

## Student Perspectives on Internal and External Factors Influencing Vulnerability to Risk-Taking Behaviour among Girls in Public Day Secondary Schools in Kiambaa, Kiambu County, Kenya

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### ABSTRACT

*The study investigated internal and external determinants of vulnerability to risk-taking behavior (RTB) among female students in public day secondary schools (PDSS) in Kiambaa, Kiambu County, Kenya. This was due to the high levels of RTB among secondary school girls that had been reported. The study integrated two theories, problem behaviour theory and empowerment theory. It employed a descriptive survey methodology. Using proportional stratified random sampling and purposive sampling procedures 96 girls participated in the study. A pilot study involving 10 students from Kiambu Sub-County was conducted to assess content and construct validity. Cronbach's alpha ( $\alpha = 0.7$ ) ensured internal consistency and reliability of variables. Data was collected through questionnaires and interviews, analysed using SPSS version 24 for quantitative data and content analysis for qualitative data, and presented via tables and figures. The findings revealed various RTB among girls, including unprotected sex, prostitution, drug use, abortion, theft, and fighting. RTB determinants encompassed factors like parental divorce, absenteeism, peer pressure, financial hardship, and lack of role models, excessive idle time, societal influences, and declining values. In conclusion, this study highlights the existence of RTB among girls in PDSS and underscores the complexity of factors influencing these behaviours. To effectively address RTB, a comprehensive approach that considers both internal and external factors is essential.*

**Keywords:** Determinants, Kiambaa Sub-County, Risk-taking Behaviour, Secondary School Girls, Vulnerability

### I. INTRODUCTION

The escalating prevalence of Risk-Taking Behaviors (RTB) among girls in Public Day Secondary Schools (PDSS) globally has raised serious concerns among educators and scholars. These behaviors, including substance abuse, early initiation into sexual activities, and other risky conduct, pose significant threats to the physical and mental well-being of young girls (Kauppi, 2015; Mason et al., 2010; Kyalo, 2010; Oteyo et al., 2013). This research sought to delve into the complex interplay of internal and external factors that contribute to the vulnerability of female students in PDSS to engaging in RTB, focusing specifically on Kiambaa Sub-County in Kiambu County, Kenya.

Girls in PDSS face a myriad of challenges that propel them towards RTB, as evidenced in studies conducted worldwide. The influence of family dynamics, peer relationships, socioeconomic status, and societal norms significantly shapes the vulnerability of these girls to risky behaviors (Wolfe, Jaffe, & Crooks, 2006; Legleye, Janssen, & Beck, 2011; Allen et al., 2012). However, despite the global awareness of RTB among girls, there is a notable dearth of systematic studies that explore the specific challenges faced by girls in PDSS in Kenya, particularly in Kiambaa Sub-County.

This research aims to address this gap by conducting an in-depth investigation into the internal and external determinants of vulnerability to RTB among female students in PDSS in Kiambaa. The socio-cultural context of Kenya, coupled with the breakdown of societal systems and the impact of psychosocial interventions, necessitates a comprehensive understanding of these issues (Ogidefa, 2008; MOH, 2005). The study probes into the intricate dynamics of family relationships, the influence of peer groups, societal expectations, and individual resilience to uncover the factors that contribute to the vulnerability of girls in Kiambaa Sub-County to engaging in RTB.

Kiambu County is faced with high levels of RTB among the girls. There is a substantial co-occurrence of drug usage among secondary school pupils. According to Oteyo et al. (2013), 25% of students had used psychoactive substances before the age of 10. By the time children hit adolescence, some of them, including girls, would have moved to hard drugs and other forms of RTB. Data on teen pregnancy shows that 14% of girls aged 15-19 years had

started having children (GOK, 2016). This shows early sexual debut among girls. NASCOP (2016) states that Kiambu County contributed 7.1% of new reported HIV cases, out of which 7.1% were school-going girls aged between 10-19 years. Mugo (2011) found that more female students, 89% as compared to male students, 11%, were dropping out of PDSS in the county, and that most of them took to various RTB. According to Kato (2015), teenaged pregnancy accounted for more than 40% of girls' dropout cases in day secondary schools. Murigi (2015) found out that by age 15, secondary school-going girls in Kiambaa had already been initiated to sex while 43% of the sampled girls had used a modern contraceptive, with the majority being from PDSS. In light of this context, it was crucial to study the causes of RTB among girls attending PDSS in Kiambaa Sub-County, Kiambu County.

As shown by the preceding discourse, this research aims to unravel the internal and external determinants of vulnerability to RTB among female students in PDSS in Kiambaa Sub-County, Kiambu County, Kenya. By examining family dynamics, peer influences, societal expectations, socioeconomic status, and individual resilience, the study seeks to provide a detailed understanding of the factors contributing to girls' susceptibility to engaging in risky behaviors.

### **1.1 Research Objective**

Examine the internal and external factors that influence vulnerability to RTB among girls in PDSS in Kiambaa Sub-County, Kiambu County;

## **II. LITERATURE REVIEW**

### **2.1 Theoretical Review**

This study was guided by two theories: the problem behaviour theory and empowerment theory.

#### **2.1.1 Problem Behaviour Theory**

This research was based on Jessor's Problem Behaviour Theory (PBT) from 1977. The idea explains "adolescent adaptations to unusual behaviour, such as RTB in our study." This theory is often used to cast light on the reasons as to why students, the world over, take to RTB such as risky sexual behaviours, drug and substance use, violent and gang behaviours among others (Ma & Shive, 2000).

The theory's primary assumption is that "behaviour is driven by the interaction of three systems: legal norms in society, the individual's value system, and the relationships that one maintains in his or her environment" Within the scope of this study, various gender-based strategies that can be used to protect teenage girls from negative environmental influences determine the RTB of such girls. In the right environment at home, families can have strong defences against RTB among their girls. At societal levels, interventions by religious and advocacy organisations can also reduce the risk-taking appetites of girls. The legal regime of a country can also alleviate the RTB among girls through legislation that discourages behaviours that put girls at risk.

Problem Behaviour Theory, which explores the interaction between individual values, societal norms, and environmental factors, can shed light on why girls may engage in risky behaviours. It allows the researcher to understand the likely reasons of adolescent girls' vulnerability to RTB behaviour.

Jessor's Problem Behaviour Theory adds value to the study by providing a robust theoretical framework that helps to comprehensively analyse the factors influencing risky behaviours among girls in PDSS. In Kiambaa, the theory allowed the researcher to explore both individual and environmental factors, consider practical interventions, and highlight the gender-specific aspects of the research. This theoretical foundation enhances the depth and relevance of the study's findings and recommendations.

#### **2.1.2 Empowerment Theory**

The empowerment theory was postulated by Rappaport in 1981. Empowerment is defined in this theory as "a framework that relates people talents and skills, natural supporting structures, and proactive behaviours to social change and social policy" (Rappaport, 1981, 1984). As a result, the empowerment concept connects the person (in this example, families) with his or her country's national political context.

