

**EFFECTS OF PROVISION OF SANITARY TOWELS ON PERFORMANCE OF
ADOLESCENT GIRLS' IN PRIMARY SCHOOLS IN KENYA: A CASE OF MATUNGU
SUB-COUNTY, KAKAMEGA COUNTY.**

BY

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DECLARATION

This research project paper is my original work and has not been presented for academic award in this or any other University.

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DEDICATION

My dedication goes to first and foremost the Almighty God for the grace and strength that saw me through my studies. My greatest support, love and care from my family; Joseph, Magdalene, Paul and Veronica who played different roles in ensuring I achieve my desired dream and great academic achievement. To my Late Dad and Mum (Mr. & Mrs. Orlando Wang'anya) I know I have made you proud.

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ABBREVIATIONS AND ACCRONYMS

CCGD - Collaborative Centre for Gender and Development

FAWE - Forum for African Women Educationalists

MoE - Ministry of Education

NGOs - Non Governmental Organizations

NSTP - National Sanitary Towels Programme

PMS - Premenstrual Syndrome

SDGs - Sustainable Development Goals

SPSS - Statistical Package for Social Science

UNESCO - United Nations Educational, Scientific and Cultural Organization

ABSTRACT

This study was conducted to examine the effects of provision of sanitary towels on performance of adolescent girls in primary schools in Kenya: A case study of Matungu sub county, Kakamega County. The objectives of this study were to assess how the provision of sanitary towels has improved attendance on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County, Investigate how the provision of sanitary towels has improved transition on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County, Assess how the provision of sanitary towels has increased self-esteem, reduced embarrassment and psychological trauma on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County and Assess how the provision of sanitary towels has improved peer relations on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County. This study employed a descriptive survey research design and targeted 100 respondents and a sample of 108 respondents of the target population was considered. Specific considerations were 2 primary schools per ward within the 5 wards in the sub-county making a total of 10 schools targeting 10 adolescent girls' per school from classes five, six, seven and eight at random. Stratified sampling technique method was used and primary data was collected through the use of questionnaires. A pilot study was conducted to pretest the validity and reliability of instruments for data collection. The data was logged in and analyzed using SPSS version 20 and presented using frequency tables to facilitate comparisons and conclusions. Data collected was analyzed and interpreted based on the identified independent and dependent variable. The study findings revealed that 87% and 81% of the girls are always in school during their menses and always present in school respectively and 40% absent from school for various reasons with only 9% attributed to lack of sanitary towels. There was a progressive increase in transition rates from lower to upper classes with 88% agreeing to concentrate on their study activities. Happiness and shyness was 43% and 56%. Self-confidence and being confident was at 61% and 78% while 81% were comfortable in class during their menses. Majority of the girls at 85% can freely participate in class while 82% relate well with the peers and 68% mingle freely with their classmates both boys and girls. Overall 72% admit there is adequate provision of sanitary towels. Data was analyzed using correlation regression using Pearson Correlation to relate variables. This was to establish if there was a correlation between dependent variable performance against independent variable improved attendance and performance, improved transition and performance, self-esteem, reduced embarrassments and psychological trauma and performance and lastly improved peer relations and performance. The researcher recommended need for a further nationwide research on the effects of provision of sanitary towels on performance of adolescent girls in primary schools with the aim of capturing everyday geographies of menstruation to inform future programs and policies that aim to address gender parity within the education system, the NSTP should ensure always constant supply of sanitary towels to all primary schools nationwide, the NSTP should conduct a monitoring and evaluation on their programme to further inform policy and facilitate addressing the gaps within the programme and more training on teachers on menstrual health and management and evaluated on the dissemination of the same to students.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Adolescence is a crucial stage of life and one that is challenging for most girls because of its physical and psychological changes. One of the major physiological changes in adolescence girls is menstruation. Today in Kenya menstruation is not only a health concern, but also an educational policy concern and has become a key factor in the country's bid to achieve both the National Goal and Sustainable Development Goal (SDG) of eliminating gender disparity in primary and secondary education (Stella Chebii, 2012).

According to O'Connor and Kovacs (2003), adolescence is a transitional phase in life from childhood to adulthood, and is something worth celebrating. This stage is marked by physiological changes such as increased body size and the ability to reproduce as well as psychological changes, including the ability to think critically, an expanded reasoning capacity, identity formation and sensitivity to the 'new' body image. However, for most girls in Kenya and other parts of the continent, this phase often brings challenges that push girls out of school and social activities, making the celebration short-lived. These challenges have often been underplayed, even though research has shown that their effects are significant. For example, menstruation causes Kenyan adolescent girls to lose an average of 3.5 million learning days per month (Muvea, 2011). Meanwhile, UNESCO estimates that one in 10 African adolescent girls miss school during menses and eventually drop out because of menstruation-related issues, such as the inaccessibility of affordable sanitary protection, the social taboos related to menstruation, and the culture of silence that surrounds it (AllAfrica, 2011).

There are physiological and symptomatic challenges that girls go through during their menstrual cycle, which also hinder their full access to education as well as stop them from fully enjoying activities with others. For instance, before the onset of menstruation, adolescent girls can experience tension, depression, tiredness and irritability symptoms of premenstrual syndrome (PMS), which affects the way adolescent girls relate to other students in school and their teachers. The hormonal changes in the bodies of adolescent girls cause sudden mood swings as well. Physically, the retention of fluids in the body tissues can cause swelling around the ankles in some adolescents as well as backaches (Dalton, 1979).

It is estimated some 2.6 million girls (2.2 million primary and 400,000 secondary school girls) require support to obtain menstrual hygiene materials. Approximately 300,000 of them, owing to cultural practices particularly in arid and semi-arid regions, would require both sanitary towels and underwear at an estimated cost of 2.6 billion Kenyan shillings. To address this problem, the Ministry of Education, Science and Technology initiated the Schools NSTP with the objective of ‘keeping girls in school’ and increasing their access, participation and performance in education. The Sanitary Towels Programme is mandated for: Provision of sanitary towels to school girls, training of teachers on hygienic usage and disposal of sanitary towels, monitoring and evaluation. This programme has been in place since 2010 and a total of 678,700 disadvantaged girls have benefited as of 2013 (UNESCO, 2014).

Despite difficulties in measuring girls’ school attendance during menses, both girls and parents confirm it is a common habit for girls to stay home during at least some days of their monthly menstruation. Existing qualitative studies conclude that the full engagement of girls in school activities is negatively affected, with many girls reporting they stayed home from school due to menstrual cramping, insufficient menstrual hygiene materials, inadequate water and sanitation facilities in schools, unsupportive environments, and fear of a menstrual accident McMahon, S. et al. (2011). Additionally, some girls also avoid standing up to answer teachers’ questions because of stress over leakage or smell and discomfort Sommer, M. and Ackatia-Armah, T. (2012); House, S. et al. (2012) or they hesitate to write on the blackboard for fear of menstrual accidents and others seeing blood on their clothes, and the subsequent shame and embarrassment this causes House, S. et al. (2012).

1.2 Statement of the Problem

According to Glorius Mutisya (<http://www.academia.edu>), Girls in Kenya face many challenges. Most female students are not able to afford the purchase of sanitary pads. Using other means these girls are left uncomfortable and often unhealthy during their menstrual cycle. This leads to many of them missing school for a few days each month as they are too uncomfortable and/or embarrassed to attend. Even if they attend school, they remain distracted and fail to pay attention to their lessons. As a society, we can greatly appreciate that this is a huge need. Females should be healthy and comfortable during their menstrual cycle, and not forced to miss school or be preoccupied while attending.

In view of the above statement, apart from getting assistance from various NGOs and individuals or group sponsors, the Kenya government in its annual budget, allocated funds and resources for the supply of sanitary towels to primary and secondary schools in the 47 counties countrywide. This has led to an adequate continuous supply of sanitary towels in all public primary schools, and the identified challenges experienced by the adolescent girls have tremendously reduced and enabled the girl child to be in school and improve on performance. It is upon this that this study sought to investigate the effects of provision of sanitary towels on performance of adolescent girls in primary schools in Kenya, Matungu Sub-county in Kakamega County.

1.3 Purpose of the Study

The main aim of the study was to find out the effects of provision of sanitary towels on performance of adolescent girls in primary schools in Kenya, Matungu Sub-county in Kakamega County.

1.4 Objectives of the Study

The specific objectives of this study were:

- i. To assess how the provision of sanitary towels has improved attendance on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County.
- ii. To investigate how the provision of sanitary towels has improved transition on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County.
- iii. To assess how the provision of sanitary towels has increased self-esteem, reduced embarrassment and psychological trauma on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County.
- iv. To assess how the provision of sanitary towels has improved peer relations on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County.

1.5 Research Questions

The study sought to answer the following questions:

- i. To what extent has the provision of sanitary towels improved attendance on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County?
- ii. To what extent has the provision of sanitary towels improved transition on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kenya?
- iii. To what extent has the provision of sanitary towels increased self-esteem, reduced embarrassment and psychological trauma on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County?
- iv. To what extent has the provision of sanitary towels improved peer relations on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County?

1.6 Significance of the Study

The study will be significant to the government, policy makers, planners, community and schools at large to know the effects of provision of sanitary towels on performance of adolescent girls in primary schools in Kenya, Matungu Sub-county in Kakamega County. The results of this paper will be beneficial to policy makers, parents, teachers, the community, government, researchers and other key relevant stakeholders as it will serve as empirical data giving suggestions on the benefits and importance of continuous supply of sanitary towels to the adolescent girls' school performance in primary schools in Kenya.

This study will also contribute to the body of knowledge because it can be used as a reference material by researchers.

1.7 Limitations of the Study

This study was limited to understanding the effects of provision of sanitary towels on performance of adolescent girls' in primary schools in Matungu sub-county only in selected public schools. This research proposal was an academic study which was time based covered only in one sub-county in Kakamega County due to time and financial limitation to a larger study area. The findings may not be a full representation of the whole 47 counties in Kenya.

1.8 Delimitations of the Study

The study was conducted in Matungu Sub-county within Kakamega County. It involved the teachers and pupils as main respondents.

Matungu Constituency is an electoral constituency in Kenya. It is one of the constituencies in Kakamega County with a population of 146,563. It has 5 wards namely; Mayoni, Koyonzo, Kholera, Namamali and Khalaba. This is a home of the wanga community and few of bukusu.

