

**TEACHERS' KNOWLEDGE OF IDENTIFY SUICIDAL BEHAVIOR
RISK FACTORS OF ADOLESCENTS IN PUBLIC SECONDARY
SCHOOLS IN NYANDARUA SOUTH DISTRICT, NYANDARUA
COUNTY, KENYA**

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**A Thesis Submitted to the Faculty of Education in Partial Fulfillment of the
Requirement for the award of a Degree of Master of Education in
Psychology of the Catholic University of Eastern Africa.**

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DECLARATION

This thesis is my original work and has not been presented in any other college or university for the award of a degree. Information obtained from other sources has been appropriately acknowledged.

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My regards go to all the teachers and teacher counselors who generously accepted to inform this study. Thanks to all the Little Daughters of St. Joseph for their invaluable love and support.

DEDICATION

I dedicate this work to my late father Francis Macharia who wished that I would scale the heights of education to the best of my ability.

ABSTRACT

The purpose of this study was to find out teachers' knowledge of suicidal behavior risk factors of adolescents in public Secondary Schools in Nyandarua South District, Kenya. The study employed a concurrent triangulation research methodology; both descriptive cross sectional survey and naturalistic phenomenology designs were used. Probability and non probability sampling methods were used to sample 73 teachers and 11 teacher counselors respectively. The study used 50% of the total population (168) in the 22 schools. Data was collected using questionnaires for teachers and interview guide for teacher counselors. Quantitative data was analyzed using Statistical Package for Social Sciences (SPSS) version 20.0 and was presented using frequencies and percentages while qualitative data was analyzed and categorized into themes and presented in form of narratives. The findings established that teachers are aware of depression, coping skills, age, alcohol and substance abuse, previous suicidal threats, emotional instability, low self esteem irresponsible sexual behavior, information technology and accessibility of lethal means as risk factors. Teachers demonstrated knowledge that students who 'feel at home' in school are at less risk and intimate friendship may increase or lessen the risk. They identified lack of guidance and counseling and being pressurized by teachers to perform academically as risk factors. They know that parent-child communication, parental conflicts and depression of parents are risk factors. They identified dysfunctional families, irresponsible parenting, absence of parents and parents pressure on adolescents to perform academically as risk factors. They also know that adolescents may learn suicidal behavior from family members. Conversely, teachers are uninformed that gender, chronic illness and disability and being a bully is a risk factor but do not believe that suicidal behavior is contagious. Teachers were not sure that academic achievement, living away from one parent or both, death of a relative and single parenthood are risk factors and that poverty in a family too is a risk factor. The study recommends that based on the knowledge of the various risk factors of suicidal behavior of adolescent students, teachers should identify students at risk and offer them appropriate help. School administration, through Guidance and Counseling Department, and County Education Office should hold seminars and workshops to inform teachers on the suicidal risks they are not aware of.

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ABBREVIATION/ACRONYMS

APA	American Psychological Association
ASBQ	Adolescence Suicidal Behavior Questionnaire
DEO	District Education Officer
HIV/AIDS	Human Immunodeficiency Virus /Acquired Immunodeficiency Syndrome
JAB	Joint Admissions Board
UNICEF	United Nations International Children Educational Fund
US	United States
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background to the Problem

The World Health Organization (2012) reports that suicide is among the three leading causes of death among those aged 15-44 years in many countries in the world, and the second leading cause of death in the 10-24 years age group; these figures, the report says, do not include suicide attempts which are up to 20 times more frequent than completed suicides. Joiner (2010) observes that suicidal attempts predict completed suicide in the future; therefore, measures to avert the prevalence of this phenomenon have to be put in place.

Young people in Kenya have a high rate of attempted suicidal cases. A study done by Ndetei, Mutiso, Mbwayo and Mathai (2011) shows that as many as 6.8 percent of males and 10 percent of females were reported having attempted suicide at least once. Today, both print and the television media in Kenya often report cases of adolescents' completed suicide especially related to academic performance. A report filed by Mwangi (2011) displays shocked villagers in Muranga where three students had committed suicide in a span of one week. Kinuthia (2012) reported the sad story of Stella Limo, a 17-year-old student at Alliance Girls High School who took her own life at home in Uasin Gishu County. At least three other students committed suicide soon after her death. Hussein (2012) also filed the following report:

Mercy Chebet, 14, from Kericho County got 145 marks and committed suicide in January 2012, Sylvia Wanjiku, also 14, from Kathiani got 303 marks. In Sylvia's case, though 303 marks was technically a 'pass', she had expected to score no less than 400 marks ...sadness, emptiness and the pain of loss... lost hopes, lost dreams, lost potential; she eventually committed suicide (p. 4).

In central Kenya, around the same time, Gitonga (2012) files the following report:

Cases of suicide have become too common in Kinangop, Nyandarua. Those who have been following up the matter say at least three cases of attempted suicides are reported every week in the agriculture rich area. A majority is taking their lives by swallowing deadly chemicals, especially pesticides. Among them are school going adolescents. (p. 2).

Apart from complete suicide, other forms of suicidal behavior like ideation, gestures and attempts are hardly reported though they happen in Kenyan schools. Suicidal activity among young people has been on the rise.

Teenage (13-19 years) finds the majority of the Kenyan young people in Secondary Schools where they spend most of their time (Wango, 2006). Within the four years, they go through many changes and challenges in all aspects of life. In South Korea, Kim and Kim (2008) found 17–18 years of age to be the peak age for suicide attempts. They also observe that a teenager not only has to deal with major psychological tasks that accompany this phase of life, but also has to dramatically reduce their dependence on their parents, separating from the family and forming an adult identity.

Fish (2000) asserts that adolescents believe that there is no one who can understand them. He says that this often creates a sense of intense loneliness as they face problems. Furthermore, the personal fable often relates to a belief that they are indestructible. Their belief that no one can understand them leads to feelings of loneliness and the decision not to seek needed help. As UNICEF (2012) asserts:

Adolescents experience intense physical, psychological, emotional and economic changes as they make the transition from childhood to adulthood. Risk-taking is part of adolescence, and it is the duty of society both to prevent risk and to mitigate any dangerous consequences such risk-taking is bound to have (p. 5).

Teachers are significant people in the life of a student. Apart from educating the student academically, the teacher should be aware of what is going on in the life of a student in order to protect his or her life from life threatening situations. Wango (2006) points out that at school, the teacher is a surrogate parent, and the Ministry of Education in Kenya for instance, would appear to be allocating teachers the role of guiding and counseling the child while in the school. This role, he says, is further enhanced by the establishment of boarding schools where students reside in schools. Ordinarily, the role of a parent is to take care of the young person in all aspects of life. A parent has to have some background of the young person's developmental stages and the crises they may face in order to effectively help them. Being the surrogate parent, therefore, a teacher has the obligation to have knowledge of what could precipitate suicidal behavior in an adolescent and intervene to avert it.

1.1.1 Trends of Adolescents' Suicide.

Mitchell, (2000), contends that suicide in the United States is the fourth leading cause of death among those 5-14 years old. It is the third leading cause of death among those 15-24 years old. He adds that approximately 40 percent of high school students have contemplated suicide by the time they graduate. This study does not delve into finding out what high schools are doing to deal with that relatively high percentage of students' suicidal behavior.

A report compiled by Cha and Nock (2009) contends that approximately one of two high school students receiving grades of mostly 'Ds' and 'Fs' felt sad or hopeless. But only one of five students receiving mostly grades of 'A', felt sad or hopeless. Two out of five high school students receiving grades of mostly 'Ds' and 'Fs', attempted suicide. Comparatively, only one out of twenty five who received mostly 'A' grades attempted suicide. Apparently, the report says, the grading system should be revised so as not to send signals of unworthiness to the poor performers. This finding is similar to the Kenyan situation where grading in exams has often been associated with suicidal behavior in students. The social

media often reports cases of adolescents' completed suicide especially related to academic performance.

Heron (2012) found out that the percentage of high school students who reported that they had thought seriously about committing suicide in the previous year declined from 29 percent in 1991 to 14 percent in 2009. However, in 2011, the percentage significantly increased, to 16 percent. The proportion of students who reported having attempted suicide remained relatively constant in the 1990s (between seven and nine percent), but the percentage significantly declined between 2001 and 2009, from nine to six percent. This trend also reversed in 2011, increasing to eight percent. A much smaller proportion, two to three percent of high school students, reported requiring medical attention as a result of a suicide attempt, and this proportion has remained constant over recent years.

According to Pelkonen and Marttunen (2003), important contributors to self-harm and suicide in the US include genetic vulnerability and psychiatric, psychological, familial, social and cultural factors. They assert that the relationship between psychiatric disorders and adolescent suicide is well established. Mood disorders, substance abuse and prior suicide attempts are strongly related with youth suicides. As much as description of these risk factors is important, equally useful is the information on whether key people like parents, doctors, teachers and social workers among others are aware of the same. It is only when they know that they would intervene to stop suicide and related behavior.

In South Korea, Kim and Kim (2008) found out that young people who are exposed to adverse, dysfunctional or abusive childhood environments are at a significantly greater risk for subsequent suicidal behavior. This evidence suggests that a wide array of adverse social and family factors appear to be associated with an increased risk of adolescent suicidal behavior. This has usually been interpreted as evidence of a causal process in which exposure to childhood and family adversity increases an individual's vulnerability to later

psychopathology and adjustment difficulties, with this in turn reflected in increased rates of suicidal behavior.

In 2012 alone, seven class 8 students committed suicide in Kenya because they did not obtain the desired marks to join secondary schools of their choice (Onyango 2012). Oduor (2012) quotes Professor Godia, former permanent secretary in the Ministry of Education who said that the ministry would rid the education system of the unhealthy competition for top scores in the Kenya Certificate of Primary Education (KCPE) and Kenya Certificate of Secondary Education (KCSE) examinations, which has led to some candidates even committing suicide. Weru (2012) reports of a Kenya Certificate of Secondary Education candidate who committed suicide allegedly after failing to attain the minimum university entry points.

1.1.2 Importance of Teachers' Knowledge of Suicidal Behavior Risk Factors in Adolescents

Konopinski (2011) observes that adolescents' interaction with school staff on a daily basis provide a gateway for educators to expedite identification of students at risk for suicide. Students disclose information about themselves in various ways, including their conversations with peers, in their writing, and in their behavior.

The great tragedy about youth suicide is that it takes place despite the suicidal youth giving out distress signals (Gould & Kramer, 2001). In response to the problem of youth suicide, many schools in the West now acknowledge that suicide issues are often unavoidable and school professionals are increasingly accepting the role of 'gatekeeper' in dealing with suicidal students. In order to fulfill this 'gatekeeping' role, however, teachers must possess accurate knowledge of the behavioral characteristics of suicidal intent and be capable of directing the student to appropriate services. Fish (2000) has also emphasized the importance

of the school professionals' ability to identify young people who are developing suicide risk behaviors in order to save the young potential life.

Meldrum, Venn and Kutcher (2000), carried out a study in Canada whose findings revealed that mental health of students in schools is often overlooked, yet it is extremely a relevant issue for today's educator. In Canada, between 15 and 20 percent of youth suffer from a mental disorder that would benefit from professional care, and six to eight percent of young people suffer from depression. By learning how to recognize and address adolescent mental health problems, as well as how to appropriately refer those young people suffering from mental health problems to health professionals for treatment, educators have a unique opportunity to play an important role in the health and well being of Canadian youth. It is therefore imperative that teachers are equipped with the practical tools and knowledge required to recognize and intervene appropriately in situations where mental illness may be a concern.

Granello and Granello (2011) warn that schools in the U.S have been sued for failure to notify parents if their child appears to be suicidal, failure to get assistance for a student at risk of suicide and failure to adequately supervise a student at risk of suicide. This strengthens the need for teachers and all school staff to have knowledge of factors that lead to suicidal behavior among students. Since schools are found in almost every community and teachers have regular contact with children and adolescents, they are the best choice to implement suicide prevention programs. Teachers are unable to act effectively in a crisis situation if they do not have the knowledge or skills to recognize risk factors and warning signs of adolescents at risk for suicide. Despite the prevalent cases of suicidal behavior in our Kenyan schools, no school- based suicide preventive programs have been put in place.

The Ministry of Education Task Force (2012) found out that teacher education in Kenya has not kept pace with general developments that have occurred throughout most

developed countries. A policy framework for teacher education is lacking, while at the same time teacher education and the teaching profession are not well defined as few teachers have a clearly defined career development plan. In the developed and in some developing countries, the government employs fully fledged psychological counselors in schools. They are adequately trained on the mental and psychological health of students. Wango (2006) observes that in Kenya, it is not uncommon to find a school that runs without a trained teacher- counselor.

An issue of concern is the fact that the Kenyan Education system is too academic and examination oriented at the expense of other aspects that are pertinent in students' life. According to Wango (2006), a teacher may deal with a truant case punitively without bothering to know the cause of that problem. Such a child would be suffering at home and punishing him only worsens their situation. This could lead to low self esteem or escalate into depression that is highly linked to suicide or suicidal behavior. He adds that every teacher has a duty to offer guidance and counseling to students. For a teacher to be able to notice a suicidal student, they must have received training on the same. In the researcher's opinion, identifying suicide risk factors in a student and in turn taking the necessary measures should be in the heart of guidance and counseling in our Kenyan schools.

In his research done in Machakos Secondary Schools, Kenya, Duda (1996) found that most students did not receive guidance and counseling services. Teachers were incompetent in the area and did not know exactly how to guide and counsel the students. Little or no attention had been given to the need to equip the teachers with relevant knowledge and skills essential for planning, implementing and monitoring guidance and counseling services and activities in the school. He concluded that teachers lacked the skills and techniques to handle students' problems effectively. Given that suicide among students in Kenya is on the rise, the

researcher is therefore interested in establishing what teachers know and/or do not know about factors that predispose and precipitate adolescents to suicide.

1.1.3 Description of the Study Site

Nyandarua South District is part of the former Nyandarua District. The district was split into two in 2007: Nyandarua North District and Nyandarua South District. The information on that is available refers to prior 2007 and so describes the former Nyandarua District, now Nyandarua County. Nyandarua County is an administrative county located on the North-Western part of the Central Province, west of the Aberdare Range. Nyandarua constitutes of four constituencies: Kinangop, Kipipiri, Ol-Kalou and Ndaragwa. Its capital town is Ol Kalou. According to Burugu (2012), the population of Nyandarua is estimated at 596,268 people. It is characterized by high horticultural productivity of the small scale farms. One of the geographical features that determine the climatic and weather patterns of the county is the Aberdare ridges. Some of these aspects include temperature, rainfall and humidity. Nyandarua County is dominated by steep slopes and mountains and this increases the susceptibility of the county to soil erosion and landslides especially in the rainy seasons.

According to a report by the Ministry of Education (2012), there are a total of 471 primary schools and 149 secondary schools. This, the report says, helps in ensuring that all young persons in the county get access to easy and affordable education which is usually free. Other learning institutions include Technical Colleges and Teachers Training Institutions. The report avails the data on the population with Primary Education which it says stands at 67.9%, those with Secondary Education are 14.2% and those who can read and write are 75.4%. The population attending school (15-18 yrs) are 65.3%. The last cluster of school going population is this study's concern. They spend most of their time in school and it is important to know whether their teachers are in a position to detect the life events that may place them at risk of suicide and related behaviour.

1.2 Statement of the Problem

The death of an adolescent permeates an entire community with a sense of loss and anguish. As Omigbodun et al., (2008) postulate, complete suicide cannot be handled in isolation, rather, we consider suicidal behavior which is a continuum from suicidal ideation and suicide threats, and attempts which escalate into completed suicide if no intervention is made. Though they are not mental health professionals, the teaching role that teachers have provides them with a unique opportunity to closely monitor students' behavior, identify any risk of suicidal behavior and appropriately intervene. As Wango (2006) puts it, they are the surrogate parents of students in their school life and so have to take care of the students in every aspect. Lack of knowledge about how best to protect students against suicidal thoughts and behaviors poses a significant problem.

Karanga (2012) notes that in Kenya, 'Suicide is taking toll on students', (p.43). Responding to suicidal risk can be very intimidating in cases where one lacks the necessary information. In order to prevent it from occurring, teachers and counselors require a clear understanding of nature of suicide including suicide risk factors of which a number of them have been described by Karanga (2012).

Studies describing risk factors of adolescent students' suicidal behavior have been conducted. Among the most recent are Lee, Kweon and Kim (2007); Omigbodun, Dodra Esan and Adedokun (2008); Schlebusch, Burrows and Vawda (2009); Palmier (2011). These studies are of paramount significance because they describe what factors precipitate high school students to suicidal behavior. However, it is equally important to find out whether guardians of students such as teachers are aware of those factors. The present study seeks to find out the knowledge secondary school teachers have on the risk factors for suicidal

behavior among students since they are in the best position to identify them in students and respond by helping at-risk-students.

Studies have been carried out to find out school teachers' and other school professionals' knowledge about adolescents' suicidal behavior risk factors. An Australian study by Leane and Shute (1998) observed that in Adelaide, teachers' 'gatekeeping' potential was compromised by a low level of knowledge about factors of suicide risk. King (2000), Hamrick, Goldman; Sapp and Kohler (2004); Westefeld, Ketterman, Lovmoand and Hey (2008); Williamson (2010) and Heitkamp (2011) were all studies carried out in the US in the area of interest. Shelley and Nerina (2009) carried out a similar study in Australia. Generally, all the aforementioned researchers' findings revealed deficit of knowledge in identifying some suicide risk factors of adolescents. The researcher finds it significant to carry out a similar study in Kenya where suicide has taken toll on students (Karanga, 2012). Innumerable studies in Kenya have been carried in the field of guidance and counseling in secondary schools but not one has sought to find out what teachers know about adolescent suicide.

The present study acknowledges the prevalence of adolescents' suicidal behavior in schools, and seeks to understand what the teachers know about it. In order for teachers to play part in prevention of adolescents' suicidal behavior, they have to know why some adolescents are more likely to be suicidal than the others. Therefore, the present study's quest was to find out teachers' knowledge about factors that prompt adolescent students to be suicidal.

1.3 Research Questions

Specifically the study is aimed at answering the following questions:

1. What knowledge of personal risk factors for adolescents' suicidal behavior do Secondary school teachers of Nyandarua South district have?
2. Which environmental risk factors of adolescents' suicidal behavior do Secondary School teachers of Nyandarua South district know?

3. Which family risk factors that predispose and precipitate adolescents to suicidal behavior are teachers of Nyandarua South district aware of?
4. What knowledge of school-based suicidal behavior risk factors of adolescent students do teachers of Nyandarua South district possess?
5. What suggestions do the teachers of Nyandarua South district offer for improvement on their knowledge of suicidal behavior risk factors of adolescents?

1.4 Significance of the Study

The purpose of this study was to find out the depth and breadth of the knowledge of high school teachers about adolescent suicidal behavior. Because the number of teens killing themselves every year is on the increase, there is a need for additional and more comprehensive education for school personnel, especially high school teachers, about adolescent suicide awareness, prediction, and intervention.

Teachers can play an important role in prevention of teenager suicide because they spend more time with students during the week than any other individual at the school. Finding out what knowledge they have about suicidal behavior among adolescents, will help them see to what level they are equipped to identify suicidal students in order to prevent loss of young life.

This research would provide necessary information to the administration of secondary schools in Kenya on what the teachers know about adolescent suicide. It is hoped that this information would help them organize workshops to train teachers in the areas they lack knowledge in order to use knowledge acquired in detecting and helping at risk students.

The Ministry of Education in Kenya and its policy makers could use the findings of this study to evaluate the content taught to degree and diploma secondary school teachers concerning adolescent suicide. This study would serve as, a bottom- up- needs- assessment to establish whether knowledge acquired by teachers in colleges and universities meets the

needs of students especially in the area of mental health. The curriculum designers too may find the information important for future inclusion of lacking content about adolescent mental health especially suicidal behavior.

Kinyanda, Hjelmeland, Musisi, Kigozi, and Walugembe (2005) observe that since most research of suicide risk factors has been done in the U.S., Western Europe, and other more developed countries, it is unknown if these risk factors would exert similar effects in less developed countries or how the influence of such factors might vary from country to country. Finding out which suicidal behavior risk factors teachers believe to be predisposing the Kenyan youth to suicidal behavior would go a long way into bridging that gap of knowledge.

This research was also aimed at eliciting information that would form a basis for future research on how teachers respond to students who are at risk of suicidal behavior. For instance, a study built on the findings of this research would be carried out to find out how teachers respond to students who present suicidal behavior.

1.5 Scope and Delimitations of the Study

The study was tailored to only look into the knowledge that high school teachers have on adolescents' suicide risk factors. The researcher is aware that it is important to find out what other stakeholders such as parents and primary school teachers know about adolescents' suicide risk factors. However, the researcher deems it primary to find out what high school teachers know about the subject of research since they are the ones who closely interact with the students at their most turbulent developmental stage-adolescence.

This study drew its respondents from teachers of Boarding Secondary Schools in Nyandarua County at all levels: National, Provincial, and District schools. It did not include private schools since, to the researcher's knowledge; there are rare cases of suicide from those schools. The researcher chose to carry out this study in Nyandarua County since she

had witnessed many cases of attempted suicide among secondary school students who were taken to North Kinangop Catholic Hospital. In addition, a report filed by Digital Standard Media Group (2012), says that the hospital treats up to 3 suicide attempters per week. The report says that most of them are secondary school students.