In this regard, the government is pushed to institute measures aimed at availing socio-economic well-being for the individual (Swift & Levin, 1987; Rappaport, 1984). Political establishments (government as in the case of this study) put in place strategies for ensuring that families access economic opportunities. This, as envisaged by this study, could enable these families take care of girls attending PDSS.

Empowerment Theory emphasizes the importance of providing individuals and communities with the resources, knowledge, and support needed to make informed decisions and effect positive change. Empowerment

programs, rooted in the Empowerment Theory, can equip girls with the confidence and skills to make independent and informed choices.

One of the assumptions that the theory makes is that the government (political institution) always come up with programmes aimed at empowering the individuals under their jurisdiction at grassroots levels. In this study, it is conceptualized that empowerment programmes from government and civil society organizations can lead to gender-specific strategies that can strengthen the capacity of families to minimize RTB among girls in PDSS. This can be achieved through an expanded policy environment in which parents can protect their girls through legislation and empowerment programmes. The fact that empowerment can create an opportunity for parents to air their voices also means that government and non-governmental agencies can exploit this environment to put in place programs to enhance girls' ability to overcome RTB. The empowerment theory is specifically important in this study since it shows the link between government empowerment program and possibilities to avoid and take care of girls that take to RTBs. The theory provides a holistic perspective on potential strategies to protect girls in PDSS from engaging in RTB.

## 2.2 Empirical Review

### 2.2.1 The Types of RTB among Girls

Marseille et al. (2018) studied "The Efficacy of School-Based Interventions to Prevent Teen Pregnancy in United States." A systematic evaluation and meta-analysis were used to conduct the research. The study was carried out between January 1985 and September 2016. The findings show that there were high levels of RTB in the country among teenagers. This study shows that RTB was also a major problem facing schools in developed countries. However, there exists a gap in the exploration of specific gender-related challenges and strategies related to reducing RTB susceptibility among female students. The reliability of these finding in the Kenyan context was examined by this current study.

Romer et al. (2010) in Europe found out that during adolescence, girls are subject to problems related to "lack of self-control, inability to delay gratification, and poor risk analysis capabilities." This shows that girls are likely to engage in numerous and dangerous behaviours that may have to negate ramifications on their health and schooling. However, the study by Romer et al. (2010) did not explore potential gender-responsive strategies that could effectively address these challenges and minimize the likelihood of risky behaviours among female students in the mentioned educational setting. The current study addressed these issues.

Kauppi (2015) examined behaviour change and communication in Sub-Saharan Africa (Botswana, Cameroon, Ethiopia, Malawi, Kenya, Zambia, Nigeria, Tanzania, and Zimbabwe) using a comparative literature review. During adolescence, girls are susceptible to several harmful behaviours, including smoking, casual sex, gang behaviours, drug misuse, shoplifting, and unnecessary physical fights," according to the research. This study underscores the breadth of risky behaviours that adolescent girls in Sub-Saharan Africa might be exposed to. However, there is still a gap in understanding how these findings relate specifically to the susceptibility of girls to risky behaviours within, and the exploration of potential gender-responsive strategies to address these challenges effectively in schools.

Ogidefa (2008) determined that Nigerian adolescents, especially girls, engage in high - risk behaviours such as "prevalent drug misuse, deviant behaviours, and alcohol abuse." The study found a connection between the inability of "the culture in which a kid grows up to apply the prescribed disciplinary measures for specific behaviours" and RTB. This research sheds light on the prevalence of risky behaviours among Nigerian adolescents, yet there remains a gap in understanding how these cultural dynamics and disciplinary measures impact the vulnerability of girls to participate in risky behaviours within the specific context of educational setting.

Ali and Ahuja (2015) performed a comparative cross-sectional research in Ethiopia, selecting secondary schools using a multistage random selection approach. A total of 1,037 learners (519 from public schools and 518 from private schools) were selected for the research using a simple random selection procedure. Various statistical approaches were used in the research, including descriptive statistics like mean, percentage, and standard deviation, as well as inferential statistics like the chi-square test and binomial logistic regression. The survey discovered that a quarter of all students (264 students, or 25.5%) had begun sexual relations at an average age of 16.39 years (with a standard deviation of 17 years) across all students (including public and private school goers). A significant proportion (188 students, or 71.2%) of those who had begun sexual engagement reported participating in unsafe sexual practises. Surprisingly, the prevalence of hazardous sexual behaviour in public schools was roughly 73.28%, whereas it was approximately 69.17% in private schools. The research also found that the difference in the incidence of hazardous sexual behavior between these two types of schools was not statistically significant ( $p > 0.05$ ). The study identified the prevalence of risky sexual behavior but did not deeply explore the underlying causes or contextual factors contributing to these behaviors among students in public day secondary schools. Consequently, there is a gap in understanding how

these findings could relate to the context of PDSS and how gender-responsive strategies might be employed to minimize the vulnerability of female students to risky behaviors in Kiambaa Sub-County, Kiambu County.

UNICEF (2011) carried out a survey in developing countries using extant literature to determine RTB among the youth. The findings obtained show that in Kenya, in urban informal settlements, there are high tendencies by girls to engage in risky behaviours. There is also early sexual debut, often leading to unwanted pregnancies and abortion in some instances among others. However, this study is broad and thus, there is a gap in understanding how these findings relate to the specific school context and the potential implementation of gender-responsive strategies to address these issues.

A report by the KNBS (2015) shows that societal values determine the behaviours condoned by people in society. According to the study, 15% of women aged 20 to 49 had their first sexual experience at the age of 15, 50% at the age of 18, and 71% at the age of 20. In this regard, societal values put girls at the risk of early pregnancies or STIs. In light of this context, the current study aimed to investigate how societal influences contribute to risky behaviours among girls in PDSS in Kiambaa Kiambu County. The current study sought to uncover the specific mechanisms through which societal values may impact the engagement of girls in PDSS in Kiambaa Sub-County, Kiambu County, in risky behaviours.

Ochieng (2013) investigated “the sexual behaviour of girls attending public day schools in Nairobi, Kenya.” The study used a descriptive cross-sectional design. From 499 learners, survey responses were taken. The findings obtained show that teenagers tend to engage in various behaviours that have the potential to cause harm to them. These include deviant behaviour, risky sexual behaviours and drug abuse among others. However, it did not extensively delve into the contextual factors or motivations driving these behaviours. Understanding the underlying reasons behind these behaviours was the objective of this current study.

Kayla (2010) examined drug and substance misuse in Murang'a County through the experiences of schoolchildren in Secondary boarding schools. The research used a descriptive survey design. The results indicate that social tolerance led to drug and substance addiction among teenagers in high school. This emanates from the fact that drugs and substances were often outsourced from the surrounding areas. The former study did not attempt to find out all the various determinants of RTB among girls. However, the fact that it was undertaken in an area neighbouring Kiambu County means that the findings could remotely relate to this current study. However, this should be done with caution since both counties have divergent demographic characteristics.