This study was limited to the teachers and pupils of public primary schools analyzing the effects of provision of sanitary towels on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County.

The adolescent girls face a lot of challenges and hence the need for this study to investigate the behavioral impacts of provision of sanitary towels among primary schools in Matungu sub-county in order to come up with ways and suggestions that will continuously keep the girl child in school and ensure they achieve good performance. Therefore it will be interesting to study how the adolescent girls cope with menstruation while in school and how it affects performance.

1.9 Assumptions of the Study

The study was conducted under the assumption that the respondents will be available and also that they will give valid and honest responses. This study assumed that the respondents have a good understanding of the effects of provision of sanitary towels on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County.

1.10 Definition of Significant Terms

Attendance	The act of being present in school throughout the learning process
Sanitary Towel	Is a pad of thick soft material which women and girls wear to absorb the blood during their periods
Transition	Change or passage from one state or stage to another
Self-esteem	A realistic respect for or favorable impression of oneself; self-respect
Embarrass	To cause confusion and shame to; make uncomfortably self-conscious; disconcert

Psychological Trauma	A type of damage to the mind that occurs as a result of a severely distressing event
Peer	A person who is equal to another in abilities, qualifications, age, background, and social status
Peer Relations	Are the social relationships and interpersonal interaction processes that take place between peers so refers to how people within a similar age group relate among themselves
Participation	Taking part in educational activities

1.11 Organization of the Study

This study was organized into five chapters; chapter one focused on introduction, giving a background of the study while putting the topic of study in perspective. It gave the statement of the problem and the purpose of study. This chapter outlined the research objectives and questions, significance, limitations, delimitations and the assumptions of the study. Chapter two reviewed the literature based on the objectives of the study. The chapter looked at the theoretical framework and conceptual framework. Chapter three covered the research methodology of the study. The chapter further described the introduction, research design, sampling procedure and sample size, data collection instruments, data collection procedure, data analysis techniques, ethical considerations and finally the operationalization of variables. Chapter four covered data analysis, presentation, and interpretation of the study as set in the research methodology. Finally, the study closed with chapter five which presented the summary of the findings, conclusion and recommendations for action and further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review on effects of provision of sanitary towels on performance of adolescent girls' in primary schools in Kenya. The review of literature for this study was drawn from books, internet scholarly articles and websites, government publications and documents, several research reports from the African Population and Health Centre (APHRC) in Kenya's urban informal settlements, the Forum of African Women Educationists (FAWE), UNESCO, individual researchers and other non-governmental organizations (NGOs).

This section mainly focused on improved attendance, improved transition, self-esteem, reduced embarrassment and psychological trauma and improved peer relations; theoretical review and conceptual framework.

2.2 Improved Attendance

Menstruation causes Kenyan adolescent girls to lose an average of 3.5 million learning days per month. Limited access to safe, affordable, convenient and culturally appropriate methods for dealing with menstruation has far reaching implications for rights and physical, social and mental well-being of many adolescent girls in Kenya and other developing countries as well. It undermines sexual and reproductive health and well-being and has been shown to restrict access to education. Faced with the complete lack of sanitary pads, this can only mean that the girls miss school for considerable period of time which has negative impact on the quality of learning they receive, their overall academic performance, their retention and transition through the education system. Constant discomfort in class and regular absence from school affected negatively the girls' participation. It made girls' be away from school longer than expected which affected their academic performance. Interrupted attendance, insufficient learning and therefore poor results in the long term can contribute to eventual drop out Muvea (2011). UNESCO estimates that one in 10 African adolescent girls miss school during menses and eventually drop out because of menstruation related issues, such as the inaccessibility of affordable sanitary protection, the social taboos related to menstruation, and the culture of silence that surrounds it (AllAfrica, 2011).

Furthermore a study in Kenya by Ministry of Education in 2007 found that sanitary pads provision coupled with sexual and reproductive health education could reduce absenteeism amongst girls by over 3.5 days per month and brought other important benefits in terms of girls' self-esteem and self-confidence. MoE further explains that thousands of Kenyan school girls miss one and a half school months of class each year due to their menstrual cycles. School absence lowers girls' academic performance and self-esteem and widens gender disparities in educational achievements. Many girls who cannot afford sanitary napkins endanger their health by resorting to unhygienic solutions, such as leaves, old cloth, sponges, soil or feathers. Consequently, existing programmes aimed at retaining girls in school tend to be labor-intensive community engagement efforts where the gains may be small, progress slow, and outcomes uncertain (Otieno, F. A., 2007). Such programmes include those by local NGOs, churches and well-wishers who occasionally distribute sanitary towels to schools. Another such programme is by the government which was started in 2012 as part of the free education for all campaign (Scott, L. et al, 2009). The Kenyan MoE launched the NSTP in public primary schools in 2012 with the aim of increasing opportunities for poor adolescent girls in order to reduce "absenteeism among girls, improving self-esteem and participation during instruction" (Ministry of Education).

"Limited access to safe affordable, convenient and culturally appropriate methods for dealing with menstruation has far reaching implications for rights and physical, social and mental well-being of many women and adolescent girls in Kenya. It undermines sexual and reproductive health and well-being and has been shown to restrict access to education." APHRC 2010, (p.2)

The provision of sanitary towels to the adolescent girls in primary schools increased their performance in the sense that there were decreased level of absenteeism, high levels of self-esteem, and participation in school activities that made the girls be much comfortable in class. This ensured there was uninterrupted attendance in school with sufficient learning which in the long term improved the quality of performance of the adolescent girls' (CCGD).

In November 2013, Citizen TV highlighted a story whereby Kenya Red Cross Society (KRCS) together with Citizen TV and well-wishers rolled out a nationwide campaign dubbed "Inua dada" to mobilize and stock piling of disposable sanitary pads for girls in hardship areas of Marigat, in Baringo County. This came to light after a news feature "Period of shame" was aired on Citizen

TV highlighting how school going girls in Marigat, Baringo County have had to turn to desperate measures such as unhygienic rags, hides and feathers as sanitary pad are not available. This does not only put the girls at the risk of infections but many of them have had to skip school when they have their periods or simply drop out completely (Citizen TV).

Many myths and taboos still hover around menstruation and lead to negative attitudes toward this biological phenomenon and women experiencing it. After menarche, girls are faced with challenges related to management of menstruation in public places. UNICEF (2013) estimates that 1 in 10 school-age African girls ‘do not attend school during menstruation’. World Bank (2005) statistics highlight absences of approximately 4 days every 4 weeks. Partly due to the difficulties in measuring absenteeism and its causes, especially when linked to menstruation, there are differing opinions on the impact of lack of menstrual hygiene materials. Nevertheless, a lack of sanitary towels is one amongst many reasons why girls may miss school (Mensch and Lloyd, 1998; Mensch et al., 2001; Lloyd and Mensch, 2006; Grant et al., 2010; Sommer, 2010a; McMahon et al., 2011; Mason et al., 2013; Malusu and Zani, 2014).

2.3 Improved Transition

Menstruation is an issue that goes beyond learning, because it concerns the educational setting. Menstrual hygiene materials must be made available, linkages to health services must be formed, and safe latrines, clean water and soap, adequate sanitation and disposal mechanisms must be provided. These objectives are for the benefit of all members of the school community, including learners and staff; furthermore, failure to meet them puts girls at risk of not having a high-quality educational experience (UNESCO, 2014).

One of the most challenging times for learners is puberty, when the body goes through multiple changes all at once as it makes the transition to adulthood. Puberty is not a problem to be solved; it is simply a time of accelerated physical growth and sexual development experienced by every human. But by facing this pivotal phase of life unprepared, learners are left confused and unsupported, which in turn affects the quality of their education. In some cases it may directly affect school attendance, especially for girls. It is incumbent on the education sector to make sure all learners are prepared for these changes. Achieving this goal calls for education about puberty, sometimes approached within a wider programme of comprehensive sexuality education, but it also requires ensuring that the educational setting is a safe and clean space to support healthy

practices. A health- promoting school is central to providing a high quality education for all, including learners going through puberty (UNESCO, 2014).

In many contexts menstruation is considered a private issue, making it difficult to speak about it in public, for instance in a classroom. Many girls are not properly prepared; numerous studies, particularly from low-income countries, show that a very high number of girls start menstruating without having any idea what is happening to them or why. Since parents can find it difficult to speak of sensitive and sexual issues with their children, even while admitting it is also their responsibility, schools have a central role in puberty education (McMahon et al., 2011).

According to FAWE, in their study focusing on the dynamic in the school space, a girl's education is the most important investment for women because of its contribution towards better health for their families, alongside increasing the women's potentials as well as lowering fertility rates. The onset of menstruation marks a significant turning point in the life of a young girl. According to O'Connor and Kovacs (2003), this turning point is something worth celebrating. However, for most girls in Kenya and other parts of the continent, this phase often brings challenges that push girls out of school and social activities, making the celebration short-lived. The onset of menstruation with its accompanying physical development, its hygienic requirements and its increased social pressure to move into adulthood has implications for young girls' school attendance, academic performance, and self- esteem.

As menstruation is often portrayed as a 'curse', a threat to public hygiene, seeking to incorporate more positive, nuanced teaching about menstruation as a valuable and healthy biological process, coupled with deliberately challenging ideas of the stigma and disgust about menstrual blood, would go a long way to help girls build self-confidence in their bodies and bodily functions, facilitating their healthy transition from puberty to adolescence and adulthood Kirk, J. and Sommer, (M. 2006).

2.4 Self-esteem, Reduced Embarrassments and Psychological Trauma

According to Brehm S. Sharon et al (2002) there is need for self-esteem. That people with positive self-image tend to be happy, healthy, productive, successful and confident while people with negative self-image tend to be more depressed. In the absence of sanitary towels the sense of girls' interaction gets interfered with as they feel very uncomfortable being together with boys

counterparts. The girl child constantly fears messing her clothing and getting embarrassed. This damages their self-esteem even further. Girls' low self-esteem slows their progress. It is this high expectation in the change in behavior that puts pressure on the girl child to not only be good in class but also be neat (Dona Dunn, 1997).