1.6 Theoretical Framework

The theoretical foundation of this research capitalizes on the ecological systems theory. This theory, by Urie Bronfenbrenner (1990) merges two popular theories frequently used in social work and other professions; the ecological perspective, and the systems theory. The ecological perspective is an orientation that emphasizes understanding people and their environment and the nature of their transactions. This theory also infers that individuals and their environments are in a state of continuous exchange, interaction, and reciprocal influence (Maguire, 2002).

The ecological systems theory involves the basic principle that systems interrelate with one another and attempts to explain holistically the behavior of people and societies by identifying the interacting components of the system and the controls that keep these components (subsystems) stable and in a state of equilibrium. Individuals change their environment and individuals are also changed by environmental influences.

This theory, as analyzed by Heitkamp (2011) identifies four levels of the environment that influence the development of an individual. The four environmental levels are: 1) the microsystem, which includes the individual's immediate environments, such as, family, school personnel, peer group, and neighborhood; 2) the mesosystem, which encompasses the interaction of two or more microsystems; 3) the exosystem, which involves external environmental settings and people that the individual may not directly interact with but may affect the individual; and 4) the macrosystem, the largest and most remote set of people and places, for example, the larger socio-cultural context, national economy, and political culture.

The most striking feature of this theory is that it focuses on interrelations between the individual student, the family system and the school system that consists of teachers, fellow students and support staff. This allows a high school teacher to recognize risk factors that put a student at risk for suicide and other related behavior.

This theory is deemed fit for this research for the fact that it goes beyond presenting problems and delves into other far reaching problems and concerns. For instance, drug abuse among students is treated with respect to the relationship the abuser has with family, peer members and the teachers in order to find out the precipitating factors of such a behavior.

The systems ecological theory however fails to explain adolescent suicide from the other domains; personal factors such as age and gender, biological such as genetic mental disorders through familial transmission and cognitive factors. Another drawback is that it tends to deny the individual's responsibility of behavior; it rather attributes all behavior to the environment surrounding the individual. In our case, adolescents are forced to behave suicidal only in response to the environment; they have nothing to blame.

With its weaknesses notwithstanding, applying the ecological systems theory to adolescents at risk for suicide is important because it allows examination of an individual as a system who interacts with other systems. In our case, the adolescent interacts with both the family and the school systems. Additionally, the ecological systems theory provides insight as to how the human system connects with and affects the environment and how the environment also changes that system. An adolescent who for instance commits suicide because they are bullied at school may force the school administration to change its policies in response to that. The theory allows analysis of an individual adapting to its environment to achieve equilibrium and harmony and it also enables examination of how the environment disturbs an individual's emotional stability and ability to utilize coping skills. The adolescent at risk for suicide can be studied using Bronfenbrenner's (1989) four levels of the

environment that influence the development of an individual, the microsystem, the mesosystem, the exosystem, and the macrosystem.

The first level, the microsystem, examines the adolescent in his immediate environment and includes how he feels within that environment. The individual and members of his immediate environment, family, school personnel, peer group, and neighbors, for example, are all microsystems. For instance, an adolescent that witnesses violence at home causes him insufficient sleep at night resulting in the student sleeping in class. This may result to being mocked by peers and adversely affects the student's self-esteem. An adolescent, who is bullied at school, causing him to skip school in order to avoid injury and humiliation, and subsequently producing failing grades, may also suffer low self esteem. According to Gould and Kramer (2001), low self esteem is closely linked to suicidal ideation.

The second level, the mesosystem, involves the interactions and interrelationships between two or more microsystems. An adolescent who just broke up with her boyfriend resulting in her sudden withdrawal from social activities and interactions with other students may eventually lead to feelings of loneliness. Loneliness, as George (2009) claims, is a predictor of suicidal behavior. He also says that lack of communication with the teen's mother causes them to drink alcohol and use drugs to numb the pain; drug and alcohol abuse is a strong risk factor of to suicidal behavior.

The third level, the exosystem, explores people and settings that may indirectly affect an adolescent's risk for suicide. For example, a parent could be fired from their job causing the family to become homeless resulting in the student to suddenly have a change in hygiene habits. Poor hygiene habits can cause discrimination by other students which again precipitates suicidal behavior.

The fourth and final level, the macrosystem, studies the larger socio-cultural context. Events at this level can affect teenagers are the downward spiral of the national economy,

government laws and regulations, cultural values, and war. The decline in the national economy may affect an adolescent's family income, housing, ability to meet basic needs, and mood of its members. The adolescent in the family will be affected in ways like lack of food, school fees and other basic needs. The weight of that lack may translate into suicidal thoughts or behavior.

1.7 Conceptual framework

Wasserman, Carli, Wasserman and Apter (2010) indicate that suicidal behaviors can be conceptualized as a complex process that can range from suicidal ideation (which can be communicated through verbal or non-verbal means), to planning of suicide, attempting suicide, and in the worst case, completed suicide. As Fordwood, Asarnow, Huzar and Reise (2009) puts it, suicide is not precipitated by only one risk factor, rather, different factors interact to render the adolescent vulnerable to the same. For instance, risk is likely to be high among youth with a combination of depression and behaviors such as romantic breakup, being bullied or abusing drugs because home environment is hostile. All the above events boil down to high risk for suicidal behavior.

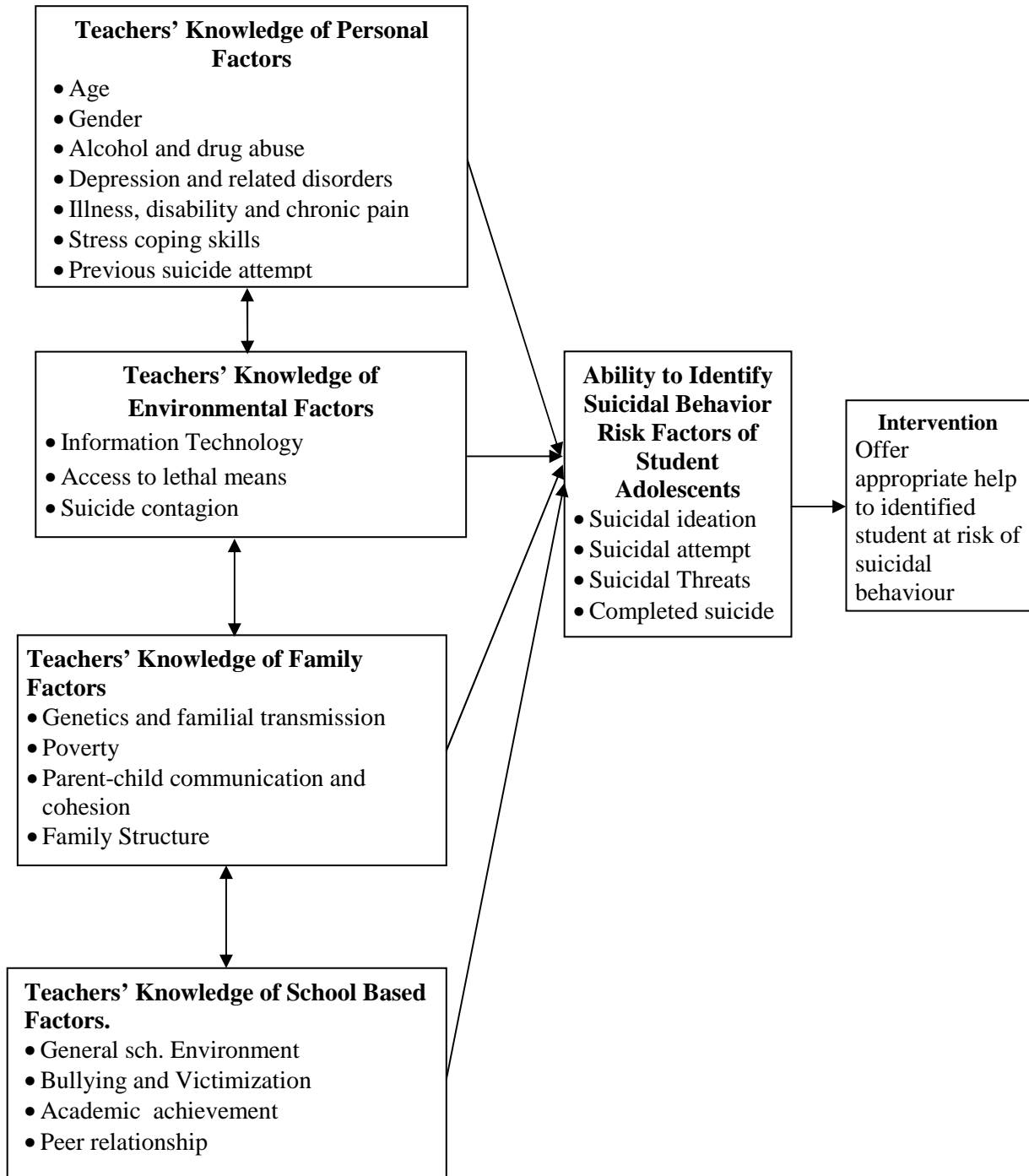
Figure 1 is a summary of how teachers' knowledge of suicidal behavior risk factors leads to identifying those risks in students and so intervening before the student begins to behave suicidal. The independent variable is the knowledge teachers have about the various suicide risk factors while the dependent variable is the ability to identify those risk factors in students.

The one pointed arrows show prediction, that is, if a teacher possesses knowledge of the risk factors, he/she is able to identify students at risk of suicide and thus intervene. The double pointed arrows show interaction/ interrelatedness of the suicidal behavior risk factors of which a teacher should be keen to observe in a student and thus assess whether they are at risk for suicide.

Among the factors that teachers should be aware of are: Personal (age, gender, alcohol and drug abuse; depression and related disorders; disability and chronic illness; stress coping skills and suicide attempts); Environmental (information technology, access to lethal means and suicide contagion); Family (genetics and familial transmission; poverty parent-child communication and cohesion; and family structure). School (general school environment, bullying and victimization, academic achievement and peer relationship). In order for a teacher to identify a student who is at risk of suicidal behavior, they have to recognize the above suicidal behavior risk factors.

Figure 1

A Diagram of Conceptual Framework on Teachers' Knowledge and Ability to Identify Suicidal Risk Factors of Student Adolescents



Source: Adapted from National Centre for Suicide Training, USA. (2012)

1.8 Operational Definition of Key Terms

Adolescent in this research refers to a person aged between thirteen and nineteen years.

Teenager will be used interchangeably with adolescent and youth.

Youth is used interchangeably with adolescent and teenager.

Risk factors refer to, internal or external phenomena that either predispose or precipitate an individual to suicide or suicidal behavior.

Suicidal Behavior in this research refers all the below terms: Suicidal ideation, suicidal threat, and suicidal gesture, attempted and completed suicide.

Suicidal Ideation is any self-reported thoughts or fantasies about engaging in suicide-related behavior.

Suicidal Threat refers to interpersonal action, verbal or non-verbal, indicating a self-destructive desire, but stopping short of a directly self-harmful act.

Suicidal Gesture is a potentially self-injurious behavior or act symbolic of suicide, but not a serious threat to life. The act may accidentally result in death, injuries or no injuries.

Attempted suicides are acts by adolescents whose determination to die is thwarted because they are discovered and resuscitated effectively, or the chosen method was not effective.

Completed Suicide is a situation where someone takes his or her own life with conscious intent by lethal means for example, jump from height, injury, poisoning etc.

Teachers' knowledge in this study refers to the awareness a teacher has about the various suicide risk factors that prompt a student to suicidal behavior.

Secondary school students are boys and girls in their teenage who are studying in Kenyan Secondary schools.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

In this chapter, review of related literature will include Adolescents' suicide research in Africa, discussion of suicide risk factors among adolescents and high school students; personal, environmental, familial and school related factors. Review of studies on the knowledge of teachers' about risk factors for suicidal behavior will be appraised and gaps identified.

2.2 Research on Adolescents' Suicide in Africa

Studies conducted by Sukhai, Harris, Moorad and Dada (2002), show that in the developing countries of the African continent, the trend of more attempted suicides by adolescent girls was maintained for a period of years but the rates for completed suicide for male adolescents were higher. In South Africa for instance, 76.8% of all suicide attempts were made by females.

Kinyanda et al (2005) contend that in Africa, a good understanding of the full burden of suicidal behavior is limited by a lack of systematic data collection and high-quality research. They observe that lack of research infrastructure and funds, limited death registers, a lack of expertise in suicide research, inadequate inter-African research collaboration, limited and outdated studies, a lack of standardized research designs and assessment instruments resulting in mostly descriptive studies, have resulted into scarce information in suicide. This claim is confirmed by the researcher's efforts to obtain statistics of students who commit suicide from Kinangop South District, Nyandarua County in vain. The DEO appreciated the prevalence of cases of suicide among students but hastened to add that they do not keep suicide records.

Echoing the observation of scarce research on suicide in Africa Schlebusch ,Burrows and Vanda (2009) concludes that research on suicidal behavior in Africa is scanty much of this dearth of research has been the result of political and economic instability that has plagued much of the continent for several decades. In addition, cultural and religious diversity, plus traditional African beliefs, make it difficult to get a comprehensive understanding of the suicidal problem. They add that the prevalence of suicide tends to be higher in African countries in the east and south, compared to those in the north and west. Kenya lies in the East of Africa and so, according to this study, suicide is higher here than in the rest of the African countries. This research used scientific research designs and standardized instruments of measurement to find out whether teachers are aware of the factors that render adolescents susceptible to suicidal behavior.

In South Africa, Schlebusch, et al (2009) carried out a study that revealed that risk factors associated with adolescent suicide ideation include: the influence of the mass media and information technology, imitation or ‘copycat’ effects, dysfunctional family dynamics, poor problem solving skills, neurobiological and genetic correlates, familial transmission, substance abuse, aggression, impulsivity, brain pathology, depression, acute and chronic stress, and various other psychopathological conditions. This study however does not delve into finding out whether teachers- the surrogate parents of school attending adolescents -are able to identify those factors in order to help at risk students.

Schlebusch, et al (2009) continues to observe that the high suicidal prevalence rates have considerable implications for mental health care facilities in the South Africa. Early recognition of risk factors is important for the prevention of suicidal behavior and the need to develop appropriate, cost-effective interventions. He also observed that South Africa has showed a marked increase in adolescent suicide since 2002. An average of 15 cases of suicide per week and 40 suicides per month were reported, most of which are in the 14-19 year old.

This age (14-19) partly finds the Kenyan youth in secondary schools. For this reason, the researcher wants to find out whether teachers are aware that this is the age most vulnerable to suicidal behavior.

Palmier (2011) carried out a study in Sub-Saharan Africa whose results showed variability in the prevalence of suicidal ideation among high school students across the following African countries; Zambia, Kenya, Botswana, Uganda and Tanzania. Zambia had the highest prevalence of suicidal ideation (31.9%) among all students, followed by Kenya (27.9%), Botswana (23.1%), Uganda (19.6%) and Tanzania (11.2%). The fact that Kenyan high school students rank second in suicidal ideation among the above sub-Saharan countries compels the researcher find out whether teachers are aware of, and have the ability to address suicidal behavior risk factors among the students they teach.

To the researcher's knowledge, in Kenya, no comprehensive report and has been made publicly available on the prevalence of adolescents and more specifically, high school students' suicidal behavior. On teachers' knowledge of risk factors for adolescents' suicidal behavior, the researcher has not come across any that has been carried out in Kenya. However, Oteyo and Kariuki (2011) in their study to find out the prevalence of drug abuse in Nakuru County, quoted the 2008 Kenya Police crime report which shows that in the year 2006 there were 362 suicide cases among 15-19 age group compared to 221 in 2007; a decrease of 34 per cent was recorded. They however noted that what seemed like a declining trend in 2007 rose to 266 adolescents, in 2008. This research did not find out the rate of suicide among high school students, but zeroed in on whether teachers have the knowledge to identify suicidal behavior risk factors among the students.

2.3 Personal Suicidal Behavior Risk Factors

2.3.1. Age

Louw and Louw (2007) contend that adolescence is characterized by significant cognitive, emotional, and social changes. An adolescent not only has to deal with major psychological tasks that accompany this phase of life, but also has to dramatically reduce their dependence on their parents, separating from the family and forming an adult identity. They also observe that this developmental stage brings with it not only the advantages of greater social recognition, but also additional social challenges that adolescents have to deal with. A number of adolescents find it difficult to cope with the emotional and social demands that accompany this life stage, often leading to the display of high suicidal risk behaviors' such as substance abuse, promiscuous sexual behavior and self-harm.

According to Muula, Kazembe and Rudatiskira (2007), African countries report suicide data which are not disaggregated by age, making estimations of suicide among adolescents difficult. In young people, they add, death by suicide is often obscured by other mortality diagnoses or documented as being accidental. They observe that cultural and religious barriers also make it difficult to classify an adolescent death as a suicide.

Kim and Kim (2008) found 17–18 years of age to be the peak age for suicide attempts. He contends that suicide is rare before puberty, but the rate begins to rise sharply after the age of 14 years. In this period, he says, rising expectations and responsibilities may create pressures for many of them. Apparently, this age finds most of the Kenyan adolescents in secondary schools and the present research aims at establishing whether teachers are aware they are dealing with an age that is at risk of suicidal behavior.

A report by Tanya (2010) says that on the average, every high school will have at least 1 student every 5 years who dies by suicide. A typical high school, the report reveals, also will have between 35 and 60 students every year who will attempt suicide. Tanya (2010)

adds that in the a youth survey conducted in 18 Warren and Clinton County schools during the 2008-2009 school year, 12% of 6th-12th graders reported seriously considering attempting suicide within the prior 12months. 9% had developed a suicide plan and 6% reported having actually completed suicide.

Rubin (2013) too observes that suicidal thoughts, plans, and attempts are rare before the age of 10. The prevalence of suicidal ideation, he adds, increases slowly between the ages of 10 and 12 years and then more rapidly after age 12. The prevalence of suicidal plans and non-lethal suicide attempts did not increase much above baseline until age 12. Despite the high suicide attempts among students, these reports do not treat the role played by teachers in identifying and helping students to curb this menace.

2.3.2. Gender

A report by Ndeti et al (2011) shows that in Kenya, 10 percent of females were reported to have attempted suicide as compared to 6.8 of males. Though the researcher did not access any statistics on Kenyan secondary school students' suicidal behavior by gender, the print media presents more cases of suicidal girls than of boys. This therefore concurs with other findings, as discussed below, that girls are more prone to suicidal attempts than their male counterparts. Whether the secondary school teachers in Kenya, particularly in Nyandarua South District.

Bearman and Moody (2004) observe that adolescence is an age group at higher risk of suicidal behavior than others. The report adds that boys are more likely than girls to die from suicide. Of the reported suicides by CDCP (2008), of the adolescents in the U.S., 84% of the deaths were males and 16% were females. Girls, however, are more likely to report attempting suicide than boys. In their study, Lee, Kweon & Kim (2007) observed that female secondary students in South Delhi had greater suicidal ideation than males in middle schools. These findings are in line with Canetto (2009) who observes that girls and women have

higher rates of suicidal ideation and behavior, but lower rates of suicide mortality than boys. This is also affirmed by Rubin (2013) who observes that teenage boys succeed in completing suicide than girls.

If the teacher is aware of this factor, they would be more cautious while handling boys and girls in school especially in the presence of other risk factors like loss of a loved one. For instance, girls would be more likely to attempt suicide after falling out with an intimate friend than boys would. Boys on the other hand would succeed in killing themselves than just attempting suicide.

2.3.3. Alcohol and other Substance Abuse

Wichstrom (2000) in his studies of Norwegian high school students finds evidence linking alcohol and other illicit drug use with suicide ideation and attempts. He found out that young people who had made a suicide attempt had significantly higher levels of marijuana use and recent drunkenness than those with suicide ideation only. Alcohol intoxication was a predictor of future suicide attempts. This descriptive cross-sectional study found out that daily use tobacco is associated with suicide ideation and attempts among high school adolescents.

A report by the Borges, Walters and Kessler (2000) shows that, repeatedly using alcohol (frequency or quantity) at such a critical stage in life may result in detrimental effects on brain development. For example, the report says, alcohol exposure in adolescence has been associated with a greater risk of disrupted hippocampus functions, including memory in human models. This alcohol related cognitive, emotional, and behavioral impairments may then furthermore exert a cascading effect on subsequent health and adjustment. This report concludes that in adolescents, alcohol or drug misuse plays a role in up to 70% of suicide. Adolescents who are intoxicated are at high risk of successful suicide and of hurting others through accidents or violence.

In agreement with that report's findings, Williamson (2010) reveals that participation in any sexual activity or consumption of alcohol, illicit drugs or tobacco significantly increase the odds of depression, suicidal thoughts and suicide attempts among adolescents compared to those who are not involved in the identified risk behaviors. This report shows that about 50% of young people who commit suicide have a recent history of substance abuse.

A report by Kyalo (2010) observed that drugs and substance abuse, both licit and illicit are forming a sub-culture in Kenya among high school students. They say that this is a big challenge to the Kenyan society and immediate attention is necessary. Drugs abuse attacks the brain, which is the centre of all the vital human functions. When psychoactive substances destroy several thousand neurons, the consequences are fatal. Some students have died through an overdose of drugs. This type of death too is suicidal since it results to termination of a young life by self.