Mugo (2011) explored the variables affecting female secondary school dropouts in both day and mixed schools. The study focused on Kiambu County in the former Central Province of Kenya and used an ex post facto research approach. Using questionnaire and chosen secondary data sources, information was gathered from 46 informants. The study found out more female students, 89% as compared to male students, 11% were dropping out of PSSs in the county, and that most of them took to various RTBs. This research sought to determine the degree to which these girls engaged in a variety of risky behaviours. However, the study did not thoroughly explore the underlying factors contributing to the girls' susceptibility to these risky behaviours and how gender-responsive strategies could effectively address these challenges within the PDSS context. Therefore, this current study aimed to bridge this gap by investigating the degree to which girls in PDSSs engage in various risky behaviours and by exploring the factors that influence their susceptibility, with the intention of suggesting gender-sensitive strategies to mitigate these behaviours.

Kato (2015) conducted a research to investigate the influence of adolescent pregnancy on finishing rates of female students attending Kenyan public day secondary schools. This study used a descriptive survey research approach and stratified random sampling to recruit 106 individuals. The study's findings revealed that a number of factors, including individual student sexual behaviour, insufficient parental supervision, financial difficulties at home, poor academic performance at school, and instances of sexual assault by both male peers and teachers, all contributed to the problem of teen pregnancy among girls. Notably, the research found that adolescent pregnancy accounted for more than 40% of females' dropout cases in day secondary schools during a four-year period. However, it's important to note that Kato's study primarily identified these factors associated with teenage pregnancy without delving into the underlying causal relationships. In contrast, the present study aims to explore the intricate interactions between these factors. This deeper analysis will enable the development of more precise and targeted interventions to address this complex issue.

### **2.2.2 Internal and External Factors Influencing Vulnerability to RTB among Girls**

A study by Garney et al. (2018) studied ecological approaches to teen pregnancy prevention in USA. Data was collected from time series data over a period of 20 years. The findings show that teenage pregnancy had declined and had declined over time. Most of the causes of teenage pregnancy were in the environment. Negative peer and societal

influences contributed to the rise in the number of teenage pregnancy among some youth populations. The goal of this study was to determine the validity of these results in Kenya.

Willoughby and Hamza (2011) investigated the bidirectional relationships between perceived parental behaviours, teenage disclosure, and problem behaviours throughout high school in Canada. The longitudinal study surveyed 2,941 adolescents, with 50.3% of them being females, each year from grades 9 through 12. The findings indicate that parents are the primary determinants of the risks that adolescents are prone to take and the frequency with which they do so. When families were socio-economically stable, there was a tendency to guide their children towards accepted behaviour and vice versa. The study does not thoroughly address the intersection of internal and other external factors that may contribute to the susceptibility of female students in PDSS to engage in risky behaviours. Additionally, the study does not explore gender-responsive strategies that could be employed to effectively address and mitigate the influences of perceived parental behaviours on the risky behaviours displayed by female students within the PDSS context. Therefore, the current study aimed to bridge this gap by examining how perceived parental behaviours interplay with the school environment and by proposing gender-sensitive strategies to address the impact of these behaviours among female students in PDSS.

Olivari (2015) sought to establish how parenting affects adolescent behaviour styles in Sweden. The findings show that more often than not parenting styles have been subject to socioeconomic factors. This goes on to affect sexual initiation. In this regard, the socio-economic empowerment of families tended to protect children from falling prey to various forms of RTBs as envisaged by this current study.

Legleye, Janssen, and Beck (2011) studied the reasons for drug abuse among students in France. The study was a 2005 French cross-sectional national survey using official statistics." Herein, 29,393 students aged 17 were studied. The findings show that RTB were correlated with high socioeconomic statuses of girls since girls from "families with higher socioeconomic statuses were more likely to know the dangers of RTB" and vice versa. The research highlights the role of socioeconomic status but did not consider potential variations among students. Factors like age, gender, and type of school, urban-rural divide, and cultural background may influence how students perceive and engage in RTBs. The current study looked at these factors so as to inform interventions.

Brooks et al. (2012) studied the determinants of adolescent multiple risk behaviour in Hong Kong. The research was based on a review of the existing literature. Findings indicate a correlation between family breakup and teenage RTB. In this regard, lack of stability at home predisposes teenagers to RTBs such as risky sexual behaviour, crime, and gang activities, and drug abuse among others, which may curtail their ability to succeed in life owing to the resultant consequences. While the study highlights the negative consequences of family breakup, it does not investigate potential protective factors or resilience factors that could mitigate the impact of family breakup on girls in PDSS'. The current study identified the factors which are essential for designing effective intervention strategies.

Anake and Ada (2015) conducted a study that examined how social patterning affects risky teenage behaviours (RTBs) among Nigerian students. They selected a sample of 627 participants using a combination of stratified and simple random sampling techniques. Data collection primarily relied on questionnaires. Their analysis yielded a significant finding: parenting styles have a noteworthy impact on girls' behaviour. As a result, they offered recommendations based on their findings, emphasizing the importance of maintaining a positive and interactive relationship between parents and their daughters to prevent behavioural misconduct. While the study established a clear link between parenting styles and adolescent behaviour the study did not delve into the underlying causation or the specific mechanisms through which parenting styles influence RTB.

Nyaga (2015) studied selected microsystems and their influence on antisocial behaviours among adolescents. The study was adopted the descriptive survey design. Data was collected from 320 students and 8 teachers in PDSS in Manyatta Sub-County of Embu County in Kenya. From the findings, it is evident that students whose parents were unemployed had fewer tendencies to abuse drugs in comparison with whose students' parents were employed owing to limited resources and finances. Though this study was conducted in Kenya it did not focus on PDSS which is the focus of the current study.

### III. METHODOLOGY

#### 3.1 Research Design

The descriptive survey design was utilized in the study. Data, in this design, was collected by interviews and questionnaires. The design studies relationships between study variables. In this context, the design facilitates the creation and generalization of universally applicable concepts or theories. This study design also examines the variables in their natural states, without including researcher-imposed treatments (Kamau, Githii, & Njau, 2014). Since this study looked at a relationship, "determinants" versus "RTB among PDSS girls," it was deemed as an

appropriate design.

### 3.2 Variables of Analysis

In this study, the independent variables were types of RTB internal and external factors influencing vulnerability to RTB, the gender-specific challenges facing girls in RTB and, the gender-based strategies used to minimise RTB. The dependent factor was RTB among girls in PDSS.

### 3.3 Site of the study

Kiambaa Sub-County in Kiambu County was the location of this study. It is approximately 20 km to the South of Nairobi City and borders Kikuyu to the West, Limuru to the North and Kiambu Sub-County to the East. It covers 53.9 square kilometres. Kiambaa has got a population of 145, 053 (GOK Census, 2019.) The sub-county is divided into five wards namely: Cianda, Karuri, Muchatha, Ndenderu, and Kihara. The headquarters of Kiambaa Sub-County is Karuri. The area is characterized by high population density due to its proximity to Nairobi.