Studies have shown that most aspects of an adolescent girl's life are affected by lack of sanitary facilities thus lowering the girl's level of self-esteem and confidence among other issues. This is experienced when the girls lack sanitary towels which results to leakages and exposures which causes great embarrassments. A review of several studies earlier been done indicate that lack of these sanitary towels result in embarrassments, anxiety and shame when girls stained their clothes which makes them be stigmatized. The schoolgirls interviewed for the various studies generally described menstruation as a time of anxiety and discomfort especially at school, leading to low concentration in class (Stella Chebii, 2012).

The stigma surrounding menstruation may have significant physiological damage where the girls who are not properly educated about menstruation, have had no chance to completely understand what they are going through. Besides facing problems at school, girls are also susceptible to intense physiological and symptomatic challenges during their menstrual cycle, another factor that hinders their access to education. Many of the girls may go through days of physical, psychological and behavioral changes; all symptoms of PMS, which has a wide variety of symptoms, including mood swings, tender breasts, food cravings, fatigue, irritability and depression (Kirk and Sommer, 2006).

According to Kotoh (2008), menstrual blood is considered dirty and harmful, resulting in girls who are menstruating being restricted from participating in some activities for fear that they may 'contaminate' others and the things they may touch. For instance, in most African communities, menstruating girls are not allowed to be in the kitchen to cook or to do the dishes, and neither are they allowed to participate in games with other young people during their menstruation period. This in turn fosters stigma as the restrictions create the perception that menstruation is shameful and that menstrual blood is harmful. And yet menstrual blood is free of toxins and any harmful bacteria (Bharadwaj and Patkar, 2004).

Long school days (typically 8 hours) that increase the risk of menstrual leaks coupled with frequent harassment by boys in and around school toilet areas add to the shame and embarrassment experienced by many post-pubescent girls. Where it is difficult to change sanitary products, infections (and the odour of menstrual blood being detected by others) are likely to be higher and girls may suffer discomfort and stigmatization as a result (Muito, 2004). Given such constraints, it is unsurprising that many Kenyan girls view ‘menstruation as the most significant social stressor and barrier to schooling’ and prefer to manage their menses at home (McMahon et al., 2011).

Lack of information, misconceptions and adverse attitudes to menstruation may lead to a negative self-image among girls who are experiencing menses for the first time, and can result in a lack of self-esteem as they develop their personality as women. The culture of ‘silence’ around menstruation increases the perception of menstruation as something shameful that needs to be hidden, and may reinforce misunderstandings and negative attitudes toward it. While we are not implying that exactly the same curriculum should be provided for girls as for boys, there should be sensitization Kirk, J. and Sommer, (M. 2006). One notable consequence is that boys have too little information about menstruation, which a number of studies suggest might be at the root of the teasing and bullying that frequently happens in schools. Therefore educating boys and male teachers on menstruation is aimed at creating a less stigmatizing educational environment for girls, as boys’ lack of understanding is likely to underpin much of the teasing and shaming behavior that is widely prevalent in schools (and elsewhere) Haver, J. et al., (2013).

2.5 Improved Peer Relations

By definition, peer relations refer to associations among equals, but in reality the equality is confined to individuals who share the same life stage (fellow adolescents). Hierarchies emerge within aspects of the peer system, such that certain crowds have more status than others (Brown, Von Bank, & Steinberg, 2008; Horn, 2006), and cliques feature leaders and followers (Dunphy, 1969), if not an even more differentiated “pecking order” or dominance hierarchy (Adler & Adler, 1998; Savin - Williams, 1980).

For decades, scholars have pointed to peer relationships as one of the most important features of adolescence. Peers have been alternately blamed for some of the more problematic aspects of adolescent functioning and praised for contributing to adolescent health and well - being.

Recently, researchers have pushed the study of peer relations in exciting new directions, using more sophisticated methodologies to explore understudied aspects of adolescent peer relationships and mechanisms of influence (B. Bradford Brown and James Larson, 2008).

A fundamental feature of friendships is that partners share many characteristics in common. Through systematic research, investigators have discovered that this is because similar background, tastes, values, and interests propel individuals to select each other as friends, and as these characteristics are affirmed within the relationship, the partners are likely to grow even more similar to each other (Cohen, 1977; Kandel, 1978).

2.6 Theoretical Framework

A theory is a set of properly argued ideas intended to explain a phenomenon. This is a structure that can hold or support a theory of a research study. It introduces and describes the theory that explains why the research problem under study exists (USCLibraries).

2.6.1 Liberal Feminism

“Feminism” is about equality of the sexes and activism to achieve such equality for women (Jone Johnson Lewis).

According to Alison Jaggar (1983), she described liberal feminism as a theory and work that focuses more on issues like equality in the workplace, in education and in political rights. Where liberal feminism looks at issues in the private sphere, it tends to be in terms of equality; how does that private life impede or enhance public quality. It works to remove obstacles to women achieving on an equal level with men. Liberal feminism’s primary goal is gender equality in the public sphere; equal access to education, equal pay, ending job segregation, better working conditions won primarily through legal changes.

According to this theory, all forms of prejudices, biasness and discriminatory behavior should be done away with and people should be considered equal for the community to be successful. All the boys and girls in education should be given equal opportunities without interference for them to excel in their studies. The liberal feminist seeks to remove all challenges and barriers to girls and women freedom of choice and equal participation in every concerned area. In this regard, the adolescent girls should be provided with sanitary towels to enable them to attend school as expected to improve their performance. Otherwise lack of sanitary towels will make the girls

have different experiences from them that have. Therefore the need of the adolescent girls must be given high attention like any other basic requirement (Otieno, F. A., 2007).

2.6.2 Conceptual Framework

The independent variables in this study were improved attendance, improved transition, self-esteem, reduced embarrassment and psychological trauma and improved peer relations.

Dependent variable is a factor which is observed and measured to determine the effect of the independent variable. The dependent variable is performance.

Independent Variable

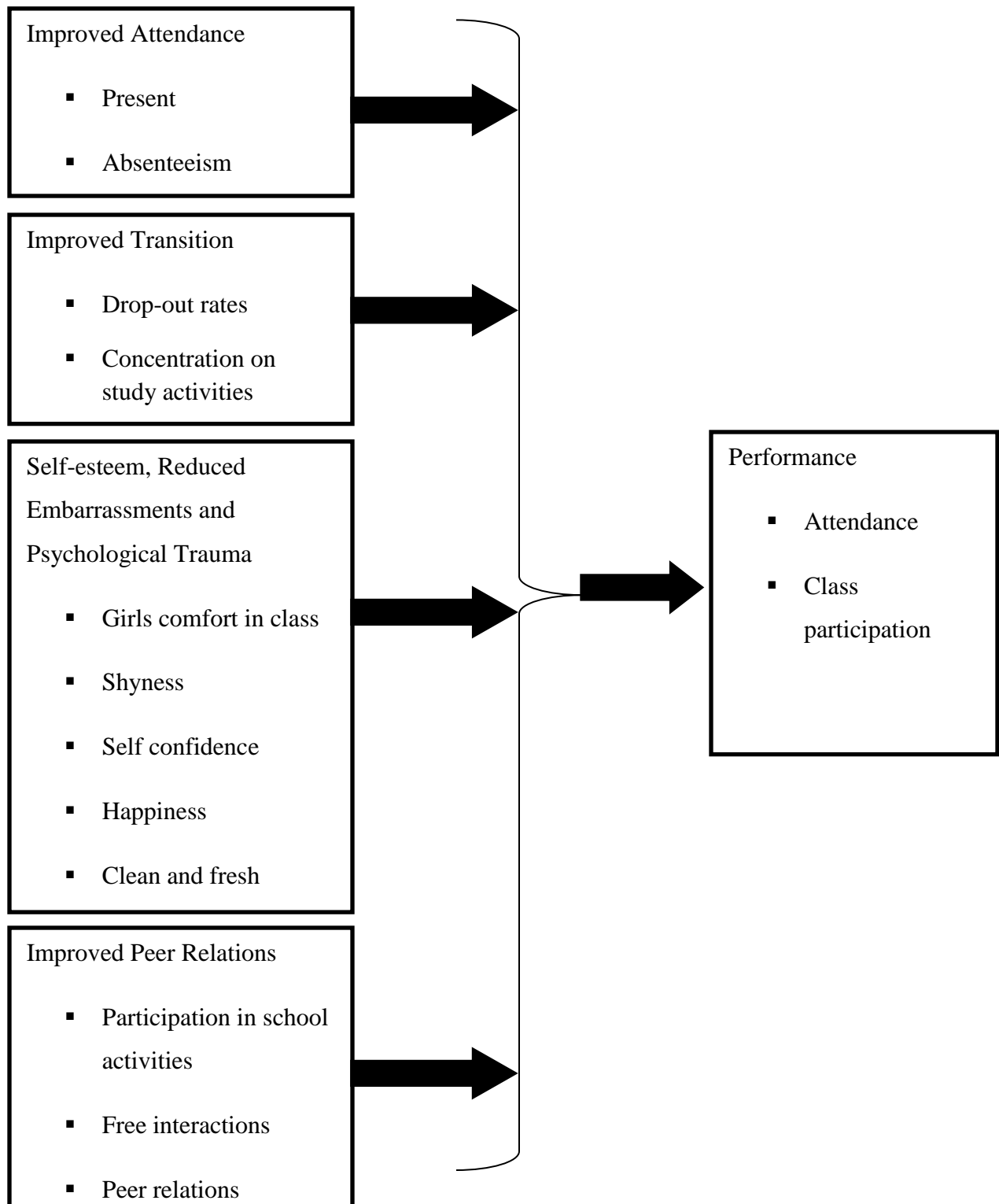


Figure 1: Conceptual Framework

The framework depicted the relationships between provisions of sanitary towels and performance of the adolescent girls in primary schools. It is conceptualized that Improved Attendance, Improved Transition, Self-esteem, Reduced Embarrassments and Psychological Trauma and Improved Peer Relations will influence Performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlined the overall research methodology used in the study which included the research design, sampling procedure and sample size, data collection instruments, data collection procedure, data analysis techniques, ethical considerations and operationalization of variables.

3.2 Research Design

A research design is the overall plan or strategy for conducting the research. This study applied descriptive survey research methodologies involving adolescent girls' from public schools in Matungu Sub-county within Kakamega County. This design refers to a set of methods and procedures that describe variables. It involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data. The qualitative and quantitative data collection captured the school performance of the students within the study period. The study aimed to assess the performance of the pupils with and without the constant distribution of sanitary towels.