In Kenya, these findings are replicated by Oteyo and Kariuki's (2011) who in their study in Nakuru County found out that the secondary school students who use alcohol are more likely to commit suicide than their counter parts who do not. Gitonga (2012) too observes that many of the adolescents in North Kinangop area-the researcher's research site, commit suicide while drunk.

It is important to note that Karanga (2012) who wrote in Teachers' Image Magazine of August-December, 2012 points out that between one-fourth and one-third of all suicides are associated with alcohol as contributing factor (TSC, 2012). The present study seeks to understand whether teachers are aware that drug and alcohol abuse expose students to suicide and related behavior.

2.3.4 Depression and Related Mental Disorders

Mazza and Reynolds (2008) observe that for teens, even one episode of severe depression can trigger cause to believe it will never end and prompt a suicidal attempt. Dysthymic disorder lasts much longer than major depressive disorder, and can go for years without being diagnosed. These ongoing feelings of depression can also lead an adolescent to suicidal ideation if that teenager becomes discouraged with never feeling happy. Brunstein-Klomek, Marrocco and Kleinman (2007), observe that about one-third of adolescent suicide victims appear to satisfy clinical criteria for depression or other treatable mental illnesses.

Part of preventing adolescent suicide includes the ability to recognize symptoms of depression in teens. For teachers to identify at-risk students, it is important for them to know that in adolescents, the depressed mood can appear as irritability and displaying acts of defiant, aggressive, and rebellion. Teachers should also know that other symptoms of depression in adolescents include feelings of sadness, isolation, fatigue, boredom, hopelessness, helplessness, worthlessness, decreased attention and distractibility, apathy and inertia, eating and sleeping disruption, anxiety and agitation, and a loss of pleasure in almost everything. As Williamson (2010) observes, in adolescence depression may be masked by over-activity of participating in a constant cycle of social activities, sexual promiscuity, or drug and alcohol abuse and the depression may be demonstrated by the adolescent isolating from friends and family. This observation demonstrates that the teacher should not consider a single risk factor; the various factors interact to render the adolescent at higher risk of suicidal behavior. In addition, teachers should not downplay such like behaviors when displayed by students; they might be indicative of suicidal behavior.

In Kenya, Khasakhala, Ndeti, Mutiso, Mbwayo, Mathai (2011) found out that majority (75%) students of Nairobi public secondary schools who had clinically significant depressive symptoms, had suicidal behavior. Form 4s had higher clinically significant depressive symptoms than Form 2s. The occurrence of suicidal behavior in females as

compared to males was higher. They observe that although students in Form 4 had more clinically significant depressive symptoms than Form 2's had more suicidal behavior. Why Form 2s are more suicidal than the Form 4s while the latter have more clinically significant depressive symptoms, shows that depression interacts with other risk factors to precipitate suicide in the students. This study is only descriptive and does not go into what measures the teachers take to help students; the present study thus tries to bridge that gap of knowledge.

Karanga (2012) is in line with these findings when he identifies depression and other psychological problems as a risk factor for adolescents' suicide. The magazine says that the suicide rate for those with clinical depression is about 20 times greater than the general population. In order to identify a student suffering from depression, some symptoms teachers can look for are depressed or irritable mood, markedly diminished interest in activities, psychomotor retardation or agitation, fatigue or loss of energy, and diminished ability to think or concentrate (American Psychiatric Association, 2000). Though matters of depression sound to be more in the discipline of medicine than in the teaching profession, this research is aimed at finding out what knowledge teachers have in it. It could happen that certain universities provide this information to its teacher students while others might not. Teachers ought to know the symptoms that point to depression in order to help students at risk of suicidal behavior.

2.3.5 Illness, Disability and Chronic Pain

Research done by Wachter and Bouck, (2008) in South Korea found out that students with a chronic illness or a handicapping condition are at an even higher level of risk. A teenager, they say, may find a chronic physical illness or a handicapping condition difficult to deal with at school. For this reason, it is important for teachers to know that the stress from these conditions can trigger suicidal ideation and therefore should give helpful attention to the affected students.

Jones Fasha and Lollar's (2008) study in the USA, explored the relationship between physical disabilities or long-term health problems and health risk behaviors among high school students. They found that significantly more students with physical disabilities or long-term health problems than their peers engaged in behaviors that put their health at risk including, seriously considering attempting suicide (33.2% vs. 15.0%) and attempted suicide (19.0% vs. 6.5%). The study also provided evidence that, compared to their peers, twice as many students with physical disabilities or long-term health problems, reported that they felt sad and hopeless almost every day for two weeks or more in a row so that they stopped doing some usual activities. Similarly, compared to their peers, more than twice as many students with physical disabilities or long-term health problems reported seriously considering suicide during the 12 months preceding the survey, and they were almost three times as likely to report having attempted suicide during the 12 months preceding the survey.

Though the present study did not have special education teachers among its respondents, it presumes that mainstream schools too have physically challenged students and teachers need to know that they are more vulnerable than their unchallenged counterparts. There are also students living with HIV and AIDS. Sometimes teachers know them or some of them. Due to the stigma attached to it, HIV and AIDS may cause suicidal ideation in the young boys and girls. Plusnews (2008) reports a case where a secondary school student in Kenya's North Eastern Province (Garissa) committed suicide after he was diagnosed as HIV positive.

Williamson (2010) too contends that many adolescents are preoccupied with personal appearance and well being; anything that sets them apart from their peers is a source of stress for them. She says that even when the condition is relatively invisible such as diabetes, the student may feel like an outsider among peers. Chronic, long-term illness or a physical handicap can put an adolescent at greater risk for suicidal behavior.

While the above studies sought to establish that illness, disability, and chronic pain are related to suicidal behavior in students, the present study investigated whether teachers know that these are suicide risk factors among students. Moreover, by interacting with teacher counselors, the present research found out whether this factor affects our Kenyan adolescent students.

2.3.6 Stress Coping Skills

Gould and Kramer (2001) assert that thinking or believing that one's situation is hopeless and that things will never get better is associated with suicidality among adolescents. He adds that adolescents want to solve their issues once and for all, and so become hopeless if solutions are not reached.

Magaya, Asner-Self and Schreiber (2005), in a study among a sample of Zimbabwean adolescents, found out that cultural factors bear a significant influence on adolescents' choice of coping approaches, as adolescents are often encouraged to adopt non-confrontational and avoidant behaviors that are focused on the promotion of a harmonious and interdependent social environment. This may result into bottling up anger, unvented rage and suicidal ideation. Though this study was done in Zimbabwe, the Kenyan communities, especially in the rural areas bring up their children in a similar way. It would therefore be important to find out whether teachers know that how students have been socialized to deal with stressing events is related to suicidal behavior.

Coping, according to Frydenberg, (2008), refers to the set of cognitive and behavioral strategies individuals use in their efforts to manage stressful situations. The choice of coping strategies has been found to influence behavioral outcomes, as adolescents who model adaptive coping skills are reported to have a lower prevalence of suicidal ideation (George, 2009). The inability to develop effective coping skills for some adolescents, who have reached levels of significant personal distress and who display health compromising choices,

ultimately increases their risk of negative life outcomes such as psychiatric disorders, substance abuse and a greater propensity for suicidal behavior. A teacher who recognizes that poor coping skills may result in suicidal behavior, would take precautions such as referring the at risk student to a professional counselor for assistance.

According to Schlebusch et al (2009), young people employ suicidal behavior as more desperate cry for help and a first-line, crisis-management technique. This, he says, is consistent with international research which indicates that a substantial proportion of people who commit or attempt suicide indicate a need for help. Lack of interpersonal problem solving skills too increases the adolescents' risk to suicide. A knowledgeable teacher would not dismiss suicidal behavior as indiscipline; rather seek to understand the cause for that suicidal behavior.

2.3.7 Previous Suicide Attempt

Jeffrey (2003) points out that one of the suicide myths is to think that someone who attempts suicide will not try it again. He says that many suicide victims have made prior attempts, sometimes several. These attempts, he observes, can be in the form of reckless behavior that is often not recognized as suicidal.

Contrary to the myth, Bordini (2007) contends that as with much of behavior in general, the best single predictor of suicide attempt is a previous suicide attempt. Estimates, he reports, have suggested that as many as 40% of adolescents making a prior attempt will try again. He says that even more alarming is that one of 20 individuals with a history of more than one attempt will succeed in a suicide attempt. Repeat attempters are likely to have had school difficulties, serious life stressors as well as elevated levels of anger and depression. Older adolescent males with chronic conduct problems and poor impulse control make up a large proportion of these repeat attempters.

Reports from O'Connor(2008) in the U.S show that forty percent of adolescents who complete suicide have a history of prior attempts; He carried out a study which revealed that four out of every ten high school students who attempted suicide would go on to complete suicide . If a teen makes one suicide attempt, he says, even if the attempt does not appear to be serious, that teen is more likely to make another attempt at some juncture in the future. This is especially true when the original problem that led the teen to suicidal ideation has not been resolved. He observes that half of all adolescents who have attempted suicide once will attempt suicide again

Larkin and Beautrais (2008) agree with the observation that previous suicide attempt is the strongest predictor of a future suicide attempt or suicide. They observe that up to 25% of those treated in emergency departments for a suicide attempt will make a future attempt and 5% to 10% will eventually die by suicide. Beghi and Rosenbaum (2013) observe that the risk for a suicide attempt is higher for people who had previously attempted. The disadvantage of teachers using a previous suicide attempt as an indicator of increased risk is that the teacher may not know about the attempted suicide; parents may choose to keep that information from school personnel, consequently suppressing vital information needed to assess a student's risk for suicide. The present research is aimed at finding out what teachers believe; do they treat suicide prior attempts as predictive of future similar behavior.

2.4 Environmental Suicidal Behaviour Risk Factors

2.4.1 Access to Lethal Means

Eddleston, Sheriff and Hawton (1998) conducted a study that revealed that self-poisoning with agricultural pesticides or natural poisons such as oleander seeds as an important cause of mortality in many rural areas in Sri Lanka. Limiting access to these are difficult, the rural farmer needs ready access to pesticides since they are an important part of the developing world's strategy for increasing its food production. Locking pesticides away

safely is also difficult in rural Sri Lanka in as much in most developing countries where the farmers usually live in huts and have no facilities to store pesticides securely. Though may not directly control accessibility of lethal means by students, if they have the proper knowledge they can alert parents in events of lurking risk.

Similarly, Stone (2002) says that the reasons for easy access to pesticides in India are the same as those that exist in Sri Lanka. This holds true for most of the countries in the developing world. He adds in India , the most commonly used methods to commit suicide by adolescents was self-poisoning used by 69% of the study population, where in a large proportion of the cases the poison was stored at home. In Kenya where guns are not common in rural homes, adolescents attempt and commit suicide by swallowing poisonous pesticides among others means.

Where firearms such as guns are accessible to adolescents, the risk to commit suicide is even higher. Epidemiological studies done in the US have established that the access and availability of firearms is a key factor in observed increases in rates of adolescent suicide. Brent and Mann (2005) too observe that if guns are in the home, it is highly probable to be the method of suicide. Use of firearms has a higher degree of lethality than any other means of suicide. “If you have a gun in your home, you are five times more likely to have a suicide in your house than homes without a gun” (O’Connor, 2008).

Like in Sri Lanka and in India, many of the adolescents, who commit suicide in North Kinangop area, take pesticide which is readily available in the highly agricultural area. Gitonga (2012) reveals this in his media report that availed information on how the adolescents access the available pesticides and herbicides to commit suicide. It is therefore important that the teachers be aware of the risk accessibility of lethal means exposes to adolescent students.

2.4.2. Suicide Contagion

Cutler, Glaeser and Norberg (2001) conducted a study of U.S. among high school students. Findings of this study revealed that students who knew friends or family members who had attempted suicide were about 3 times more likely to attempt suicide than teens who did not know someone who had attempted suicide.

Contagion in suicide as described by U.S. Department of Health & Human Services, (2008) is the process by which the suicidal behavior or a suicide influences an increase in the suicidal behaviors of others. Of primary concern following a youth suicide is the potential for contagion that can lead to cluster suicides. An adolescent who identifies with another one's plight, and the latter victim has committed suicide, gets persuaded to think that suicide is the best way to solve problems. As part of her research, Gould and Kramer (2001) as cited in Joyce, (2008) identified 53 suicide clusters made up of 3–11 victims; ranging from 13–20 years of age, who took their life within a one-year period in the United States.

WaldVogel, Rueter and Oberg (2008) too in their study found that students having peers with suicidal ideations or attempts, or peers who completed suicide were also more likely to be suicidal, have substance abuse problems, or be depressed. They also found the death of an adolescent or the association with friends who have attempted or completed suicide may increase the depression of their peers and may lead to increased suicidal behavior in the group. Beghi and Rosenbaum (2013) also claim that studies conducted primarily in adolescents revealed that up to 5% of all suicides are due to suicide contagion. Teachers who know that suicide is contagious would treat suicide information with cautiousness in order to avoid it diffusing to the students in a manner that would suggest 'copycat' behavior.

2.4.3 Mass Media

A research by Martin (1996) examined the impact of televised suicide stories employed a cross-sectional survey of high school students in the Columbia to assess television viewing habits, television life events, and suicidal ideation and attempts. He observes that students reporting frequent exposure to television suicide reported more suicide attempts than those who did not watch suicide on the television.

Schlebusch, et al (2009) in his study of Suicide in South Africa observes that modern communication methods are apparently increasingly tolerant of suicidal behavior. He says that the concept of suicidal transmission is becoming extremely relevant amongst young people who learn about suicide through mass media publicity.

Furthermore, he asserts, there are websites that graphically describe suicide methods and information technology and media development have created expanded opportunities to influence vulnerable young people thereby enhancing the contagious effects of suicidal behavior. Internet and cellular telephone use in South Africa have blossomed amongst young people and worrying trends about their influence on suicidal behavior are clearly discernable in media reports. Beghi and Rosenbaum (2010) reviewed a large body of research in the last 10 years that clearly demonstrated that extensive newspaper and television coverage of suicide is associated with a significant increase in the rate of suicide.

South African high school students who are predisposed or vulnerable to suicidal behavior through imitation effects appear to be the most vulnerable to these modern influences. On the positive side, the media and internet sites can play a proactive role in the prevention of suicidal transmission by not sensationalizing coverage about suicidal behavior and by providing information about available help.

In Kenya, cases of suicide are reported both on television but even more on the print media. Especially after national examinations are announced in Kenya, many cases of

completed suicide are reported. Those who commit suicide are reported to have had lower academic grades than they or their parents expected. Students who watch or read about their peers commit suicide, may consider it a means coping skill if faced by a similar problem such as academic low grades. Since it would be difficult to censure all the information that students access, especially in print media, a teacher who is aware that mass media is a risk factor might choose to take time to teach students on alternative coping skills other than suicide. This research aims at establishing whether secondary school teachers are aware students are rendered vulnerable to suicidal behavior by watching, reading or surfing on suicide.

2.5 School Environment Suicidal Behaviour Risk Factors

2.5.1 General School Environment

A study done among Norwegian school going adolescents by Undheim and Sund (2005) found that teacher support strongly predicted lower depressive symptoms. They established that pupils with low levels of school engagement and involvement are more likely to attempt or seriously think about taking their own life or deliberately harm themselves.

Moon (2006) observes that a significant predictor for students' suicidal behavior in Korea is school adjustment. He says that academic stress, negative relationships with teachers and negative peer relationships increases the likelihood of suicidal ideation among high school students. He also observes that greater school-related stress significantly predicts suicidal ideation among adolescents. This implies that teachers who do not care about maintaining a good rapport with students precipitate students to suicidal behavior.

On the other hand Wango (2006) observes that Kenyan education system is too academic oriented at the expense of other important aspects of the student's life. He gives an example of a teacher who punishes a truant student without finding out the underlying

problems. Those underlying problems could be lack of school fees, being bullied in school or even other issues that might be suicidal behavior risk factors.

Unfortunately, by punishing, the teacher adds to the susceptibility of the student to suicidal behavior. While the present study is not out to verify general school environment as a risk factor for suicidal behavior among students, it sought to find out whether teachers are aware that students who are not comfortable at school are vulnerable to suicidal behavior. The feeling of 'not at home' in school prompts a student to turn suicidal.

Da Costa and Mash (2008) found that students who were not well integrated into their school environment were significantly more likely to report suicidal ideation than well-integrated students. They used a stratified, multi-ethnic sample of 1033 Grade 11 and 12 learners which included students from eighteen schools in the Free State (South Africa). They observed that school connectedness, school ethos and school context, orientation to school, teacher support, school engagement, school attachment, school bonding, school climate, school involvement, and school connectedness are all terms that refer to the attachment individual pupils have to the school and which have been measured with a variety of scales .

Pisani, Schmeelk-Cone, Gunzler, Petrova, Goldston, and Tu (2012) found that a more supportive school social environment was associated with 20 percent fewer suicide attempts than an unsupportive environment. A supportive school environment was also associated with a 9% lower rate of suicidal ideation among students. Sometimes teachers behave in a non caring manner to the students. Others do not mind how much students are finding themselves in school especially in Form I or in a new school. It would be important to find out whether teachers consider school environment as an influencing factor in students' suicidal behavior.

2.5.2 Bullying and Victimization

Brunstein -Klomek, Marrocco, Kleinman (2007), reporting on data from 2,342 high school students in Australia, found that frequent exposure to victimization and/or the bullying of others was associated with greater risk of depression compared to those not involved in bullying behavior. They also reported that frequent exposure to all types of victimization in a school set up was related to increased risk for depression and suicidal behavior.

Okembwa (2007) admits that although the issue of bullying is common place and well talked about topic in Kenya, the researchers have for the first time shown its magnitude in scientific terms. The high prevalence of bullying in Kenyan schools is worrying, and may be detrimental to the victims if well defined interventions are not put in place (Ndetei, 2005). Studies reviewed above show that one of those detriments is suicidal behavior. It is therefore important that teachers be aware that both perpetrators and victims of bullying are at high risk of suicidal behavior so as to offer them the necessary help. Studies show that students who are bullied and abused by their peers are at risk for mental health problems and suicide (Aslund, Starrin, Leppert & Nilsson, 2008). Experiences of being repeatedly subjected to humiliation, ridicule and social exclusion can result in what Aslund et al. (2008) refers to as ‘toxic’ shame, which they declare may form a basis for psychological and physical pathological reactions.

Without question, the nature of adolescent peer aggression has evolved due to the proliferation of information and communications technology. There have been several high-profile cases involving teenagers taking their own lives in part because of being harassed and mistreated over the Internet, a phenomenon they have termed *cyberbullicide* – suicide indirectly or directly influenced by experiences with online aggression (Hinduja & Patchin, 2010). They found out that those cyber bullied are as much as at suicidal behavior risk as those traditionally bullied

Childhood and adolescent bullying and cyber bullying behavior have been associated with depression, suicidal ideation, and suicide attempts in elementary, middle and high school students. Gould, Klomek, and Sourander (2011) found out that victims of bullying had more depressive symptoms, high levels of suicidal ideation, and were more likely to attempt suicide than were non victims of bullying. Both the perpetrators and the victims were at high risk for suicidal ideation and behavior. They found both peer victimization and bullying along with existing comorbidity of psychopathology were cause for concern as they were serious risk factors for later suicidality. Rivers I. (2013) claims that feelings of helplessness are significantly associated with suicidal thoughts among students who only observe bullying at school.

Bullying is punishable in Kenyan Secondary schools; however, it is still prevalent in Kenyan schools and could be precipitating students to suicidal behavior. Ngesu ,Gunga, Wachira, Muriithi ,Kili and K'odhiambo (2013). They add that student victims of bully commit suicide to escape from prolonged bullying. The present study investigated whether teachers are abreast with the knowledge that both the bullies and the bullied are at risk of suicidal behavior.

2.5.3 Academic Achievement

Kim and Chun (2000) noted that receiving results on the university entrance examination was reported as a major trigger for suicide attempts from 1994 through 1999. Kirk (2005) echoed this when he found that in the United Kingdom, among adolescents admitted to a pediatric ward; those who had attempted suicide were significantly more likely to report poor performance in school than individuals in a control group.

Suicidal high school students in Korea reported that the most significant stressor in their life is low academic achievement (Im & Jung, 2002). They add that poor academic performance contributes to depression and suicidal ideation among adolescents. Within the

extremely competitive educational environment, academic underachievement is considered as failure, leading to depression, anxiety, substance abuse, delinquency and suicidal behavior.

In Australian high schools, Richardson , Bergen, Graham, Leigh, Roeger, and Stephen (2005) carried out a research among young adolescents, and found out that perceived academic performance is related to self-esteem, locus of control and depressive symptoms. All three variables are related to suicidal thoughts and behaviors.

Cases of suicide among Kenyan students especially after exam results have been in the public domain. The high prevalence of suicide among Kenyan students has been noted by TSC (2012) and they affirm that perceived low academic performance is one of the principal risk factors associated with suicidal behavior among students. The researcher's concern is to find out whether the teachers take cognizance of this high risk factor for suicidal behavior among students; if they knew, they could not overemphasize academic achievement but would help students excel in other talented activities.