Kiambaa Sub-County was selected as the study location due to the high number of girls being reported to be engaging in RTB especially during the weekends and during school holidays and the fact that it has very high number of PDSS. Its proximity to the capital city can result to unique challenges and dynamics that influence the behaviour of girls in public day secondary schools. The urban-rural interface often presents specific challenges related to access to resources, exposure to different lifestyles, and socio-economic disparities, which can impact risky behaviors among adolescents.

### 3.4 Target Population

A target population is “a group of individuals objects or items from which samples of measurements are taken” (Mugenda & Mugenda 2012). The study targeted all girls in all public day secondary schools, teachers, and principals. There were 2230 girls (Kiambaa Sub-County Secondary Staffing Data in February 2020). It was believed that these would comprehend and contribute significantly to the issue under research. Table 1 shows the target population.

**Table 1**

*Target Population*

	Name of School	No. of Girls
1	Kihara secondary	200
2	Karuri High school	402
3	Gachie Secondary	163
4	Cianda Secondary	118
5	Gacharage mixed	140
6	St Joseph's Gathanga	138
7	Muongoiya Secondary	235
8	Kiambaa mixed	290
9	ACK Karura secondary	205
10	Mucatha Secondary	112
11	Thimbigua Secondary	104
12	St Andrew Ndenderu Secondary	123
	<b>Total</b>	<b>2230</b>

### 3.5 Sample Size and Sampling Design

The study participants were selected from all 12 Public Day Secondary Schools (PDSS) using a proportional stratified sampling method. In this approach, each PDSS was treated as a distinct stratum, and data was collected proportionately from each stratum. The sample in each school was proportionate to the number of girls and teachers per school. The selection of participants followed the formula developed by Yamane in 1967 to ensure a representative sample. The formula is:

$$n = \frac{N}{1 + N*(e)^2}$$

Where:

n= sample size

N= population size

e= acceptable sampling error (assumed at 0.1)

The sampling formula was only applied per stratum. The research participants were then chosen from each stratum using simple random selection. The researcher then used stratified random sampling in each school, stratified by class, from form 1 to form 4, to get study representative from each form. To get the particular participants in the study from the forms, a basic random sampling using the lottery technique was utilised; the researcher scribbled pieces of paper and placed them in a bowl, and those who chose the required number took part in the study. The research sampled 96 girls using Taro Yamane's formula. The sample size is presented in Table 2.

**Table 2**

*Sample Size*

Total Population (N)	Sample (n)
2230	96

### 3.6 Research Instruments

This study collected primary data in addition to secondary data. In this regard, secondary data was collected from print and online journals, conference papers, and government publications. Records at the Ministry of Education (MOE) offices were also collected. Structured questionnaires as well as interview guides were utilized in data collection. The choice of research instruments in the study was driven by the need to gather both quantitative and qualitative data efficiently, explore participants' perspectives, and validate findings using existing sources of information. These instruments were selected to address the specific research objectives and the complexity of the research questions.

#### 3.6.1 Questionnaire

A questionnaire is a valuable tool for collecting information and evaluating specific perspectives. It offers the advantage of gathering a large amount of data from a large number of respondents within a short period of time (Patten 2017). The researcher developed two types of questionnaires which were administrated to 68 teachers and 96 girls. They were preferred because they are easy to administer and collect huge amounts of data within a short time. They also provided a systematic way of collecting data since they gave data that was easy to tabulate leading to easy analysis. Questionnaires are also convenient for gathering sensitive information. They were divided into five parts, the first of which collected demographic information from respondents. The remaining parts concentrated on the four research objectives. Closed and Likert scale questions were used to obtain data. Open ended questions were also incorporated in the questionnaire to enable the girls to answer freely to provide possible information that is not captured by the questionnaire.

#### 3.7 Pilot study

A pilot study was conducted to assess the accuracy, clarity, suitability and accuracy of the research instruments. The researcher picked 10 girls from Kiambu Sub-County for the pilot study which represented 10% of the sample size. This was based on Kothari's (2004) proposal that 10-30% of the research sample be used for a pilot study. The goal was to increase the reliability and validity of the instruments. The researcher examined the questions to see whether they elicited a reaction and if they were biased.

##### 3.7.1 Validity

Validity refers to the degree to which a research tool accurately measures the specific concept it intends to assess. A valid instrument is one that effectively and faithfully captures the underlying theory or constructs being studied. It represents the closest approximation to the true validity or accuracy of a particular deduction (Patton, 2002).

To assess the validity of the data collection tools, a pilot study was conducted. The primary objective of the pilot study was to subject the data collection instruments to rigorous testing. This pilot study involved the participation of 1 teacher and 10 girls from Kiambu Sub-County, which shares similar characteristics with Kiambaa Sub-County.

Kothari (2004) suggested that a sample size of 10% to 30% of the target sample is appropriate for questionnaire piloting. The outcomes of the pilot study were utilized to evaluate both content and construct validity.

Content validity was established by thoroughly analysing the research questions. Additionally, the research tools were reviewed by supervisors who provided valuable input for improving the questionnaire items. Their expertise and feedback played a pivotal role in ensuring that the instruments accurately and comprehensively captured the relevant constructs and variables of interest. During the pilot testing phase, the researcher also assessed whether respondents comprehended the survey questions and responded to them easily. Any questions that were found to be confusing were refined to enhance clarity.

Construct validity was ensured by effectively aligning the terms used in the research with the theoretical assumptions underpinning the study's conceptual framework (Cooper & Schindler, 2003). This involved contextualizing the research variables in a manner that accurately represented the theoretical foundations upon which the study was built.

### **3.7.2 Reliability**

Reliability, as defined by Saunders, Lewis, and Thornhill (2009), refers to the degree of consistency in the results produced by a research instrument across repeated trials. Ensuring reliability in this study involved employing various strategies to enhance the consistency and dependability of the research instruments.

To establish reliability, a standard definition of social science practices was used and provided to the target group before the questionnaire items. This ensured that the respondents had a clear understanding of the concepts being measured and promoted consistency in their responses.

Internal consistency and reliability of the variables were assessed using Cronbach's alpha, which is a commonly used measure of reliability. By calculating Cronbach's alpha, the study examined the extent to which the items within each variable were interrelated and produced consistent results. The acceptable threshold for assessing reliability in this study was set at 0.7 and above. A Cronbach's alpha value of 0.7 or higher indicates a satisfactory level of reliability, suggesting that the variable consistently measures the intended construct (Malhotra, 2004).

Furthermore, the questionnaire design and the inclusion of relevant literature related to the study also contributed to data reliability. By incorporating established theories and concepts from the literature, the questionnaire items were grounded in existing knowledge and research, increasing the likelihood of obtaining reliable and consistent data. By employing these strategies and setting the acceptable threshold for reliability at 0.7 and above, the study aimed to ensure that the research instruments consistently measured the intended constructs and produced reliable results. This increased the confidence in the study's findings and the reliability of the conclusions drawn from the collected data.

