of developing mental disorder (χ^2=2.330, p=0,127).

4.2.3 Level of Education of the Youths

The study also sought to determine the level of education among the youths. The results were as presented in table 4.

Table 4: Youth Highest Level of Education

	Category	Frequency	Percent
	Primary	48	12.4%
	Secondary	108	28%
	College	230	59.6%
	Total	386	100.0%

From table 4 it is evident that, 59.6% of the youths had college education as their highest level of education, 28% had secondary education as their highest level, and 12.4% had primary education as their highest level. The results indicate that there were youths who dropped out of primary school; others had secondary and college level of education. Among the 48 who had dropped out of school, 8 were at risk of developing mental disorder.

Table 5: Association between Youth's Level of Education and Development of Mental Disorders

variable	Category	Risk for developing mental disorder		Total
		High	Low	
Level of education	Post college level	19	211	230
	Pre-college level	68	88	156
	Total	87	299	386

χ^2 (1, N=386) = 66.4521, p<0.001

There were 156 participants with secondary level of education and below, among them, 68 were at risk of developing mental disorder, while among the 230 who had completed college or were in college at the time of study, 19 were at risk of developing mental disorder. From the results, the risk of developing mental disorder was low among the college level compared to those with primary and secondary level of education. These results were further categorized into pre-college level of education and post college level of education. During calculation of Chi-square it was evident that level of education was contributing to development of mental disorders. The youths who had not advanced to post college level were more profound to have mental disorders than those who had attained above college level of education (p<0.001).

4.2.4 Marital Status of the Youths

The study also determined the marital statuses among the youths in Chuka sub-county. The results were presented in Table 6.

Table 6 Marital Status of the Youths

Variable	Frequency	Percent	Cumulative Percent
Single	307	79.5%	79.5%
Married	79	20.5%	100%
Total	386	100.0%	

Results from table 6 shows that 79.5% of the youths are single, 20.5% of the youths were married at the time of the study. Figure 4 highlights the marital status of the youths according to their ages.

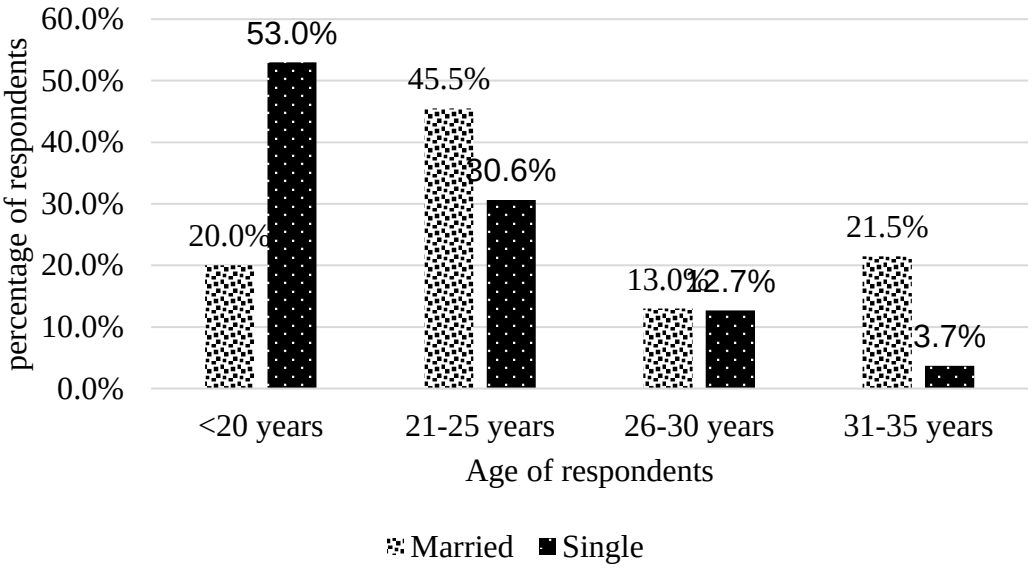

Figure 4: Marital Status of the Youth per Age

The above figure 4 shows 20 % of the respondents aged between 15 – 20 years they are married and 53% of the same age category were single, 45.5% of the category aged between 21 – 25 years were married and 30.6% were single, and 13% of the category aged 26-30 years were married 12.7% were single. 3.7% of the age category between 31 – 35 years was single, while 21.5% of the same age category were married youths.

Table 7: Association between Marital Status and Development of Mental Disorders

variable	Category	Risk for developing mental disorder		Total
		High	Low	
Marital status	Single	77 (69.19%)	237 (237.81%)	314
	Married	10 (17.81%)	62 (61.19%)	72
	Total	87	299	386

χ^2 (1, N=386) = 5.5543, p=0.018

In the current study as shown in table 7 above, there were 314 youths who were single, out of all these only 77 were at risk of developing mental. Among the 72 participants who reported to be married, 10 of them were at risk of developing mental disorder. The youths who were single were 0.984 times more likely to develop mental disorder compared to those who were married. The youths who were single were prone to development of mental disorders compared to who were in marriage. This was

significant when computation of Chi-square was done between marital status and development of mental disorders as shown in table 7.

4.2.5 History of Previous Diagnosis of Mental Disorder Among the Participant

The study found out that previously among the participants 19.7% (n=76) of them had been diagnosed with mental disorder. Among those who had been diagnosed previously, the risk of developing the disorder again was 0.813 times higher than among those who had never been diagnosed with mental disorder. There were 22.5% who had been previously diagnosed less than three years ago and 7% others were diagnosed more than three years ago, but there was no significant difference between the two groups.

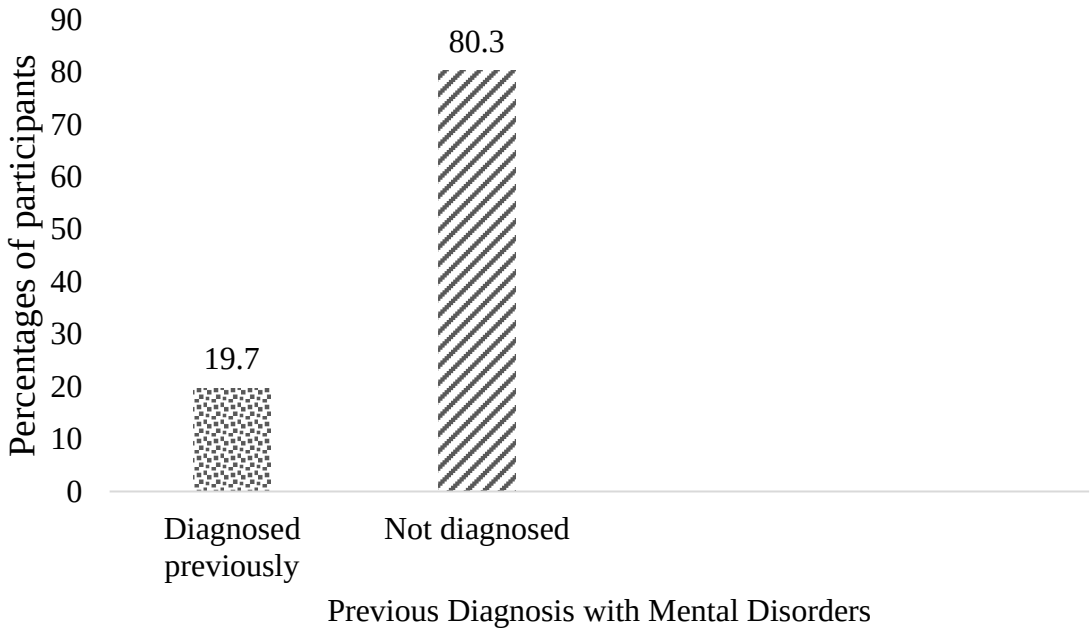

Figure 5: Percentage of Previous Diagnosis of Mental Disorder

On computation of the strength of association between previously being diagnosed and risk of developing the disorder again, there was no significant association (χ^2=0.426, p=0.514).

Table 8: Association between ever been previously diagnosed of Mental Disorder and Current Risk of Developing Mental Disorder

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Has ever been diagnosed of being mentally ill	Yes	61 (58.87%)	15 (17.13%)	767
	No	238 (240.13%)	72 (69.87%)	310
	Total	87	299	386

χ^2 (1, N=386) = 0.4256, p=0.514

4.2.6 Genetic Predisposition in the Family to Development of Mental Disorders

Regarding the family history, 22.5% (n=87) reported to have family history of mental disorders in their family tree.

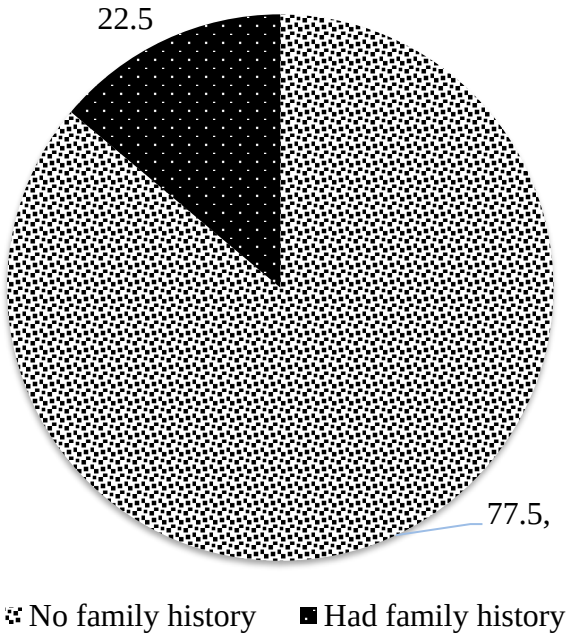

Figure 6: History of Mental Illness

Table 9: Association between Family History of Mental Disorder and Risk of Developing Mental Disorders Among the Youths

variable	Category	Risk for developing mental disorder		Total
		High	Low	
Has family history of mental disorders	Yes	21 (19.61%)	66 (67.39%)	87
	No	66 (67.39%)	233 (231.61%)	299
	Total	87	299	386

χ^2 (1, N=386) = 0.1645, p=0.685

Among the 87 respondents who reported to have had a history of mental disorders in their family, only 21 (24.1%) of them were found to be at risk of developing mental disorder. Among those who had no history of mental disorders in the family, out of 299, 66 (22%) of them were at risk of developing mental disorder. The ones who had history of mental disorder in the family were 1.123 times more likely to develop mental disorder than those with no family history of mental disorders. However, the association between family history of mental disorders and risk of developing mental disorder among the participants was not significant (χ^2=0.164, p=0.685).

4.3 Social Risk Factors for Development of Mental Disorders Among the Youths

The participants in the study reported that; 53.6% (n=207) lived alone, 33.9% (n=131) lived with a friend and 12.4% of the participants lived with a family member.

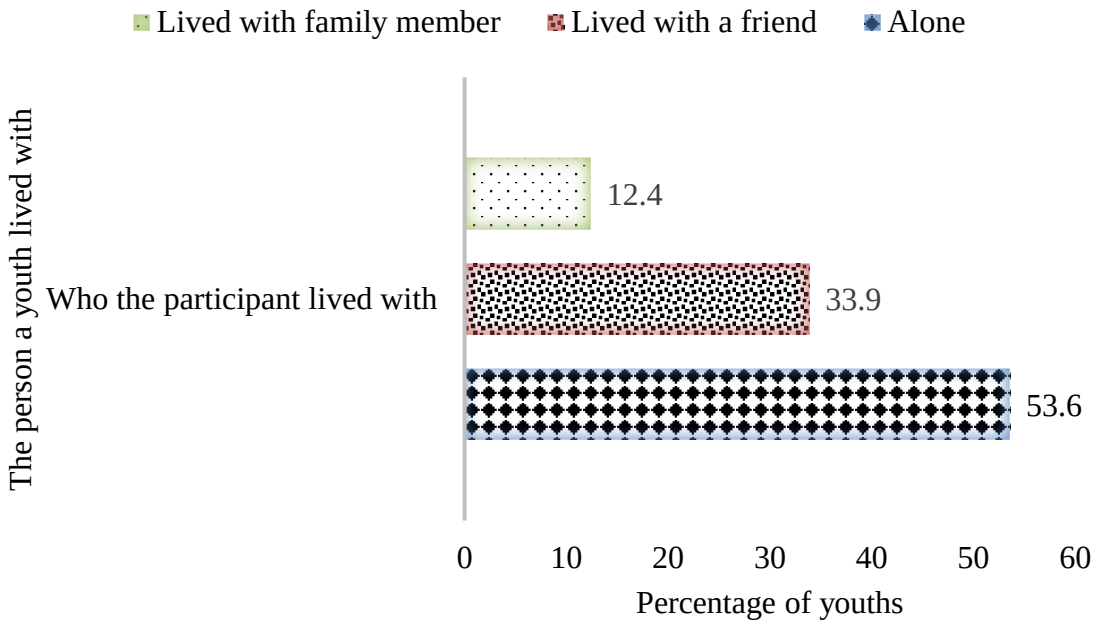

Figure 7: Percentage of youths and who they lived with

Table 10: Who the Participant Lives with

variable	Category	Risk for developing mental disorder		Total
		High	Low	
Who the participant lived with	Alone	164	43	207
	With a friend	102	29	131
	With a family member	33	15	48
Total		299	87	386

χ^2 (1, N=386) = 2.488, p=0.291

Among those who reported to live alone, 43 out of 207 were at risk of developing mental disorder, while out of 131 participants who reported to be living with a friend, 29 were at risk of developing mental disorder. The research also found out that out of 48 participants who lived with their family members 15 of them were at risk of developing mental disorder. The association between who the participant lived with did not significantly influence the development of mental disorders among the youths (χ^2=2.488, p=0.291).