2.5.4 Peer Relationships

Fritsch, Donaldson, Spirito, and Plummer (2000) postulate that negative relationship with peers compromises the self esteem of adolescents that leads to increased risk of suicidal behavior. If that is the case then, it is important for subject and class teachers to be equipped with the knowledge to identify an at risk student and intervene appropriately.

Borowsky, Ireland and Resnick (2001) found that out-of-home relationships, peer relationships, and maintenance of self-esteem among peers are also important factors that might predispose adolescents to suicidal behavior. Establishing supportive social interactions could be a factor that might be helpful in preventing suicidal behavior. They claim that interpersonal problems involving friends (such as problems with their boyfriends/ girlfriends), particularly among persons with depressive disorders, should be considered as important potentiating factors for suicidal risk.

Borowsky et al (2001), in their cross sectional studies have found main effects of peer support variables and interaction effects between peer support and gender. Problems with their boyfriends/girlfriends and having a same-sex romantic attraction have been found to predict attempted suicide among adolescent students.

Field, Diego and Sanders (2001) found that high school seniors above a clinical cutoff score on a prominent depression measure had fewer friends, less optimal peer relationships, and were less popular. In Kenya, same sex relationship is not legalized. This implies that those with such inclination may have anxiety that could also translate into suicidal ideation. Same sex relationship is an emerging issue in Kenya and so teachers need to be aware that it is one of the risk factors for suicidal behavior among adolescent students.

Bearman and Moody (2004) carried out an extensive study of friendships and adolescent suicidality with a national representative sample of 13,465 students in grades 7 through 12 using a longitudinal design. It explored the relationship between adolescent suicidality and several friendship problems, including social isolation and intransitivity of friendships, that is, when an individual's friends are not friends with each other, with patterns of risk being examined separately for girls and boys. Social isolation and intransitive friendships were both associated with suicidal ideation in girls but not in boys. Also, in girls, the relationship between social isolation, intransitive friendships, and suicidality was stronger than other known correlates of suicidality such as depression. It suggests that friendship problems may be particularly influential in girls' suicidality. It is of paramount importance that teachers in all categories of schools are knowledgeable of this risk factor.

Eisenberg and Resnick (2006) found that 47.3 percent of gay adolescent boys and 72.9 percent of lesbian adolescent girls reported suicidal ideation, compared with 34.7 percent of non-gay or adolescent boys and 53 percent of non- lesbian adolescent girls

respectively. This statistics suggest that gay girls are more prone to suicidal ideation than boys; a claim that is put across by Lee, Kweon & Kim (2007).

Louw and Louw (2007) opined that on the one hand, romantic relationships can act as an emotionally and socially satisfying experience, but on the other hand romantic problems are stressful and may lead to suicidal behavior in adolescents. Disruptions in or the termination of romantic relationships are common events preceding adolescent suicidal behavior. Borsatte (2008) too partly attributes suicidal ideation to breached adolescents' peer relationships. Plessis (2012) further supports these findings in his study. He affirms that positive peer experiences among high school learners has a buffering effect against suicidal behaviour. Peers, he adds, can help adolescents cope with stressors they are exposed to, counteract loneliness and isolation and also contribute towards the development of the adolescent's self-concept.

The above findings imply that if a teacher has knowledge that these factors can suggest suicidal behavior to a student; they may not dismiss issues such as boy/girl relationship as some do. Instead, they would take caution in the occurrence of this event especially if the teenager presents any signs of suicidal behavior like withdrawal and clinical symptoms of depression. In some schools, boy/girl relationship is criminalized and so punishable. This research seeks to find out whether teachers are in the position to address boy/girl relationship from the perspective that it is a risk for suicidal behavior among adolescent students.

2.6 Family Suicidal Behaviour Risk Factors

2.6.1 Genetics and Familial Transmission

Mann (2002) observed that patients who engage in suicidal behavior often have a higher rate of suicidal behavior in their families. He says that parents of victims of suicidal behavior have higher rates of suicidal behavior, independent of the presence of psychopathology. Twin studies have demonstrated a higher concordance rate for suicidal behavior in monozygotic compared with dizygotic twins. Studies of adoptees who have engaged in suicidal behavior have shown increased rates of suicidal behavior in the biological parents of such adoptees, compared to controls, indicating familial correlates of suicidal behavior in the young.

Brent and Mann (2005) contend that suicidal behavior is highly familial, and on the basis of twin and adoption studies, it is heritable as well. Both completed and attempted suicide form part of the clinical phenotype that is familiarly transmitted, as rates of suicide attempt are elevated in the family members of suicide completers, and completion rates are elevated in the family members of attempters.

This is echoed by CDCP (2008) whose report shows growing evidence of familial and genetic factors that contribute to the risk for suicidal behavior in adolescents. Major psychiatric illnesses, including bipolar disorder, major depression, schizophrenia, alcoholism and substance abuse, and certain personality disorders, which run in families, increase the risk for suicidal behavior. However, they note that this does not mean that suicidal behavior is inevitable for individuals with this family history; it simply means that such persons may be more vulnerable and should take steps to reduce their risk, such as getting evaluation and treatment at the first sign of mental illness.

There are mechanisms and precursors of familial transmission of suicidal behavior. Zalsman (2010) contends that transmission of suicidal behavior may be through pure genetic

transmission (specific genes and loci). He adds that family, twin, and adoption studies have established a genetic basis of suicidal behavior. This implies that an adolescent who hails from a family that has history of suicide is more likely to be suicidal than others.

A teacher who does not know the family history of a student misses out the information that the latter's behavior is in some way tied to the family nature and nurture. This study sets to find out whether teachers know that familial genetics and socialization influences on a student as far as suicidal behavior is concerned. Teacher's knowledge would help them identify a student who is at risk of suicidal behavior offer the necessary help such as referral to a professional counselor.

2.6.2 Poverty

Larson, Wilson and Mortimer (2002) assert that unemployment of parents, especially fathers, is significantly related to the occurrence of depression and suicidal reactions in their children. In their study, Ulusoy and Demir, (2005) found that the risk for suicidal behavior is also increased among adolescents from socially disadvantaged backgrounds characterized by extreme poverty, unemployment, lack of social infrastructure, and the provision of inadequate educational, health, housing, recreational and transport facilities.

The effects of family poverty, according to Goldstein and Brooks (2006), create a sense of helplessness and an acceptance of circumstances which stifles the adolescent's ability to become ambitious, resilient and non-accepting of their circumstances. Adolescent students from lower-income families tend to have higher levels of depression and anti-social behaviors such as bullying, dishonesty and criminal acts, and display a higher risk for engaging in alcohol and drug use and other high-risk suicidal behavior. Kruger (2010) too established that adolescents living in extreme poverty are in danger of attaching little meaning to life and so harbor suicidal ideation. Though it is the government's duty to provide for poor students, a teacher who is aware that poverty can push an adolescent to attempting or

committing suicide would give an extra attention to the student especially if he is faced by other risk factors like poor performance.

2.6.3 Family Cohesion and Communication

Though familial cohesion is supportive to an adolescent member, too much of cohesion has a negative impact on its adolescent members. King and Smith (2000) observe that family cohesion has a significant correlate for adolescent suicidal threats. They say that suicidal threats may be more likely to be prevalent in adolescents who come from families where degrees of commitment, helps and supports are high. This finding is in line with that of Shek (2004) who postulates that high levels of family cohesion in a family may be linked to adolescent suicidal behavior. This, he continues to say, is because such families discourage independence and so they fail to facilitate disengagement between members. Lack of knowledge might result to a scenario where a teacher thinks that a student from a highly cohesive family would not be at risk of suicidal behavior and so fail to offer support even when they show signs of the same.

Inadequate flexibility in a family has been noted to be implicated in causation of suicidal behavior in adolescents. Shek, Lee, Lee and Chow (2006) carried out a study in china to find out the 'Perceived parental control and psychological well-being in Chinese adolescents in Hong Kong'. They observed that families that want to protect adolescents members from social change, result into those adolescents expressing desire to break from familial restrictions by portraying suicidal behavior.

On the other hand, Park and Choi (2008) report that lack of both father-child and mother-child communication has negative associations with suicidal ideation among middle school students. They observe that open and positive communication between children and their parents, particularly positive mother-child communication decreased youth suicidal thoughts.

Communication is a tool of cohesion in a family. Based on the responses of 5,557 Chinese secondary students in Hong Kong, Kwok and Shek (2010) examined the relationships among perceived hopelessness, family functioning, and suicidal ideation. Findings show that compared with father-adolescent communication, mother-adolescent communication generally had a stronger association with adolescent suicidal ideation. This might also be the case in Kenya given that over the years, mothers have been closer to their children since they have not been engaged in working far away from the family as fathers do. However, the inner workings of the family are changing by the day; many families have both parents working outside the family. In this case, this research treated communication with both parents as a risk factor for adolescents' suicidal behavior.

Vicki (2010) observes that in Africa, parents who seem to control adolescent members of the family and parents who feel powerless are more likely to be hyper vigilant with a child. They focus on the negative, engage in coercive and punitive parenting, misread neutral child cues as malevolent and derogate a child in an effort to restore power. As a result of negative parent-child relationships adolescents are often unskilled to cope with the demands of life due to the fact that their emotional developmental needs remain unfulfilled.

Adolescents from such families are subject to high parental restriction. Adolescents crave for freedom and when they cannot make themselves heard verbally, they try other behavioral communications that seem to shout their 'cry for freedom'. Unfortunately, these actions sometimes are suicidal and so harmful to the youth. For instance, a student whose parents are not willing to hear him out on why he or she performs poorly may attempt suicide to win his parents' attention.

Teachers who are aware that these familial issues are prompters of suicidal behavior would be in a better position to identify them in students and so help them. The concern of the present study is whether teachers are cognizant of these factors.

2.6.4. Family Structure

Evans, Hawton and Rodham (2004) did a literature search in Australia which revealed certain aspects of family structure that appear to be linked to adolescent suicidal phenomenon. Living apart from both parents, is found to have a direct association with suicidal ideation and completion. They report evidence that parental divorce and the presence of a step-parent was associated with suicide attempts and ideation among adolescents. There was also a suggestion of an association with absence of fathers but not mothers. However, they observe, it may have been that too few adolescents were living apart from their mothers for any impact on suicidal phenomena to be detected.

The family structure in the African context keeps on changing. Children and adolescents are living separate from their parents due to various reasons. Parents separate due to various reasons such as dysfunctionality of the family, economical aspects or even death among others. A case in point is the AIDS catastrophe that has left adolescents as bread winners for their siblings. In his study, Kiirya (2005) established that many orphan children and adolescents in Uganda who lost their parents to AIDS harbored suicidal thoughts. He says that those orphans find it difficult to survive both at home and in school. They fend for themselves and more often than not, the extended family neglects or even disowns them. He also observes that where one parent is absent in the early years of the child, the young one may suffer lack of role model and complicates their role identification in adolescents. Teachers who appreciate the fact that the students from such families might be at risk of suicidal behaviour, could intervene through parenting programs in the school.

They continue to observe that marital conflict is a stronger predictor than divorce. Many of the problems experienced by children and adolescents in families in which parents subsequently divorce can be observed long before separation and the intensity and frequency of conflict are predictors of child adjustment. Conflicts and arguments within the home are

clearly and directly associated with the prevalence of adolescents' suicidal phenomena, whereas family harmony and cohesion appear to have a protective effect. These associations appear to be stronger for females. Emotional aspects of the parental relationship are also relevant. Having unsupportive parents is directly associated with suicidal phenomena. Too little or too much parental supervision is also associated with an increased prevalence of suicidal phenomena, as is poor general family functioning.

Wangari (2012) says that psychologists identify home environment as determinant of mental state of a child and predisposes him to suicidal thoughts. Though they spend little time at home as compared to school calendars, the family structure in which the adolescent adapts to when they go for holidays is influential in their lives. Detailed and subsequently updated records of students especially can show the type of a family structure a student hails from. A teacher who knows that familial structures if combined with other challenges at school would precipitate suicidal behavior, is likely to intervene in the student's life when need be. On the other hand, the reverse is true; a teacher who is ignorant of those factors will not identify them in a student and so is likely not to help.

The present study was tailored to finding out whether secondary school teachers are knowledgeable about the factors that, through extensive studies, have been linked to suicidal behavior in adolescents. This study presumes that knowledge is predictive of ability to identify at risk student and thus help the learners to avert the tendency to suicidal behavior.

2.7 Review of Empirical Studies

2.7.1 Teachers' Knowledge of Adolescent Risk Factors for Suicidal Behavior

King (2000) did a study in the US to find out the School counselors' knowledge of youth suicide risk factors. The research design used was purely quantitative where the tool of collecting data was a 'tick where appropriate' questionnaire. A random sample of 340 high school counselors who were members of the American School Counselor Association

(ASCA) was mailed surveys regarding adolescent suicide. To establish content validity, the survey instrument was distributed to six national experts on adolescent suicide. Analyses of variance (ANOVAs) found that high school counselors' overall knowledge scores did not differ significantly ($p > .05$) based on any of the demographic variables.

One of the recommendations he makes is that school counselors should continue collaborating with teachers and other school professionals as a means to better understand their student population and educate teachers and other school professionals about suicidal risk factors. Since teachers are the school professionals who spend the most time with the students in their classes, they may be able to inform school counselors of students who are potentially at risk for suicide. In his data analysis, he did a chi-square test which revealed that there were no potential interaction effects between age, education level of the teacher and their overall knowledge scores. The overall findings of this study showed that the majority of school counselors surveyed were knowledgeable about the risk factors of adolescent suicide and about the appropriate intervention and postvention steps schools should take regarding suicidal students. Out of the 340 sampled counselors, 135 reported that they did not consider gender as a risk factor of suicide among the youth.

This finding is in line with Shelley and Nerina (2009) discussed above. In King (2000), one outstanding observation is that almost the entire school counselor participants (93%) affirmed that isolation by peers precipitated students to suicidal behavior. These two studies also have results that majority (89%) of school counselors believe that previous suicidal attempts predict future attempts.

The current study focused not only on teacher counselors but on all teachers since they all interact with students at a close range; a counselor may only depend on information gathered or observed by the teacher especially in the classroom context and during other curricular and co-curricular activities. This is because in Kenya, school counselors are not

mental professionals; one of the teachers is appointed by the head teacher to become the teacher-counselor. Another flaw that the present study improved on is the research method; use of concurrent triangulations yields to more comprehensive data.

Hamrick, Goldman, Sapp and Kohler (2004) carried out a study in United States measuring teachers' abilities to identify symptoms of suicide behavior in adolescence. The Student Behavior Survey (SBS), a questionnaire designed to assess an educator's efficacy in identifying symptoms of suicidal behavior was used. Participants were 882 regular and special educators in a southeastern state who completed mailed questionnaire presenting hypothetical vignettes of adolescents at risk for suicide. The hypothetical adolescents were portrayed as showing behavior changes over a period of six months.

Multivariate analysis of responses revealed no significant difference between the capabilities of regular and special teachers to identify these symptoms, either covert or overt. Findings indicated that both regular educators and special educators had difficulties in correctly identifying symptoms of depression as suicidal risk factor. The present study reached out to a more representative number of schools and use method triangulation to collect and analyze data, both questionnaires and interview guide was employed as data collection tools.

Westefeld, Ketterman, Lovmoand and Hey (2008) in their study on the knowledge, attitudes and opinions of American high school teachers concerning adolescence suicide found out that teachers have some familiarity with the risk factors for adolescence suicide. 167 high school teachers from five high schools in four school districts were administered a questionnaire that asked about a variety of issues related to suicide and high school students, including the nature of the problem, risk factors, and solutions. A cross sectional survey was used. The respondent teachers were given a list of risk factors drawn on the literature on adolescence suicide and were asked to indicate those they believed were risk factors. Data

was analyzed in tables and percentages. A 68% of the participants indicated that they viewed these risk factors as contributing to adolescence suicide.

Although teachers in Westefeld et al study had familiarity with the risk factors for adolescence suicide, when asked to identify other risk factors not included in the list teachers did not identify them. One of the strongest risk factors for eventual completed suicide that teachers did not recognize is previous suicide attempt. A majority of 78 % said that family problems are a risk factor. Stress related to teachers and games coaches was identified by 43% while 70% of affirmed that a history of mental illness is associated with suicidal behavior in adolescents.

Majority of their participants affirm that alienation from peers leads to suicidal tendencies in Secondary school students. Majority of them too knew that ending an intimate relationship would trigger suicidal behavior in adolescents while only 57% knew that someone who committed suicide and getting the idea from them is a suicide risk factor among secondary school students. A majority (88 %) of their participants say that alienation from peers contributes to suicidal thoughts among the school going adolescents while 53% acknowledge that academics related stress is a suicidal behavior risk factor among high school students. Majority (74%) of the teacher respondents expressed knowledge that victims of bullying by relative and peer(s) precipitate students to suicidal behavior.

This study, like all studies, had limitations; the study drew its sample from teachers in only five high schools from 4 districts. In addition, it employed only descriptive survey to elicit data. The present study drew its sample from eight schools in a district that has 22 schools to improve on that flaw and used a mixed approach to carry out the study.

Shelley and Nerina (2009) carried out a study to find out the school professionals' role in identification of youth at risk of suicide in Australia. The target group for this study was secondary school professionals. A survey research design was used and data was

collected using a self-administered questionnaire. The Adolescent Suicide Behaviour Questionnaire (ASBQ) by Scoullar and Smith (2002) which was developed specifically to measure knowledge on suicide was adopted. The respondents for this study were volunteer secondary school teachers. The sample comprised of 201 secondary school teachers from both Private (n=63, 31%) and Government (n=138, 69%) schools who were randomly selected from the various volunteer teachers in North Queensland schools. Findings show that, only half of the respondents (51%), identified the suicide risk factors indicated in the questionnaire.

The vast majority of school teachers (89%) were unaware of the high prevalence of mental disorders in adolescents who commit suicide. There was also a notable deficit in teachers' knowledge of family and social environmental risk factors affecting suicide among adolescents. Teachers were unaware that risk factors such as a family history of drug or alcohol abuse (82%) and depression in parents (73%) increase the risk of suicide in adolescents. In addition, the majority of teachers (88%) did recognize that a lack of social support was a risk factor for suicide.

Only 45% of the respondents demonstrated knowledge that adolescents with a family history of suicidal behavior are more at risk. Instead, 59% respondents said that suicidal and non-suicidal adolescents do not differ in their problem-solving abilities. About half of the participants (54%) affirmed that previous attempt is a risk factor. A 62.7 % agreed that suicide is contagious among adolescents.

A high percentage (84%) did not know that young females were more likely to attempt suicide than young males, yet many (75%) were aware that males are more likely to complete a suicide than young females. Majority (78%) of the respondents identified family breakdown of communication and conflict as common among adolescents who attempt or complete suicide and (88%) knew that lack of social support significantly increases the risk

of an adolescent committing suicide. Teachers were generally uninformed that a loss or separation of a family member is common in adolescents who commit suicide (81%). In line with these findings, Heitkamp (2011) who found that only 27% of his pre-service teacher participants knew that living separated due to any loss including death from parents is a risk factor of suicide ideation and completion among adolescents.

Shelley and Nerina's (2009) study had a sample selection bias. The characteristics and behavior of the teachers who volunteered for the study may be very different from the teachers who chose not to volunteer. To take care of this limitation, the current study stratified the respondents by gender and then randomly selected the participants. The school teacher counselors were purposively selected. While Shelley and Nerina's study was carried out in Australia, the current study is Kenya based. Shelley and Nerina carried out their study in both government and private schools, this study focused only on public schools where teachers are posted by TSC from diverse universities. One more improvement that was effected by the present study is presenting findings through other methods in addition to tables and percentages.

In addition, their first recommendation called for a development of education programs to improve teacher knowledge and recognition of suicidal behavior. By finding out the knowledge of teachers in this field, the present study attempted to establish whether development of a similar program should be realized in the Kenyan Education Sector and recommended the same.

Williamson (2010) carried out a study California that was designed to investigate the level of knowledge of adolescent suicide awareness, prevention, and intervention among high school teachers. The study adopted a used in this study was a positivist approach survey research design. This study employed only one data collection tool; the questionnaire and its population was high school teachers working in two high schools selected from the same

urban community. She used a sample size of 48 teachers. In his data analysis, Williamson used chi-square tests to establish that the correlation between teaching experience of teachers and their knowledge of suicidal risk factors was statistically significant; teachers who had taught more than ten years knew the information presented at almost twice the rate than the teachers who had taught up to ten years (71% vs. 38%).

Findings of this study revealed that a vast majority (87.5%) of the participants recognized previous suicide attempts as risk factors. Majority (80%) of the teachers recognized 'bullied at school' as a risk factor, but only about 44% of the teachers identified school bully to be a risk factor for adolescent suicide. The other risk factor recognized by 77% of the participants is family history of mental disorders and family history of suicide attempts and completions. Lower than half (35%) of his participants agreed that disabled students are vulnerable to suicidal ideation as compared to children without disability. The same respondents reported that students with learning disabilities are prone to suicidal ideation more than their not- challenged- counter parts.