3.3 Sampling Procedure and Sample size

This is the technique used by a researcher in selecting the items for the sample which need to result in a truly representative sample, controls systematic bias, a smaller sampling error and is viable in the context of funds available for the research study. On the other hand, sample size is the number of items to be selected from the universe to constitute a sample which should be optimum (C.R. Kothari, 2004).

3.3.1 Sample Size

A sample size of 108 pupils as respondents in total and selected proportionately, participated in the study. These mainly comprised of girls from classes five, six, seven and eight who had started their menses.

Key informants selected from each school included the head-teachers, female teachers in charge with the distribution of sanitary towels and guiding and counseling teachers.

Discussions and interviews of a cross-section of the teaching staff were also employed to supplement and validate the findings.

3.3.2 Sampling Procedure

To have a good representation which gives each person an equal chance, minimize sampling error and bias; the researcher used simple random sampling to select the public primary schools in the constituency to be studied with the help of the Ministry of Education in Matungu sub-county to accommodate at least two schools in each of the five wards. In each school, stratified random sampling was employed to select 10 girls respectively from classes five, six, seven and eight assisted by the concerned teachers who also approved and gave consent of the study. Consent was also given from the MoE via the Matungu Sub-county Director of Education.

3.4 Data Collection Instruments

They are tools for collecting data. They include questionnaire, interview, observation and reading. Essentially the researcher must ensure that the instrument chosen is valid and reliable. The validity and reliability of any research project depends to a large extent on the appropriateness of the instruments (Educadium, 2017).

These tools are guided by the nature of data to be collected, time available as well as the objectives of the study. Such information can best be collected by use of the following instruments:

i) Key Informant Guide

A face to face interview was conducted involving the main key informants that were the head-teachers, teachers and guiding and counseling teachers with the aim of gaining insights on the effects of provision of sanitary towels on performance of adolescent girls in primary schools in Kenya in Matungu sub-county within Kakamenga County. This helped me as a researcher to get the exact concerns by observing the opinions, feelings, views and perceptions of the respondents.

ii) Questionnaires

The researcher used a questionnaire with open and minimal closed ended questions answered by the key respondents of the research study. This was mainly vital for the variables that cannot be directly observed such as views, perception, opinions and feelings of the respondents. Also because of the time constraint and sample size, I found the questionnaire instrument as the most ideal tool for collecting data.

3.4.1 Pilot Testing

Pilot Test was conducted to test the project instruments prior to its full implementation or execution. It was vital in assessing whether the project objectives were achievable or not. Mugenda and Mugenda (2003) advise that a pretest sample should be 10% of the sample size. Taking 10% of the sample size 100 gave 10 respondents. Therefore a sample of 10 respondents was given questionnaires and the same people did not take part in the actual study. A pilot test was done in two schools within the five wards. It was conducted 2 days prior to the research.

3.4.2 Validity of Research Instruments

According to C.R. Kothari (2004), Validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure. Mugenda and Mugenda, (2003), validity is a measure of relevance and correctness. It is the accuracy and meaningfulness of inferences which are based on the research results. Therefore, Validity was ensured by having objective questions included in the questionnaire and by pre-testing the instrument used to identify and change any ambiguous, awkward, or offensive questions and technique as emphasized by Cooper and Schindler (2003).

3.4.3 Reliability of Research Instruments

Reliability measure is an indication of stability and consistency with which the instrument measures the concept. It has to do with the accuracy and precision of a measurement procedure. A measuring instrument is reliable if it provides consistent results (C.R. Kothari, 2004).

The researcher measured the reliability of the questionnaire to determine its consistency in testing what they are intended to measure. The test re-test technique was used to estimate the reliability of the instruments. This involved administering the same test twice to the same group of respondents who had been identified for this purpose by administering the test to the respondents for the first time, after 2 days administer the test a second time and then correlate the score from both testing periods.

3.5 Data Collection Procedure

Prior to the commencement of data collection, the researcher obtained all the necessary documents, including an introduction letter from the University of Nairobi and the MoE. Upon

getting clearance, the researcher in person commenced fieldwork immediately to the sampled individuals.

Qualitative data was collected through key informants' interviews. The researcher collected data by recording all the responses and discussions given by the respondents.

Quantitative data was collected through the use of questionnaires which had open ended and closed ended questions. Editing and quality control was done in the field to ensure the questionnaires were accurate and of required standard.

3.6 Data Analysis Techniques

The researcher must pay attention toward data organization and coding prior to the input stage of data analysis. If data are not properly organized, the researcher may face difficulty while analyzing their meaning later on. For this purpose the data must be coded. Categorical data need to be given a number to represent them (C.R. Kothari, 2004).

The collected data was analyzed using both quantitative and qualitative data analysis methods. Quantitative method involved descriptive analysis. Descriptive analysis such as frequencies, percentages were used to present quantitative data in form of tables. Data from questionnaire was coded and logged in the computer using Statistical Package for Social Science (SPSS V20.0). This involved coding closed ended items in order to run simple descriptive analysis to get reports on data status. Descriptive and inferential statistics involved the use of absolute and relative (percentages) frequencies, measures of central tendency, dispersion (mean and standard deviation respectively) and correlation and regression analysis. Frequency tables were used to present the data for easy comparison.

For open ended questions, the researcher first read the responses to see if made sense. A code-list was derived from the responses given on the questionnaire. The open ended questions were coded based on the themes that emerged by assigning numbers. The data was coded and sorted using MS Excel.

The researcher also employed descriptive analysis techniques like means, percentages, tables and frequency plus the standard deviation. Data was analyzed by use of SPSS.

3.7 Ethical considerations

I sought approvals from the Ministry of Education via the Sub-county Director of Education. Signed consent for the study participants was obtained from the MoE and teachers before the study began.

In this study, confidentiality was of concern as the information relevant to the study was of strategic importance. In this regard, voluntary consent by all who participated was not coerced into participating in the research. The researcher ensured that guarantees to the participants concerning confidentiality were given and strictly observed. Information was not made available to anyone who was not directly involved in the study. Other ethical issues put in check included honesty whereby the researcher strived to maintain truthfulness in reporting data results by ensuring that there is no fabrication, falsehood, or any misrepresentation of data. Objectivity done by the researcher avoided biasness in research design, data analysis, and data interpretation. Respect for Intellectual Property by the researcher to honor patents, copyrights, and other forms of intellectual property by accrediting and acknowledging of contributions from various parties.

3.8 Operationalization of variables

This section analyzed the operational definition of variables on the effects of provision of sanitary towels on performance of adolescent girls in primary schools in Kenya, Matungu Sub-county within Kakamega County.

Table 1: Operationalization of variables

Objective	Type of Variable	Indicator (s)	Measure	Level of Scale	Data Analysis
To assess how the provision of sanitary towels has improved attendance on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega	<u>Independent variable</u> Improved Attendance	<ul style="list-style-type: none">▪ Present▪ Absenteeism	Mean, Percentage	Ordinal	Descriptive Statistics

County					
To investigate how the provision of sanitary towels has improved transition on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County	<u>Independent variable</u> Improved Transition	<ul style="list-style-type: none"> ▪ Drop-out rates ▪ Concentration on study activities 	Mean, Percentage	Ordinal	Descriptive Statistics
To assess how the provision of sanitary towels has increased self-esteem, reduced embarrassment and psychological trauma on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County	<u>Independent variable</u> Self-esteem, reduced embarrassment and psychological trauma	<ul style="list-style-type: none"> ▪ Girls comfort in class ▪ Shyness ▪ Self confidence ▪ Happiness ▪ Clean and fresh 	Mean, Percentage	Ordinal	Descriptive Statistics
To assess how the provision of sanitary towels has improved peer relations on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County	<u>Independent variable</u> Improved Peer Relations	<ul style="list-style-type: none"> ▪ Participation in school activities ▪ Free interactions ▪ Peer relations 	Mean, Percentage	Ordinal	Descriptive Statistics

<u>Dependent Variables</u>	Performance	<ul style="list-style-type: none"> ▪ Attendance ▪ Class Participation 	Correlation and Regression Analysis	Ordinal	Inferential Statistics
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CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The chapter presents the results of the primary data which was collected through the use of closed ended and open ended questionnaires. Both descriptive and inferential statistics were used to analyze the data. The results were analyzed response rate and background information to assess how the provision of sanitary towels has improved attendance on performance of adolescent girls', Investigate how the provision of sanitary towels has improved transition on performance of adolescent girls', Assess how the provision of sanitary towels has increased self-esteem, reduced embarrassment and psychological trauma on performance of adolescent girls' and Assess how the provision of sanitary towels has improved peer relations on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County. Correlation analysis to show the strength of the relationship between performance and improved attendance, improved transition, increased self-esteem, reduced embarrassment and psychological trauma, improved peer relations and regression analysis was used to show the nature of the relationship between performance and the independent variables.

4.2 Response Rate

With a target response of 100 questionnaires, 108 questionnaires were correctly filled and returned. The response rate was appropriate since according to C.R.Kothari (2007) a response rate of more than 70% is appropriate for analysis.

4.3 Background Information

The study sought the demographic characteristics of the respondents in the study, specifically the gender, age, class and whom does the girl live with.

4.3.1 Gender

All the respondents were girls from primary schools in Matungu sub-county within the 5 represented wards. The total number of respondents interviewed and percentages for each school is represented in table 2 below while table 3 shows the survey ward with a balanced representation. These are schools located in the interior rural areas where poverty seems to be evidently portrayed. From girls putting on torn school uniforms with no shoes, some schools pupils have no desks at all thereby forced to sit on the floor. School children are seen walking long distances to and from school. Many pupils are forced to join their parents in small

businesses to subsidize their expenses in school. Such environments expose the girl child to many problems for example, dropping out of school, early pregnancies, and peer pressure amongst others.