4.3.1Youths Social Relationships with Peers

Majority of the participants (87.6%, n=338) reported to be having both girlfriends and boyfriends. This applied to all youths; those who were single and those who were married.

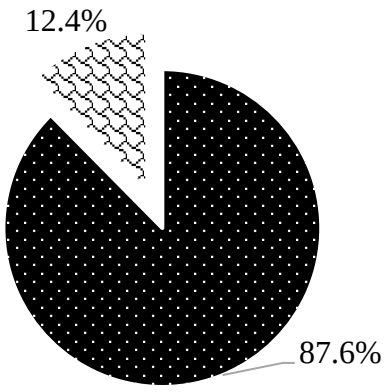

Figure 8: Having Social Friends

Table 11: Participants Circle of Friends

variable	Category	Risk for developing mental disorder		Total
		Low	High	
The participant had both boy and girlfriends	Yes	266	72	338
	No	33	15	48
Total		299	87	386

χ^2 (1, N=386) = 2.383, p=0.123

Among the youths who reported to have girlfriends and boyfriends, 72 (21.3%) out of 338 participants were at risk of developing mental disorders. Out of the 48 who reported either gender of friends, 15 of them were at risk of developing mental disorder. Those youths who reported to be having no close friends were 1.679 times more likely to develop mental disorder than those who reported to have friends. However, the association was not significant (χ^2=2.383, p=0.123).

4.3.2 Peer Rejection as A Risk for Development of Mental Disorders

On peer rejection, 80.6% (n=311) reported that they have never been rejected by their friends while 19.4% (n=75) reported to have been rejected by the friends at one point or another.

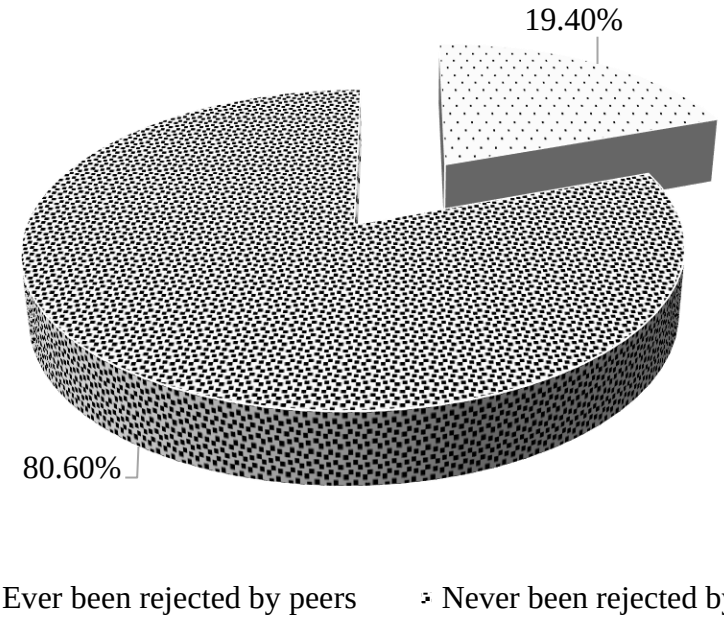

Figure 9: Percentage of youths subjected to Peer Rejection

Table 12: Peer Rejection Analysis

variable	Category	Risk for developing mental disorder		Total
		Low	High	
The participant had been rejected by peers	Yes	63	12	75
	No	236	75	311
Total		299	87	386

χ^2 (1, N=386) = 2.423, p=0.131

Among the youths who reported to be rejected by friends, 11 out of 311 of the participants were at risk of developing mental disorder, while out of 75 who were never rejected by friends, 12 of them were at risk of developing mental disorder. The youths who reported to be rejected by friends were 0.599 times more likely to develop mental disorder than those who were not rejected. On computation, the association between rejection by friends and risk of development of mental disorders was not significant (χ^2=2.423, p=0.131).

4.3.3 Family Neglect as a Risk for Development of Mental Disorder

Some participants (19.7%, n=76) reported to have been neglected by their families, in the same group, 80.3% had not been neglected.

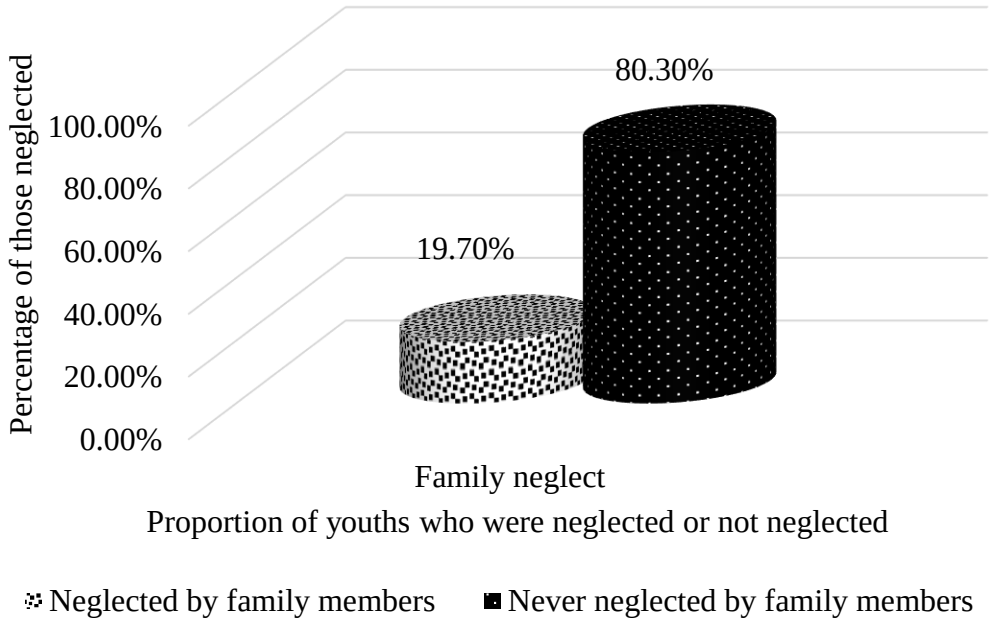

Figure 10: Participant had been neglected by family members

Table 13: Youths' Family Neglect

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Family neglect of the youths	Yes	63	13	76
	No	236	74	310
Total		299	87	386

χ^2 (1, N=386) = 1.681, p=0.224

Among the 310 participants who reported to be never neglected by their families 74 of them were at risk of developing mental disorders. For those who were neglected by family members, 13 out of 76 were at risk of developing mental disorder. Those who were neglected were 0.658 times more likely to develop the mental disorder. The relationship between family neglect and risk of developing mental disorder among the youths was found not to be significant (χ^2=1.681, p=0.224).

4.3.4 Youth Discrimination as a Risk for Development of Mental Disorder

In the same study, 26.7% (n=103) of the youths reported to have been discriminated by their friends. These findings indicated that majority of the youths were not discriminated.

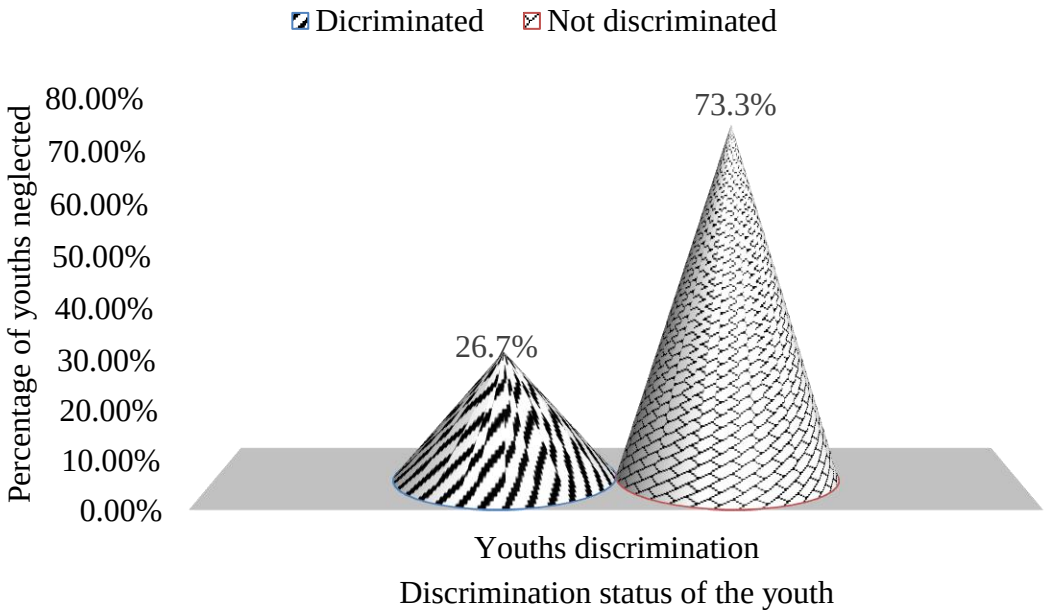

Figure 11: Youths Discrimination

Table 14: Youth Being Discriminated

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Youth discriminated by friends	Yes	71	32	103
	No	228	55	283
Total		299	87	386

χ^2 (1, N=386) = 5.854, p=0.016

Out of 283 of the participants who reported not to be discriminated by friends, 55 (19.4%) of them were at risk of developing mental disorder. Among the 103 participants who reported to be discriminated 32 (31%) of them were at risk of developing mental disorder. Those who were discriminated were 1.868 times more likely to develop mental disorder than those who were not discriminated. Discrimination of the youths significantly predispose youths to development of mental disorder among the youths (χ^2=5.854, p=0.016, AOR= 1.868, CI [1.121-3.114]).

4.3.4 Social Class Exclusion as a Risk for Development of Mental Disorder

Social class exclusion was reported to affect youths, 13.7% (n=53) participants reported to have experienced social class exclusion.

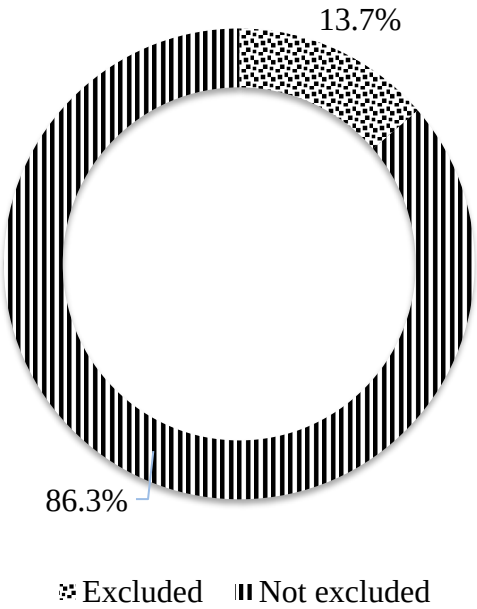

Figure 12: Social Class Exclusion

Table 15: Youth Excluded Based on Social Class

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Youth excluded by friends based on social class	Yes	32	21	53
	No	267	66	333
Total		299	87	386

χ^2 (1, N=386) = 10.27, p<0.001

Out of 333 participants who reported not to be excluded, 66 (19.8%) of them were at risk of developing mental disorder. Among the 53 respondents who reported to be excluded, 21 (39%) of them were at risk of developing mental disorder. The youths who were excluded were 0.481 times more likely to develop mental disorders than those who were not excluded. The association between social class exclusion was significant at (χ^2=10.27, p<0.001, CI [0.209-1.108]).

4.3.5 Bullying of the Youths as a Risk for Development of Mental Disorder

Bullying of the youths was reported among the participants. From the findings, 13.5% (n=52) of the youths reported to have been bullied by their fellow students while in school.