One limitation of the above reviewed study is that the researcher drew his sample from only two schools. The results may therefore not be used to generalize the findings to a larger population and to other areas because the sample is not representative of all secondary school teachers. The current study did not just select schools, it randomly sampled eight schools of different levels; District, County and National schools to ensure adequate representation. In addition, while this study was carried out in California, the present study focused on Nyandarua South District in Kenya.

Heitkamp (2011) carried out a study in Cleveland State University to find out the knowledge of undergraduate pre-service teachers had about risk factors of adolescent suicidal behavior. The participants were 54 pre-service teachers from the same university and he admits that, "this study had one major limitation; the sample size was too small" (p.74); the

researcher also observes the limitation. Having respondents from one university might only reflect what content is taught in that particular University which compromises the generalizability of findings. To correct this flaw, the current study sampled teachers from different schools. This gave it a chance to capture what the various teachers have been taught about adolescent suicide in the various universities where they studied. Unlike Heitkamp's, the current study dealt with graduate teachers who practically interact with students, not those in University colleges in the Kenyan context.

The study used only descriptive survey method to elicit information. The present study employed both descriptive and naturalistic approaches. In addition, for comparative purposes, it is important to carry out a similar study in Kenyan setting; though the current study is not a comparative study by design; its result revealed the difference of knowledge between the two groups of respondents.

The instrument used was the Adolescence Suicide Behavior Questionnaire (ASBQ) that was developed by Scouller and Smith (2002). It consists of 39 statements about adolescence suicide across five separate contents areas pertaining to general area of adolescence suicide; demographics and statistics, risk factors warning signs and prevention and treatment. Besides adapting the aforementioned questionnaire, the present study also used interview guide to capture first hand experiences of the knowledge of teachers.

The hypothesis of the above reviewed study was that participants of the study would have low overall knowledge about adolescence suicide. In his study, he established that pre-service teachers with more experience in classroom teaching answered significantly more ASBQ items than those who had little experience. On the contrary, correlation between the number of Education courses taken and correctly answered questions was not statistically significant. As Heitkamp predicted pre-service teachers demonstrated poor knowledge level on the risk factors for adolescence suicide, scoring less than 60% of the items that they

answered in ASBQ. Instead, they scored the highest number in recognizing warning signs of suicide in adolescence. This finding is in agreement with Scouller and Smith (2002), who found that teachers in his sample scored better in warning signs, but poorly in identifying risk factors for adolescence suicide. Majority of participants recognized depression as a risk factor for suicide among adolescent. The current study sought to find out whether teachers knowledge concurred with these findings.

Half of the participants correctly identified that young males are more likely to complete suicide than young females. However, the majority of participants did not know that young females are likely to attempt suicide than young males. Only 27% of his pre-service teacher participants knew that living separated due to any loss including death from parents, is a risk factor of suicide ideation and completion among adolescents.

A majority of 60% of participants did not know that adolescents who have psychiatric disorders are vulnerable to suicidal behavior. Shelley and Nerina (2009) too had similar findings. This finding is in line again with the study by Scouller and Smith (2002) which found that only 11% of teachers knew that Depressive disorders are a risk factor of suicidal behavior among adolescents.

Majority (76.6%) of Heitkamp's participants recognized that any type of loss of a very significant peer such as girl or boyfriend could trigger a suicidal attempt in adolescents. Interestingly, only 27% of the participants answered correctly that living separated from parents due to any loss including death, is a risk factor of suicide ideation and completion among adolescents. Similar to Williamson (2010) findings, Heitkamp's (70.4%) respondents affirmed that previous suicide attempt(s) was a factor.

In assessing the level of Australian teachers and general practitioners about adolescence suicide, Scouller and Smith (2002) developed the Adolescence Suicide Behavior

Questionnaire (ASBQ), 39- item questionnaire that measures knowledge about adolescence suicide across five separate content areas related to the general area of adolescence suicide.

The five content areas measured by ASBQ include demographics and statistics, precipitating factors, risk factors, warning signs and prevention treatment. They found that knowledge of teachers about risk factors for adolescence suicide was poor. Teachers on average only answered 59% of ASBQ items correctly. The current study adapted the ASBQ to find out what knowledge Kenyan teachers have about those items.

Many of the respondents, (45%), of teachers indicated that they were not sure whether all suicide threats should be taken seriously. This is contrary to Williamson (2010) whose majority identified suicidal threats as a predictor of future ones. Only 11% of teachers were aware that having a psychiatric disorder is a strong risk factor for adolescence suicide; findings that are replicated by Shelley and Nerina (2009); and Williamson (2010). It was interesting for the researcher to find out how respondents in the present study would respond differently. Scouller and Smith (2002) found out that teachers in their study were generally poorly informed about adolescence suicide. The current study sought to reveal whether Kenyan teachers are knowledgeable in identifying the various suicidal risk factors.

2.7.2 Suggested Ways of Improving Teachers' Knowledge of Adolescents' Suicidal Behavior Risk Factors

Upon finding out that teachers lacked knowledge in some risk factors, Nerina and Shelly (2009) recommended development of education programs to improve teacher knowledge and recognition of suicidal behavior; education of teachers on youth suicide at the beginning of their career, which would better equip inexperienced teachers; addition of a suicide education module to university curricula for both primary and secondary school teachers that include information and training on assessing risk of suicide and information on appropriate referral of suicidal students; provision of regular in-service training on youth

suicide to all teaching staff; periodic training every two years will further ensure that these professionals remain aware of the behavioural characteristics of suicidal intent as well as the appropriate steps to take with a suicidal student.

In addition, they also recommended that all schools should ensure that they have a policy on suicide and that their teachers are aware of it in order for any intervention to be successful. According to them development of education programs to improve teacher recognition of suicidal behaviour could dramatically decrease one of the leading causes of death for young people.

Williamson (2011) too found that teachers would have to be trained on adolescents' suicide. He pointed out that as Leane and Shute (1998) observed in Adelaide, teachers' 'gatekeeping' potential was compromised by a low level of knowledge about factors of suicide risk. He therefore advocated for training of teachers on the same. However, he did not specify the particular ways in which teachers could be trained.

Similarly, based on his findings, Heitkamp (2011) pointed out that there was need for better education and preparation on both pre-service teachers and teachers in the area of adolescent suicide. He opined that part of the undergraduate level and in service programs for teachers already working in the field should include modules that focus on increasing teachers' knowledge about adolescents' suicide and how to help at risk adolescent students.

The role of teachers in identifying suicidal students and offering appropriate help suggests knowledge of suicidal behavior risk factors .However, prior research indicates that suicide prevention–related skills and knowledge are lacking among many high school teachers. The present study sought to find out what teachers, especially teacher counselors suggested as ways of improving their knowledge of suicidal behavior risk factors that would aid identification of suicidal students and helping them appropriately.

2.8 Summary of Reviewed Related Literature and Research Gap

Research on suicide in Africa is scarce due to various reasons such as political and socio-economic instability, lack of accurate statistics on suicidal behavior, lack of research infrastructure and funds, limited death registers, a lack of expertise in suicide research among others (Schlebusch, et al, 2009). The present researcher makes an attempt to add to the relatively scarce information on adolescents' suicide in Africa and Kenya in particular by finding out the knowledge teachers have about the adolescent students' suicidal behavior and its risk factors.

None of the reviewed studies has revealed adequate teachers' knowledge about all the suicidal behavior risk factors among adolescents and high school students in particular Heitkamp (2011). Moreover, most of the reviewed studies have been carried out in the developed countries, so this research went some way into enriching the scanty research about suicide in Kenya and Africa at large.

Several studies have been carried out to find out high school teachers' or professionals knowledge about suicidal behavior risk factors among adolescents. Westefeld et al (2007) results indicate that 'a significant percentage of the teachers appear uninformed about high school suicide, including what action to take when a student is at risk' (p. 31). Shelley and Nerina (2009) and Williamson (2010) findings demonstrate how poorly teachers are knowledgeable in what predisposes adolescent students to suicidal behavior. Heitkamp (2011) observes that; 'as predicted, pre-service teachers demonstrated a poor knowledge level on the risk factors for adolescent suicide (p. 56). The fact that all these studies have revealed poor teachers' knowledge about adolescents' suicidal behavior, in developed countries, compelled the present researcher to carry out a similar study in Kenya where adolescent students' suicidal behavior is on the rise.

Moreover, most studies have adopted only one research method; either quantitative or qualitative. The current study employed mixed method paradigm; concurrent triangulation which provided more detailed information.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design and methodology. It describes target population, the sample, sampling procedures, research instruments, validity and reliability of the instruments, data collection procedures, data analysis procedures and ethical considerations.

3.2 Research Designs

This research employed mixed research methods. According to Creswell and Clark (2007), mixed methods research entails philosophical assumptions that guide the direction of the collection and analysis of data; and the mixture of qualitative and quantitative in many phases in the research process. They contend the central premise of this method as being the use of the combination of the two approaches to provide a better understanding of a research problem than use of only either of the two. Mixed methods research provides strengths that offset the weaknesses of both qualitative and quantitative research. The specific model of the research design that was employed in this study is concurrent triangulation model.

According to Terrell (2011) use of concurrent triangulation enables the researcher to collect two types of data simultaneously; both quantitative and qualitative data allowing for perspectives from each and provides advantages of both methods.

Specifically, cross-sectional survey study, which falls under quantitative paradigm, is one of the designs was used in the present study. It is carried out in a population at one point in time. According to Gay, Mills and Airasian (2009), this design involves collection of standardized, quantifiable information from all members of a population or a selected sample. The present study adopted simple descriptive cross sectional survey design since, according

to Marlow (2001), it generates initial insights into the nature of an issue and develops questions to be investigated by more extensive study

Another advantage of using survey research is that participants have time to answer the questions and there is a fairly quick turnaround (Trochin, 2006). Additional strength of survey research is “surveys present information about specific populations about which generalizations can be made” (Dickinson & Blunt, 2005, p. 53). This research therefore used the cross-sectional survey design to find out the knowledge secondary schools teachers in Nyandarua District have about risk factors for adolescent students’ suicidal behavior. The results could be generalized to other populations of similar characteristics.

Using qualitative research method, this study used phenomenology to elicit information from teachers. Phenomenology, according to Gall, Gall and Borg (2007) is the study of the world as it appears to individuals when they lay aside the prevailing understandings of those phenomena and revisit their immediate experience of the phenomena.

The distinctive characteristic of phenomenology is the emphasis on participants’ experiences and interpretations. In the present study, it sought to understand the experiences of teachers in what they consider to be risk factors for suicidal behavior among adolescent students. It also employed it in eliciting information from teacher counselors. Phenomenology procedure involves: identification of a topic of personal and social significance, selecting appropriate participants, interviewing participants and analyzing the interview data. Phenomenological inquiry is a straight forward procedure capable of detecting many aspects of experience that may prove to be important with no further analysis (Gall et al, 2007). The researcher was keen to follow the aforementioned steps.

3.3 Target Population

A target population in research, as Gall et al (2007); Mugenda and Mugenda, 2003 contend, includes all the members of a real or hypothetical set of people, events or objects

that conform to a given characteristic and to which a researcher wish to generalize the results of a study. Information got by the researcher from Nyandarua South District Education Office shows that the total number of teachers in this district as per February, 2013 is 168 in number. The target population for this study therefore consists of all the teachers in Nyandarua South District in Nyandarua County, Kenya.

3.4 Description of Sample and Sampling Procedures

Probability and non-probability procedures were used to select the sample size and sampling procedures. Non probability sampling is used when the researcher wants to get information from particular sources. According to Best and Kahn (2006), purposive sampling which is one type of non-probability procedures, helps the researcher to build a sample that is satisfactory to their specific needs.

According to Gay, Mills & Airasian (2009) in probability sampling, the researcher specifies the probability, or chance, that each member of a defined population was selected for the sample. Cohen, et al (2007) says that a probability sample is useful because the researcher is able to make generalizations since it seeks representativeness of the wider population. In addition, it gives equal chances of participation to each member of the population. Simple random sampling as Gay et al describes, could involve listing the number of the defined population, identifying the desired sample number and randomly picking them from the list. The researcher adopted this method to come up with the desired sample.

3.4.1 Schools

There is no exact size of sample but this depends on the purpose of the study and the nature of the population under scrutiny (Cohen et al 2007). They also say that in general, though, they say that the larger the sample the more reliable it is. For a survey research, a sample of 10% to 20% of population is acceptable (Gay, Mills and Airasian, 2009). For this study, the researcher chooses to use 50% as the percentage of sampling since the target

population which is slightly higher than (30%) the one advocated by Best and Kahn (2006) since the target population is relatively small.

The researcher purposively selected the one County school and the one National school. Four schools were selected from Engineer zone which has a total of ten schools. From Ndunyu Njeru, three out of the seven schools were selected and two school from Murungaru zone which has a total of three schools. Based on the list provided by the DEO in the site, the researcher wrote names of the schools on pieces of paper, then folded them and put into three baskets representing the three zones. The researcher picked from the various baskets pieces of paper correspondent to the required number.

Table 1

School Sampling Frame

Zone	School Category	No. of Schools	Sampling Procedure	Sample Size	Percent
Engineer	National	-	-	-	-
	County	1	Purposive sampling	1	4.54%
	District	10	Simple random sampling	4	18.18%
Ndunyu Njeru	National	1	Purposive sampling	1	4.54%
	County	-	-	-	-
	District	7	Simple random sampling	3	13.63%
Murungaru	National	-	-	-	-
	County	-	-	-	-
	District	3	Simple random sampling	2	13.63%
Total	-	22	-	11	50%

Source: Nyandarua South District Education Office. (2013)

3.4.2 Teachers

In this research, teachers were key respondents since it is their knowledge that the researcher wanted to measure. The teachers were stratified random sampling was used to sample the sample of 73 (43.45 per cent of 168).

3.4.3 Teacher Counselors

Since the researcher believes they might possess more knowledge on adolescents' suicide as compared to the rest of the teachers, all the teacher counselors were be handpicked.

Table 2

Teachers' and Teacher Counselors Sampling Survey Frame

Category	Total Population	Desired Sample Size	Actual	Sampling Technique
Teachers	146	73(43.45%)	71(97.26%)	Random Sampling
Teacher Counselors	22	11(6.54%)	9(81.8%)	Purposive

3.5 Description of Data Collection Instruments

This study used questionnaires and interview guides as instruments for collecting data.

3.5.1 Questionnaires for Teachers

Questionnaires are economical, ensure anonymity, permit use of standardized questions, have uniform procedures, provide time for the respondents to think and are easy to score (Ogula 2005). For this reason this research employed them to elicit the desired information.

The questionnaire used in this research were adapted from a 39- item questionnaire (ASBQ) developed by Scouller and Smith (2002). It was self-administered and took the respondents around 30 minutes to fill in. It had six sections. Section A consisted of items on demographic information of the teachers namely; gender, age bracket, marital status, teaching experience in years and level of education and training in adolescents' suicide. Section B consisted of questions related to personal factors that precipitate adolescents to suicidal behavior. Section C dealt with environmental factors. Section D consisted of questions on whether teachers know the school factors that prompt suicidal behavior in students, while section E contained questions related to family and how it may predict suicidal behavior in the adolescents.

3.5.2 Interview Guide for Teacher Counselors

An interview guide, is a tool that aids a face to face encounter between a respondent (interviewee) and a researcher (interviewer) that entails orally asking questions and making comments to lead a respondent towards giving data (Mugenda & Mugenda, 2003). Probing is used to get deeper information. A rapport is picked with prospective respondents prior to the actual interview in order to obtain maximum cooperation and accurate information. Interview guides are flexible and yield high response rates However, they involve more travels hence are more expensive, time consuming, requires more researcher's interpersonal and communication skills.

In the present research, an interview guide was used to interview teacher counselors. Teacher counselors handle students' social issues and for that reason, they might possess more detailed and firsthand knowledge about factors that expose students to suicidal behavior. Moreover, they might have attended trainings and workshops that inform them in the same area. Use of an interview guide allowed the researcher to clarify any ambiguity or obscurity in the questions.

3.6 Validity and Reliability of Research Instruments

3.6.1 Validity and Reliability of Questionnaires

The questionnaires used in this research were expressly adapted for this study. By adapting Scouller and Smith's (2002) questionnaire, the researcher is sure the document accurately reflects the concepts that the researcher wants to measure since it was successful for the above quoted researchers. Mc Millan (2008) contends that the evidence of content validity is accumulated by having experts examine the contents of the instrument and indicate the degree to which they measure predetermined criteria or objectives. This research's quantitative instruments (questionnaires) were ascertained by subjecting them to the scrutiny and judgment of peers and the expertise of the university supervisors' panel consisting of

Counseling Psychology and research lecturers. Their criticism and suggestions were be considered in the final draft of the research instruments.

In addition, validity of questionnaires was ascertained by a pilot study which was done in two schools of similar characteristics with the population. Ten teachers were requested to fill in the questionnaire; they did not form part of the study sample. According to Gay et al (2009) pilot testing is conducted in order to detect any deficiencies and difficulties that respondents are likely to face while responding to the items. The observed areas of improvement were considered and appropriate corrections made. Any deficiencies were corrected and ambiguities cleared. This aided in having the participants read from the same script.

As regards reliability, this study used Chronbach's Alpha reliability test which, according to Gay, Mills and Airsian (2009) estimate internal consistency by determining how items on a test relate to all other test items and to the total test. This technique provides reliability estimates that are equivalent to the average of the split half reliabilities computed for all possible halves.

According to Bowling (2002) an alpha of 0.5 or higher is considered as a sign of acceptable internal consistency. The present study yielded a reliability of 0.659 which is slightly higher than the recommended and so it is acceptable.

3.6.2 Credibility and Dependability of Interview Guide

The trustworthiness of research instruments in qualitative data, according to Cohen, Manion and Morrison (2007); Creswell (2009) focuses on the researcher since he/she is the instrument itself. The trustworthiness of a research therefore involves credibility, transferability, dependability and conformability.

Transferability (applicability) refers to showing that the findings can be applied to other contexts and settings. The researcher followed a research design and methodology, collected

in-depth data and for description of the phenomenon of the study. This allows other researchers to have a proper understanding and able to make judgments about the findings and transfer to other contexts.

Dependability (consistency) indicates that the findings are steady if the study could be repeated. The researcher ensured employment of triangulation of data collection methods. In addition, the researcher reported in detail the processes within the study, thereby enabling the future researchers to repeat the work, if not necessarily to gain the same results.

Confirmability (neutrality) involves the degree of neutrality or the extent to which the findings of a study are shaped solely by the participants and not the researcher bias, motivation or interests. The researcher used method and source triangulation in order to avoid the effect of investigator's bias. Leading questions were avoided during engagements and interviews and respondents were given sufficient time. The researcher has also acknowledged within the research report the reason of employing qualitative approach.

3.7 Description of Data Collection Procedures

After meeting the requirements at the department of postgraduate studies in education for the research proposal at the Catholic University of Eastern Africa, the researcher applied for a research permit from the Ministry of Higher Education. The researcher made courtesy calls to submit copies of the research permit and sought clearance from the District Educational Officer Kinangop South District before proceeding to the sampled schools. Further clearance from school principals was sought and building of rapport, booking appointments for interviews, administration of questionnaires and confirming when to collect them. The researcher enjoyed a lot of support by all principals.

Thereafter, the researcher administered research instruments to participants namely teachers and teacher counselors. To facilitate high response rate, the researcher personally collected data by administering the research instruments. To aid collection of unbiased

responses, the researcher emphasized on respondents' anonymity by requesting them not to indicate their names or those of their institutions and assured them that the information given would be treated in confidence and used solely for the study.

3.8 Description of Data Analysis Procedures

Data obtained from the questionnaires, and interviews in its original form may be difficult to interpret. Such data must be cleaned, coded, entered into a computer and analyzed and thereafter make conclusions and recommendations. According to Kothari, (2004) data analysis is the process of bringing order and meaning to raw data. This research used quantitative and qualitative data analysis

Quantitative data were obtained from the closed-ended items in the questionnaires. Questionnaire response rate computed and its adequacy established. The raw data were analyzed after being coded and entered into the computer by use of Statistical Package for Social sciences version 20 (SPSS). Data were summarized using descriptive statistics such as frequencies and percentages.

Qualitative data were derived from interviews conducted on teacher counselors, and from the open-ended items on the various categories of questionnaires. The raw data was examined and analyzed to establish accuracy, usefulness and completeness. The process of analyzing qualitative data involves systematically searching, arranging, organizing, breaking data into manageable units, synthesizing and looking for patterns among variables. The researcher was categorized data into themes and used thematic analysis through discussions and presented in form of narratives, direct quotes and excerpts.

3.9 Ethical Considerations

The researcher made sure that the purpose of this study was fully explained in advance to respondents, informed consent was obtained from all the respondents before answering questions; they were required to sign a consent letter. Since suicide and related

behavior is a sensitive issue that might evoke emotions and memories among the respondents, the researcher briefed the respondents prior to responding to questionnaire and conducting interviews.

Confidentiality at all times was maintained and anonymity of the identity of the respondents safeguarded by using codes. The researcher was open and honest in dealing with respondents. Respect and dignity for human respondents was upheld. All the information got from sources other than the researcher was duly acknowledged to avoid plagiarism. Findings of the present study were reported with the highest possible objectivity and utmost honesty.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the findings of this study based on the data collected through questionnaires for teachers and interview guide for teacher counselors. The summaries of these findings are presented in tables of frequencies and percentages, and in narratives and direct quotes.