Table 2: Distribution of Respondents by Primary Schools

Primary School	Frequency	Percent
Ebusambe Primary	10	9
Khalaba Primary	10	9
Eshibanze Primary	10	9
Bulimbo Primary	12	11
Mayoni Township Primary	10	9
Mwira Primary	12	11
Ikulumwoyo Primary	10	9
Koyonzo Primary	10	9
Lung'anyiro Primary	10	9
Mungore Primary	14	13
Total	108	100

Table 3: Distribution of Respondents by Survey Ward

Survey Ward	Frequency	Percent
Mayoni	22	20
Koyonzo	20	19
Kholera	22	20
Namamali	24	22
Khalaba	20	19
Total	108	100

4.3.2 Class

The study sought to interview pupils from specifically class five, six, seven and eight respectively at random who have already started their menses. This was in guidance by the concerned teachers.

Table 4: Distribution of Respondents by Class

Q1. What class are you in?	Frequency	Percent
Five (5)	4	4
Six (6)	11	10
Seven (7)	29	27
Eight (8)	64	59
Total	108	100

From table 4 above, majority of the respondents who were 59% (64) were in class eight, followed by class seven 27% (29), then class six 10% (11) and finally class five at 4% (4). We can see a progressive increase in the number of respondents from class five to eight which is attributed to high transition rates of girls from lower to upper classes. This can be seen as a change from past statistics where there has been a low transition rate of girls from lower to upper classes due to early pregnancies, gender inequalities, and high school drop-outs during adolescence (MoE Survey, 2004). This also means that many girls are aware of their body changes and stage in life which makes them build self-confidence in their bodies and bodily functions, facilitating their healthy transition from puberty to adolescence and later adulthood.

4.3.3 Age

The respondents were aged between ages 11 - 17years old with a mean of 14years as depicted in table 5 below. The minimum age being 11years and maximum was 17years. 1% was 11years, 5% were 12years, 17% were 13years, 41% were the majority at 14years, followed by 25% who were 15years, 6% were 16years and 17years respectively. This shows that majority were falling under ages 13 - 15 years.

Table 5: Distribution of Respondents by Age

Q2. What is your exact age?	Frequency	Percent
11	1	1
12	5	5
13	18	17
14	44	41
15	27	25
16	6	6
17	7	6
Total	108	100

4.3.4 Whom the respondent lives with**Table 6: Whom the respondent lives with**

Q3. Whom do you live with?	Frequency	Percent
Both Parents	68	63
Single Parent	23	21
Relative/Guardian	17	16
Total	108	100

From table 6 above, majority of the respondents at 63% (68) live with both parents, 21% (23) live with a single parent while 16% (17) live with a relative or guardian. Facts reveal that children who live with both parents tend to get good and valuable care and as an adolescent girl, much attention is considered. As a single parent, many seem to be overwhelmed by the duties and responsibilities thereby giving less attention to the adolescent girl while a relative or guardian still gives less attention. This representation shows the contribution to the performance of the adolescent girls' in school. Depending on whom the respondent lives with, some fear to open up and talk about their body changes of which if not well handled affects the adolescent girl school attendance and transition.

4.3.5 Age when the respondent started her periods

Table 7: Onset age of menstruation

Q4. How old were you when you started your periods?	Frequency	Percent
10	3	3
11	2	2
12	28	26
13	45	42
14	23	21
15	6	6
16	1	1
Total	108	100

All the respondents had started their menses from ages between ages 10 - 16years old with a mean of 13years as shown in table 7 above. The minimum age being 10 and maximum was 16years. 3% was 10years, 2% were 11years, 26% were 12years, 42% were the majority at 13years, followed by 21% who were 14years, 6% were 15years and 1% who was 16years. This shows that majority were falling under ages 12 - 14 years. This depicts the earliest age of adolescence to be 10years old when girls start menstruating. However, this varies with different individuals with others even starting at 17years. On average it appears at ages 12 and 14years old of the adolescent girl. By this age of 10years, it means the girl must be prepared psychologically and made aware to understand her body changes so that they are not surprised when it occurs. This will improve their school attendance, self-esteem and confidence, improve transition and improve peer relations in school.

4.3.6 Feeling when the respondent started her periods

Table 8: Distribution of Respondents by feeling when started periods

Q5. How was the feeling when you started your periods? Tell me the experience	Frequency	Percent
Happy/Felt good	10	9
I was not happy/Unhappy/Sad/Don't feel good/Felt bad	13	12
Severe abdominal pains/Body pains/Sickness	58	54
Didn't understand what was happening to my body	12	11
I felt Shy/Embarrassed/Moody	33	31
Scared/Afraid/Screamed/Worried/Nervous and Cried	11	10
Approached my Teacher/Mum/Aunty/Relative for assistance and advise	19	18
Kept away from people/Felt Lonely	5	5
Feared to tell my Mum/Parents/Anybody	7	6
Felt Uncomfortable	2	2
Thought it was urine/Felt like urine/Water	16	15
I stained my dress in class and fellow students laughed at me/Stained panty/dress at home	9	8
I was sweating	1	1
Was astonished/surprised/perplexed	7	6
Felt Tired	3	3
Felt Confident	1	1
Nothing/None	2	2
Total	108	100

The researcher sought to ask the respondents on their first time feeling experience when they started menstruating. This was an interesting question with many responses from the participants. 54% of the respondents expressed feeling severe abdominal pains / body pains or sickness while 18% were able to approach somebody like a Teacher / Mum / Aunt / Relative for assistance and advice. As much as majority was willing to seek for assistance and advice, 6% of the girls feared to tell their Mum / Parents or anybody else and 11% did not understand what was happening to their bodies which show they were not well aware or prepared to welcome this stage in their life. 31% of the target population felt shy and embarrassed which is mostly experienced with the adolescent girls. While 12% felt unhappy / sad about their first menses, 9% felt happy / good because they felt now they are mature and grown as a woman.

The above table 8 depicts further the other experiences the girls felt during their first menses.

4.3.7 Feeling when the respondent gets her periods while in school

Table 9: Feeling when started periods while in school

Q7. How do you feel when you get your periods while in school?	Frequency	Percent
Hate it	35	32
(2))	3	3
(3))	6	6
(4))	7	6
(5))	28	26
(6))	3	3
(7))	3	3
(8))	4	4
(9))	1	1
Love it	18	17
Total	108	100
Mean 4.51		

On a scale of 1 - 10 (whereby 1 - Hate it and 10 - Love it, the researcher sought to ask the respondents on how they felt when they got their menses while in school. While 32% felt they

really hate it, 26% were on average and 17% loved it. Others lied in between on the scale as shown in table 9 above. It is during this period the girls feel moody, tired, abdominal pains, sick and uncomfortable.

The pupils said when it happens in school, sanitary towels are always available to them from the concerned teacher and painkillers given to the girls with severe abdominal pains or rather sick to keep them in class rather than go home. This ensures there is continuity with their class work which does not affect their performance.

4.4 Improved Attendance

The first objective of the study was to assess how the provision of sanitary towels has improved attendance on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County. To achieve this, the respondents were asked some questions in relation to this as discussed below:

4.4.1 Times respondent is absent from school

The respondents were asked whether there are times when they were absent from school and 40% admitted to have been absent from school while 60% said No meaning they were never absent. UNESCO estimates that one in 10 African adolescent girls miss school during menses and eventually drop out because of menstruation related issues, such as the inaccessibility of affordable sanitary protection, the social taboos related to menstruation, and the culture of silence that surrounds it (AllAfrica, 2011). Therefore, from the below statistics as shown in table 10, there is a great increase to school attendance by the adolescent girls. Much has been attributed to the provision of sanitary towels in schools and education on menstruation management to the girls.

Table 10: Times respondent is absent from school

Q10. Are there times when you are absent from school?	Frequency	Percent
Yes	43	40
No	65	60
Total	108	100

4.4.2 If absent, reasons why absent from school

The respondents were then asked to state the main reasons why they may have been absent from school. Out of the 108 participants, only 43 stated yes to have been absent from school. As shown in table 11 below, the major reason is general sickness at 37% followed by menstruation at 33%. According to Muvea (2011), Menstruation causes Kenyan adolescent girls to lose an average of 3.5 million learning days per month. However, we can note that lack of sanitary towels as a reason does not hold water which is at 9% being the least of the reasons. This implies that adequate provision of sanitary towels in primary schools has enabled the adolescent girl to be in school. This problem has been addressed by the Ministry of Education, Science and Technology which initiated the Schools NSTP with the objective of 'keeping girls in school' and increasing their access, participation and performance in education. The Sanitary Towels Programme was mandated for: Provision of sanitary towels to school girls, training of teachers on hygienic usage and disposal of sanitary towels, monitoring and evaluation (MoE).

Table 11: Reasons why absent from school

Q11. If yes, tell me a little bit what happens during these times?	Frequency	Percent
Lack of Sanitary Towels	4	9
General Sickness	16	37
When on my periods/Menstruation	14	33
Attend funeral/Wedding (Ceremony)/Meeting at home	10	23
Abdominal Pains	9	21
Lack of Fees	5	12
Total	43	100

4.4.3 How often the respondent attends school while on her periods

From table 12 below, the respondent was asked on how often she attends school while menstruating and 87% admitted to be always in school and only 13% to at times attend school. This major increase has killed the fact that many adolescent girls used to miss out on school

while on their periods because of the main reason of lack of sanitary towels. The government of Kenya through the NSTP has seen many girls attend school continuously.

Table 12: Attendance of school by respondent while menstruating

Q12. How often do you attend school while on your periods?	Frequency	Percent
At times	14	13
Always	94	87
Total	108	100

4.4.4 Main Reason why respondent misses school during her periods

The respondent was then asked on the main reason that makes her not to attend school. 39% was attributed to abdominal pains while 19% to lack of sanitary towels and only 3% to shyness. 39% of the girls stated no other reason as stated above. From table 13 below, there is provision of sanitary towels to the girls which keeps most girls in school. However, the main issue is the abdominal pains of which in some schools, the teachers said the girls are being provided with painkillers to cater for the pains which helps them stay in school. Shyness is not a major concern as seen below because the girls nowadays are aware of their body changes.

Table 13: Main reason why respondent misses school while menstruating

Q13. Main Reason why you miss school during your periods?	Frequency	Percent
Lack of sanitary towels	21	19
Abdominal pains	42	39
Shyness	3	3
None of the above	42	39
Total	108	100

4.4.5 Barriers to girls' school attendance

As a general question according to the respondents, many girls miss out on school because of various reasons and the main barrier being lack of sanitary towels at 44%, followed by lack of fees at 42% as shown in table 14 below. General sickness and menstruation and cramps came at

37% and 32% respectively. Taking care of siblings came at 20% and peer pressure at 17%. 5% of the girls did not know any barriers to girls' school attendance. Therefore, as lack of sanitary towels is the key barrier to school attendance, the other reasons also play an important role in preventing girls from attending school.