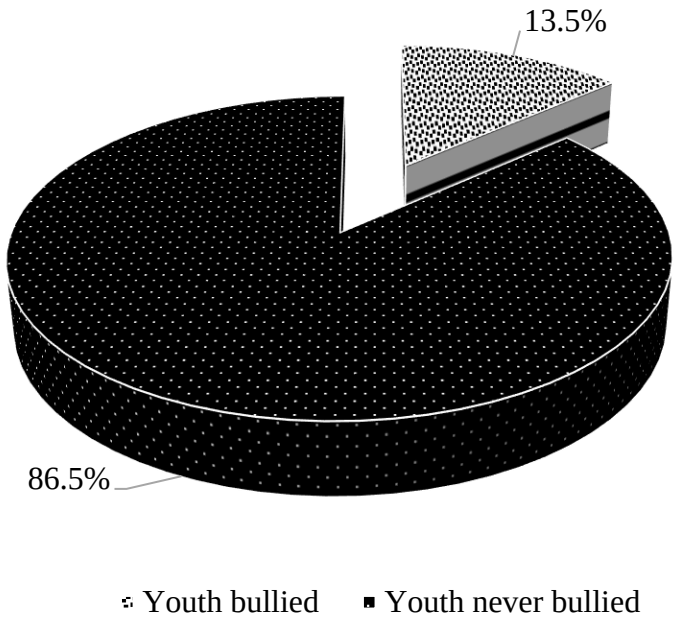

Figure 13: Bullying Among Youths

Table 16: Association between being Bullied by Friends and Developing Mental Disorders

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Bullied by friends	Yes	42	10	52
	No	257	77	334
Total		299	87	386

χ^2 (1, N=386) = 0.3767, p=0.539

Out of 334 participants who indicated that they had never been bullied by friends, 77 (23%) of them were at risk of developing mental disorder. There 52 participants who reported that they had been bullied by their friends, and 10 (19%) of them were found to be at risk of developing mental disorder. Those who were bullied were 0.795 times more likely to develop mental disorder than those who were not bullied. The association between being bullied and being at risk of developing mental disorder was not significant (χ^2=0.3767, p=0.539, CI [0.381-1.658]).

Table 17: Bullied by Fellow Students

Variable	Category	Risk for developing mental disorder		Total
		Low	High	
Bullied by fellow students	Yes	48	29	77
	No	251	58	309
Total		299	87	386

χ^2 (1, N=386) = 12.6011, p<0.001

Among the 77 participants who reported to be bullied by their fellow students, 29 of them were at risk of developing mental disorder. Bullying increased the odds of developing mental disorder by 0.813 among those who were bullied than those who were not bullied. Bullying by fellow students was significantly associated with developing mental disorder. (χ^2=12.601, p<0.001, CI [0.436-1.516). This was in contrast to when they were reporting to be bullied by friends.

4.3.6 Youth Mistreatment as a Risk for Development of Mental Disorder

Youth mistreatment is considered to influence youth development of mental disorder. The research found out that 20.5% (n=79) youths indicated to have been mistreated when growing up.

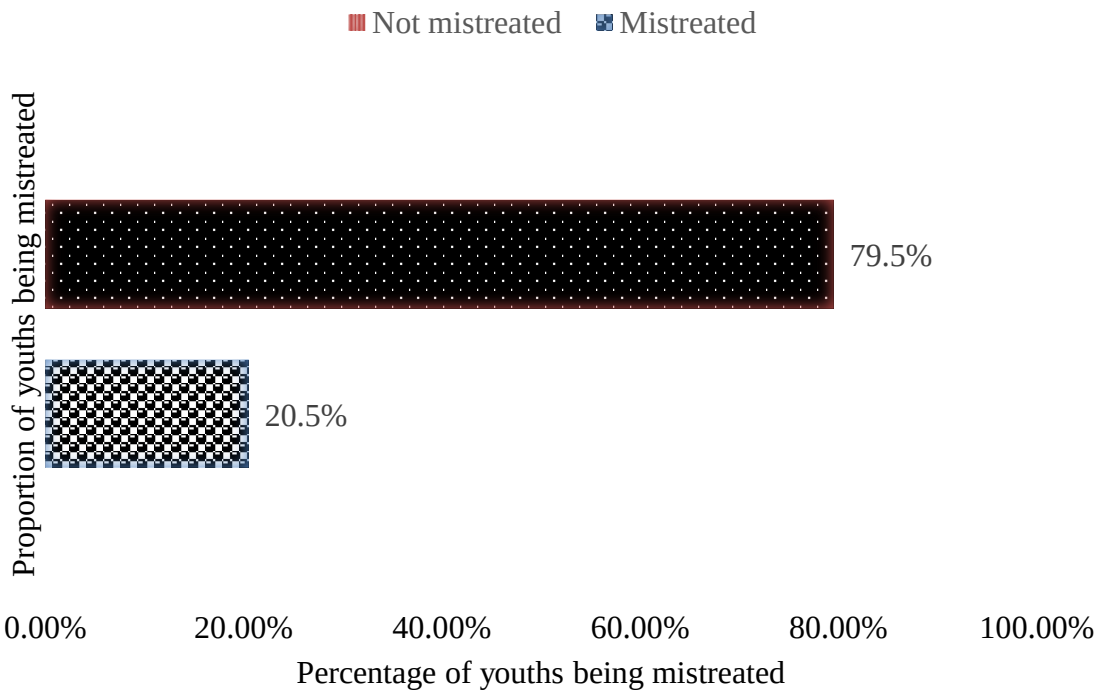

Figure 14: Prevalence of Youths' Mistreatment

Table 18: Mistreatment among Youths as a Risk Factor for Mental Disorders Development

Variable	Category	Risk for developing mental disorder		Total
		Low	High	
The youth was mistreated while growing up	Yes	53	26	79
	No	246	61	307
Total		299	87	386

χ^2 (1, N=386) = 6.1211, p=0.013

Among the 79 youths who reported to have been mistreated when growing up, 26 of them were found to be at risk of developing mental disorder. In the same study, out of 307 participants who were not mistreated when growing up, 61 of them were found to be at risk of developing mental disorder. Being mistreated increased the odds of developing mental disorder by 1.690 times more among the youths. (χ^2=6.121, p=0.013, CI [0.971-2.940]).

4.3.7 Family Support for the Youth

The youths are thought to be have progress ideas that if supported can help them actualize their dream goals. Despite this, in the current study, 80.3% (n=310) of the

youths reported not to be supported neither their progress ideologies when they aired them during family meetings.

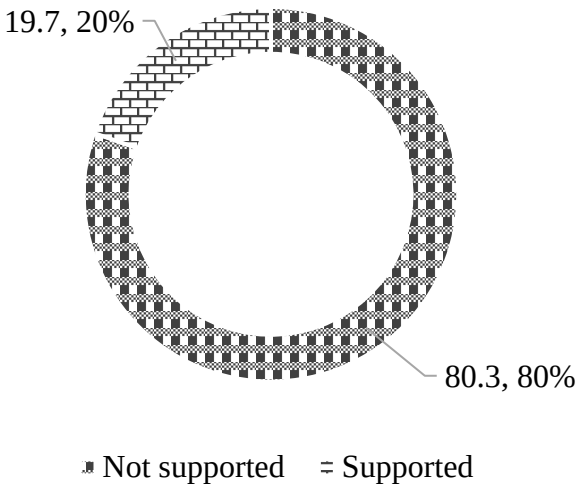

Figure 15: Family Supports Youths' Ideologies

Table 19:The Youth was Receiving Family Support

Variable	Category	Risk for developing mental disorder		Total
		Low	High	
The youth was receiving family support	Yes	52	24	76
	No	247	63	310
Total		299	87	386

χ^2 (1, N=386) = 4.430, p=0.035

Supporting the youth ideologies empower them. In the current study, among the 310 youths who reported not to be supported 63 (20%) of them were at risk of developing mental disorder while among 76 who reported to be supported, only 24 (30%) were found to be at risk of developing mental disorder. Not supporting the youth's ideologies increased the likelihood of the youth to develop mental disorder by 1.810 times. The association between supporting the youth ideologies and development of mental disorders was significant at (χ^2=4.430, p=0.035, CI [1.037-3.159]).

4.3.8 Effects of Favorism Among Family Members as A Risk for Development of Mental Disorder

The study findings revealed also that 67.6% (n=261) of the participants felt that some of their family members were favored than them.

Table 20: The Youth Felt Some of their Family Members were Favoured than them

Variable	Category	Risk for developing mental disorder		Total
		Low	High	
The youth felt some of their family members were favoured than them	Yes	213	48	261
	No	86	39	125
Total		299	87	386

χ^2 (1, N=386) = 7.943, p<0.001

Out of the 261 participants who felt that other family members were favored than them, 48 (18.4%) of them were found to be at risk of developing mental disorder. Among those who reported that in their family each member was treated the same way, out of 125, 39 (31.2%) of them were found to be at risk of developing mental disorder. As reported by participants, favoring some youth members in the family increased the chances of the youths' not favored developing mental disorder by 0.497 times more. On computation, there was a significant association between favoring youth members and development of mental disorders (χ^2=7.943, p<0.001, CI [0.304-812]).

4.3.9Friends Support of Individual Youths' Ideologies as a Risk for Development of Mental Disorder

Majority of the youths (86.5%, n=334) reported that their friends too never supported their ideologies, 13.5% reported that their friends supported their ideas.

Table 21:The Youth Felt that their Friends Supported their Ideologies

Variable	Category	Risk for developing mental disorder		Total
		Low	High	
The youth felt that their friends supported their ideologies	Yes	31	19	52
	No	268	68	125
Total		299	87	386

χ^2 (1, N=386) = 6.746, p<0.001

It was found out that, among the 52 participants who reported that their friends supported their ideologies, 19 of them were found to be at risk of developing mental disorder. There were 334 participants reporting not to be supported by their friends whenever they raised their ideas. It was found out that out of the 334, 68 of the participants were found to be at risk of developing mental disorder. Supporting the youths ideas especially by their friends is 2.252 less likely to increase chances of developing mental disorder among the youths (χ^2=6.746, p<0.001, CI [1.207-4.204]).

4.3.10 Occurrence of Family Conflicts as a Risk for Development of Mental Disorder

It was evident from the research findings that more than half of the participants (73.3%, n= 283) had been involved in a family conflict. Out of the 283, 66 participants were found to be at risk of developing mental disorder while 21 out of 103 who reported that they have never been involved in family conflict were at risk of developing mental disorders. Those who were involved in family conflicts were 1.188 times more likely to develop mental disorder than those who were never involved. However, there was no significant association between involvement in family conflict and development of mental disorders among the youths (χ^2=0.372, p=0.542, CI [0.683-2.064]).

4.3.11 Frequency of Family Conflicts as a Risk for Development of Mental Disorder

Table 22: Frequency of Family Conflicts

Variable	Category	Risk for developing mental disorder		Total
		Low	High	
Frequency of family conflicts	Never	191	43	234
	Rarely	54	22	76
	Sometimes	40	8	48
	Always	14	14	28
Total		299	87	386

χ^2 (1, N=386) = 17.153, p<0.001

On occurrence of family conflicts, 60.6% (n=234) participants reported that they have never had family conflicts, 19.7% (n=76) reported that family conflicts rarely occur in their families, 12.4% (48) reported that family conflicts sometimes occur and 7.3% (n=28) of the respondents indicated that conflicts always occur in their families. There

was found significant association between occurrence of family conflicts and risk of developing mental disorders among the youths (χ^2=17.153, p< 0.001).

4.3.12 Occurrence of Conflicts between the Participant and other Family Members as a Risk for Development of Mental Disorder

Table 23: Occurrence of Conflict between Family Member and Participant

Variable	Category	Risk for developing mental disorder		Total
		Low	High	
Occurrence of conflict between family member and participant	Yes	268	70	338
	No	31	17	48
Total		299	87	386

χ^2 (1, N=386) = 5.2069, p=0.022

Among the youths who responded to have had a conflict in their families, 87.6% (n=338) reported to have had the conflict with a family member. Among the participants who had a conflict with a family member, 70 (21%) of them were found to be at risk of developing mental disorder. In the same study, among the 48 participants who had no conflict with family member, 17 (35%) of them were found to be at risk of developing mental disorder. The members who never had conflicts with family member were 0.476 times more likely to develop mental disorder (χ^2=5.207, p=0.022, CI [0.249-0.910]).

4.3.13Ability of the Participant to Control Family Conflict as a Risk for Development of Mental Disorder

Most of the time the youths involved in conflict feels inadequate to control family conflicts. In the current study, 73.3% (n=283) of the youths felt inadequate to control family conflicts. Among the participants who reported that they were adequate to control family conflicts, 62 (21.9%) out of 283 were found to be at risk of developing mental disorder. Also, among the 103 respondents who reported inadequacy in controlling family conflict, 62 (60.1%) were at risk of developing mental disorder. Being inadequate to control family conflict decreased the chances of developing mental disorder by 0.875 times (χ^2=0.242, p=0.623, CI [0.515-1.489]).