The chapter is organized into five sections that include demographic information of the study participants, teachers' knowledge of personal suicidal behavior risk factors of adolescent students; personal suicidal behavior risk factors, environmental suicidal behavior risk factors, school suicidal behavior risk factors, and family suicidal behavior risk factors. Recommendations consequent upon the findings were made in chapter five.

4.2 Return Rate of Instruments

A total of seventy three questionnaires were distributed to the teachers who had been randomly sampled in the study. Seventy one teachers returned their filled in questionnaires. The researcher had intended to interview 11 teacher counselors from all the randomly sampled schools. Those who were willing to participate were nine; the return rate of teacher counselors was 81% which too was very good. According to Mugenda and Mugenda (2003), the percentage of subjects who respond to questionnaires is adequate if it is 50%, good at 60% and very good at 70%. The response of the present study was 97% which therefore was very good.

4.3 Demographic Characteristics of Respondents

This section highlights the composition of the respondents (teachers and teacher counselors) in terms of gender, age, educational level, teaching experience, and training in suicide.

Table 3

*Demographic Characteristics of Respondents**n=80*

Demographic Information	Teachers		Teacher Counselors	
	Frequency	Percent	Frequency	Percent
Gender				
Male	48	67.6	4	44.4
Female	23	32.4	5	55.6
Sub-total	71	100	9	100
Age				
20-29	36	50.7	1	11.1
30-39	19	26.8	2	22.2
40-49	16	22.5	4	44.4
50-59	-	-	2	22.2
Sub-total	71	100	9	100
Educational Level				
Diploma	11	15.5	1	11.1
Degree	58	81.7	8	88.9
Masters	2	2.8	-	-
Sub- total	71	100	9	100
Teaching Experience				
0-5 years	43	60.6	1	11.1
6-10 years	8	11.3	1	11.1
10 and above	20	28.2	7	77.8
Sub- total	71	100	9	100
Suicide Training				
Yes	1	1.4	-	- -
No	70	99.6	9	-
Total	71	100	9	100

The information presented in Table 3 shows that the male teacher respondents (77.6%) are slightly higher than twice the female teacher respondents (32.4%); while male teachers are 67.6%, the females are 32.4%. This is due to a reason that the DEO had briefed the researcher from the outset that Nyandarua South is not a well infrastructured region and

so, in his observation, lady teachers prefer working in towns. This however is not the case when it comes to teacher counselors; out of the nine, five were females. The researcher sought to establish the gender of respondents with the assumption that ordinarily, women are intrinsically motherly and might be more involved in the social life of students than men do. Contrary to this assumption, both male and female teachers demonstrated the same knowledge.

Table 3 reveals that only one teacher has training in suicide. This finding implies there is need for training of teacher and teacher counselors in risk factors of suicidal behavior and adolescents' suicide in general.

Table 4 shows that 95.8% of the male teachers and 91.3% of female teachers were aware that depression is a risk factor of suicidal behavior. Gender therefore cannot be said to influence what knowledge teachers have about suicidal behavior risk factors.

Table 4

Cross Tabulation of Gender and Knowledge that Depressed Adolescents are more likely to be Suicidal than those who are not depressed

		Depressed adolescents are more likely to be suicidal than those who are not depressed.							
		Agree		Uncertain		Disagree		Total	
Gender		F	%	F	%	F	%	F	%
Male		46	95.8	-	-	2	4.1	48	100
Female		21	91.3	-	-	2	8.6	23	100
Total		63	-	-	-	4	-	71	100

Statistics in Table 3 show that 50.7% of the teachers are aged between 20-29 years. While 26.8% were in 30-39 age brackets, 22.5% aged between 40-49 years. The present study did not observe any relationship between age and knowledge of teachers. Table 5 shows almost equal numbers of teachers aged between 20-29years, 30-40 years and over 40

years demonstrating uncertainty of knowledge of poor stress coping skills as a risk for suicide among the youth at 5.7%, 5.2% and 6.2% respectively.

Table 5

Cross tabulation of Age and Poor Stress Coping Skills as a Risk for Suicide among the Youth

Age	Poor Stress Coping Skills is a Risk for Suicide among the Youth							
	Agree		Uncertain		Disagree		Total	
	F	%	F	%	F	%	F	%
20-29 years	33	94.2	2	5.7	0	0	35	100
30-40 years	16	84.2	1	5.2	2	10.5	19	100
40 and above	14	87.5	1	6.2	1	6.2	16	100
Total	63		4		3		70	100

These findings are in line with those of King (2000) which revealed that there were no potential interaction effects between age and the teachers' overall scores in knowledge of suicidal behavior risk factors. It is however important to note that majority of teacher counselors 44.4% range from 40-49 years old and only one in their 20s and two were in the age brackets of 50-59 years. Another two are aged between 30-39. This implies that age is a factor to consider while appointing a teacher counselor in that a school teacher counselor has to be mature enough to handle adolescents' issues.

Teachers who were degree holders were 81%, 15.5% diploma holders while only two (2.8%) were master's holders. In addition, Table 3 reveals that 88.9% of teacher counselors were degree holders; only one had a diploma while none held a master's degree. The researcher sought to establish the nature and level of teachers' education in order to capture any influence education level may have on the knowledge teachers have about suicide. The observation the researcher made is that education level influenced the knowledge teachers have about risk factors of suicidal behavior.

Table 4 reveals that 60.6% have the lowest teaching experience of between 0-5 years. Only 11.3% have taught between 6-10 while 28.2% had 10 and above years of teaching experience. In normal circumstances, the more one is experienced in a certain field, the more they gain knowledge in the same and all circumstances that go with it. The present study observed that teachers with more teaching experience demonstrated knowledge in more risk factors than those with less teaching experience. This observation is similar to Williamson (2010) and Heitkamp (2011) findings that more experienced teachers scored higher in knowledge of suicidal behavior of students than the less experienced. For instance, Table 6 shows that 90% of teachers with 10 years of teaching experience were aware that adolescence is the most vulnerable age to suicidal behavior compared to 67% of those with 0-5 years.

Table 6

Cross tabulation of Teaching experience and Knowledge of Adolescence as the most vulnerable age to suicidal behavior

Teaching Experience	Adolescence is the Most Vulnerable Age to Suicidal Behavior							
	Agree		Uncertain		Disagree		Total	
	F	%	F	%	F	%	F	%
0-5 years	29	67.4	5	11.6	9	20.9	43	100
6-10 years	6	75	1	12.5	1	12.5	8	100
10 and above	18	90	2	10	0	-	20	100
Total	53		8		10		71	100

Table 3 shows that 77.8% of teacher counselors have a teaching experience of ten years and above. Only one teacher counselor had 0-5 and another one had 6-10 years of teaching. There seems to be a silent policy to appoint the more experienced teachers as teacher counselors. In fact, the researcher established that the one with 0-5 years of experience was standing in for the practicing teacher counselor. The researcher, through interview, observed that teacher counselors were more knowledgeable in most of the risk

factors than the class teachers. This finding is similar to King's (2000) findings who established that teacher counselors were more able to identify students at risk than teachers could. This finding is attributed to the fact that teacher counselors are more into contact with students as far as their psycho-social life is concerned than teachers are. In addition, teacher counselors had more teaching experience than teachers had.

4.4 Teachers' Knowledge about Suicidal Behavior Risk Factors

The teacher respondents were required to tick (√) either under agree, uncertain or disagree against each factor to the best of your knowledge. Agree was interpreted as teacher's knowledge of that particular factor as a risk, uncertain is taken to mean the teacher is not sure whether that factor can precipitate suicidal behavior in adolescents or not, while disagree interprets into lack of knowledge that a given factor is a suicidal behavior risk factor. In the negatively stated statements, disagree was interpreted as knowledge, uncertain simply meant lack of surety while agree interpreted into lack of knowledge in the given risk factor.

4.4.1 Teachers' Knowledge about Personal Suicidal Behavior Risk Factors

The purpose of this question was to find out from the respondents which personal suicidal behavior risk factors teachers know. It went further to find out which risk factors they had identified in their teaching experience. These include age, gender, alcohol and drug abuse; depression and related disorders; disability and chronic illness; stress coping skills and suicide attempts. Table 7 shows the statistics of those who possess knowledge in the various factors, those who are uncertain and those who do not know.

Table 7

Teachers' Knowledge about Personal Suicidal Behavior Risk Factors

Factor	Agree		Uncertain		Disagree	
	F	%	F	%	F	%
Adolescence is the most vulnerable age to suicidal behavior	53	74.6	8	11.3	10	14.1
Young males are likely to succeed in suicide than young females	39	54.9	18	25.4	14	19.7
Adolescents who abuse alcohol and other substance are likely to be suicidal	58	81.7	4	5.6	8	11.3
Depressed adolescents are more likely to be suicidal than those who are not depressed.	67	94.4	-	-	4	5.6
Disabled, and chronically ill adolescents are at higher risk for suicidal behavior than those who are not.	30	42.3	21	29.6	20	28.2
Poor stress coping skills is a risk for suicide among the youth	63	90.0	4	5.7	3	4.3
An adolescent who previously attempted suicide is likely to attempt again in future	52	73.2	14	19.7	5	7.0
Teenagers die of suicide more than older adults	24	34.3	20	28.6	26	37.1
Suicidal attempts are more common among adolescent females than males	18	25.4	27	38.0	25	35.2
Being drunk predisposes adolescents to suicidal behaviors	41	58.6	17	24.3	12	12.4
Majority of adolescents who commit suicide have a psychiatric Disorder	37	52.1	16	22.5	18	25.4
Adolescents living with Aids and diabetes are susceptible to suicidal behavior.	40	56.3	15	21.1	16	22.5
Suicidal and non-suicidal adolescents do not differ in their problem-solving abilities	15	21.1	12	16.9	44	62.0
Not all suicide threats by an adolescents should be taken seriously	16	22.5	9	12.7	46	64.8

As can be noted in Table 7, 74.6% of teachers know that adolescence as the most vulnerable age of suicidal behavior. This is in line with the claim of Louw and Louw (2007)

who contend that adolescence is characterized by significant cognitive, emotional, and social changes and so adolescents are more vulnerable to suicidal behavior more than both children and adults. Most of the interviewed teacher counselors too said they were aware they were handling the most vulnerable ages as far as suicidal behavior is concerned. One of the teacher counselors had the following to say

This is an age of confusion, turbulent age. Most of them are even misinformed and then when things happen, they commit suicide. For example, girls are cheated that they should break their virginity at this age, this leads to unwanted pregnancies. Some of them are ejected out of their families and they commit suicide out of frustrations. Boys are lured into drugs, their peers tell them that taking drugs sharpens concentration in class, when it doesn't work, they are devastated but addicted; they opt for suicide.

These findings imply that there is need for teachers to take time with adolescents, interact with them to find out what they are going through and advise them appropriately. This calls for teachers to be friendly to students so as to give them(students) the right information as they go through adolescence.

On the other hand, the finding that the 11.3 % were not certain and 14.1% do not know that age is a risk factor implies that those teachers are not cautious enough while handling adolescents in school and this could increase cases of suicide. Comparing the response to this statement with 'adolescents die more of suicide than older adults', it is apparent that teachers know they are dealing with an at risk age, but are not equally aware that the adolescents die more of suicide than adults; 34.7% expressed knowledge that adolescents die more of suicide than adults. In addition, 28.6% were not certain whether adolescents die more while 37.1% indicated knowledge that adults could be dying more than

adolescents. Uncertainty and lack of knowledge decrease the ability of a teacher to identify an at risk student which translates into no provision of help.

Given that 74.6% of the teachers and teacher counselors were aware that they are dealing with an age that is at risk, the researcher concludes that they (teachers) therefore, take appropriate precautions in order to save the young ones from the menace of suicidal behavior.

Statistics show that 54.9% of the teachers demonstrated knowledge that young males are likely to succeed in completing suicide than females. On the other hand, 25.4% demonstrated knowledge on the fact that females attempt suicide than male adolescents. According to a report filed by Center for Disease Control and Prevention ((CDCP) 2008), boys commit suicide more than girls. These findings are similar to Shelley and Nerina (2009), who established that majority of the teachers were aware that males are more likely to complete a suicide than young females.

Knowledge of this factor is important since it helps the teacher to intervene appropriately in cases of attempted suicide depending on the gender of the victim. Table 7 also shows that 25% could not tell which gender is more at risk while 19.7% thought that suicidal behavior among adolescents does not depend on gender. Dealing with both genders in a similar manner increases the risk since they are prone to different tendencies. It implies that only half of the teachers would attend to each gender differently as far as attempted and completed suicides are concerned. If all or majority of teachers were aware of this factor, cases of completed would be reduced especially in boys' schools while measures to avert suicidal attempts would be put in place in girls' schools. This finding compels the need for all teachers to be aware of this factor.

On alcohol and other substance abuse as a suicidal risk for adolescents, 81.7% affirmed it. It is important to have found out that a high number of teachers are aware of this factor since Karanga (2012) only outlined it as a risk but did not find out whether teachers are

aware. Teachers who expressed uncertainty were 5.6% while 11.3% indicated that it was not a risk factor. This finding suggests that if teachers were committed to curbing the increasing number of adolescents' suicidal cases as reported by Gitonga (2012), they would work on dealing with alcohol and substance abuse first. Through the interview, the researcher established that alcohol and substance abuse were prevalent in schools in that region.

According to Mazza and Reynolds (2008), depression is the surest predictor of suicidal behavior and this was confirmed by 94.4% of the teachers. None of them was uncertain but 5.6% demonstrated lack of knowledge. Most of the teacher counselors said they believed that it is a risk factor though they had not had many of depressed cases in school. This finding is contrary to that of Scouller and Smith's (2002) study where teachers were not aware of this risk factor. Similarly, Heitkamp's (2011) teacher respondents did not know that depression is a risk factor. It is important that teachers are aware of depression as a risk factor because in case they identified a case of depression, the researcher assumes that they would take the appropriate intervention measures. This might require consulting the parents of the student, referral to a mental professional or both.

Regarding psychiatric disorders as a risk of suicidal behavior, 52.1% of the respondents affirmed it, while 22.5% were not certain, 25.4% believed that this was not a risk factor. This implies that teachers recognize depression on its own as a risk but not other psychiatric disorders. Their failure to recognize is justified by the claim that little is known regarding which disorders are uniquely associated with suicidal behavior because of high levels of psychiatric comorbidity (Nock, Hwang, Sampson & Kessler, 2010). Through the interview, the researcher gathered that cases of psychiatric disorders are rare in schools and so, lack of teachers' knowledge in this factor may not directly affect dealing with suicidal behavior in schools.

Statistics indicate that 42.3% of the teachers expressed knowledge that disability and chronic illness precipitates suicidal behavior in adolescents, 29.6% do not know whether it is a risk factor or not, while 28.2% believed that it does not matter at all. Apparently, teachers who are aware of this risk factor in the present study are more than in William's (2010) study. The researcher gathered from the teacher counselors that disabled students are rare in schools in that district. Lack of knowledge in this factor therefore would not have an impact on alleviating suicidal behavior in secondary schools. However, 56.3% affirmed that suffering from HIV/Aids and diabetics could bring the risk of suicidal behavior higher. This implies that teachers would recognize these two chronic illnesses as a risk more than they the general chronic illnesses.

The researcher attributes the disparity in response to the fact that, according to the teacher counselors, there are scores cases of diabetic and HIV/AIDS positive students in their schools. Transcripts from the two longest serving teacher counselors were:

There are many cases of diabetes here. I think it is because of our staple food-potatoes. Students suffering from diabetes get tired of injecting themselves. Though they do not commit suicide, you can observe that they harbor suicidal thoughts.

HIV/AIDS is a bad disease. It is not only adolescents who kill themselves, even adults. The most recent case was a 14 year old boy. The grandmother had tried all the best not to let him know he was born positive. It is from the hospital that they revealed it, he killed himself that night.'

These data, based on teacher counselors' opinions, argues that schools should liaise with the nearby hospitals for health and counseling services for the ill students.

In response to whether teachers know poor stress coping skills increases the tendency of becoming suicidal, 90% of them responded in affirmation. A negligible percentage (4.3%) denied this claim while 5.7% were uncertain. This high number of teachers affirms what

Schlebusch et al (2009) claim that young people employ suicidal behavior as more desperate cry for help and a first-line crisis-management technique. While the ecological systems theory by Urie Bronfenbrenner (1990) does not explicitly explain how a personal factor such as stress coping skill can influence suicidal behavior, it acknowledges that the environment can pose challenges that require certain coping skills. Students face challenges both internally and externally, at home and within the school environment. The researcher assumes that given the fact that teachers are aware of this risk, they should take time in teaching students appropriate stress coping skills as a suicidal behavior preventive measure.

While 62.0% agreed that problem solving abilities differ between suicidal and non suicidal adolescents, 16.9% had no idea while 21.1% felt that it did not matter. This is different from Nerina and Shelly's (2009) findings where respondents reported that problem solving abilities did not vary between the two groups. The researcher attributed this disparity of responses to the two last factors to the fact that an adolescent may have problems that are beyond his power to solve and so stands a risk of committing suicide, however, it depends on the extent to which they can withstand problems. To elaborate this, one of the teacher counselors said the following. 'It is the power of the mind that matters. All adolescents go through more or less similar problems; those at higher risk are the weak minded; those who cannot absorb the problem shock.' This implies that despite the external problems that prompt students to suicidal behavior, for instance being bullied, some are able to withstand while others are not.

It is noted from Table 7 that, 73.2% of teacher respondents affirmed that a suicidal attempt predicts another one in the future, 19.7% were not sure while 7% were completely unaware. This explains why 64.8 % of them would take suicidal threats seriously as depicted on Table 9. However 12.7% were uncertain on whether all suicide threats should be taken seriously while 22.5% would not. These findings are similar to those of Williamson (2010). Teachers in the present study are knowledgeable in this risk unlike those of Scouller and

Smith's (2002). Given that most of the teachers are aware, the assumption is that they should offer appropriate help to any student who attempts suicide; they should not downplay it. Most of the teacher counselors were in agreement with this claim. One of them shared his experience:

'My brother was in Form 3, he once took some poison because he wanted to commit suicide after picking a quarrel with mom, we took him to North Kinangop hospital and he was detoxified, after three weeks he hung himself, from that time I never take suicidal attempts as jokes.'

Table 8 presents results on the personal risk factors that, in their observation and interaction with adolescent students, teachers have linked them to their suicidal behavior. The researcher deemed it important in order to find out whether there are other prevalent suicidal behavior risk factors other than those discussed in the literature review.

Table 8

Other Personal Suicidal Behavior Risk Factors Identified by Teachers

	Frequency	Percentage
Emotional Instability	45	63.3
Low self esteem	12	16.9
Irresponsible sex	11	15.4

The information presented in table 8 shows 63.3% of teachers stated that emotional instability is suicidal behavior risk factors that they had observed in suicidal adolescent students. The indicators of emotional instability that teachers identified were excessive anger, impulsivity and short temper. Though adults and children have their own nature of emotional instability, adolescence, as Louw and Louw (2007) portends, is an age of emotional changes. This implies that, if teachers are aware of this, they should make an effort to teach students how to handle emotions appropriately. This depends on whether they are well trained and

whether they are committed to reducing or eliminating suicidal cases in this region. Low self esteem was nominated by 16.9% as a risk for suicidal behavior in students. In addition 15.4% reported that boy/girl relationship engaged in irresponsible sex that resulted to unwanted pregnancies. This, in turn, is a risk factor for suicidal behavior especially in girls. Five of the eleven teacher counselors identified unwanted pregnancies as a great risk especially when it is coupled by authoritative parents who more often chase their pregnant adolescent girls away. This means that in order to deal with suicidal cases, teachers have to educate students on healthy relationships. On the other hand, teachers and teacher counselors should offer guidance to students who are in opposite sex intimate relationship as preventive measures.

4.4.2 Teachers' Knowledge about Environmental Suicidal Behavior Risk Factors

The environment around students, both social and physical may prompt them to suicidal behavior. It is important that teachers are aware of factors in the environment that can influence suicidal behavior so that they can control it. There are many of them but the ones discussed in the literature review of the present study are the ones the researcher sought to find out whether teachers were aware of. They are; information technology, access to lethal means and suicide contagion. Table 9 shows their responses.

Table 9

Teachers' Knowledge about Environmental Suicidal Behavior Risk Factors

Factor	Agree		Uncertain		Disagree	
	F	%	F	%	F	%
Adolescents who can access guns are likely to commit suicide than those who do not	39	55.7	16	22.9	15	21.4
Watching or knowing somebody who kill him/herself prompts an adolescent to do the same.	33	47.1	19	27.1	17	24.3
Information technology can facilitate suicidal behavior in teenage	49	71.0	15	21.7	5	7.2
Accessibility of pesticide and herbicides increases suicidal risk	41	58.6	11	15.7	18	25.7
The internet has suicidal sites where adolescents may learn from	40	57.1	24	34.3	6	8.6
Suicidal behavior is contagious	22	31.4	23	32.9	25	35.7

The information in Table 9 indicates that 55.7% know that access to lethal means such as guns increases the risk of behaving in a suicidal manner. While 22.9% were uncertain whether access to guns is a risk factor, 21.4% demonstrated lack of knowledge in this fact. On the other hand, 58.6% of the teacher participants know that lethal pesticides and herbicides accessibility precipitates suicidal risk. This resonates with Gitonga (2012) who reveals in his media report that adolescents in Nyandarua South have access to the available pesticides and herbicides to commit suicide in their homes. However, the percentages of those who were uncertain 22.9% and the 21% who denied the claim are not negligible. Their uncertainty and denial is probably pegged on their experience of the fact that most of the adolescents who attempt suicide in that area, buy the poison from the chemists but not from the family farm store. This fact was stated from the teacher counselors during the interview. One of the teacher counselors shared,

Most of the suicidal cases I have heard and seen do not get the poison from the family stores; they buy them in the angrovets. You see, the seller cannot tell whether the young man has been sent by their parents or the pesticide is for killing self; this is a region where farmers use those things throughout the year.