### **3.8 Data Collection Procedure**

The researcher recruited and taught three research assistants to help with data collection. Before administering the research tools, appointments were scheduled with the multiple study participants. The researcher and research assistants went to the study location to administer the research tools. Interviews were taped. The surveys were distributed using a 'drop and pick' method. This took two weeks to complete.

### **3.9 Data Analysis and Presentation**

The Problem Behaviour Theory (PBT) and Empowerment Theory, as well as the conceptual framework, contributed to the understanding of data analysis in the study. PBT served as a foundational framework for understanding the factors that drive risky behaviours among adolescent girls in Kiambaa Sub County. During data analysis, this theory allowed the researcher to scrutinize the interaction between societal norms, individual values, and environmental influences that contribute to these behaviours. For instance, the study explored how societal values and family dynamics correlate with reported risky behaviours. PBT focused on the interplay of these factors in guiding the data analysis process, helping the researcher unearth insights into the determinants of these behaviours. On the other hand, Empowerment Theory was instrumental in shaping the approach to data analysis, particularly concerning interventions and community dynamics.

To analyse questionnaire data, the Statistical Package for the Social Sciences (SPSS) version 24 was utilized. Several descriptive statistics are utilized in data analysis. (Frequency, percentages, and means) were employed to offer overall characteristics of the research variables. The results were presented using tables and figures. This was done to facilitate both presentation and interpretation.



## IV. FINDINGS & DISCUSSIONS

### 4.1 Introduction

The goal of this research was to investigate the internal and external variables that determine girls' vulnerability to RTB in PDSS in Kiambaa Sub-County, Kiambu County. The results of the investigation are presented herein.

#### 4.1.1 Questionnaire Return Rate

The sample of the study was 96 girls from the 12 PDSSs in the sub-county. From these, all the 96 (100%) participated in the study. In this regard, and as shown in Table 4.1, the response rate was considered sufficient for analysis which is in line with Fincham (2008) who points out that the goal of the research should be to achieve a response rate of at least 60%. The findings are presented in table 3 below.

**Table 3**

*Response Rate*

	Sampled	Responded	Response Rate
Students	96	96	100%

### 4.2 Demographic Information of the Respondents Involved in the Study

This section includes demographic information on the instructors and students who took part in the research.

#### 4.2.1 Age of Girls

The girls were asked to indicate their age. The findings as shown in Table 4.2 show more than half of the girls (62.5%) were in Forms 2 and 3. Out of these, 30.3% were aged 16 years while 31.2% were aged 17 years. These were followed by 16.8 who were 18 years and 3.1 who were above 18 years with 15.6% being 15 years old. This demonstrates that girls are more likely to engage in risk-taking behaviours (RTB) between the ages of 16 and 17 as predicted by Pharo et al. (2011) that showed girls were likely to engage in risk-taking behaviours at a young age because their prefrontal cortex, which is associated with judgment, was not yet fully developed. This implies that the older the student is, the lower the frequency of engaging in RTB. This observation may be attributed to the fact that older students are aware of the effects of RTB and therefore are more likely to avoid RTB.

**Table 4**

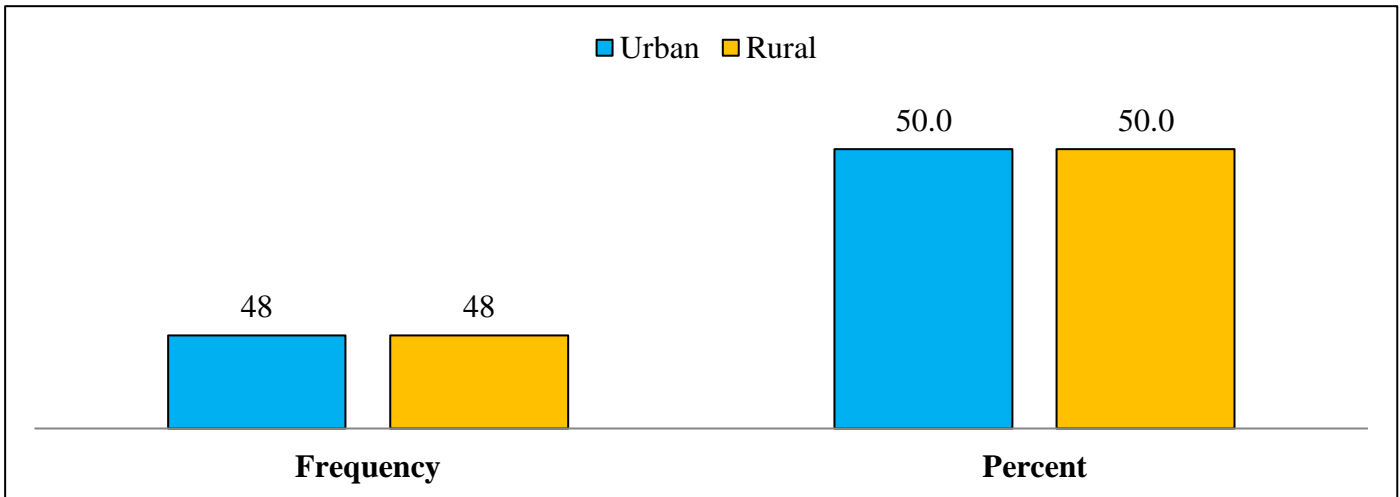
*Age of Girls*

Class	15 years		16 years		17-years		18 years		18 years and Above		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
Form 1	11	11.4	4	4.2	0	0	0	0	0	0	15	15.6
Form 2	7	7.2	21	21.9	5	5.2	0	0	0	0	33	34.4
Form 3	0	0	4	4.2	18	18.8	5	5.2	0	0	27	28.1
Form 4	0	0	0	0	7	7.3	11	11.6	3	3.1	21	21.9
<b>Total</b>	<b>18</b>	<b>18.6</b>	<b>29</b>	<b>30.3</b>	<b>30</b>	<b>31.2</b>	<b>16</b>	<b>16.8</b>	<b>3</b>	<b>3.1</b>	<b>96</b>	<b>100</b>

#### 4.2.2 Residence of Family

When asked where they lived, the girls split 50-50, with half residing in rural locations and the other half living in metropolitan areas. This means that the girls came from both rural and urban areas. This is a reflection of the county which has many urban centres but also rural areas due to proximity to Nairobi. Girls living in areas close to Nairobi may have increased exposure to urban lifestyles, trends, and influences. Urban areas often have a faster pace of life, greater access to technology, and more diverse social interactions. This exposure can lead to different experiences and pressures compared to those living in rural areas. Furthermore, urban environments typically have larger populations and more diverse peer groups. The peer influence can be both positive and negative. While urban peers may introduce new perspectives and support systems, they can also expose girls to risky behaviours if they are not surrounded by positive role models. These findings are in line with the study by Ndirangu et al. (2016) that affirms that Kiambu County is characterised by high levels of urbanization. This could predispose girls to RTB since a study