4.3.14 Sexual Harassment as a Risk for Development of Mental Disorder

The study findings indicated that 26.7% (n=103) of the youths had been harassed at the time of study while 73.3% (n=283) were never harassed by the time of study. This included harassment during childhood. Out of the 283 participant who had never been harassed, 63 (22.2%) of them were found to be at risk of developing mental disorder. In the same study, out of 103 respondents who reported to have been harassed, 24 (23.3%) of them were at risk of developing mental disorder. Those who had been harassed were 1.061 times more likely to develop mental disorder compared to those who had never been harassed. However, on computation the differences were not significantly associated with development of mental disorder among the youths (χ^2=0.047, p=0.829, CI [0.621-1.813]).

4.3.15 Physical Harassment as a Risk for Development of Mental Disorder

Some youths reported to be physically harassed, physical harassment was reported by 19.7% (n=76) of the youths.

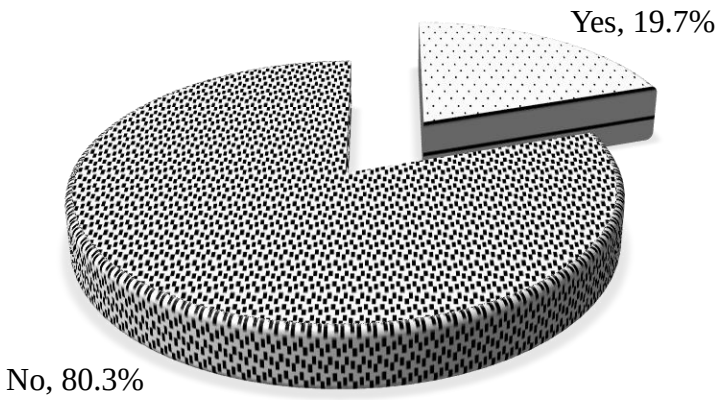

Figure 16: Youths' Physical Harassment Status

Among the 76 youths who reported to be harassed, 12 (15.7%) were found to be at risk of developing mental disorder. Those who were never harassed, out of 310, 75 (24.1%) were at risk of developing mental disorder. Physical harassment increased the odds of developing mental disorder by 0.588 more in those who reported to be harassed compared to those who were not harassed. Despite these findings, the association between physical harassment and risk of developing mental disorder was not significant (χ^2=2.469, p=0.116, CI [0.301-1.147]).

4.3.16 Occurrence of Traumatic Life Event During the Life of the Youth as a Risk for Development of Mental Disorder

Evidence of traumatic events during the life of the youth was also analyzed. It was found that 25.9% (n=100) of the youths had endured some traumatic events in their life. This meant that 74.1% (n=286) of the participants never had any traumatic event in their lives.

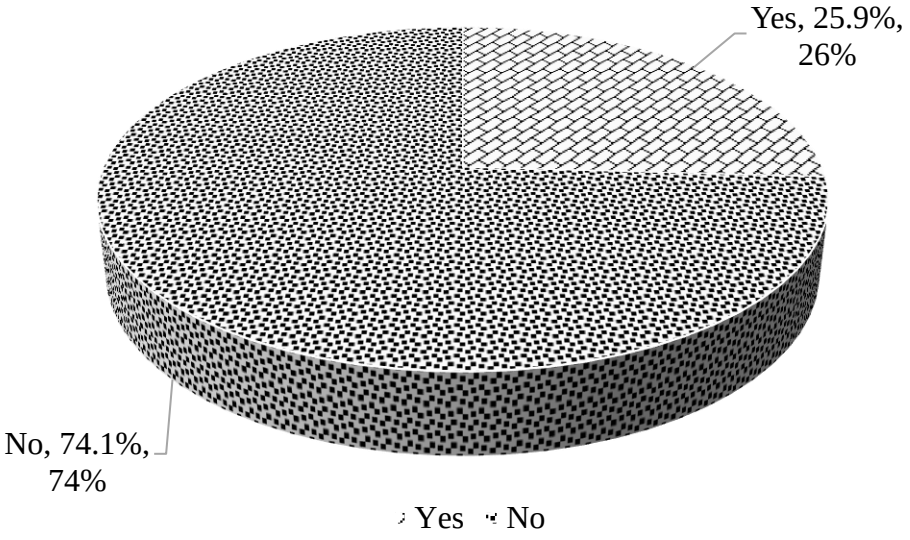

Figure 17: Occurrence of Traumatic Life Event During Youths Life

Out of 100 participants who had traumatic live event in their lives, 26 of them were at risk of developing mental disorder while among the 286 respondents who had never had traumatic life event, 61 were found to be at risk of developing mental disorder. Those participants who reported to have had a traumatic live event were 1.296 times more likely to develop mental disorder than those who had never had a traumatic live event. On computation, the association between having a traumatic live event was not significant in determining development of a mental disorder among the youths (χ^2=0.926, p=0.336, CI [0.764-2.199]).

4.3.17Abuse of Drugs and Substances to Forget a Traumatic Life Event as a Risk for Development of Mental Disorder

From the research findings, 13.5% (n=52) of the participants were abusing substances to forget a life event that they can't consciously think about. However, 86.5% (n=334) of the participants never had such a life event to disturb them. Those participants who abused drugs in order to avoid remembering the traumatic live event were 2.116 times

more likely to develop mental disorder than those who never abused drugs. Amongst the participants who abused drugs reported to have had abused alcohol, cigarette, bhang or Khat in their life time.

Table 24: Abuse of Drug and Substance to Forget a Traumatic Life Event

Variable	Category	Risk for developing mental disorder		Total
		Low	High	
Abuse of drug and substance to forget a traumatic life event	No	264 (259.49%)	70 (75.51%)	334
	Yes	35 (39.51%)	17 (11.49%)	52
Total		299	87	386

χ^2 (1, N=386) = 3.9219, p=0.047

Among the 52 participants, 17 (32.6%) of them were at risk of developing mental disorder. Out of 334 participants who never abused drugs and substances, 70 (20.9%) of them were at risk of developing mental disorder. Abuse of drugs and substances increased the odds of developing mental disorder by 1. 893 times more compared to non-abuse of the drugs and substances. There was a strong association between abusing drugs to forget a traumatic live event and risk of developing mental disorder among the youths (χ^2=3.922, p=0.047, CI [1.269-3.529]).

4.3.18 Living with a Person Who Abuses Drugs and Substances as a Risk for Development of Mental Disorder

Table 25:Living with a Person who Abuses Drugs and Substances

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Living with a person who abuses drugs and substances	Yes	250	81	331
	No	49	6	55
Total		299	87	386

χ^2 (1, N=386) = 4.9688, p=0.026

Majority of the youths (85.8%, n=331) reported that they had at some point of their lives lived with a person who abused drugs and substances. Only 14.2% (n=55) of the participants reported to have been living with people who do not abuse drugs. Those who lived with a person who abused drugs and substances were 2.646 times more likely

to develop mental disorder than those who never lived with a person who abused drugs. Out of 55 participants who have never lived with a person who abused drugs and substances, 6 (10.9%) of them were found to be at risk of developing mental disorder. Among the 331 participants who reported to have lived with a person who abused drugs and substances, 81 (24.4%) of them were at risk of developing mental disorder. There was a strong significant association between living with a person who abused drugs and substances and development of mental disorder (χ^2=4.969, p=0.026, CI [1.093-6.405]).

4.3.19 Association Reception of Parental Support and Risk for Development of Mental Disorder

Parental support is key in growth and development of youths. The current study found out that majority of the youths (73.3%, n=283) received parental support whenever they needed it.

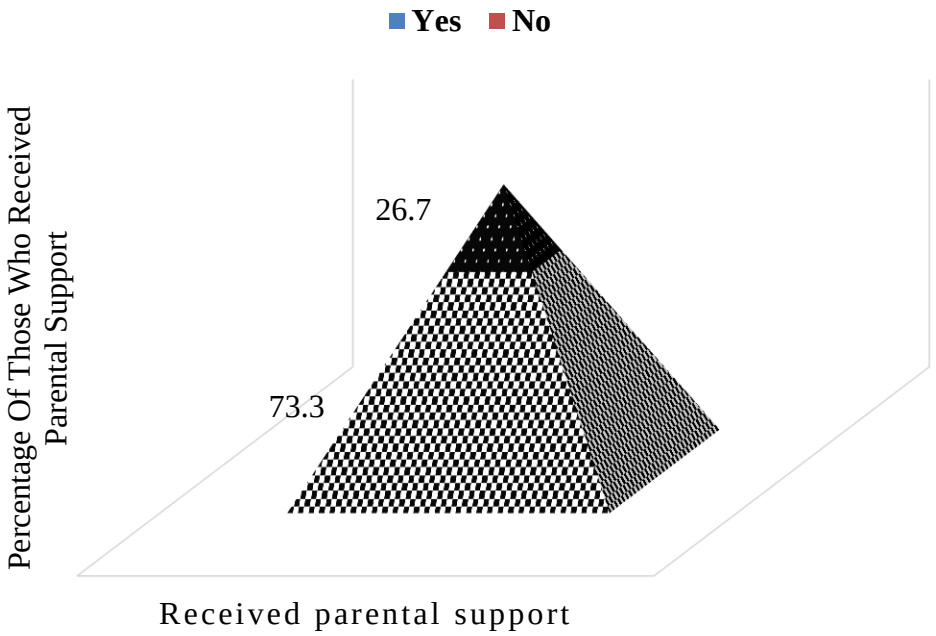

Figure 18: Youth Received Parental Support when Growing Up

Among the youths who reported to be supported by their parents, 62 (21.9%) out of 283 were at risk of developing mental disorder while among the 103 respondents who reported not to be supported by their parents 25 (24.2%) were found to be at risk of developing mental disorder (χ^2=0.242, p=0.623).

4.3.20 Binary Logistic Regression of the Significant Social Risk Factors

After analysis, a number of factors showed significant results at a chi square p value < 0.05. These factors included: youths being excluded by friends, youths excluded based of their social class, bullying by fellow students, mistreated while growing up, their ideologies not supported by friends and family members, having family conflicts and frequency of the family conflicts, living with a person abusing drugs and substances and the youths themselves abusing substances and illicit drugs. These factors were entered in binary logistic regression model and entered in forward step wise regression. Following the regression only four factors became significantly associated with risk of developing mental disorders. These included; youths' discrimination by friends, bullying by fellow students, mistreated while growing up, and frequency of family conflicts.

4.4 Economic Risk Factors for Development of Mental Disorders

4.4.1 Gross Income of the Youth

Majority of the youths (59.8%, n=231) reported that they can earn a gross income of up to five thousand per month, 21.5% (n=83) indicated that they can earn between 10 and 15 thousand per months, while 18.7% (n=72) reported to earn 5-10 thousand per month. On computation, the amount of money the youth earned per month was not significantly associated with risk of developing mental disorder (χ^2=3.383, p=0.184).

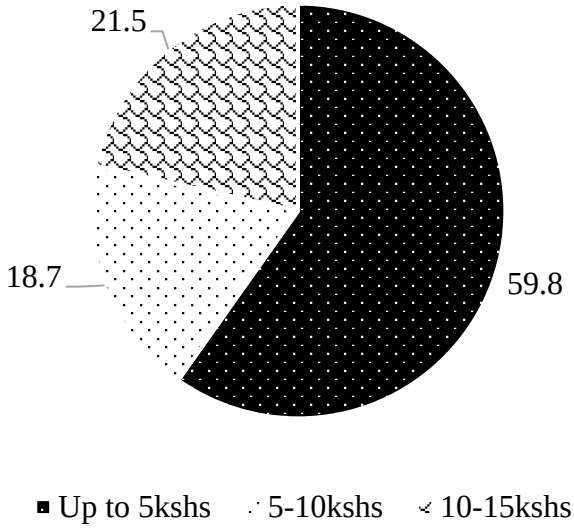

Figure 19: Gross Income

4.4.2 Source of Income for the Youth

The main source of the income of the youths (60.6%, n=234) came from their parents and family support, 18.9% (n=73) of the youths got their income from gambling, 14.2% (n=55) got their income from business and 6.2% (n=24) got their income from formal employment.