This finding implies that though teachers are aware of accessibility to pesticide/herbicides as a risk factor, it requires collaboration of other stakeholders like chemist sellers and parents to curb the menace. A policy like presenting a veterinary or agriculture officer's prescription to buy drugs could control adolescents from buying poison over the counter.

As regards suicide being contagious, 47.1% of the teachers indicated knowledge that it really is. According to Cutler, Glaeser and Norberg (2001), if one happens to watch somebody committing suicide, they can be prompted to commit suicide. While 27.1% of the teachers cannot tell whether it happens, 24.3% are completely unaware that suicide is contagious. These responses is contrary with Nerina and Shelly's (2009) who carried out a similar research in Australia whose respondents were aware of this risk factor. Findings of this study are taken to mean that if a student committed or attempted suicide, only a few teachers would take precautions against other students buying that idea. This is affirmed by the three teacher counselors who said that suicidal behavior is more deterrent than appealing to the victim's colleagues. One of them expressed the following,

When one of them attempts or commits suicide, the rest talk in disfavor of that action, they feel that the victim should have sought other ways of solving the problem. They feel it is a not socially acceptable behavior. You can hear them condemning the action, yes, it is deterrent.

The present study deduces that while suicide and related behavior of an individual influences others in the Western contexts such as Australia and America, it might not be the

case in Kenya and specifically among the high school students in Nyandarua South district. This means that Kenyan teachers might not require to panic that suicidal behavior might diffuse into other students in cases of suicide. It implies that the increase of suicide in Nyandarua South is not attributable to its contagiousness.

Statistics in Table 9 indicate that 71% of the respondents demonstrated knowledge that information technology can expose adolescents to suicidal behavior. While 21.7% were not sure about it, only 7.2% disagreed with that claim. It is positively impressive to find out that teachers in this region are well versed with Schlebusch et al (2009) observation that modern communication methods are apparently increasingly loaded with suicidal behavior among adolescents. This implies that teachers should censure the information students are accessing through technology. Censuring however is not taken kindly by the students and as one of the teacher counselor revealed; it could even lead to violence. Excerpt from the interview transcripts from one of the respondents is:

These young people watch horror movies. We know that they create bad pictures in their minds, some suffer hallucinations and that can lead to mental disorder, that can also lead to suicide. Others have pornography in CDs and mobile phones. The problem is that they do not want us to know what they watch. As they come from holiday, we check their bags but they protest, the other day they attempted a strike over that checking.

This finding implies that even when teachers are aware of a risk factor and are putting preventive measures to control it, other factors come into play which could counteract their efforts. For instance, students' level of discipline plays an important role in dealing with suicidal behavior among students.

About a particular element of information technology, the internet, 57.1% of the teachers indicated knowledge that it contains suicidal sites from which adolescents can learn.

While 34.3% were not certain about it, only 8.6% disagreed with this fact. Comparatively, the number of those who know (57.1%) is lower than those who are aware (71%) of Information Technology as a risk factor. The researcher attributes this to the fact that Nyandarua South is a relatively remote area and has no access to internet except through modems and phones. This means that even the teachers themselves might not have explored the internet to know whether it could have suicidal sites. This places the adolescent students at a higher risk since they can access the internet and be influenced by suicidal sites without having their teachers know that they (students) are in danger. Teachers therefore might need be familiarize themselves with the internet and its content in order to be in a position to judge whether a student who accesses it is at risk of suicidal behavior.

Generally, teachers seem to be fairly aware of the environmental factors that Bronfenbrenner's (1989) ecological system theory describes as the exosystem. The theory claims that that this subsystem contains external environmental settings around the individual, which may not directly interact with but may affect the individual.

4.3.3 Teachers' Knowledge about School Based Suicidal Behavior Risk Factors

Students spend much more time in school than they do at home. It is therefore imperative for teachers to be aware of the factors that could prompt suicidal behavior at school. Among the common and reviewed risk factors are general school environment, bullying and victimization, academic achievement and peer relationships. To solicit information on whether teachers are aware of these factors, the researcher asked the teachers to indicate the risk factors they know.

Table 10

Teachers' Knowledge about School Based Suicidal Behavior Risk Factors

Factor	Agree		Not certain		Disagree	
	F	%	F	%	F	%
Adolescents who feel at home in school are not likely to be suicidal	59	83.1	6	8.5	6	8.5
Students who bully and victimize others are at risk of suicidal behavior than those who do not	32	45.1	20	28.2	19	26.8
Adolescents scoring As and Bs are likely to be suicidal than those who score Ds.	13	18.3	18	25.4	40	56.3
Adolescents who have intimate friends are likely to be suicidal than those who don't have friend	32	45.7	14	20.0	24	34.3
Same sex attraction and relationship is a risk for suicidal behavior among adolescents	39	55.7	20	28.6	10	14.1
Lack of teachers' support is a risk factor for suicidal behavior among adolescent students	52	73.2	9	12.7	10	14.1
Victims of bullying are likely to be suicidal than those who are not bullied	54	76.1	10	14.1	6	8.5
Level of academic achievement may prompt students to be suicidal	46	64.8	14	19.7	11	15.5
Falling out with a boyfriend/girlfriend is common and so is not a risk for suicidal behavior	28	40.0	6	8.6	36	51.4
Lesbianism and gay relationships are common and so should not prompt an adolescent to be suicidal	11	5.7	16	22.9	43	61.4

The information presented in table 10 indicates that 83.1% of the teachers responded in affirmation that adolescents who feel at home in school are not more at risk of suicidal behavior like those who do not. It is also clear that 8.5% teachers were uncertain while an equal number of felt that feeling or not feeling at home at school is not related to suicidal behavior. The 83.1% of respondents have acknowledged what Bronfenbrenner's (1989) ecological systems theory describes as microsystem. This involves how an individual interacts with their immediate environment. One of such environments is the school where

the student spends the better part of their adolescence life. Related to this is teachers' support. According to Pisani, Schmeelk-Cone, Gunzler, Petrova, David, Goldston, and Tu (2012) , a supportive school environment is associated with low rate of suicidal ideation among students.

As it can be noted from Table 10, 73.2% recognized support of teachers as a risk factor, 12.7% were not sure while 14.1% said it has nothing to do with suicidal behavior of students. The high percentage of teachers who possess this knowledge is taken as an indicator that teachers in Nyandarua South District offer support to students so that they may feel at home. The researcher however noted a disconnect between knowledge and practice, as most of the teacher counselors claimed that teachers are not keen in offering support especially when students are facing social-psychological issues. One of the teacher counselors illustrated this saying, 'some teachers do not take time to help students even when they have lost their dear ones. Some just want to make sure the bereaved student academically catches up with the rest.'

In response to the question on whether teachers were aware that bullies are more at risk than those who are not, 45.1% of the teacher respondents indicated knowledge. While 28.2% were not sure whether bullies were at risk, 26.8% indicated lack of knowledge in this factor. These findings are similar to those of Williamson (2010) whose respondents were not aware that bullies are at risk. The finding that most of them do not know is illustrated by one of the teacher counselors who stated that a bully cannot be at risk of killing himself since they are out to kill others, not themselves.

Table 10 indicates that, 76.1% of teachers knew that if one is a victim of bullying and victimization, then they are at risk. While 14.1% are uncertain, 8.5% are completely ignorant. Similarly, Williamson (2010) respondents knew that being bullied exposed adolescents to suicidal behavior. Being bullied implies lack of social support and as mentioned earlier, the

latter increases suicidal behavior risk. This finding implies that in cases of bullying in schools, most teachers would only offer help to the bullied leaving the bully unattended. This would put the bully at a higher risk since as Gould, Klomek and Sourander (2011) reported, bullies too are at risk especially if they have other psychopathological problems.

The respondents who demonstrated knowledge that students who score As and Bs are at a lower risk than those who score Ds were 56.3%, 25.4% were not certain about it while 18.3% indicated lack of knowledge. This conforms to their response to whether academic achievement or failure can influence suicidal behavior. Majority of them (64.8%) indicated that it is a risk factor, 19.7% said they are not sure while 15.5% did not know that it is. According to Im and Jung (2002); Richardson, Bergen, Graham, Leigh, Roeger, and Stephen (2005) and Karanga (2012) studies, poor academic performance contributes to depression and suicidal ideation among adolescents. According to Ecological system's theory, the interaction between two or more Microsystems, such as a student and the academic system is referred to as a mesosystem. The theory postulates that such an interaction influences how an individual behaves. If the two are not interlocking, it might render them to being at risk. This is taken to mean that teachers are aware of elements within the academic system that prompt students to suicidal behavior. For instance, an adolescent might turn suicidal if they cannot score as expected by the academic system.

One possible reason as to why 18.3% of the teachers believed that high academic achievers are the ones at risk compared to D scorers, might be due to what three teacher counselors termed as mediocrity of low achievers and ambitiousness of higher achievers. One of them asserted

Low achievers have nothing to lose. For example girls who score Ds from this school think that they have marriage after Form IV as an option in life. For them, scoring either high or low does not disturb them. Instead, the higher achievers want to achieve

high enough to be admitted to university through Joint Admissions Board. When they fall short of this, they become devastated. We have lost scores of boys who fell below the cut mark by a point to suicide.

This implies that factors other than high or low academic performance come into play to render the adolescent at risk. This finding makes it a compelling case for the need for high school teachers to be trained on how handle both the highly performing and the low performers as far as suicidal behavior.

It is notable from the results in table 10 that 45.7% of the teachers affirmed the claim by Louw and Louw (2007) that adolescents who have intimate friends are at more risk than those who do not. At the same time, the 20% who reported that intimate friendship may prompt suicidal behavior among adolescents are in line with Louw and Louw (2007) observation that intimate friends can also experience romantic problems which are stressful and may lead to suicidal behavior in adolescents. Teacher counselors affirmed the two opinions as they shared experiences of how some pairs of friends support each other emotionally while others become too attached emotionally and affectionately and anything trivial like intransitive friendships may result into suicide. In relation to this factor, the responses of teachers to whether falling out with a girl or boyfriend is a suicidal risk behavior to adolescents were as follows; 51.4% said that a fall out is a risk, 8.6% were uncertain while 40% demonstrated that they do not know it as a factor.

These findings imply that it is difficult for the teachers to tell whether an adolescent in love is at risk of suicidal behavior or not unless other risk factors are in play. However, as Fordwood, Asarnow, Huzar and Reise (2009) put it, suicidal behavior is not precipitated by only one risk factor, rather, different factors interact to render the adolescent vulnerable to the same. A teacher may rule out other suicidal behavior suicidal factors in the students in order to determine whether they are at risk.

Statistics display that 55.7% are aware that, as Borowsky et al (2001) found out, having a same-sex romantic attraction predicts suicidal ideation among adolescent students.

Though 28.6% could not tell whether it predisposes or not, only 14.1% believe that it is not related to suicidal behavior. It is interesting to note that 61.4% of teachers were aware that lesbianism and gay is a risk factor. This echoes the findings of Eisenberg and Resnick (2006) who stated that gay adolescent boys and lesbian adolescent girls are more at risk of suicidal behavior than heterosexuals of both genders. However, 22.9% were uncertain whether gays and lesbians are at risk, only 5.7% negated the claim. Though gay and lesbianism are not common in Nyandarua South District, the researcher gathered from the teacher counselors that they perceive it as an abnormal tendency and so could lead to suicidal behavior especially if the victims come to know they have been discovered. Given that most of the reviewed studies about adolescent suicide is based on the developed countries, the researcher sought to find out whether there are other risk factors that are prevalent in the Kenyan context; especially in Nyandarua South District.

Table 11 shows suicidal behavior risk factors that teachers have identified in adolescent students in their course of teaching.

Table 11

Other School Based Suicidal Behavior Risk Factors Teachers have Observed in Students

Factor	Frequency	Percentage
Lack of school fees	8	11.2
Lack of guidance and counseling	21	29.5
Severe punishment	5	7
Teachers pressure on students to perform	20	28.8

From table 11, it is clear that 28.8% of teachers indicated that teachers' pressure on students to perform is a risk factor of suicidal behavior among them. Teacher counselors

attested to that observation saying that some teachers have a habit of calling students who apparently do not perform highly humiliating names. Some of those students acquire low self esteem which is a risk factor of suicidal behavior. The fact that teachers know that their pressure on students to perform exposes them to the danger of suicidal behavior implies that they have witnessed it and therefore might be focusing on other talents of students such as athletics, music or drama among others.

Lack of guidance and counseling is one suicide risk factor that 29.5% teachers reported. The teacher counselors too felt that students do not receive adequate guidance and counseling. This finding confirms what Duda (1996) found out in a research done in Machakos Secondary Schools, Kenya; most students did not receive guidance and counseling services in schools. One of the teacher counselors elaborated:

The education system in Kenya is overly academic. The spirit of competition is also very high. Teachers try to use every available minute to cover the syllabus and coach students in order to perform. It is very rare to find a teacher sitting down with a student to talk about social matters. All issues that require guidance are pushed to the teacher counselor. He or she cannot manage all the cases, the students manage their way.

This finding implies that though teachers were aware of lack of guidance and counseling as a risk factor, they do not avail themselves to offer the same services to students. This thus increases the risk of suicidal behavior among adolescent students.

Another risk factor that was identified by 11.2% of teacher respondents is lack of school fees. It is important to note that this is connected to the factor of poverty where only 32% of the teachers agreed it is a risk factor. This implies that poverty in this region is not perceived as one of the main risks of suicidal behavior among the adolescent students.

Severe punishment, especially expulsion from school, prompts the students to be suicidal was nominated by 7% as a risk factor. Expulsion, the teacher counselors said, if coupled with lack of communication between the student and the parent, fuels suicidal ideation and attempt in adolescents. Such an incident is what Bronfenbrenner's (1989) describes as mesosystem; it involves the interactions and interrelationships between two or more microsystems. The school system expels the student only to find an unwelcoming family system. The two systems therefore meet to propel an adolescent to suicidal behavior. If this is the case, teachers and district education officers should find out the relationship between the student and parents before they expel students in order not to put them to a suicidal risk.

4.4.4 Teachers' Knowledge about Family Based Suicidal Behavior Risk Factors

The family is a very important unit in the life of an adolescent. Its environment can either be a strong source of support for developing adolescents, or negatively affect them according to the nature and nurture. Such risk factors are genetics and familial transmission; poverty parent-child communication and cohesion; and family structure. The statements in table 11 display which familial factors the teachers were able to identify.

Table 12

Teachers' Knowledge about Family Based Suicidal Behavior Risk Factors

Factor	Agree		Uncertain		Disagree	
	F	%	F	%	F	%
A family that has suicidal history can genetically transmit it to the children.	33	46.5	12	16.9	26	36.6
An adolescent can behaviorally learn suicidal behavior from family members.	52	73.2	12	16.9	7	9.9
Students from poor families are likely to be suicidal than the rich	23	32.4	8	11.3	40	56.3
Adolescents whose parents freely communicate with them can be at suicidal behavior risk	5	7.0	3	4.2	63	88.7
Living away from a parent or both precipitates suicidal ideation in an adolescent	42	59.2	13	18.3	16	22.5
Depression is more common in the history of parents of children who commit suicide than in the histories of parents of non-suicidal children	53	74.6	15	21.1	3	4.2
Death of a relative through suicide may suggest suicidal ideation in an adolescent	35	50.0	24	34.3	11	15.7
Suicide is more common among adolescents of high economic status than from low economic status	31	44.3	16	22.9	23	32.9
Parental conflicts are common precipitants of adolescents' suicide	56	78.9	8	11.3	7	9.9
Single parenthood is common and so is not a precipitant of suicidal behavior among adolescents	37	52.1	16	22.5	18	25.4

Table 12 points out that 88.7% teachers expressed knowledge that adolescents whose parents freely communicate with them are not at suicidal behavior risk as compared to those who do not. This finding is similar to Shelley and Nerina's (2009) findings whose respondents demonstrated knowledge in this factor. However, negligible percentages; 7% and 4.3% were unaware and uncertain respectively. Parent-child communication, according to Park and Choi (2008) may either enhance or lessen suicidal behavior in adolescents; it

depends on whether it is open or not. This finding means teachers are well aware of the role played by parent-student communication in the adolescents' welfare. It implies that they would identify as at risk a student whose communication with parent(s) is breached.

It is evident from Table 12 that 78.95% of the teachers demonstrated knowledge that parental conflicts are common precipitants of adolescents' suicide, 11% were hesitant and 9.9% did not know. The response of the majority echoes what the ecological system postulates; people's settings may indirectly affect an adolescent's risk for suicide. Even in cases where parents are in conflict only among themselves, the children are adversely affected. The observation that majority of teachers are aware of this implies that if they are perturbed by the rising cases of suicide, then they offer appropriate help to students whose parents are in conflict.

As illustrated in Table 12, 74.6% of the teachers affirmed that depression is more common in the history of parents of children who commit suicide than in the histories of parents of non-suicidal children. On the other hand, findings on 18% of the teachers are not sure whether depression of parents affects their children and 22.5% do not know that it does. Lack of knowledge would slow down the teacher's ability to identify a student at risk. It is important to be aware of this since, as (CDCP 2008) major depression disorders that run in a family increase the risk of suicidal behavior in adolescents. This implies that if they learnt of a depressive parent, majority of the teachers would keep watch in case the student shows any tendency of suicidal behavior; they would duly intervene.

Statistics indicate that 73.2% of the teacher participants demonstrated knowledge that an adolescent can behaviorally learn suicidal behavior from family members, 16.9% were not sure while 9.9% said it does not happen. Comparatively, 46.5% of the teacher respondents are aware that a family that has suicidal history can genetically transmit it to the children. 16.9% was uncertain while 36.6% demonstrated lack of knowledge.

As Zalsman (2010) contends, transmission of suicidal behavior may be through pure genetics (specific genes and loci). The family environment that influences behavior of an adolescent is captured by ecological systems theory which says that the immediate surroundings of an individual influence them. These findings show clearly that teachers are more conversant with what they can easily observe or gather from students but not book knowledge like genetics; after all, they are not mental or medical professionals. In relation to this, the researcher further sought to know whether teachers know that death of a relative through suicide may prompt suicidal behavior in an adolescent. Half of them (50%) were aware, 34% were not certain while only 4.2% were ignorant.

These findings show that teachers believe suicide is contagious more within the family circles than it is in the larger society. This finding is confirmed by the many teacher counselors who in the interview said that family based factors, more than school based, are to blame adolescent students' suicidal behavior.

In response to the statement that students from poor families are likely to be suicidal than the rich, 32.4% responded in affirmation while 11.3% could not tell the difference. Conformingly, 56.3% negated that those from the poor families are more at risk. This implies that majority of the teachers do not believe in the claims of Larson, Wilson and Mortimer (2002); Ulusoy and Demir, (2005); Goldstein and Brooks (2006), who contend that family poverty, which is characterized by provision of inadequate educational, health and housing among others, precipitates suicidal behavior in adolescents. In addition, when asked whether suicide is more common among adolescents from high than from low economic status, 44% answered in the positive, 23% were uncertain while 32.9% disagreed. This shows that majority of teachers believe that adolescents from rich families are more at risk than the poor ones. In support of this, one teacher counselors said:

The poor children have been brought up lacking in many things. They are used to having problems. They can go hungry even for days and no one will notice; they are strong. Wait one day the child of the rich misses a meal, or money for a school tour, he/she would easily go for the poison.

This finding is in agreement with the observation that only 11% of teachers identified lack of school fees as a risk factor. This implies that teachers would not give attention to a poor child in bid to decrease any risk of suicidal behavior, rather, a student from the rich would be attended to as one at risk. In this case, the researcher concludes that poverty is not a suicidal risk factor of adolescent students in Nyandarua South.

Living away from a parent or both as a precipitator of suicidal ideation in an adolescent was identified by 59% of the teachers as a risk factor. This finding is disagrees with Shelley and Nerina (2009) whose respondents were aware that it was a risk factor. On the other hand, 18.8% demonstrated hesitancy while 22.5% were completely unaware. The implication of this finding is that only half of the teachers would consider a student who lives away from their parent(s) as at risk. This translates into failure to help such like students and so may end up attempting or committing suicide.