From the discussions with the teachers in all the interviewed schools, there is adequate provision of sanitary towels from the government which should not be a barrier to school attendance. There is also provision of painkillers to the girls for those experiencing severe cramps.

Table 14: Barriers to girls' school attendance

Q15. What are the barriers to girls' school attendance?	Frequency	Percent
Menstruation and Cramps	35	32
Lack of fees	45	42
General Sickness	40	37
Taking care of siblings	22	20
Peer pressure	18	17
Lack of sanitary towels	48	44
Being addicted in bad behavior	1	1
Funeral Programme	1	1
Don't know	5	5
Total	108	100

4.5 Improved Transition

The second objective was to investigate how the provision of sanitary towels has improved transition on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County. To achieve this, descriptive analysis such as the means and percentages was used as explained below.

4.5.1 Respondents Class

From table 15 below, majority of the respondents who were 59% (64) were in class eight, followed by class seven 27% (29), then class six 10% (11) and finally class five at 4% (4). We

can see a progressive increase in the number of respondents from class five to eight which is attributed to high transition rates of girls from lower to upper classes. This can be seen as a change from past statistics where there has been a low transition rate of girls from lower to upper classes due early pregnancies, gender inequalities, and high school drop-outs during adolescence (MoE Survey, 2004). This also means that many girls are aware of their body changes and stage in life which makes them build self-confidence in their bodies and bodily functions, facilitating their healthy transition from puberty to adolescence and later adulthood.

Table 15: Distribution of Respondents by Class

Q1. What class are you in?	Frequency	Percent
Five (5)	4	4
Six (6)	11	10
Seven (7)	29	27
Eight (8)	64	59
Total	108	100

4.5.2 Can concentrate on my study activities

The respondents were asked to what extent they agreed with the statement “I can concentrate on my study activities” on a scale of 1-5 whereby 1- Strongly Disagree, 2- Disagree, 3- Neither Agree or Disagree, 4- Agree and 5- Strongly Agree while on their periods. 56% strongly agreed while 32% just agreed. This shows that the level at which the girls agree to concentrate on their studies when combined is 88% vis-à-vis the 8% combined of strongly disagree, disagree and 4 % neither agree nor disagree. It further explains that, there are improved transition rates of the adolescent girl in school. This means that there is adequate provision of sanitary towels in school and the girls are aware of their body changes. Further shown in table 16 below:

Table 16: I can concentrate on my study activities

Q16. To what extent do you agree with the following statement - I can concentrate on my study activities	Frequency	Percent
Strongly Disagree	2	2
Disagree	7	6
Neither Agree or Disagree	4	4
Agree	35	32
Strongly Agree	60	56
Total	108	100
Mean 4.33		

4.5.3 There is adequate provision of sanitary towels in school

From table 17 below, when respondents were asked to what extent they agreed there is adequate provision of sanitary towels in school, 72% (combined 49% strongly agree and 23% agree) admitted to adequacy of sanitary towels in school while 16% (combined 3% strongly disagree and 13% disagree) and 12% neither agreed or disagreed. This implies that there is adequate provision of sanitary towels in primary school thanks to the government of Kenya through its NSTP which has helped keep the adolescent girls in school and therefore improved transition rates.

Table 17: There is adequate provision of sanitary towels in school

Q16. To what extent do you agree with the following statement - There is adequate provision of sanitary towels in school	Frequency	Percent
Strongly Disagree	3	3
Disagree	14	13
Neither Agree or Disagree	13	12
Agree	25	23
Strongly Agree	53	49
Total	108	100
Mean 4.03		

4.6 Increased self-esteem, reduced embarrassment and psychological trauma

The third objective was to assess how the provision of sanitary towels has increased self-esteem, reduced embarrassment and psychological trauma on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County. To achieve this, descriptive analysis such as the means and percentages was used as explained below.

4.6.1 Happy during time of periods

The researcher sought to ask whether the respondent was happy during the time of periods. From table 18 below, majority with 43% claimed to be happy while 29% were not very happy. 14% and 15% were quite happy and not at all happy respectively. To an adolescent girl, this symbolizes sexual maturity and hence views it as transforming to womanhood. Those happy said menses made them feel like a woman and made one be normal. Those unhappy it is because as a first-timer, menses messes up their clothes, the pain, nausea, sickness, discomfort, the uncleanliness makes one feel so odd and especially when one does not know how to go about it plus the lack of sanitary towels makes it even worse. But as they grow older, they get used to it and it does not become a big issue.

Table 18: Whether happy during time of periods

Q6. Are you happy during the time of your periods?	Frequency	Percent
Very happy	46	43%
Quite happy	15	14%
Not very happy	31	29%
Not at all happy	16	15%
Total	108	100
Mean 2.84		

4.6.2 Shy during periods

From table 19 below, 56% of the respondents said to be shy during their periods while 44% said they were not shy. To an adolescent girl, being shy during their menses is normal as they are still young and adapting to the changes in their bodies. However, with appropriate coping mechanisms majority take it as a symbol of sexual maturity. They take the cycle calmly, normal and as a symbol of increased status

Table 19: Shyness

Q8. Are you shy during your periods?	Frequency	Percent
Yes	61	56
No	47	44
Total	108	100

4.6.3 Level of self-confidence during periods

As shown in table 20 below, 61% of the respondents are very confident, 23% quiet confident, 7% not very confident and 8% not all confident. Studies have shown that most aspects of an adolescent girls' life are affected by lack of sanitary facilities thus lowering the girl's level of self-esteem and confidence among other issues and is experienced when the girls lack sanitary

towels which results to leakages and exposures which causes great embarrassments. Thus it implies that with adequate provision of sanitary towels, the adolescent girl gains more self-confidence and is able to focus on her education. This further reduces the embarrassments and psychological trauma the girl could have encountered.

Table 20: Self-confidence

Q9. When in your periods, how much self-confidence do you have in yourself?	Frequency	Percent
Very confident	66	61
Quite confident	25	23
Not very confident	8	7
Not at all confident	9	8
Total	108	100
Mean 3.37		

4.6.4 Feeling confident

As earlier seen, the level of confidence of the adolescent girls is progressively increasing compared to earlier studies. From table 21 below, 78% (combined strongly agree of 47% and 31% agree) of respondents agree to have high confidence in themselves during their periods while only 5% (combined strongly disagree of 1% and 4% disagree) and 18% neither agree nor disagree. This implies that there is increased self-esteem and reduced embarrassments on the adolescent girl. This is a good improvement as it enables the girls to even improve on their performance in school.

Table 21: Confidence

Q16. To what extent do you agree with the following statement - I feel confident	Frequency	Percent
Strongly Disagree	1	1
Disagree	4	4
Neither Agree or Disagree	19	18
Agree	33	31
Strongly Agree	51	47
Total	108	100
Mean 4.19		

4.6.5 Feel clean and fresh

53% and 24% strongly agree and agree respectively while 5% and 12% strongly disagree and disagree respectively. 6% of the respondent neither agree nor disagree with the statement. These percentages imply that majority of the girls feel clean and fresh during their periods and hence make them feel comfortable and normal like when they are not in their menses. This has been attributed to the teachers taking the girls through menstruation management, coping mechanisms and also attributed to the adequate provision of sanitary towels in schools by the government.

See below table 22:

Table 22: I feel clean and fresh

Q16. To what extent do you agree with the following statement - I feel clean and fresh	Frequency	Percent
Strongly Disagree	5	5
Disagree	13	12
Neither Agree or Disagree	7	6
Agree	26	24
Strongly Agree	57	53
Total	108	100
Mean 4.08		

4.6.6 Feel more comfortable in class during periods

Majority of the respondents at 57% strongly agree that they feel more comfortable in class during their period while 24% just agree as shown below in table 23. 4% and 8% strongly disagree and just disagree respectively. 6% of the respondents tend to neither agree nor disagree. This implies that due to adequate provision of sanitary towels in primary schools, adolescent girls now feel more comfortable in class during their menses. Unlike earlier shown studies where the lack of sanitary towels made girls use rags, mattresses thus making them uncomfortable and unable to attend school during their periods which deeply affects the performance in school. Being comfortable increases their self-esteem, reduces embarrassments and psychological trauma school because it means the girls are more aware of their bodies and understand the menstrual management.

Table 23: Feel more comfortable in class during periods

Q16. To what extent do you agree with the following statement - I feel more comfortable in class during my periods	Frequency	Percent
Strongly Disagree	4	4
Disagree	9	8
Neither Agree or Disagree	7	6
Agree	26	24
Strongly Agree	62	57
Total	108	100
Mean 4.23		

4.6.7 Others do not notice am on my periods

When asked whether others do not notice when one is on their periods, 60% strongly agreed with the statement and 19% just agreed. 6% and 7% strongly disagreed and just disagreed respectively while 7% neither agreed nor disagreed. From the percentages shown in table 24 below, it implies most girls run normal lives when on their periods without being noticed. Most of the teachers explained that the girls are more equipped with how to manage themselves during these times and with adequate provision of sanitary towels, there is nothing to worry about. Going unnoticed increases the levels of self-esteem and confidence of the adolescent girl with reduced embarrassments and psychological trauma.

Table 24: Others do not notice am on my periods

Q16. To what extent do you agree with the following statement - Others do not notice am on my periods	Frequency	Percent
Strongly Disagree	6	6
Disagree	8	7
Neither Agree or Disagree	8	7
Agree	21	19
Strongly Agree	65	60
Total	108	100
Mean 4.21		

4.7 Improved Peer Relations

The fourth objective was to assess how the provision of sanitary towels has improved peer relations on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County. Descriptive analysis of means and percentages was used as explained below.

4.7.1 I can freely stand and answer questions in class

From table 25 below, 52% and 31% strongly agree and just agree that they can freely stand and answer questions in class during their periods respectively while 4% and 10% strongly disagree and just disagree with the statement. 3% of the respondents neither agree nor disagree with the statement. This implies that majority of the respondents are more confident and comfortable during their periods. There is also sufficient provision of sanitary towels for the adolescent girls. Most teachers said that as long as the girls are in school, the girls actually know where the pads are and comfortably pick for themselves when the need arises. There is no fear anymore for anyone.