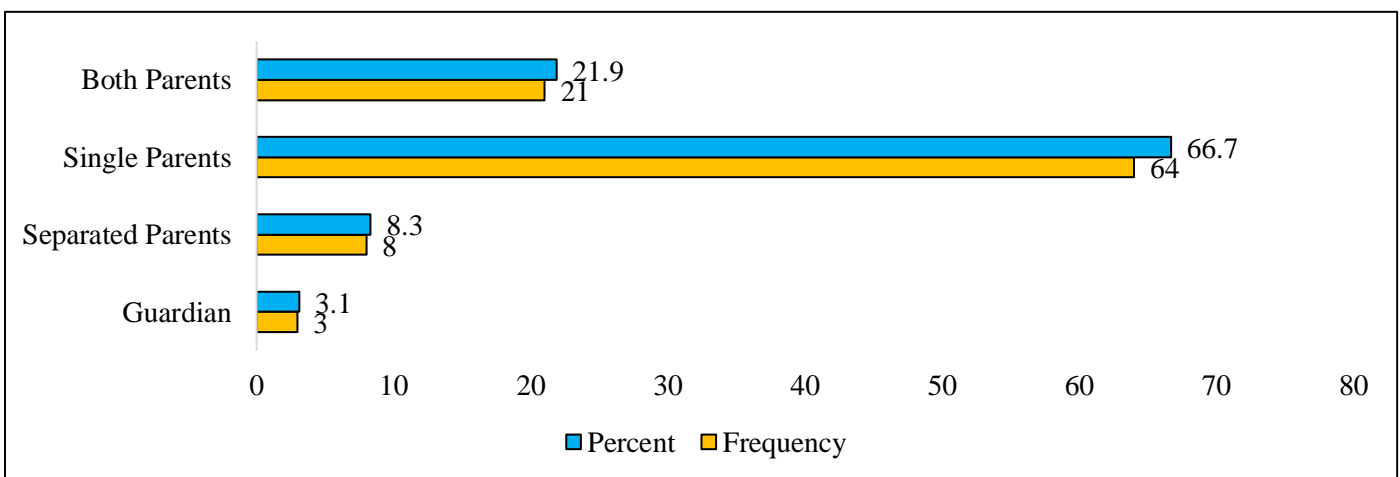
by Obare et al. (2016) focused on Kajiado North Sub-County, which borders Kiambu County, shows that 60% of girls started engaging in risky sexual behaviours at an early age due to its proximity to Nairobi County. The findings were presented in Figure 1.



**Figure 1**  
*Residence of Family*

#### 4.2.3 Marital Statuses of Parents

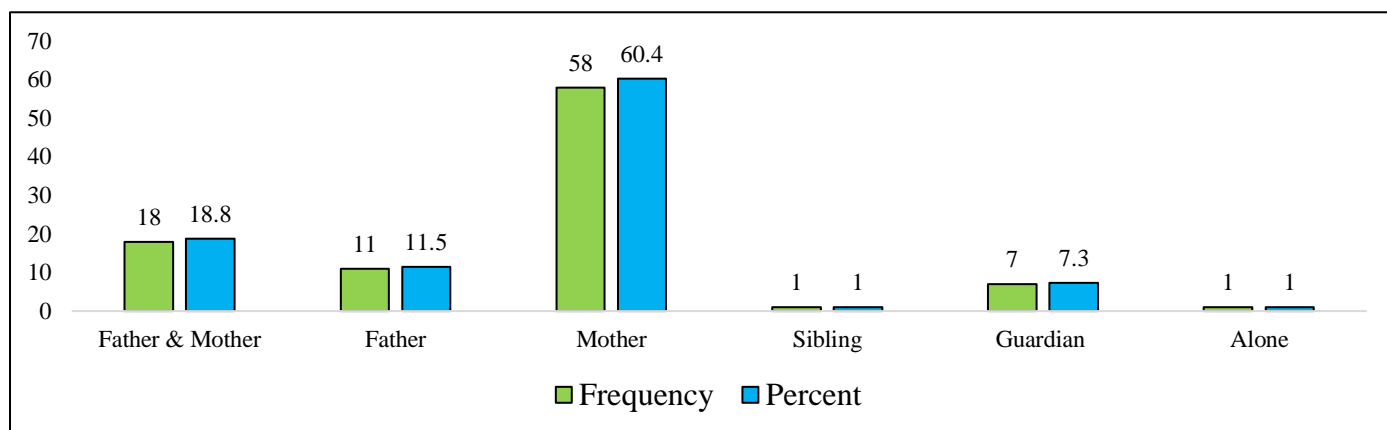
The respondents were asked to indicate their parents' marital statuses. More than two thirds of the girls 64(66.7%) pointed out that they their parents were single. These were followed by more than a fifth 21 (21.9%) who had both parents. Whereas 8 (8.3%) came from separated parents, 3 (3.1%) had guardians. This shows that most of the girls came from diverse families and could cast light on the challenges facing girls based on the family they came from. In line with this, a study by Wolfe et al. (2006) posits that most of the causes of teenage pregnancy were in the environment. Furthermore, Garney et al. (2018) discovered that the family is a substantial predictor of RTB among these teenagers. These findings are further supported by a research by Daryanani et al. (2016), who contend that single mothers face lots of new obstacles and stressors that undermine their parenting, leaving their daughters vulnerable to a variety of RTB. Figure 2 depicted the findings.