The researcher further sought to find out whether teachers know that single parenthood is a precipitant of suicidal behavior among adolescents. As displayed on Table 12, 52.1% affirmed this claim, 22.5% were not sure while 25.4% believed it is not a risk for suicidal behavior. This finding means that, as far as suicidal behavior is concerned; only about half the teacher populace in this region would consider sons and daughters of single parents and students who live away from their parents as ones at risk. This finding is contrary to Johnson (2006) assertion that children of unmarried parent often fail and are at risk emotionally. On the other hand, teacher counselors had a different view. One of them said:

Problems arise when children of single mothers want to know their fathers. One boy who sat for exams last year picked a quarrel with the mother. When the mother failed to show him the father, the boy eventually got into drugs and then committed suicide. Another left a note saying the mother failed to provide school fees and he believed that if he had a father, he could have provide. Still another boy killed himself after he severally quarreled with the mother who kept on hosting different men in the house.

The fact that only teacher counselors and not teachers are aware of single parenting as a risk factor means that students do not readily tell any other teacher what makes them feel or behave suicidal. Given that teacher counselors are sometimes overwhelmed by the huge numbers of students who need counseling, the risk of suicide may run high among the students. Besides, teachers indicated other risk factors as displayed by table 13.

Table 13

Other family based suicidal behavior risk factors observed by teachers

Factor	Frequency	Percentage
Dysfunctional Family	34	47.8
Irresponsible Parenting	32	45.7
Absent parents	23	32.8
Pressure for high academic performance	32	45.7

From the table 13, it is clear that 47.8% of teachers attributed much of the suicidal behavior risk to dysfunctional families. They indicated that they have identified elements like violence in the family, alcoholism, rejecting parents and child abuse present in suicidal students. Irresponsible parenting as a risk factor was named by 45.7% of the teachers. This observation agrees with that of Westfeld et al (2008) that family problems are a great risk for suicidal behavior among adolescent students. The absence of parents was another identified risk. On the other hand, 32.8% of the teachers stated that divorce or prolonged separation

between the parents poses a suicidal risk to the adolescent students. Teacher counselors said that some parents are absent from the adolescents' life because of drug addiction and alcoholism. This is a double tragedy since the adolescents, apart from the absence of parents; are denied role models. This reality increases the risk of adolescents' suicidal behavior. Finally, 45.7% of the teachers stated that in their teaching experience they have identified parental pressure to perform highly academically as a risk factor for suicidal behavior of adolescent students. This came out clearly among the teacher counselors who said that many parents in the district were not educated and seemingly, they wanted their children to perform extremely well; to go to the University. One of the counselors said:

Most of the parents here are small scale farmers. They want their children to join university. However, they would not have money to take their children to parallel degrees. So they almost 'force' them to score JAB points. In instances where these students miss the points, even slightly, they feel unwanted, failures; some have ended up committing suicide.

It is of paramount importance that teachers were able to identify the risk factors facing students in their schools. The researcher concludes that if the teachers are aware of the discussed risk factors, they are in a position to identify students at risk of suicidal behavior and thus offer them appropriate intervention.

4.4.5 Teachers' Suggestions on Ways of Improving Knowledge of Adolescent Risk Factors for Suicidal Behavior

Teacher counselors overwhelmingly expressed need for training of both teachers and teacher counselors. They said that though suicidal behavior is prevalent in schools, they feel inadequate in handling at risk students due to lack of knowledge on how to go about it. Their concern is similar to Heitkamp (2011) findings where majority of the teacher respondents expressed the feeling of inadequacy in identifying and handling suicidal students. Similar

findings are observed in Nerina and Shelly (2009); Leane and Shute (1998); and Westefeld et al (2007). Apart from the respondents in Westefeld et al, all the rest attributed their inadequacy to lack of training in adolescents' suicide.

The present study captured the statistics of teachers and teacher counselors who have training in suicide in demographic data; only one teacher has been trained while none of the teacher counselors has any training in suicidal behavior of adolescents. This finding therefore supports the reason as to why all the teacher counselors suggested introduction of a unit in undergraduate teacher training that focuses on general knowledge about adolescent suicide. One of them shared the following observation:

At the university, there is no explicit information availed to teachers on adolescent suicidal tendencies and how to deal with them. It is only mentioned in Educational psychology but it is not enough to render a teacher or teacher counselor capable of identifying a suicidal student; leave alone helping them.

This implies that there is need to step up the content of teachers training as regards adolescents' suicide. This observation supports the recommendations made by Nerina and Shelley (2009) who suggested addition of a suicide education module to university curricula for both primary and secondary school teachers that include information and training on assessing risk of suicide and information on appropriate referral of suicidal students.

Another suggestion teacher counselors candidly expressed was the need for having organized workshops and seminars at the county level to sensitize all teachers on their important role in curbing the tendencies of suicidal behavior among adolescent students. They acknowledged that knowledge is a prerequisite of identifying suicidal students and helping them appropriately.

In addition, majority of them felt that teachers and teacher counselors should take the initiative to do personal reading and research on how to identify and handle suicidal students.

This, they said, would go a long way into equipping teachers with current trends of suicidal behavior and how to help students at risk.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the research findings, conclusions, recommendations and finally gives suggestions for further studies.

5.2 Summary

The purpose of this study was to find out teachers' knowledge to identify suicidal behavior risk factors of adolescents in selected public secondary schools in Nyandarua south district, Nyandarua County, Kenya. From the background information, it is depicted that cases of adolescent suicidal behavior are prevalent in Nyandarua South district. To the researcher's knowledge, no study has been done to find out whether teachers-the students' surrogate parents in the district, are aware of what exposes the students to the risk of suicidal behavior.

The present study was guided by four research questions which sought to find out what knowledge teachers had on personal, environmental, school and family based suicidal behavior risk factors of adolescents.

The study used concurrent triangulation which enabled the researcher to collect two types of data concurrently. A sample of 71 teachers and 9 teacher counselors were randomly and purposively sampled respectively from a population of 168 teachers in the district. The instruments used for data collection were questionnaires for teachers and interview guide for teacher counselors. The researcher used the statistical package software for social sciences (SPSS) version 20.0 windows to process the data collected. Descriptive statistics, frequencies and percentages were used to summarize the data.

On data analysis, responses from the closed ended questions that yielded quantitative data were computed and reported in tables, frequencies and percentages. Responses from the

interview conducted among teacher counselors were relayed in narrative form which included direct quotations and paraphrases.

5.3 Main Findings

Teachers are aware that depression is the greatest risk of suicidal behavior of adolescent students. They are also aware that coping skills determine risk of suicidal behavior among adolescents. Teachers are aware that age, alcohol and substance abuse and previous suicidal threats are risks that predispose adolescents to suicidal behavior, but are not aware that gender, chronic illness and disability place adolescents at a risk of suicidal behavior. The study also found out that teachers recognized emotional instability, low self esteem and irresponsible sex as a risk factor of suicidal behavior among the adolescents.

Teachers are aware that information technology and accessibility of lethal means pose a risk for suicidal behavior among adolescent students. Conversely, they are not aware that suicidal behavior is contagious.

It was established that teachers are aware that students who 'feel at home' in school are at less risk of suicidal behavior than those who do not. Teachers demonstrated knowledge that intimate friendship may in one way lessen the risk and on the other hand increase it. In addition, they know that lack of teacher support, lesbianism, gayism and being bullied are risk factors. Teachers are unsure whether academic achievement precipitates suicidal behavior among adolescent students. It was observed that teachers did not know that being a bully is a risk factor. In addition, teachers identified lack of guidance and counseling and pressure from teachers to academically perform as a risk factor for adolescents.

The study established that teachers are aware that lack of communication between parents and their adolescent children is a risk factor. Similarly, teachers know that parental conflicts could spur suicidal behavior in the young ones. They are also aware that depression of parents may predispose children to suicidal behavior and that adolescents may learn

suicidal behavior from family members. Teachers are not sure that living away from one parent or both, death of a relative and single parenthood are risk factors. Conversely, teachers do not believe that poverty in a family poses a risk of suicidal behavior to the adolescent member. The study therefore concluded that teachers in Nyandarua South have a knowledge deficit of the factors predisposing and precipitating adolescent students to suicidal behavior.

5.4 Conclusions of the Study

The study established that among the personal suicidal behavior risk factors, teachers were aware that depression, age, coping skills, emotional instability, irresponsible sex and low self esteem are risk factors. This finding suggests that teachers are in a position to identify students standing suicidal behavior risk based on the aforementioned factors and offer appropriate intervention. If knowledge is translated into action, then teachers would help reduce the cases of suicidal behavior in Nyandarua South Secondary schools. The fact that some teachers demonstrated uncertainty or lack of knowledge in factors such as, disability and chronic illness, gender and previous suicide are risk factors implies their indifference to students at risk due to these factors. Failure to intervene translates into more cases of suicidal behavior and tendencies among the students.

About teachers' knowledge of environmental risk factors, the study concluded that teachers are aware of information technology as a risk factor though they do not know that the internet has suicidal sites that can influence students. Teachers believe that accessibility to lethal means, especially pesticides and herbicides, is not a factor. This suggests that teachers would not take precautions of alerting parents to keep off these substances if they noted a suicidal student. Failure to do so would increase the risk even more. Teachers are not aware that suicidal behavior is contagious since they believe that it deters the rest other than influencing them to do the same. This finding implies that teachers do not take measures to warn students against the same since they believe that students abhor the act. This is however

debatable since the cases are still on the increase even after students witnessing many cases in the past

As far as knowledge about school- based suicidal behavior risk factors is concerned, the researcher concludes that teachers are able to identify students who do not 'feel at home' are at risk. It is only logical therefore for teachers to relate with students in a way that will make them feel at home in order to reduce suicidal cases. Teachers are aware that intimate friendship especially if there are break-ups can prompt suicidal behavior. Given the awareness, teachers could reduce suicidal risks by availing information to students on healthy relationships and stress management skills. Teachers also cited lack of guidance and counseling and pressure to academically perform as the main school based risks they have noted. Since all teachers have basic guidance and counseling skills, more involvement in counseling students would help alleviate the suicidal cases in schools. As pertains pressure to perform, teachers could acknowledge the different abilities of students and appreciate them. The study reveals that only half of the teachers knew that lesbianism and gayism are risk factors. Given that this phenomenon is gaining prevalence in Kenya, the researcher concludes that teachers would not appropriately help gays and lesbians as far as being at risk of suicidal behavior. The study also concludes that teachers are only cautious about victims of bullying as far as being at risk is concerned; they do not recognize the bullies as at risk and so do not offer any help. This increases the risk of bullies to suicidal behavior.

Parents with depression, familial conflicts and parent-child communication were identified as suicidal behavior risk factors. In addition, teachers nominated dysfunctional family, irresponsible parenting, absence of parents and parent-child pressure to perform as risk factors. This implies that in order to identify these risk factors, and thus help students, the teacher has to involve himself in finding out the family background of students. This finding

argues for the need for collaboration between teachers and parents in order to collectively work to reduce or terminate cases of suicidal behavior among students.

Teachers demonstrated disbelief in poverty as a risk factor. They claimed that it is the deprived rich who are prone to suicidal behavior since the poor ones are used to lack. The researcher concludes that this might be context bound since ordinarily it is lack that makes an average person to feel disadvantaged and thus escalating to suicidal ideation.

Specifically, teachers had knowledge deficit in adolescent suicidal behavior risk factors. Compared to personal, environment and school related risk factors, both teachers and teacher counselors attribute the prevalence of adolescent suicidal behavior to family based risk factors. The researcher therefore concluded that if teachers are practically concerned with the students' welfare, they should intervene in the lives of those whom they identify as at risk; at least in the lives of students who are at risk of the factors they are aware of. The fact that there is a deficit in their knowledge is of particular concern as it suggests that suicidal students may largely go unnoticed and therefore, are not likely to receive much needed assistance.

5.5 Recommendations of the Study

Following the findings of the present study, the researcher has the following recommendations to make to teachers, administrators and the Ministry of Education.

- Based on the knowledge of the various risk factors of suicidal behavior of adolescent students, teachers should identify students at risk and offer them appropriate help.
- The school administration, through the Guidance and Counseling Department, should hold seminars and workshops to alert teachers on the risks of suicidal behavior among adolescent students.
- The County Education office should organize seminars and workshops to train teachers and teacher counselors on adolescence suicide.

- In case of its absence, a suicide education module should be added by The Ministry of Education to university curricula for secondary school teachers and teacher counselors. The module should include information and training on suicidal behavior risk factors, how to identify a student at risk and how to intervene.

5.6 Limitations of the Study

- The researcher, through interviewing the teacher counselors realized that the present study should have been preceded by a study of finding out what the adolescent students in Nyandarua South district consider to be suicidal behavior risk factors.
- The researcher observed that it would have been significant to find out how many cases of suicidal behavior the teachers had identified in their teaching profession.

5.7 Suggestions for Further Research

The following areas are suggested for further research:

- Parents' knowledge of suicidal behavior risk factors of adolescents and the ability to identify a suicidal adolescent.
- What the adolescent students in Nyandarua South district consider to be suicidal behavior risk factors should be done.
- The kinds of help teachers offer students whom they identify as at risk.

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APPENDIX I

Consent Letter for Participating in Research

Dear Teacher,

I, Ann M Macharia, a Post graduate student in The Catholic University of Eastern Africa is kindly requesting you to participate in this research. Carrying out this research is a part of my graduation requirements for a Master's Education degree. This research seeks information from high school teachers about their knowledge of suicidal behavior risk factors among adolescent students. If you are a teacher, you will be asked to complete a written questionnaire and if you are a teacher counselor, you will be requested to participate in an interview.

Your participation in the study will be kept confidential; however, the results of the study will be aggregated and published as a thesis project and may also be shared with the public. You will not be required to provide your name or any demographic information that may identify you personally on the questionnaire. The consent forms and the questionnaires will be destroyed upon the completion of this study which is anticipated by October, 2013.

Participant's Signature_____

Thank you for accepting to participate in this study.

APPENDIX II
QUESTIONNAIRE FOR TEACHERS

SECTION A: Demographic Information

Please tick (√) where appropriate

1. Indicate your gender: Male [] Female []
 2. Age: 20-29 [] 30-39 [] 40-49 [] 50-59 [] 60 and above []
 3. Educational level: Diploma [] Degree [] Masters [] Any other _____
 5. Teaching experience: 0-5 years [] 6-10 [] 10 years and above []
 6. Any training in suicide Yes [] No []. If Yes, indicate which one
-

SECTION B: Teachers' Knowledge about Adolescents' Suicide Risk Factors

7. Please tick (√) either **agree**, **uncertain** or **disagree** against each factor to the best of your knowledge.

(a) Personal Factors

Factor	Agree	Uncertain	Disagree
Adolescence is the most vulnerable age to suicidal behavior			
Young males are likely to succeed in suicide than young females			
Adolescents who abuse alcohol and other substance are likely to be suicidal			
Depressed adolescents are more likely to be suicidal than those who are not depressed.			
Disabled, and chronically ill adolescents are at higher risk for suicidal behavior than those who are not.			
Poor stress coping skills is a risk for suicide among the youth			
An adolescent who previously attempted suicide is likely to attempt again in future			
Teenagers die of suicide more than older adults			
Suicidal attempts are more common among adolescent females than males			
Being drunk predisposes adolescents to suicidal behaviors			
Majority of adolescents who commit suicide have a psychiatric Disorder			
Adolescents living with Aids and diabetes are susceptible to suicidal behavior.			
Suicidal and non-suicidal adolescents do not differ in their problem-solving abilities			
Not all suicide threats by an adolescents should be taken seriously			

8. In your experience and observation, what other personal factors make an adolescent susceptible to suicidal behavior?

- i _____
- ii _____
- iii _____
- iv _____
- v _____

9. (b) General Environmental Factors

Factor	Agree	Uncertain	Disagree
Information technology can facilitate suicidal behavior in teenage			
Adolescents who can access guns are likely to commit suicide than those who do not			
Watching or knowing somebody who kills him/herself prompts an adolescent to do the same.			
Accessibility of pesticide and herbicides increases suicidal risk			
The internet has suicidal sites where adolescents may learn from			
Suicidal behavior is contagious			

10. During your teaching career, which environmental influences have you ever linked to suicidal students.

- i _____
- ii _____
- iii _____
- iv _____
- v _____

11. (c) School Environment Factors

Factor	Agree	Not certain	Disagree
Adolescents who feel at home in school are not likely to be suicidal			
Students who bully and victimize others are at risk of suicidal behavior than those who do not			
Adolescents scoring As and Bs are likely to be suicidal than those who score Ds.			
Adolescents who have intimate friends are likely to be suicidal than those who don't have friend			
Same sex attraction and relationship is a risk for suicidal behavior among adolescents			
Lack of teachers' support is a risk factor for suicidal behavior among adolescent students			
Victims of bullying are likely to be suicidal than those who are not bullied			
Level of academic achievement may prompt students to be			

suicidal			
Falling out with a boyfriend/girlfriend is common and so is not a risk for suicidal behavior			
Lesbianism and gay relationships are common and so should not prompt an adolescent to be suicidal			

12. In your experience as a teacher, which other school based factors have you personally identified as risks for adolescents' suicidal behavior?

- i _____
- ii _____
- iii _____
- iv _____
- v _____

13. (d) Family Risk Factors

Factor	Agree	Uncertain	Disagree
A family that has suicidal history can genetically transmit it to the children.			
An adolescent can behaviorally learn suicidal behavior from family members.			
Students from poor families are likely to be suicidal than the rich			
Adolescents whose parents freely communicate with them can be at suicidal behavior risk			
Living away from a parent or both precipitates suicidal ideation in an adolescent			
Depression is more common in the history of parents of children commit suicide than in the histories of parents of non-suicidal children			
Death of a relative through suicide may suggest suicidal ideation in an adolescent			
Suicide is more common among adolescents of high economic status than from low economic status			
Parental conflicts are common precipitants of adolescents' suicide			
Single parenthood is common and so is not a precipitant of suicidal behavior among adolescents			

14. In your interaction with the students, which other family based factors have you identified in suicidal students.

- i _____
- ii _____
- iii _____

Thank you for choosing to inform this study.

APPENDIX III
INTERVIEW GUIDE FOR TEACHER COUNSELORS

SECTION A: Demographic Information

Please tick (✓) where appropriate

1. Indicate your gender: Male [] Female []
2. Age: 20-29 [] 30-39 [] 40-49 [] 50-59 [] 60 and above []
3. Educational level: Diploma [] Degree [] Masters [] Any other _____
5. Teaching experience: 0-5 years [] 6-10 [] 10 years and above []
6. Any training in suicide Yes [] No []. If yes, indicate which one

SECTION B: Knowledge on Personal Suicidal Behavior Risk Factors

7. In your opinion, is teenage a risk for suicidal behavior? Explain your answer. _____

9. In your experience, who are more at risk of suicidal behavior, girls or boys? Please explain _____

10. As a teacher counselor, have you encountered students who abuse alcohol and drugs? If yes how are they at risk for suicidal behavior? _____

11. Do you agree that depressed and mentally ill students are more at risk for suicidal behavior? What is your experiential knowledge? _____

12. Do coping skills determine an adolescent's the level of risk an adolescent's suicidal behavior? _____

13. (i) Do you take all suicidal attempts seriously? _____
(ii) Please explain? _____

SECTION C: Knowledge on Environmental Suicidal Behavior Risk Factors

14. In your experience and/or training, does mass media precipitate suicidal behavior in adolescent students? Please explain your stand _____

15. Do you believe that access to lethal means such as guns at home, pesticides and herbicides may increase the risk of suicidal behavior in adolescent students? Please explain _____

16. Is suicide contagious? Explain _____

SECTION D: Knowledge on Family Suicidal Behavior Risk Factors

17. From your experience/training, are adolescents from families with history of suicide at risk of suicidal behavior? Please explain. _____

18. How is poverty linked to suicidal behavior? _____

19. Parent-child communication and family cohesion may influence suicidal behavior in adolescent students. Explain your position on this claim _____

20. Do you think that adolescents from single parent families are more at risk of suicidal behavior? What is your observation while dealing with students? _____

SECTION E: Knowledge on School Suicidal Behavior Risk Factors

21. Lack of general support from teachers and students can be a precipitator of suicidal behavior among adolescent students. What is your opinion? _____

22. From your experience, are perpetrators of bullying and victimization at risk of suicidal behavior? _____

23. (i) Does being bullied prompt students to be suicidal? _____
(ii) What is your experience? _____

24. Which category of students is more at risk of suicidal behavior, low academic performers or high academic performers? What is your experience? _____

25. Please tell me what you know about peer relationship and suicidal behavior among adolescent students in your school. _____

26. In your opinion, what should be done to step up teachers' knowledge and ability to identify suicidal behavior risk factors of adolescent students?

Thank you for contributing to this research.

APPENDIX IV
RESEARCH PERMIT

PAGE 2 PAGE 3

Research Permit No. **NCS7/RCD/14/013/1198**

Date of issue **2nd July, 2013**

Fee received **KSH 1000**

THIS IS TO CERTIFY THAT:

Prof/Dr./Mr./Mrs./Miss/Institution
Ann M. Macharia


or (Address) The Catholic University
of Eastern Africa
P.O. Box 62157-00200, Nairobi.

has been permitted to conduct research in

Location
Nyandarua, South District
Nyandarua County

on the topic Teachers' knowledge and
ability to identify suicidal behavior risk
factors of adolescent students in public
secondary schools in Kinangop, South
District, Nyandarua County, Kenya

for a period ending 30th September 2013.



Applicant's
Signature

For Secretary
National Council for
Science & Technology