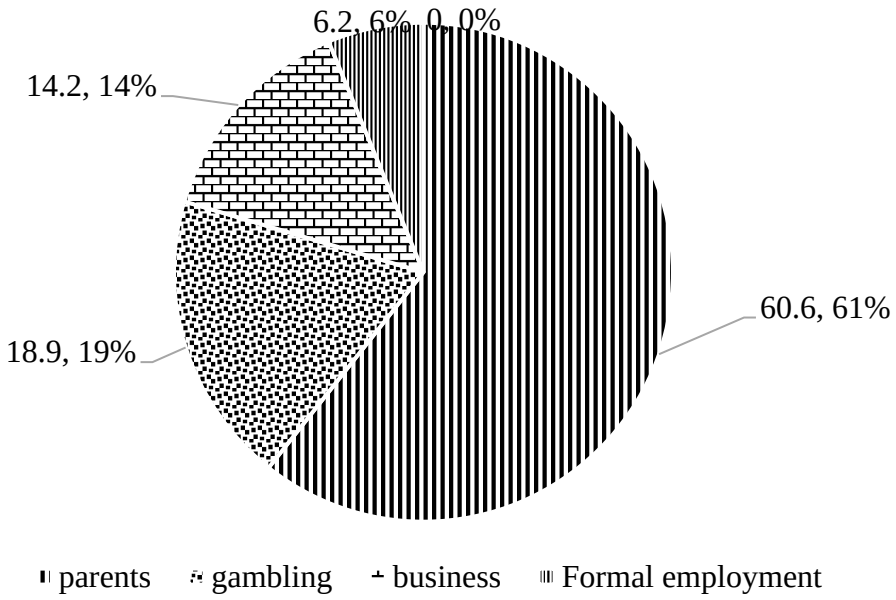

Figure 20: Source of Income for the Youth

Table 26: Source of Income for the Youth

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Source of income for the youth	Family	175	59	234
	Business	51	4	55
	Formal employment	20	4	24
	Gambling	53	20	73
Total		299	87	386

χ^2 (1, N=386) = 9.762, p=0.021

Out of 234 participants who obtained their income from family support, 59 of them were found to be at risk of developing mental disorder, out of 55 who depended on business, 4 of them were at risk of developing mental disorder. The risk also increased among those who had formal employment, out of 24 who had formal employment, 4 of them were at risk of developing mental disorder while among the 73 who depended on

gambling 20 were at risk of developing mental disorder. There was a strong significant association between the source of income and risk of developing mental disorders, those who depended on gambling had the highest risk (χ^2=9.762, p=0.021).

4.4.3 Youth Satisfied with the Income Earned Per Month

The youths reported that the money they get per month was not enough for their needs. This was evident when 79.5% (n=307) of the youths reported that the amount they got per month was not enough for them.

Table 27:Youth Satisfied with the Amount of Money they Get Per Month

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Youth satisfied with the amount of money they get per month	Yes	230	77	307
	No	69	10	55
Total		299	87	386

χ^2 (1, N=386) = 5.554, p=0.018

The research findings revealed that out of 307 respondents who reported that the money they got was not enough for them, 77 (25%) were found to be at risk of developing mental disorder. Among the 79 who reported that the money they got was enough for the month, 10(12.6%) of them were at risk of developing mental disorder. The association between being satisfied with the income earned per month and development of mental disorders was statistically significant at (χ^2=5.554, p=0.018).

4.4.4 Funding for Social Needs

On funding their social needs, majority of the youths (73.3%, n=283) indicated that they depended on their monthly earnings, 13.2% (n=51) depended on gambling and 13.5% (n=52) depended on support from their family.

Table 28: Source of Fund for Social Needs

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Source of fund for social needs	Own earnings	219	64	283
	Gambling	34	17	51
	Family support	46	6	52
Total		299	87	386

χ^2 (1, N=386) = 7.009, p=0.030

Out of the 283 participants who depended on their earnings, 64 (22.6%) of them were at risk of developing mental disorder, out of 51 who depended on gambling, 17 (33.3%) were found to be at risk of developing mental disorder and out of 52 participants who depended on support from the family 6 (11.5%) of them were at risk of developing mental disorder. The study found out that source of income to fund social needs of the youths was statistically and significantly associated with risk of developing mental disorder (χ^2=7.009, p=0.030).

4.4.5 Straining to Fund Social Needs

From the study findings, it was evident that 73.1% (n=282) were straining to fund their social needs and personal expenses.

Table 29: Straining to Fund for Social Needs

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Straining to fund for social needs	Yes	207	75	282
	No	92	12	104
Total		299	87	386

χ^2 (1, N=386) = 3.127, p=0.046

Out of the 282 participants who reported to be straining to finance their personal needs, 75 (26.5%) were at risk of developing mental disorder while among the 104 who indicated not to be straining to finance personal needs, 12 (11.5%) were found to be at risk of developing mental disorder. The participants who were straining to cater for their personal needs were 1.690 times more likely to develop mental disorders than those who were not straining. Straining to cater for social needs was statistically and

significantly associated with development of mental disorders among the youths (χ^2=3.127, p=0.046, AOR=1.69CI [0.941-3.035]).

4.4.6Youth Satisfied with Family Support they are Receiving

Family support for the youths was including the parents, other siblings and guardians. When the youths were instructed to indicated who specifically supported them, 73.3% (n=283) reported to be supported by parents and the remaining 26.7% (n=103) were supported by other siblings.

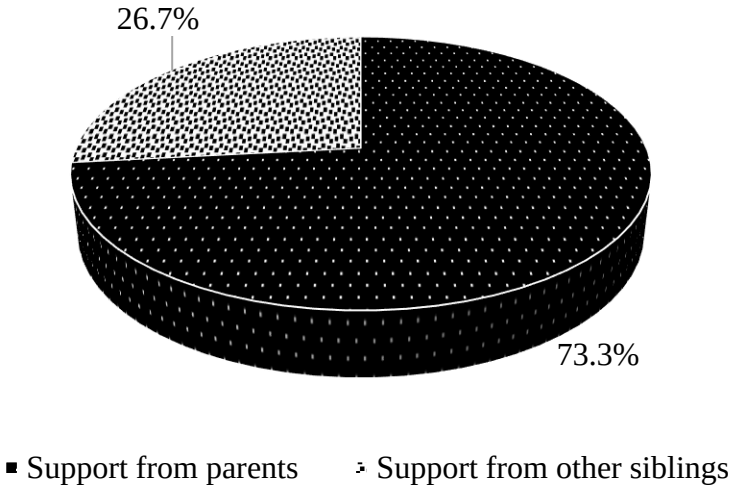

Figure 21: Reception of Family Support

The person who supported the youths; either parents or siblings was not significantly associated with development of mental disorders (χ^2=0.242, p=0.623). Despite the support the youths indicated to get, 19.7% (n=76) of the youths were not satisfied with the support they received.

Table 30: Satisfied with Family Support Received

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Satisfied with family support received	Yes	254	56	310
	No	45	31	76
Total		299	87	386

χ^2 (1, N=386) = 18.054, p<0.001

Out of the 76 youths in the study who indicated not satisfied with the support, 31 of them were at risk of developing mental disorder while among the 310 participants who

were satisfied with the support 56 were found to be at risk of developing mental disorder. Those participants who were satisfied with the support they got were 0.320 less likely to be at risk of developing mental disorder. However, on computation, satisfaction with financial support given to the youths was significantly associated with development of mental disorders among the youths (χ^2=18.054, p<0.001, OR=0.320, CI [0.186-0.550]).

4.4.7 Effects of Youths' having Friends whose Lifestyle was Deemed Expensive

Majority of the youths (73.3%, n=283) reported to have friends whose lifestyle was expensive than theirs.

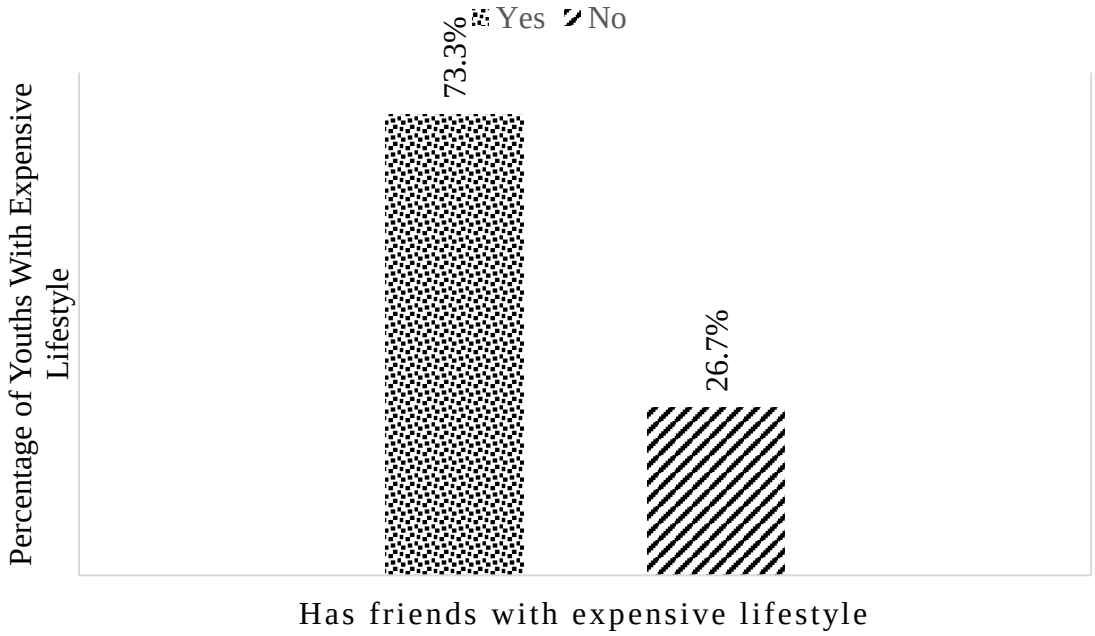

Figure 22:Has Friends with Expensive Lifestyle

Among 283 respondents who reported to have friends who were living an expensive lifestyle than theirs, 66 (23.3%) of the respondents were at risk of developing mental disorder and out of 103 participants who reported to have no friends living in expensive lifestyle, 21 (20.3%) were also at risk of developing mental disorder. The findings revealed that the participants who had friends living expensive life than theirs were 1.188 times more likely to develop mental disorder compared to those who didn't have friends living expensive lifestyle. However, these results were not statistically significant in determining the risk for developing mental disorder (χ^2=0.372, p=0.542, OR=1.188, CI [0.683-2.064]).

4.4.8 Effects of Youths' having Friends Living a Fancy Lifestyle in The Neighborhood

The study also revealed that in the neighborhood of the participants, 80.1% (n=309) of the youths lived a fancy lifestyle. Out of the majority of the respondents (n=309) who reported to have friends living fancy lifestyle, 72 (69.9%) were at risk of developing mental disorder. Among the 77 who reported not to have such friends, 15 (19.4%) were at risk of developing mental disorder. These results however were not significantly associated with development of mental disorders among the youths (χ^2=0.515, p=0.473).

4.4.9Youths' Family Financial Stability as a Risk Factor for Developing Mental Disorder

In terms of financial stability, the youths indicated varied responses. Majority of them (73.1%, n=282) indicated that their families belonged to middle class, 19.9% (n=77) indicated poor and 7% (n=27) indicated rich.

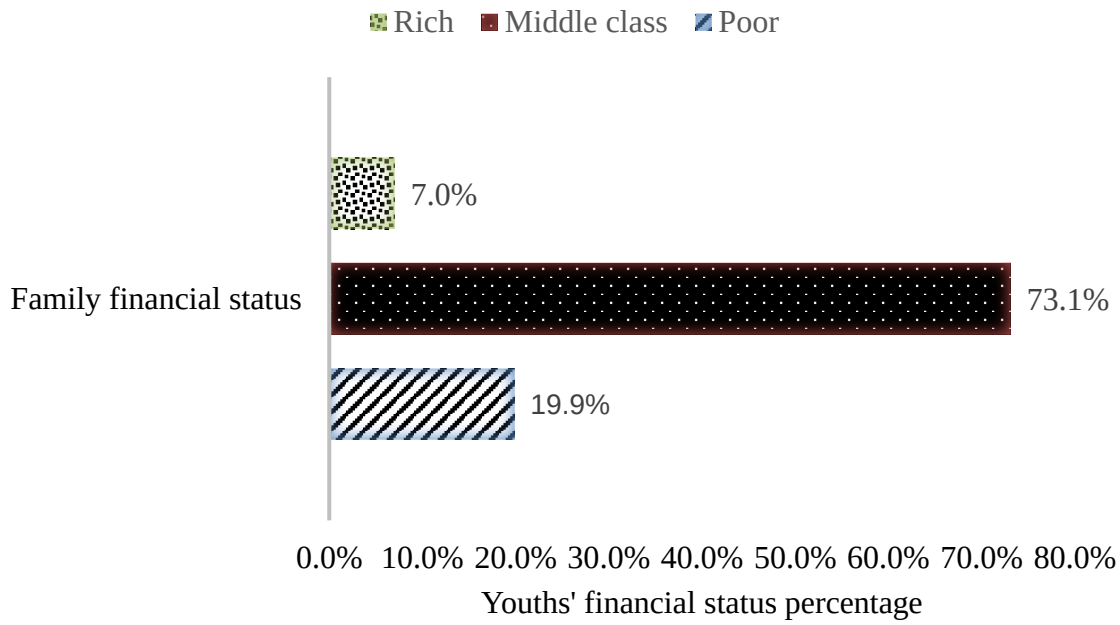

Figure 23:Family Financial Status

Out of the 282 respondents who reported their family financial background to be in middle class, 66 (23.4%) of them were at risk developing mental disorder. Among 77 who reported that their family was poor financially, 15 (19.4%) were at risk of developing mental disorder. The results also showed that among the 27 who reported to be coming from rich families, only 6 (22.2%) of them were at risk of developing

mental disorder. On computation these results were not significantly associated with the risk of developing mental disorders among the youths (χ^2=0.535, p=0.765). However, the family financial status of the youths was not making the youths feel depressed. This was indicated by majority of the youths (80.3%, n=310) while only 19.7% (n=76) participants indicated to be affected by their family financial status to an extent of going into depression (χ^2=0.919, p=0.338).