Table 25: Freely stand and answer questions in class

Q16. To what extent do you agree with the following statement - I can freely stand and answer questions in class	Frequency	Percent
Strongly Disagree	4	4
Disagree	11	10
Neither Agree or Disagree	3	3
Agree	34	31
Strongly Agree	56	52
Total	108	100
Mean 4.18		

4.7.2 I can move freely even among the boys

Respondents were asked whether they can move freely even among the boys when on their periods in assessing peer relations, 35% and 23% admitted to strongly agree and agree respectively while 21% and 17% claimed to strongly disagree and disagree with the statement. 4% of the respondents said they neither agree nor disagree with the statement. From table 26 below, this shows that most of the girls nowadays can freely move around without fear or being worried of leakages or the sanitary towel falling down.

Table 26: Can move freely even among the boys

Q16. To what extent do you agree with the following statement - I can move freely even among the boys	Frequency	Percent
Strongly Disagree	23	21
Disagree	18	17
Neither Agree or Disagree	4	4
Agree	25	23
Strongly Agree	38	35
Total	108	100
Mean 3.34		

4.7.3 Relate well with my peers

Majority of the respondents admitted to relate well with their peers when asked. 52% and 30% said they strongly agree and agree with the statement respectively while only 2% and 8% admitted to strongly disagree or disagree. Only 8% of the respondents neither agree nor disagree with the statement. This shows that, majority of the girls have good relations with their peers when on their periods. This further improves the level of peer relations amongst the adolescent girls. This also means there is increased self-esteem and confidence with the girls.

Table 27: Relate well with my peers

Q16. To what extent do you agree with the following statement - I relate well with my peers	Frequency	Percent
Strongly Disagree	2	2
Disagree	9	8
Neither Agree or Disagree	9	8
Agree	32	30
Strongly Agree	56	52
Total	108	100
Mean 4.21		

4.7.4 I can participate freely in class

When respondents were asked they participate freely in class when on their periods, 58% and 27% strongly agreed and agreed respectively while 2% and 10% strongly disagreed and disagreed. Only 3% neither agreed nor disagreed. With the high number of respondents agreeing with the statement as shown in table 28 below, it shows that with the adequate provision of sanitary towels, girls' participation in class continues as normal. This is unlike in the previous studies done by different scholars which portrayed lack of participation by the girls when on their menses attributed to the lack of sanitary towels in schools. This lack made them uncomfortable and lack self-confidence and esteem while in school.

Table 28: Can participate freely in class

Q16. To what extent do you agree with the following statement - I can participate freely in class	Frequency	Percent
Strongly Disagree	2	2%
Disagree	11	10%
Neither Agree or Disagree	3	3%
Agree	29	27%
Strongly Agree	63	58%
Total	108	100
Mean 4.30		

4.7.5 Mingle freely with my classmates both girls and boys

Majority of the respondents when asked if they mingled freely with their classmates both boys and girls when on their menses, 41% and 27% strongly agreed and agreed with the statement while 6% and 8% strongly disagreed and disagreed to it. 19% of the respondents neither agreed nor disagreed. This shows that the girls are more comfortable and handle themselves well during their menses. This is attributed to sufficiency in provision of sanitary towels in schools whereby the girls are no longer worried of leakages or having the sanitary towels falling down. This further improves their peer relations. This can further be shown on table 29 below.

Table 29: Mingle freely with my classmates both girls and boys

Q16. To what extent do you agree with the following statement - I mingle freely with my classmates both girls and boys	Frequency	Percent
Strongly Disagree	6	6%
Disagree	9	8%
Neither Agree or Disagree	20	19%
Agree	29	27%
Strongly Agree	44	41%
Total	108	100
Mean 3.89		

4.8 Inferential Statistics

Further the study carried out inferential statistics to examine the model as conceptualized in chapter two. Correlation analysis was used to show the strength of the relationship between dependent and independent variables while regression analysis was used to show the nature of the relationship between independent and dependent variable.

4.8.1 Correlation Analysis

Table 30: Summary of Correlation

		1	4	5	3	2	3	4
Performance	Pearson Correlation	1	.264**	.176	.396**	.418**	.341**	.573**
	Sig. (2-tailed)		.006	.068	.000	.000	.000	.000
	n	108	108	108	108	108	108	108
Confident	Pearson Correlation	.264**	1	.211*	.307**	.439**	.090	.281**
	Sig. (2-tailed)	.006		.028	.001	.000	.357	.003
Relate well with my peers	Pearson Correlation	.176	.211*	1	.306**	.215*	.133	.311**
	Sig. (2-tailed)	.068	.028		.001	.026	.169	.001
Concentrate on my study activities	Pearson Correlation	.396**	.307**	.306**	1	.451**	.166	.292**
	Sig. (2-tailed)	.000	.001	.001		.000	.087	.002
Always present in school when in my periods	Pearson Correlation	.418**	.439**	.215*	.451**	1	.174	.305**
	Sig. (2-tailed)	.000	.000	.026	.000		.072	.001
Adequate provision of sanitary towels in school	Pearson Correlation	.341**	.090	.133	.166	.174	1	.418**
	Sig. (2-tailed)	.000	.357	.169	.087	.072		.000
More comfortable in class during my periods	Pearson Correlation	.573**	.281**	.311**	.292**	.305**	.418**	1
	Sig. (2-tailed)	.000	.003	.001	.002	.001	.000	

*. Correlation is significant at the 0.05 level (2-tailed).

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

Key: 1- Performance, 2- Improved attendance, 3- Improved transition, 3- Self-esteem, embarrassment and psychological trauma, 4- Improved peer relations

In summary of the study objectives, table 30 above revealed that there was a positive and significant relationship between strength of improved attendance and performance ($r=0.418$, $p\text{ value}<0.05$) which implies that a unit increase in improved attendance increases performance by 41.8%.

The second objective that sought to investigate how the provision of sanitary towels has improved transition on performance revealed that there was a positive and significant relationship between concentration of study activities and performance ($r=0.396$, $p\text{ value}<0.05$) and adequacy of provision of sanitary towels ($r=0.341$, $p\text{ value}<0.05$). This implies that a unit increase in concentration of study activities and adequacy of provision of sanitary towels increases performance by 39.6% and 34.1% respectively.

The third objective that sought to assess how the provision of sanitary towels has increased self-esteem, reduced embarrassment and psychological trauma on performance revealed that there was a positive and significant relationship between confidence and performance ($r=0.264$, $p\text{ value}<0.05$) and being comfortable and performance ($r=0.573$, $p\text{ value}<0.05$). This implies that a unit increase in confidence and being comfortable increases performance by 26.4% and 57.3% respectively.

The fourth objective that sought to assess how the provision of sanitary towels has improved peer relations on performance revealed that there was a positive and significant relationship between relate well with my peers and performance ($r=0.176$, $p\text{ value}<0.05$) which implies that a unit increase in relate well with my peers increases performance by 17.6%.

4.8.2 Regression Analysis

Regression analysis was utilized to investigate the relationship between the variables. These included an error term, whereby the dependent variable was expressed with a combination of independent variables. The regression model was therefore used to describe how the mean of the dependent variable changes with the changing conditions.

$$Y_i = \alpha + \beta_1(X_1) + \beta_2(X_2) + \beta_3(X_3) + \beta_4(X_4) + \epsilon. \text{ When } \beta_5=0$$

Where;

Y_i = Performance

β = regression coefficient (parameter of the function)

X_1 = Improved Attendance

X_2 = Improved Transition

X_3 = Increased self-esteem, embarrassment and psychological trauma

X_4 = Improved Peer Relations

ϵ representing the error term

Table 31: Regression Coefficient

The coefficient was obtained as shown in the table below:

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.105	.521		.201	.841
	I feel confident (X3)	.154	.094	.135	1.626	.107
	I relate well with my peers (X4)	.046	.080	.046	.583	.561
	I mingle freely with my classmates both girls and boys (X4)	.220	.074	.249	2.969	.004
	Others do not notice am on my periods (X3)	.083	.068	.095	1.229	.222
	I am always present in school when in my periods (X1)	.314	.080	.358	3.927	.000
	I feel more comfortable in class during my periods (X3)	.333	.092	.355	3.610	.000
	There is adequate provision of sanitary towels in school (X2)	-.024	0.071	-.026	-.332	.741
a. Dependent Variable: Performance (I can participate freely in class)						

The first research question sought to find out to what extend has the provision of sanitary towels improved attendance on performance of adolescent girls' in primary schools in Kenya, Matungu

Sub-county in Kakamega County? Regression analysis was carried out to answer this and as shown in table 31 above, there is a positive and significant relationship between improved attendance and performance ($\beta = 0.314$, $t = 3.927$, $P \text{ value} < 0.05$) which implies that a unit change in improved attendance increases performance by 0.314 units.

The second research question sought to find out to what extent has the provision of sanitary towels improved transition on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kenya? Regression analysis was carried out to answer this and as shown in table 31 above, there is a negative and significant relationship between improved transition and performance ($\beta = -.024$, $t = -.332$, $P \text{ value} < 0.05$) which implies that a unit change in improved transition decreases performance by only -.024 units.

The third research question sought to find out to what extent has the provision of sanitary towels increased self-esteem, reduced embarrassment and psychological trauma on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County? Regression analysis was carried out to answer this through various variables and as shown in table 31 above, in confidence, there is a positive and significant relationship between increased self-esteem, reduced embarrassment and psychological trauma and performance ($\beta = 0.154$, $t = 1.626$, $P \text{ value} < 0.05$) which implies that a unit change in confidence increases performance by 0.154 units. Also there is a positive and significant relationship between "I feel more comfortable in class during my periods" and performance ($\beta = 0.333$, $t = 3.610$, $P \text{ value} < 0.05$) which implies that a unit change in being comfortable increases performance by 0.333 units. Again there is a positive and significant relationship between "Others do not notice am on my periods" and performance ($\beta = 0.083$, $t = 1.229$, $P \text{ value} < 0.05$) which implies that a unit change in being comfortable increases performance by 0.083 units.