**Figure 2**  
*Marital Statuses of Parents*

#### 4.2.4 Persons who Girls Live With

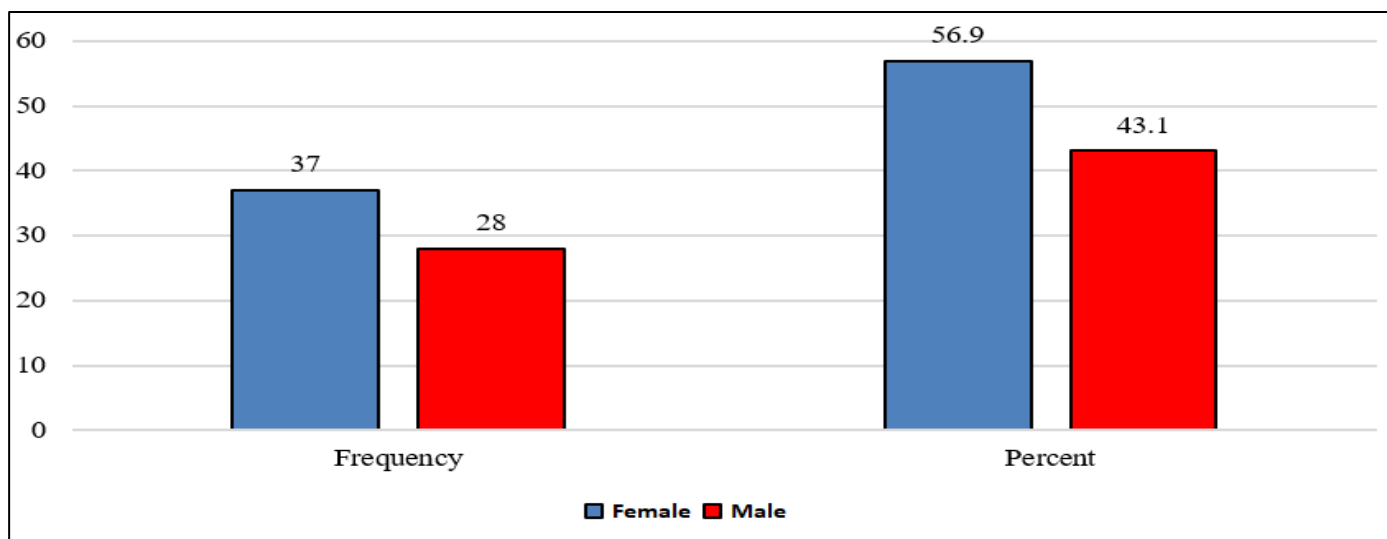
As shown in Figure 3, most of the girls lived with their mothers, 58 (60.4%). These were followed by 18 (18.8%) who lived with both parents and 11 (11.5%) who lived with their fathers. Another 7 (7.3%) lived with their guardians while those who lived with their siblings or alone where 1(1%) each. According to these data, respondents lived in a wide range of family settings, with the majority living with their mothers. This shows that most girls lived with single mothers which could contribute their chances to engage in RTBs as posited by Daryanani et al. (2016). The findings continue to rely on those of Gatura (2018), who found that children raised by people other than their biological parents were more likely to have poor academic performance, childhood diseases, accidents, adolescent pregnancies, drug addiction, and chronic absenteeism.



**Figure 3**  
*Persons Girls Live With*

#### 4.2.5 Gender of Teachers

As shown in Figure 4.4, most of the teachers, 37 (56.9%) were female while about a third, 28 (43.1%) were male. While having young female teachers who have likely undergone gender and development training is valuable, preventing RTB among PDSS girls is a complex challenge that involves a multitude of factors beyond the classroom. It requires a holistic approach that includes parents, peers, community, and broader societal factors. Teachers are an important part of this effort, but they cannot be solely responsible for preventing RTBs among students. Evidently, both genders were well signified in the PDSS in the study which is in line with the study by Karigu (2016) which calls for equitable distribution of teachers in public schools in Kenya. This could avert gender bias regarding risk taking behaviours among girls in the study population



**Figure 4**  
*Gender of Teachers*

### 4.3 Types of Risk Taking Behaviours among Girls

This section includes data from the study's first objective, which was to establish the types of RTB among girls in PDSS in Kiambaa Sub-County, Kiambu County. The section presents findings from teachers and students questionnaires as well as interviews. On a scale of 5 to 1, the girls were asked to score their degree of agreement or disagreement with the statements below (5-to a very high extent; 4-to a great extent; 3- to a moderate extent; 2-to a little extent and; 1-Not at all). The point of convergence along the scale was shown using means (M). In this regard, the levels of agreement for each statement are explained in line with the Means. Table 4.4 shows the findings obtained.

**Table 5**

*Levels of RTB among Girls by Type According to the Girls*

Descriptive Statistics					
Levels of RTB among Girls	N	Min	Max	Mean	Std. Dev.
Sometimes I smoke cigarettes and other hard drugs	96	1	5	1	0.64
Sometimes I use some hard drugs	96	1	5	1	0.62
Sometimes I am involved in stealing in school	96	1	5	1	0.83
Sometimes I am involved in unwarranted physical fights in school	96	1	5	2	1.14
Sometimes we have cases of organized gangs that steal from people in our school	96	1	5	2	1.17
Sometimes we have cases of unwanted pregnancies and abortions in the school	96	1	5	3	1.51
Sometimes I have casual and unprotected sex with my boyfriend/friends	96	1	5	2	1.33

Most girls said that did not smoke cigarettes and other hard drugs (M=1, not at all). Also, most of the girls said that they did not get involved in stealing in the schools (M=1, not at all). By agreeing to a little extent (M=2), the girls pointed out that they were in gangs that sometimes got involved in stealing in the school and that they were involved in unwarranted physical fights in the school (M=2). They also agreed to a little extent (M=2) that they sometimes had casual and unprotected sex with their boyfriend/friends in agreement with a study. These findings agree with a study by Allen et al. (2012) that shows that risky sexual behaviours were common among girls. Lastly, the girls agreed to a moderate extent that they sometimes had cases of unwanted pregnancies and abortions in the school (M=3). This corroborates a report by KNBS (2015) that shows that most girls in Kenya engage in risk-taking behaviours which predisposed most of them to sexually transmitted infections (STIs) and early pregnancies.

It is thus evident that there RTB, albeit not to great extents, of risk taking behaviours according to the girls. The most common RTB were unprotected and casual sex, gang behaviour, unwarranted physical fights and cases of unwanted pregnancies and abortion. Cigarettes and hard drugs such as bang, cocaine and hard prescription drugs were not highly used. These findings are in line with the study by Kauppi (2015) that found out that during adolescence, girls are likely to fall victim to numerous risky-behaviours such as "casual sex, gang behaviour, theft, and unnecessary physical fights, among other things."

### 4.4 Internal and External Factors that Influence RTB among Girls

The second objective of the study was to examine the internal and external factors that influence vulnerability to RTB among girls in PDSS in Kiambaa Sub-County, Kiambu County. First and foremost, the girls were asked to rate selected statements on the internal and external factors that influenced RTB among girls. The findings were presented in Table 6.

**Table 6**  
*Internal and External Factors that Influence RTB among Girls According to Girls*

Descriptive Statistics					
Internal and External Factors	N	Min	Max	Mean	Std. Dev.
My family provides for all my needs and this influences the risky behavioural choices I may make	96	1	5	2	1.53
My parents/guardian guide me on how to avoid risky behaviours	96	1	5	4	1.17
My parents/guardians do not consume excessive amounts of alcoholic drinks.	96	1	5	2	1.21
My parents/guardians advise and guide me on acceptable behaviors.	96	1	5	4	1.24
My parents/guardians advise me about the dangers of destructive behavior.	96	1	5	4	1.29
I am confident in my ability to thrive in life since my family sets a good example for me.	96	1	5	4	1.25
My parents/guardians are always there to advise me if I have a question about a specific decision that I want to make.	96	1	5	4	1.57
I have friends who often persuade me to participate in risky behaviors.	96	1	5	2	1.54
My mother scrutinizes the people I choose, and this affects my behavior.	96	1	5	4	1.63
Some of my classmates use alcohol and other drugs and push me to do so as well.	96	1	5	2	1.53
I believe that some of the things I do are influenced by the people I maintain.	96	1	5	3	1.72
It is desirable to be recognized by colleagues, thus it is frequently difficult to avoid peers regardless of their behavior.	96	1	5	3	1.69
It is deemed acceptable to do unsafe activities with friends, such as smoking, therefore one does them regardless.	96	1	5	2	1.7
The majority of my peers are involved in sexual relationships.	96	1	5	3	1.79
The society doesn't care how one lives, thus I may do anything I want.	96	1	5	3	1.77
Nothing is ever done to colleagues who engage in bad behavior in society.	96	1	5	3	1.63
There is widespread alcohol and drug misuse in the town, and no one is discouraged from partaking.	96	1	5	4	1.54
In the society, there are cases of sexual interactions between adults and schoolgirls.	96	1	5	4	1.45

The girls agreed to a little extent ( $M=2$ ) that their families provided for all their needs and this influenced the risky behavioural choices they made. They also agreed to a little extent that their parents/guardians did not indulge in excessive alcoholic drinks ( $M=2$ ). These findings are supported by a study by Theuri (2017) that shows that parental support was pivotal in preventing girls from undertaking in RTBs. To this end, the family environment could play important roles in checking the risk behaviours that girls undertook.