4.4.10Youths' own Financial Stability as a Risk Factor for Developing Mental Disorder

On assessing the youths own financial status, 86.8% (n=335) indicated to be financially unstable with only 13.2% (n=51) indicating to be financially stable.

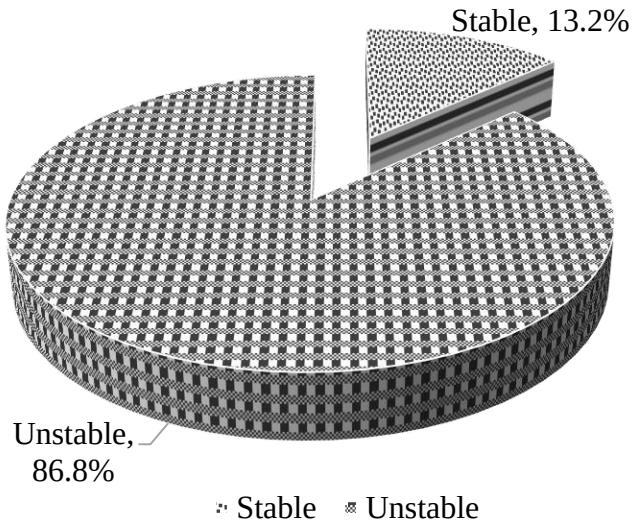

Figure 24: Financial Status of the Youth

Among the youths who reported that their financial status was unstable, 72 of them were at risk of developing mental disorder whereas among those who reported to be stable financially, 15 of them were also at risk of developing mental disorder (χ^2=1.590, p=0.207).

Table 31: Youth Affected by own Financial Status

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Youth affected by own financial status	Yes	254	56	310
	No	45	31	76
Total		299	87	386

χ^2 (1, N=386) = 4.770, p=0.029

The youths' own financial status was affecting them until some of them felt depressed. This was indicated by 80.3% (n=310) of the youths who indicated to be affected by their own financial status. Among these youths, 56 of them were at risk of developing mental disorder. These youths were 0.458 times more likely to develop mental disorder than the youths who were not affected by their own financial status. The results were found to be significantly contributing to the risk of the youth developing mental disorder (χ^2=4.770, p=0.029, OR=0.458, CI [0.225-0.936]).

4.4.11 Binary Logistic Regression for Significant Economic Risk Factor for Development of Mental Disorders

After analysis, a number of factors showed significant results at a chi square p value < 0.05. These factors included: source of income for the youth, youth being satisfied with income earned per month, source of funds for social needs, straining to fund social needs, satisfied with financial support given, and affected by own financial status. These factors were entered in binary logistic regression model and entered in forward step wise regression. Following the regression only three factors became significantly associated with risk of developing mental disorders. These included; satisfied with income earned per month, straining to fund social needs, and satisfied with financial support given from the parents, guardians and other siblings.

4.5 Environmental Risk Factors for Development of Mental Disorders Among the Youths

4.5.1 Area of Residence

Table 32: Area of Residence for the Participant

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Area of residence for the participant	Rural	192	67	259
	Urban	107	20	127
Total		299	87	386

χ^2 (1, N=386) = 4.999, p=0.025

Majority of the youths (67.1%, n=259) were living in the rural area with only 32.9% (n=127) living in urban areas. Out of 259 respondents living in rural area, 67 (25.8%) were found to be at risk of developing mental disorder and among the 127 who reported to be living in an urban area, 20 (15.7%) were found to be at risk of developing mental disorder. The youths residing in an urban area were 0.536 times more likely to develop mental disorder than those living in a rural area. The place of residence was found to be significantly influencing the risk of developing mental disorder (χ^2=4.999, p=0.025, OR=0.536, CI [0.308-0.931]).

4.5.2 Sense of Belonging to their Place of Residence Among the Youths

It was evident that majority of the youths (80.1%, n=309) never had a sense of belonging to their place of residence, only 19.9% (n=77) reported χ^2 (1, N=386) = 18.054, p<0.001

to have a sense of belonging to where they were living. Out of 309 participants who had no sense of belonging to their residence, only 72 (23.3%) were at risk of developing mental disorder. These results were not significantly associated with development of mental disorder (χ^2=0.515, p=0.473).

4.5.3Youths Participation in Civic Activities in the Community

It was established that 74.4%, (n=287) did not participate in civic activities in their area of residence, only 25.6% (n=99) reported to have participated in civic activities in their area of residence.

Table 33:Participation in Civic Activities in the Community

Variable	Category	Risk for developing mental disorder		Total
		Low	High	
Participation in civic activities in the community	No	214	73	287
	Yes	85	14	99
Total		299	87	386

χ^2 (1, N=386) = 5.378, p=0.020

Out of 287 participants who had never participated in civic activities in the area, 73 (35.2%) of them were at risk of developing mental disorder. Those members who participated in civic activities in the community were 0.483 times less likely to develop mental disorder compared to those who never participated. These results were found to be significantly associated with risk of developing mental disorders among the youths (χ^2=5.378, p=0.020, OR=0.483, CI [0.259-0.902]).

4.5.4 Crime Rate at Youths' Place of Residence

The youths reported that in their place of residence, crime rate was varied. The study findings indicated that 73.3% (n=283), of the youths reported low crime rate, 7% (n=27) reported moderate crime rate and 19.7% (n=76) reported high crime rate.

Table 34: Crime Rate at Youth Area of Residence

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Crime rate at youth area of residence	High	46	57	103
	Low	253	30	283
Total		299	87	386

χ^2 (1, N=386) = 86.5755, p<0.001

Among the youths who resided in areas reported to have high crime rate, half of them were found to be at risk of developing mental disorder. When the crime rate was categorized into high and low, the risk of developing mental disorder was high among the youths residing in areas reported to have high crime rate. Therefore, crime rate in area of residence was found to be significantly associated with risk of developing mental disorders among youths (χ^2=86.58, p<0.001).

4.5.5 Noisy Area of Residence

The calmness or loudness of area of residence was assessed too.

Table 35:Noisy area of Residence for the Participant

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Noisy area of residence for the participant	Yes	104	50	154
	No	195	37	232
Total		299	87	386

χ^2 (1, N=386) = 14.467, p<0.001

Among the participants, 60.1% (n=232) came from a calm and not noisy area of residence while 39.9% (n=154) reported that their area of residence was noisy. Out of 154 respondents who reported to live in a noisy environment, 50 (32.4%) of them were at risk of developing mental disorder. Those living in a noisy place were 2.534 times more likely to develop mental disorder compared to those residing in a calm place (χ^2=14.467, p<0.001, AOR=2.534, CI [1.557-4.124]).

4.5.6 Trust Among Residents

In the same study, 78.5% (n=303) of the youth reported that they don't trust the people they live with. Out of 83 respondents who reported to trust the people they live with, 20 (24%) of them were at risk of developing mental disorder. This revealed that there was no significant association between trusting the people the youths lived with and their risk of developing mental disorder (χ^2=0.147, p=0.701).

4.5.7 Availability of Water for Cleanliness

Availability of water for domestic use especially cleaning personal attires was also assessed during the study. It was found that 73.3% (n=283) participants were able to access clean and safe water while 26.7% (n=103) reported to have scarcity of water.

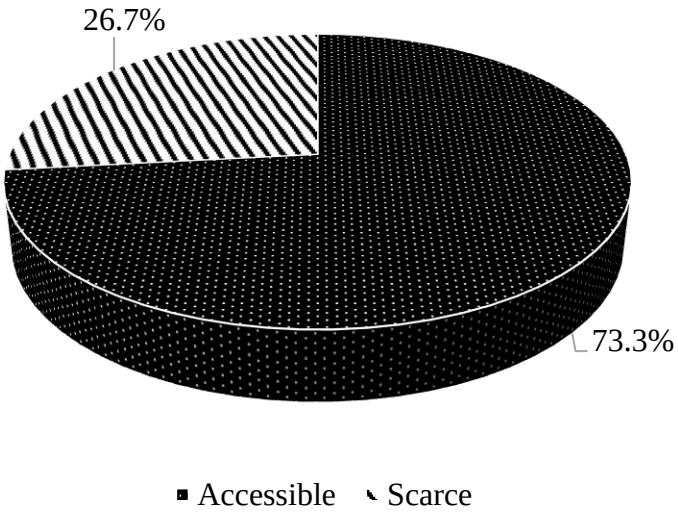

Figure 25: Accessibility of Clean Water

Availability of water promotes cleanliness. The youths accessed water with a few reporting water scarcity but that did not significantly influence the risk for developing mental disorder (χ^2=0.588, p=0.443).

4.5.8 Awareness of Community Social Norms Among the Youths

The community had social norms that the members had to abide by. Among the participants 79.5% (n=307) were not aware of the norms in the community. They just knew there are norms but were unable to tell which ones. Societal norms were found to influence development of mental disorder among youths.

Table 36:Awareness of Community Norms

variable	Category	Risk for developing mental disorder		Total
		Low	High	
Awareness of community norms	Yes	69	10	79
	No	230	77	307
Total		299	87	386

χ^2 (1, N=386) = 5.554, p=0.018

In the current study, there were 79 youth who knew about societal norms and followed them. Among the youths who followed the societal norms only 10 (12.6%) were found to be at risk of developing mental disorder. Those knowing societal norms were 0.433

times less likely to develop mental disorder and these results were significant at (χ^2=5.554, p=0.018, AOR=0.433, CI [0.212-0.882]).

4.5.9 Environmental Exposure of Youths to Drug and Substance Abuse

On exposure of youths to drug and substance abuse, 86.5% (n=334) of the youths reported that the environment they were living in was exposing the youths to drug and substance abuse.

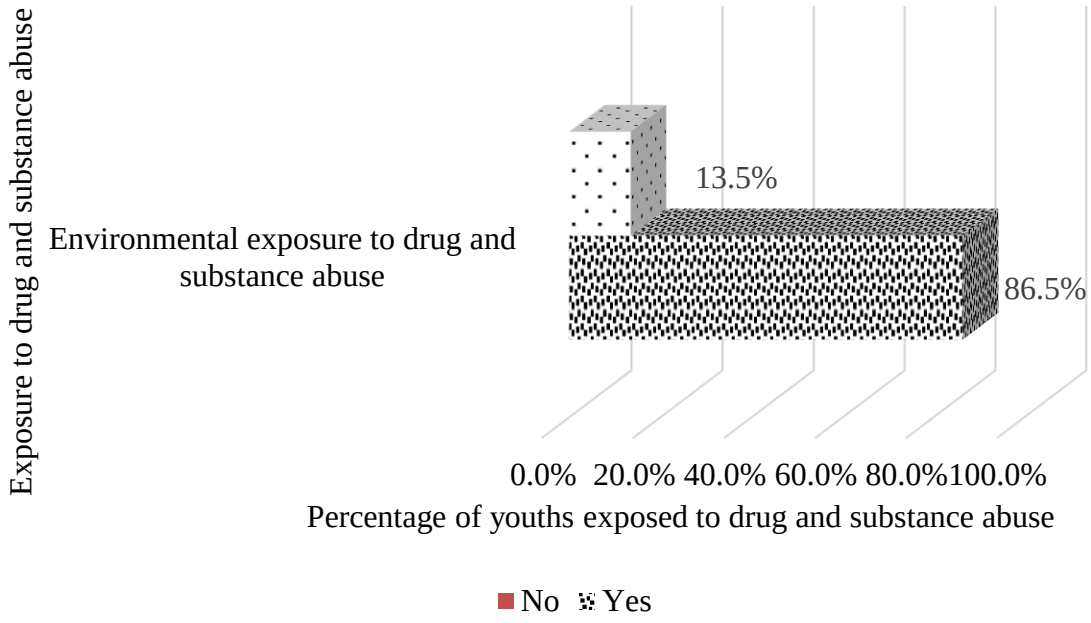

Figure 26: Environment Exposes the Youths to Drug and Substance Abuse

Among 334 respondents who reported that their environment was exposing them to drug and substance abuse only 79 (23.6%) were found to be at risk for developing mental disorder. The results also showed that among 52 who were not exposed to drug and substance abuse by their environment, only 8 (15.3%) were found to be at risk of developing mental disorder. The youths who were exposed to drug and substance abuse were 1.704 times more likely to develop mental disorders than those who were not exposed. However, on computation of these results, there was no significant association between environmental exposure to drugs and substance abuse and risk of developing mental disorder (χ^2=1.762, p=0.184, OR=1.704, CI [0.770-3.771]).

4.5.10 Community Attitude for the Youths with Mental Illness

From the study findings it was established that the community does not take care of the youths who had mental disorders but left them unattended and neglected.

Table 37:The Community Cared for Mentally Ill Youths

variable	Category	Risk for developing mental disorder		Total
		Low	High	
The community cared for mentally ill youths	Yes	50	29	79
	No	249	58	307
Total		299	87	386

χ^2 (1, N=386) = 11.424, p<0.001

This was indicated by 79.5% (n=307) of the youths who participated in the current study. Among the 79 participants who reported that their community took care for the mentally ill youths in their community, 29 (36.7%) of them were found to be at risk of developing mental disorder. The youths whose community disregarded care for the mentally ill youths were 2.490 times more likely to develop mental disorder compared to those whose community cared for the mentally ill youths (χ^2=11.424, p<0.001, OR=2.490, CI [1.452-4.270]).

4.5.11 Binary Logistic Regression for Significant Environmental Risk Factors for Development of Mental Disorders

After analysis, a number of factors showed significant results at a chi square p value < 0.05. These factors included: area of residence of the youth, youths involvement in societal civic activities, crime rate in the area of residence, noisy area of residence, awareness of community norms and following them and community support for the youths with mental disorders. Using backward and forward binary logistic regression model, the following three factors became significantly associated with risk of developing mental disorders. These included; area of residence, youth's participation in societal civic activities and crime rate at area of residence.

CHAPTER FIVE
DISCUSSION OF RESULTS

5.1 Demographic Factors

The age of the respondent was found to contribute to development of mental disorders among the youths. The current study revealed that youth below the age of 25 years were profoundly affected. These results are congruent with Bradshaw et al. (2014) results which stated that mental health conditions are commonly found in young people with one-fourth to one-third youth and adolescents experiencing these disorders across their lifetime. This also concurred with UNICEF (2012), which states that common mental illnesses are highly common among the youths aged between 19-25 years. Level of education was also associated with the risk of developing mental disorders in the current study. This mostly affects their ability to complete schooling, establish stable families and also to participate constructively in occupational life.

Youths and adolescents are particularly at risk for involvement in substance abuse as a result of the underdeveloped state of the adolescent brain which leads to impaired decision-making abilities and increased long-term effects of substance abuse (Katz *et al.,* 2014). More so, the youth stage is the experimental stage putting them at a higher risk of developing drug and substance abuse disorders. The result is an increase in the cases of mental and behavioral disorders.

Majority of the youths had precollege level of education, and this greatly contributed to development of mental disorders among the youths. Stress had been linked with lower overall productivity, and it contributes to distal adverse outcomes, such as reduced academic performance, poor work performance, increased risk of accident as well as low socioeconomic status (Eapen, 2014). WHO, (2012) stated that common mental disorders have high prevalence among the youths and this may affect their ability to attain higher education levels, establish stable families and participate in occupational life. Research has shown that half of the adolescents' fail to complete secondary school and this was attributed to mental disorders and substance abuse (Goldstein *et al.*, 2009). This was also found to be in line with the findings of the current study.

The current study revealed that majority of the youths under study were found to be at risk of developing mental disorders were single compared to those who were married. This might have been contributed by the sample size collected since majority was single. Over the decades, Pinto et al. (2015) reveals that mental disorders profoundly among the youth's who were single and this functioning affected their education, family and marital life.

5.2 Social Risk Factors for Development of Mental Disorders among the Youth.

Majority of the youths in the current study were living in rural areas, however, among those who were living in urban area they were more likely to develop mental disorders compared to those who lived in rural areas. Recent studies and evidence according to Drummond et al. (2014), indicates social factors such as migration, urban living, divorce and separation, have direct impacts on youths' mental status. Crowley (2015), described adversity in childhood and young hood like separation, victimization and social exclusion have been identified as some of the risk factors contributing to development of mental disorders among the youths. These findings were observed in the current study whereby the youths who reported to be discriminated by friends were at risk of developing mental disorders compared to those who were not discriminated. World Health Organization, WHO (2012) also stated that, social life can be complicated by traumatic experiences, antisocial behavior, behavioral disengagement, adverse childhood events, low self-esteem, anxiety and emotional problems. Majority of the youths reported that there were mistreated while growing up were found to be at risk of developing mental disorders in the current study. The results of the study concurred with the findings of (WHO, 2012). A significant proportion of youths in the current study reported to have had a traumatic life event when growing up. This alone was not associated with risk of developing mental disorder but those youths who abused drugs and substances to forget the traumatic life event were significantly at risk of developing mental disorder. The results of the current study were consistent with the studies of Wille *et al.*,(2008) and Pinto *et al.,* (2014); Wille *et al.*,(2008) found out that, adverse events in life such as bullying are risk factors to development of mental illness while the findings of Pinto et al., (2014) opined that psychological torture (may come as a result of rejection) and may play a significant role in the etiology of mental health disorders among the youths. Eapen, (2014), stated that these factors predisposes the individual youth to stressful situations. The findings in the current study showed that

youths who came from families with frequent family conflict or had a conflict with a family member, they were more at risk of developing mental disorder compared to those whose families never had conflicts or rarely had conflicts. Family conflicts were associated with increased levels of stress. According to Eapen (2014), stress affects social relationships by disrupting social interactions, and the environment in a manner that in turn increases vulnerability to further psychological and physiological distress or exacerbates the effects of the existing stressors.

5.3 Economic Risk Factors for Developments of Mental Disorders among the Youths

In the current study, the researcher explored a variety of economic factors that might predispose the youth to developing mental disorder. However, the study was limited to the information given by the respondent; we had no evidence to validate the information given especially on the income of the youths, their financial status and the financial support they were getting from their parents and other siblings/ guardians. Therefore, the results were analyzed based on the responses given by the participants. The youths desired to get more money to use in their daily activities than the income they got from the casual work, hustling and support from parents, guardians, relatives and friends. The youths like all adults had their desired living standards. However, majority of the youths were not able to live to the desired standards due to their low economic status. Only 148 youths out of 386 youths who were involved in the study reported to be comfortable and satisfied with the income they get. Majority of the youths were not satisfied. According to Bradshaw et al. (2014), young people in low and middle-income countries like Kenya face a particular set of risk factors, such as poverty, inadequate resources, and poor financial support systems. Youths with good mental health are productive in the country, however, poor mental health affects the economy of the country negatively. The current study had shown fragility in economic status of the youths. Some youths (19.5%) were affected by their own financial status to an extent of going into depression. They reported to be straining to fund their social life needs. Majority were not employed and depended on gambling of family support and this made their financial status unstable. Meeting the mental health challenges during economic crisis requires not only reducing spending on mental health services but also restricting services to meet the needs of the population. (Fazel *et al.*, 2012). Substantial research, according to Sieon et al. (2013), had revealed that youths who were

unemployed, poverty stricken and had family disruptions had a significantly greater risk of mental health problems and disorders such as suicide, alcohol abuse and depression than their unaffected counterparts. Other studies previously carried out according to Fisher, *et al.*, (2012) showed that unemployment contributes to depression and suicide; youths have a higher risk of getting mental disorders. The crisis in economic world increases mortality linker to mental disorder among the youths.

5.4 Environmental Risk Factors for Development of Mental Disorders among the Youths

Generally, the environment where the youth resided was analyzed in terms of crime rate, availability of clean and safe water, noise pollution, availability of civic community activities in which the youths can engage in, community norms and availability of support systems in the community to help the youths develop support networks. The environmental stressors were found to result in a threat to population but it was inter-generationally downward e.g. unemployment rates make mental disorders more likely. When the youth grows up in an environment surrounded by unemployed residents they become stressed in life and develop negative perception about the outside world. In India, a study on mental health among adolescents in colleges and precollege found that those living in urban areas were prone to mental disorders compared to those who resided in rural areas (Smitha *et al.*, 2015). Financial hardships, exposure to drug and substance abuse, living in urban geographical locations and natural disasters can predispose a youth to abuse of illicit drugs and substances which is a known contributor to development of mental disorders. The current study revealed that area of residence was significantly contributing to the risk of development of the mental disorders. The youth in urban residence were more at risk. According to Torrens (2015), some youths are at a greater risk of developing mental disorders due to their living conditions, stigma, discrimination, or exclusion, or lack of access to quality support and services. In their study, Polit (2012) stated that direct or indirect threats in continuity of environmental interference and the cognitive process have got impact on the youth's mental development ability. Environmental influence on the development of mental disorders is a unique relation whilst many youths are mentally fine, multiple physical emotional and social changes including exposure to poor background, child abuse or exposure to frequent violence can make them prone to mental disorders (Olfson *et al.*, 2015). The youth who resided in areas with crime rate in the current study were more

at risk of developing mental disorders compared to those living in areas with low crime rate. The crime rate was contributed by levels of poverty among the residents. This concurred with findings of Bradshaw et al. (2014), that environmental risk factors like high crime rate, and drugs abuse has serious negative impact on youth's social development, psychological and emotional performances.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary of Key Findings

The first objective of the study was to determine social risk factors associated with development of mental disorders among the youths in Chuka sub-county, Tharaka Nithi County. The factors that were identified included age of the youth; those aged below 25 years were profoundly affected, level of education of the youth; those with lower levels of education were affected most, marital status of the youth; the youth who were single were at a greater risk for developing mental disorders, discrimination and bullying by fellow students, frequency of family conflicts, it was evident that mistreatment of children while growing up and poor parenting were contributing to development of mental disorders among the youth. Drug abuse by the youths is determined by the existence of risk and protective factors. The risk factors associated with drugs abuse and the development of mental disorder included poor social models; the people the youths lived with, and peer pressure. Protective factors that make youth less prone to drugs and substances abuse includes attachment with family, and availability of resources that help people meet their emotional and physical needs. Drug abuse at an early age of life is an important predictor of the development of a substance use mental disorder.

The second objective was addressing the economic factors associated with development of mental disorders. Poverty was the key finding to the development of mental disorders. The youths had temporal jobs and majority depended on their parents for financial support and gambling. The money they got or earned was not enough to cater for their daily expenses as they were not satisfied. The youths were straining to fund their social needs. They felt inadequate and stressed up and this contributed to drug and substance abuse which led to development of mental disorders.

The third objective was to identify environmental factors contributing to the development of mental disorders among the youths in Chuka Sub-county, Tharaka Nithi County. The results showed that there was high crime rate that contributed to depression, area of residence consisted of noisy and clam, noisy environment was a factor and participation in community civic activities by the youths reduced development of mental disorders. Though many risk factors for psychiatric disorders

are external, the environment where an individual is brought up in contributes to the initiation of mental disorders.

6.2 Conclusion of the Study

In the current research the social determinants that were significantly associated with development of mental disorders include; age of the youth, level of education of the youth, marital status of the youth, discrimination and bullying by friends, mistreatment when growing up, frequency of family conflicts, and drug and substance abuse to forget traumatic live event.

Economic determinants of mental disorders include; satisfaction with income earned per month, straining to fund social needs, satisfied with financial support given from the parents, guardians and other siblings were significant economic risk factors.

The environmental determinants of mental disorders included that the environment where the youth resided was significantly increasing the risk of development of mental disorder, especially living in urban area with high crime rate and youths not involved in civic community activities.

6.3 Recommendations of the Study

i. Encourage family social groups and better ways of amicably solving family conflicts as well as reducing frequency of family conflicts.
ii. Increase the youth employment levels so as to reduce the crime rate among the youth and reduce development of mental disorders.
iii. Enhance and enforce laws to curb drug and substance abuse among the youth and minimize crime rate

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APPENDICES

Appendix I: Questionnaire for the Participants

SECTION A

Questionnaire number……..

This questionnaire has been formulated for study purposes and any information given will be treated with total confidentiality. Do not write your names (s) and please indicate the correct option by ticking (√) against the option.

SECTION A: Individual risk factors contributing to the development of mental disorders among youths

1. What is your age:15-20 years [ ] B. 21-25 years [ ] C. 26-30 years [ ] D. 31-35 years [ ]
2. Gender: Male [ ] Female [ ]
3. What is your level of Education: Primary [ ] Secondary [ ] College [ ] University [ ]
4. Indicate your marital status: Single [ ] Married [ ] Divorced [ ] Widowed [ ]
5. Have you ever been diagnosed with a mental disorder **Yes [ ] No [ ]**
6. If Yes, which and when was it

…….