The girls also agreed to a little extent ( $M=2$ ) that they had friends who regularly influenced them to participate in unsafe behaviours and that it was regarded cool to perform risky activities like smoking among peers, thus they did it despite ( $M=2$ ). This demonstrates that unfavourable peer effects contributed to hazardous behaviour among girls (Garney et al., 2018). To a moderate extent ( $M=3$ ), the girls stated that some of the things they did were because of the friends they retained and that it was necessary to be recognized by colleagues, therefore it was frequently difficult to stay away from peers regardless of their behaviour.

They also agreed, to varying degrees, that the majority of their acquaintances were in sexual relationships and that society did not care how one lived, so they could do whatever they wanted ( $M=3$ ). Furthermore, they agreed that nothing was ever done to their friends who did wrong in society ( $M=3$ ). These findings agree with the study by UNICEF (2012) that showed that girls often fall prey to premarital risky sexual relationships with peers and even adults and that prostitution among school-going girls was also common.

The respondents then agreed to a great extent ( $M=4$ ) that their parents/guardians educated them on how to avoid dangerous behaviours and offered them advice and direction on appropriate behaviours. They also agreed to great extent that their parents and guardians informed them about the dangers connected with RTB and that they were confident in their ability to achieve in life since their family set a good example for them ( $M=4$ ). The findings are a departure of the findings of Willoughby and Hamza (2011), which discovered that parents were the primary directing influences in terms of the risks that teenage children were prone to participate in, as well as the rate with which they engaged. Bulwarks at the family level against risk taking behaviours among parents were thus commendable. These findings therefore show peer influence supersedes parental guidance when it comes to involvement to RTB this is clearly explained by Problem Behaviour Theory

The girls also agreed that if they had any questions about a particular decision they wanted to make, their parents/guardians were always ready to help them (M=4). They also agreed to a great extent that their mothers checked the kind of friends they made and this influenced their behaviour (M=4). This implies that to a large extent, parents play a key role in ensuring the girls get the advice they need and that they keep friends who are considered good. This is in line with a study by Nyaga (2015) that points out that parents play important roles in checking risk-taking behaviours among teenagers. However, this contradicts with the findings of this study since it is clear that the girls do not follow parental guidance and thus continue to engage in RTB. The findings can be attributed to the breakdown of African culture and adoption of modern and western culture. This breakdown has thus deterred the girls from accessing information on RTB from parents but from other sources such as from media, peer to peer and not from significant others. This research results are supported by Dunne, McIntosh and Mallory (2014) who argued that the social media and internet had enormous impact on RTB. Furthermore, they agreed to a great extent that there was a lot of alcohol and substance misuse in the society and that using it was not discouraged (M=4). This might be explained by the fact that, according to Mukui (2018), there was a high level of alcohol usage in Kiambu County due to its great availability. These findings corroborate a research by Obare et al. (2016), which found that high levels of social value disintegration led girls to engage in risk-taking behaviours.

Finally, the respondents generally believe that there have been instances of sexual connections between adults and school-age girls in the community (M=4). This needs to be explained even before you begin referring to other studies. This buttresses the study by UNICEF (2012) that shows that there were premarital risky sexual relationships with peers and even adults. These findings show that the families and friends of girls had some influence on the risk behaviours they undertook. Societal values also contributed to RTB among girls due to tolerance of poor behaviour.

## V. CONCLUSIONS & RECOMMENDATIONS

### 5.1 Conclusions

The study conducted in Kiambaa Sub-County, Kiambu County, aimed to investigate Risk Taking Behaviors (RTB) among girls in Public Secondary Schools (PDSS) and the factors influencing these behaviors. The findings revealed the existence of RTB among these girls, including unprotected sex, drug use, physical fights, and unwanted pregnancies. Notably, perceptions of RTB varied among different stakeholders, with girls often underreporting their involvement. Teachers and parents provided a more comprehensive perspective on RTB. Internal and external factors, such as family, friends, societal values, and community norms, played pivotal roles in shaping girls' behaviors, either as protective or risk factors. Girls engaged in RTB faced gender-specific challenges like early pregnancies and school dropout, highlighting the need for gender-sensitive interventions. The study also identified potential gender-responsive strategies, such as government support, financial assistance, and community involvement, to mitigate the vulnerability to RTBs among girls.

### 5.4 Recommendations

The research findings and conclusions lead to several recommendations aimed at addressing the challenges posed by risk-taking behavior (RTB) among girls in Public Day Secondary Schools (PDSS). These recommendations are grounded in the identified factors influencing vulnerability to RTB and seek to create a comprehensive approach for intervention.

Firstly, it is suggested that girls be sensitized about the detrimental effects of risk-taking behavior through school-based interventions, with a particular emphasis on guidance and counseling programs. Such initiatives can serve as valuable platforms for raising awareness, providing support, and fostering a sense of responsibility among female students. By incorporating discussions on RTB into the school curriculum, educators can contribute to building resilience and promoting informed decision-making among girls.

Secondly, community-level measures are recommended to reinforce the protective environment around girls. This involves incorporating spiritual guidance and emphasizing the importance of shielding girls from engaging in risk-taking behaviors. Community leaders, religious figures, and local influencers can play pivotal roles in promoting values and creating a supportive atmosphere that discourages RTB among young girls.

Thirdly, the government, particularly through the Ministry of Education, is urged to take proactive steps in strengthening guidance and counseling programs in schools. This can be achieved by developing and enforcing relevant policies that prioritize the well-being of students. Additionally, providing ongoing training for teachers in effective counseling techniques and strategies will enhance their ability to address the specific challenges faced by girls in PDSS.

Lastly, a crucial recommendation involves empowering parents to guide their daughters appropriately. This can be achieved through awareness campaigns, workshops, and community engagement programs that emphasize the pivotal role parents play in shaping the behavior of their children. Moreover, strengthening empowerment programs for mothers can have a direct impact on keeping girls in school by fostering a supportive home environment that values education and discourages engagement in risky behaviors.

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