(**indicate type, month and year**)

7. Is there any history of mental disorders in the family **Yes [ ] No [ ]**
8. In your early childhood, did you suffer from any illness **Yes [ ] No [ ]**

SECTION B: Social risk factors for mental disorder development

1. Who do you live with; **Alone [ ] With Friend [ ] With family member [ ]**
2. Do you have friends (both girlfriends and boyfriends) to socialize with Yes **[ ] No [ ]**

3. Have you ever been rejected by friends **Yes [ ] No [ ]**
4. Do you feel neglected by other family members yes [ ] No [ ]
5. Have you ever been discriminated or excluded by your friends in any way **Yes [ ] No[ ]**
6. Have you ever experienced social class exclusion **Yes [ ] No [ ]**
7. Have you ever been bullied by friends **Yes [ ] No [ ]**
8. Have you ever been bullied by other students **Yes [ ] No [ ]**
9. Were you ever been mistreated or maltreated when growing up **Yes [ ] No [ ]**
10. Do your family members recognize your ideas to progress **Yes [ ] No [ ]**
11. Do you feel that other family members are favored than you **Yes [ ] No [ ]**
12. Do your friends support your ideologies when sharing with them **Yes [ ] No [ ]**
13. To what extent do you feel you control your life

    ……
14. Has your family been involved in any kind of conflict **Yes [ ] No [ ]**
15. Have you been involved in a conflict with another family member **Yes [ ] No [ ]**
16. How frequent does your family get into conflicts

……
17. To what extent can you gauge yourself in controlling family conflict?.....
18. Have you ever been sexually harassed including when you were young **Yes [ ] No [ ]**
19. Have you ever been physically harassed including when you were young **Yes [ ] No [ ]**
20. Have you ever experienced any traumatic event that you always avoid to consciously remember **Yes [ ] No [ ]**
21. Have you ever suffered any traumatic life event **Yes [ ] No [ ]**

22. Does the traumatic life event that makes abuse any drug to forget about it **Yes [ ] No [ ]**
23. Were your parents there for you when you needed them when you were young **Yes[ ] No[ ]**
24. Have you ever lived with a person who abuses drugs and substances like khat, alcohol, cigarette smoking, bhang smoking etc **Yes [ ] No [ ]**
25. Have you ever used alcohol, cigarette, bhang or khat in your life **Yes [ ] No [ ]**

SECTION C: Economic risk factors for mental disorder development

1. How much do you grossly get as earning in a month

   1000-5000 **[ ]** 5000-10000 **[ ]** 10000-15000 **[ ]** Above 15000 **[ ]**

2. What is the source of your income

   Support from family [ ] Business [ ] Formal employment [ ] Gambling [ ]

3. Does the amount you earn per month cater for all the basic needs; food, shelter and clothing **Yes [ ] No [ ]**
4. How do you fund your social needs like treating your friends……..
5. Do you financially strain to cater for your personal needs; the things you like to have in life **Yes [ ] No [ ]**
6. Do your parents support you financially **Yes [ ] No [ ]**
7. Are you satisfied with the earnings and financial support you get

   Yes [ ] No [ ]

8. Do your friends live an expensive lifestyle than yours **Yes [ ] No [ ]**
9. In your neighborhood, do you have friends or other youths living fancy life

   Yes[ ]No[ ]

10. How can you rate your family financial status;

rich [ ] poor [ ] middle class [ ]

11. How do you feel personally about your family financial status

……

12. Does your family financial status make you feel depressed **Yes [ ] No [ ]**

13. What is your financial status; **stable [ ] unstable [ ]**

14. Does your personal financial status make you feel depressed **Yes [ ] No [ ]**

SECTION D: Environmental risk factors for mental disorder development

1. Where do you live; **rural [ ] urban [ ]**
2. Do you feel that you have a sense of belonging to where you live **Yes [ ] No [ ]**
3. Do you participate in civic activities in your place of residence **Yes [ ] No [ ]**
4. How can you rate crime rate in your place of residence

   ……
5. Do you live in a noisy area **Yes [ ] No [ ]**
6. Do you live with people you can trust **Yes [ ] No [ ]**
7. Do you easily access clean water for personal use **Yes [ ] No [ ]**
8. Do you have social norms guiding youths in your place of residence **Yes [ ] No [ ]**
9. Does your residence expose you to abuse of substances and drugs **Yes[ ] No [ ]**
10. Does your community take care of the mentally ill individuals

    Yes [ ] No [ ]

11. In your area of residence, what do you see as risk to youths to develop mental

    disorders……

    ……

    ……

    ……

    ……

    ……

    ……

    ……

    ……

    ……

    ……

    ……

    ……

    ……

    …….

Thank you

Appendix II: Checklist for development of mental disorder adopted and modified from World Health Organization (Mini Kid Questionnaire V 6.0)

The following statements relate to your well-being in the last two weeks. For each statement in the box please tick one relevant answer according to you					
Well-being statement	**Always (5)**	**Most of the time (4)**	**At times (3)**	**Once (2)**	**Never (1)**
1. I was happy and in a good mood					
2. I felt calm and relaxed					
3. I was full of energy and felt active					
4. I felt fresh and relaxed when I woke up					
5. My day was full of things which interested me					
The following statements relate to your perceived stress in the last two weeks. For each statement in the box please tick one relevant answer according to you					
Perceived stress	**Never (5)**	**Rarely (4)**	**Sometimes (3)**	**Often (2)**	**Very (1)**
1. How often did you feel upset because something unexpected happened in your life?					
2. How often did you have an impression that the most important things in your life are out of your control?					
3. How often did you feel nervous and tense?					
4. How often did you succeed in dealing with unpleasant events?					
5. How often did you have an impression that you were able to deal with important changes in your life?					
6. How often did you feel sure that you were able to deal with your personal problems well enough?					

7. How often did you have an impression that things in your life developed as you planned?					
8. How often did you have an impression that you did not meet everyday demands?					
9. How often did you succeed in getting rid of vexations/nuisances (disturbances) from your way?					
10. How often did you have an impression that you were at the top?					
11. How often were you angry that things happened which were out of your control?					
12. How often did you notice that you thought about things which you had to complete?					
13. How often were you able to spend your time freely?					
14. How often did you have an impression that difficulties overwhelmed you so much that you were not able to accomplish them?					
The following statements relate to your depressive symptoms in the last two weeks. For each statement in the box please tick one relevant answer according to you					
Depressive Symptoms	**Never (5)**	**Rarely (4)**	**Sometimes (3)**	**Often (2)**	**Always (1)**
1. I am sad					
2. I look into the future in a discouraged way					
3. I feel like a goof					
4. It is difficult to enjoy anything					
5. I feel guilty					
6. I feel as if I am being punished					
7. I am disappointed with/of myself					
8. I point out mistakes to myself					
9. I consider hurting myself					

10. I feel nervous					
11. I cry					
12. angry and annoyed					
13. I do not care about other people					
14. I put off making decisions					
15. I care about my outer appearance					
16. I have to force myself to every task					
17. I cannot sleep well					
18. I am tired and dull					
19. I do not have appetite					
20. I am afraid of my health					
21. I do not care about sex					

Adopted from World Health Organization

- A score of less than 100 indicates high risk for developing mental disorder.

Appendix III: Letter of Introduction

KABURI JOHN MWITI
P.O. BOX 8 – 60400
CHUKA
kaburimwiti@gmail.com
0723 323 897

Chuka University
P. O. Box 109 – 60400
Chuka

Dear respondent,

I am a post graduate student at the School of Science Engineering and Technology in the University of Chuka, undertaking a course in Masters of Science Nursing. I am carrying out an academic research on determinants of high incidence rates of mental disorders among youths in Chuka Sub-county of Tharaka Nithi County. This is a partial fulfillment of my masters in Science Nursing. Participation is voluntary and the information provided is for academic purposes and will be kept confidential. The study will provide important information necessary for prevention and management of mental disorders among youths in Chuka sub-county.

Kaburi John Mwiti
Researcher

Appendix IV: Participants' Consent Form

My name is John Mwiti a postgraduate student at Chuka University pursing a degree in Masters of Science in Nursing. I am carrying out a research study to determine the determinants of high incidence rate of mental disorders among youths in Chuka Sub-county, Tharaka Nithi County. I humbly request you to participate in this study. Your participation is voluntary and you can withdraw at any point. There are no risks involved in the study. There is no material compensation for the participants of the study. Your confidentiality and anonymity is assured and the study will be used for academic purpose only. In case of any issue/clarifications, kindly contact the people/offices below.

Researcher: John Mwiti
0723323897
Nursing Department, Faculty of Science Engineering and Technology
Institution: Chuka University

Participant's Declaration

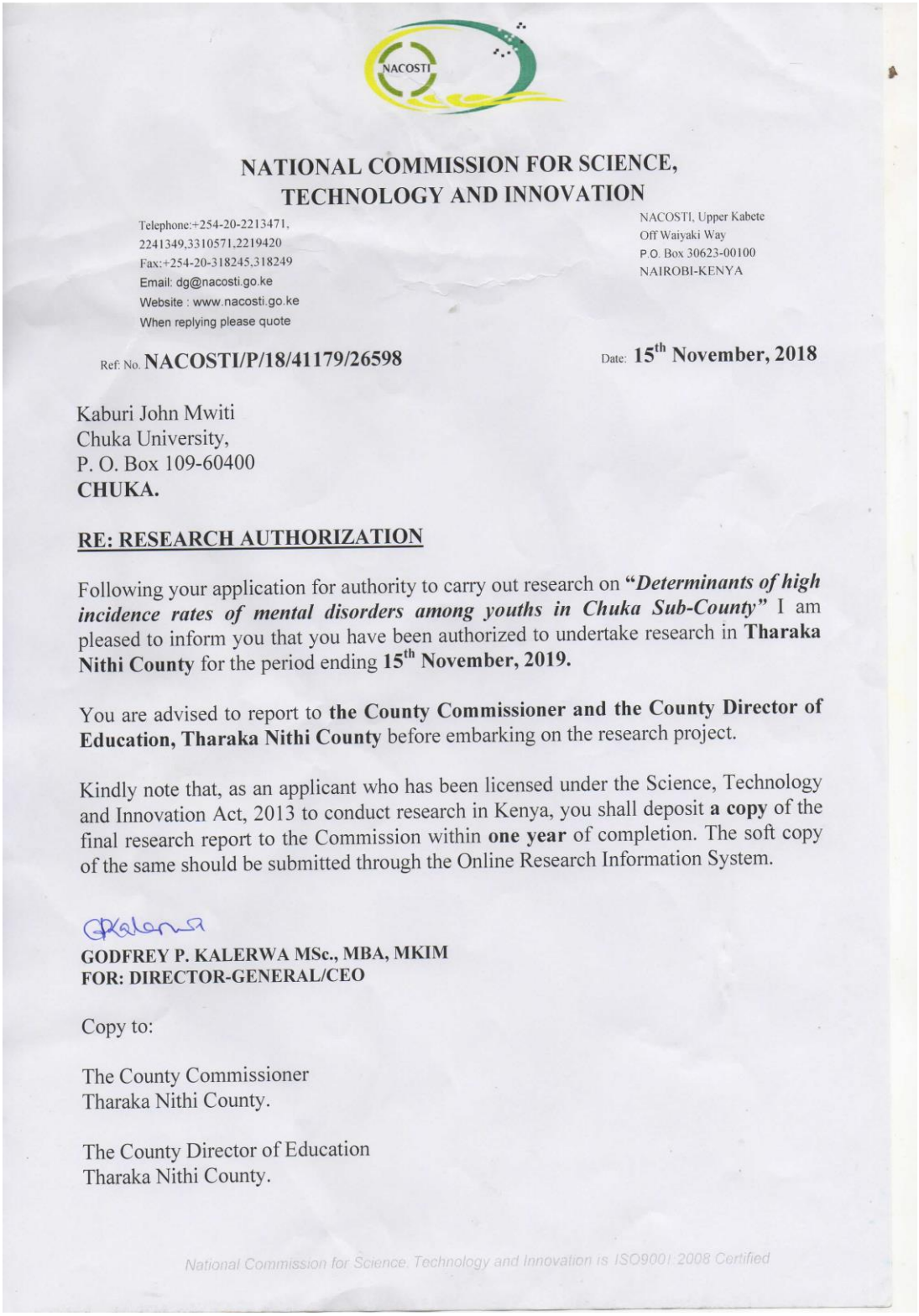
I have read and understood the above details about the research, I voluntarily agree to participate in the study and offer any information which is required of me.

Participants sign……...

Research assistant sign ……

Date…….

Appendix V: Research Permit



NATIONAL COMMISSION FOR SCIENCE,
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When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/18/41179/26598**

Date: **15th November, 2018**

Kaburi John Mwiti
Chuka University,
P. O. Box 109-60400
CHUKA.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Determinants of high incidence rates of mental disorders among youths in Chuka Sub-County"*** I am pleased to inform you that you have been authorized to undertake research in **Tharaka Nithi County** for the period ending **15th November, 2019.**

You are advised to report to **the County Commissioner and the County Director of Education, Tharaka Nithi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Tharaka Nithi County.

The County Director of Education
Tharaka Nithi County.