The fourth research question sought to find out to what extent has the provision of sanitary towels improved peer relations on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County? Regression analysis was carried out to answer this and as shown in table 31 above, there is a positive and significant relationship between improved peer relations and performance ($\beta = 0.046$, $t = 0.583$, $P \text{ value} < 0.05$) which implies that a unit change in improved peer relations increases performance by 0.046 units. Also there is a positive and significant relationship between "I mingle freely with my classmates both girls and boys"

and performance ($\beta = 0.22$, $t = 2.969$, P value < 0.05) which implies that a unit change in being comfortable increases performance by 0.22 units

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter presents a summary of the study findings, conclusions and recommendations. It also makes suggestions for further research. The findings are summarized in line with the objectives of the study which was to examine the effects of provision of sanitary towels on performance of adolescent girls' in primary school in Kenya: A case study of Matungu subcounty, Kakamega County.

5.2 Summary of findings

For the first objective which was to assess how the provision of sanitary towels has improved attendance on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County, revealed that with the adequate provision of sanitary towels in primary schools from the government, majority of the girls at 87% are always constantly in school during their periods. Some of the times at 40% the girls would be absent from school but it is concerned with other reasons and not inadequacy of provision of sanitary towels. But on a general response with regards to barriers to girls' school attendance, 44% being the highest was attributed to lack sanitary towels.

The second objective was to investigate how the provision of sanitary towels has improved transition on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County which revealed a progressive increase from lower classes to upper classes. Most of the girls continue well with their studies without any worries or interruptions. 88% and 72% agreed there was improved transition attributed to the fact that the respondents can concentrate on their study activities and there is adequate provision of sanitary towels respectively.

The third objective was to assess how the provision of sanitary towels has increased self-esteem, reduced embarrassment and psychological trauma on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County which revealed that 61% have so much self-confidence and 43% tend to be happy about it. 81% and 79% agreed that they felt more comfortable in class during their menses and others did not notice that they are in their

periods respectively. This clearly shows there is increased self-esteem and reduced embarrassments of the adolescent girl.

Finally, the fourth objective was to assess how the provision of sanitary towels has improved peer relations on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County which revealed that majority of the adolescent girls relate well with their peers at 82%. Class participation was at 85% while 68% agreed to mingle freely with their classmates both girls and boys. Free movement even among the boys was at 58%.

5.3 Conclusion

From the above discussion of the study findings, we may conclude that constant provision of sanitary towels in primary schools in Kenya has increased general school attendance as well as attendance of girls with periods and reduces general absenteeism and absenteeism with periods. Education is a fundamental gift that any child could have and therefore granting this opportunity to the girls by removing all barriers or impediments whatsoever is a noble course. This is also in line with the SDGs goal 4 and 5 to ensure inclusive and quality education for all and promote lifelong learning and to achieve gender equality and empower all women and girls.

Constant provision of sanitary towels in primary schools has also improved transition rates as there is progressive increase from lower to upper classes plus increased levels of concentration to studies and increased self-esteem, reduced embarrassments and psychological trauma among the adolescent girls attributed to high confidence levels and being happy and comfortable in class.

This has also improved on the peer relations in school as we have seen the girls could freely move and participate in class, mingle freely with their fellow classmates both boys and girls.

The study revealed that the government through its NSTP has ensured that all public primary schools are supplied with adequate sanitary towels to cater for the adolescent girl while in school annually. Most of the primary schools attested to having more than enough supply that would see the girls given sanitary towels while on holidays. Other schools due to high population, their supply are still inadequate which means the teachers would use their resources to add more sanitary towels to their stock. The aspect of shyness also was experienced in some schools where girls especially from the least age of 10 found it difficult to tell their teachers about their menses.

5.4 Recommendations

Based on the study findings, the following recommendations were made:

1. There is need for a further nationwide research on the effects of provision of sanitary towels on performance of adolescent girls in primary schools with the aim of capturing everyday geographies of menstruation to inform future programs and policies that aim to address gender parity within the education system.
2. The NSTP should ensure always constant supply of sanitary towels to all primary schools nationwide.
3. The NSTP should conduct a monitoring and evaluation on their programme to further inform policy and facilitate addressing the gaps within the programme.
4. More training on teachers on menstrual health and management and evaluated on the dissemination of the same to students.

5.5 Suggestions for further research

The study examined the effects of provision of sanitary towels on performance of adolescent girls in primary schools in Kenya: A case study of Matungu sub-county, Kakamega County.

There are other numerous factors that have the potential to affect the performance of the adolescent girls in school like gender based violence, disintegrated families, poverty, culture, peer pressure among others. Future studies should examine other factors that have the potential of affecting the adolescent girls' performance in primary schools in Kenya.

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APPENDICES

APPENDIX I: PUPILS QUESTIONNAIRE

PROJECT SANITARY TOWELS

Good morning/afternoon. My name is Anne Arochi and a Bachelor of Arts student in Project Planning and Management at the University of Nairobi. I am carrying out an academic research on the effects of provision of sanitary towels on performance of adolescent girls in primary schools in Kenya: A case of Matungu sub-county, Kakamega County. Your participation will be highly appreciated and all the information will be treated with utmost confidentiality and for statistical purposes only.

Thank you in Advance.

PLEASE WRITE IN CAPITAL LETTERS

Date of Interview: _____ Interview Length: Start Time: _____

End Time: _____

RECRUITMENT SCREENER

Respondent's Name: _____

Primary School: _____

Survey Ward (Single Answer)

Mayoni	1
Koyonzo	2
Kholera	3
Namamali	4
Khalaba	5

MAIN QUESTIONNAIRE

Q1. What class are you in? (Single Answer)

Five (5)	1
Six (6)	2
Seven (7)	3
Eight (8)	4

Q2. What is your exact age? Record age in the box below

Q3. Whom do you live with? (Single Answer)

Both Parents	1
Single Parent	2
Relative	3
Other (Specify)	99

Q4. How old were you when you started your periods? **(Insert age in the box below)**

Q5. How was the feeling when you started your periods? Tell me the experience **(Open)**

Q6. Are you happy during the time of your periods? **(Single Answer)**

Very happy	1
Quite happy	2
Not very happy	3
Not at all happy	4

Q7. How do you feel when you get your periods while in school? **(Single Answer)**

Please tell me the number on this scale that best fits with how you think. **(Circle the Number)**

Hate it									Love it
1	2	3	4	5	6	7	8	9	10

Q8. Are you shy during your periods? **(Single Answer)**

Yes	1
No	2

Q9. When in your periods, how much self-confidence do you have in yourself? **(Single Answer)**

Very confident	1
Quite confident	2
Not very confident	3
Not at all confident	4

Q10. Are there times when you are absent from school? (**Single Answer**)

Yes	1	Continue
No	2	Skip Q11

Q11). If yes, tell me a little bit what happens during these times? (**Open**)

Q12. How often do you attend school while on your periods? (Single Answer)

At times	1
Always	2
Never	3

Q13. Main Reason why you miss school during your periods? (Single Answer)

Lack of sanitary towels	1
Abdominal pains	2
Shyness	3

None of the above	99
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Q14. If you have ever missed school during your periods, what could be the other reasons?
(Open)

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Q15. What are the barriers to girls' school attendance? (Allow Multiple Responses)

Menstruation and Cramps	1
Lack of fees	2
General Sickness	3
Taking care of siblings	4
Peer pressure	5
Lack of sanitary towels	6
Others (Specify)	97
Don't know	99

Q16. To what extent do you agree with the following statements?

For each statement, please circle the number to indicate your degree of agreement.

Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1	2	3	4	5

SINGLE ANSWER PER STATEMENT

Statements	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
I can freely stand and answer questions	1	2	3	4	5
I can move freely even among the boys	1	2	3	4	5
I feel confident	1	2	3	4	5
I relate well with my peers	1	2	3	4	5
I can participate freely in class	1	2	3	4	5
I feel clean and fresh	1	2	3	4	5
I mingle freely with my classmates both girls and boys	1	2	3	4	5
Others do not notice am on my periods	1	2	3	4	5
I can concentrate on my study activities	1	2	3	4	5
I am always present in school when in my periods	1	2	3	4	5
There is adequate provision of sanitary towels in school	1	2	3	4	5
I feel more comfortable in class during my periods	1	2	3	4	5

Interviewer: Ask the respondent to sign below as confirmation that this interview was conducted with her.

I hereby agree to the use of the information collected in this questionnaire for statistical purposes only.

Name: _____

Signature: _____

Date: _____

CHECK RECRUITMENT FRONT PAGES ARE COMPLETE

****THANK RESPONDENT AND CLOSE INTERVIEW ****

APPENDIX II: INTERVIEW GUIDE

- 1) Introduction.
- 2) Introduce the topic: Effects of provision of sanitary towels on performance of adolescent girls' in primary schools in Kenya: A case of Matungu sub-county, Kakamega County.
- 3) Discuss on how the provision of sanitary towels has improved attendance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County.
- 4) Discuss on how the provision of sanitary towels has improved transition of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County.
- 5) Discuss on how the provision of sanitary towels has increased self-esteem, reduced embarrassment and psychological trauma of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County.
- 6) Assess improved peer relations on effects of provision of sanitary towels on performance of adolescent girls' in primary schools in Kenya, Matungu Sub-county in Kakamega County.
- 7) Generally look at how girls cope with the whole situation of provision of sanitary towels in Matungu sub-county in Kakamega County.

APPENDIX III: RESEARCH REQUEST LETTER



UNIVERSITY OF NAIROBI
OPEN DISTANCE AND e- LEARNING CAMPUS
SCHOOL OF OPEN AND DISTANCE LEARNING
DEPARTMENT OF OPEN LEARNING
NAIROBI LEARNING CENTRE

Your Ref:

Our Ref:

Telephone: 318262 Ext. 120

Main Campus
Gandhi Wing, Ground Floor
P.O. Box 30197
NAIROBI

12th January, 2018

REF: UON/ODeL/NLC/27/26

RE: WANG'ANYA ANNE AROCHI - REG NO.46/33151/2015

The above named is a student at the University of Nairobi Open, Distance and e-Learning Campus, School of Open and Distance Learning, Department of Open Learning pursuing Bachelor's degree in project planning and Management.

She is proceeding for research entitled "effects of provision of sanitary towels on performance of adolescent girls' in primary schools in Kenya: A case of Matungu sub-county, Kakamega County".

Any assistance given to her will be appreciated.



For: *[Signature]*

CAREN AWILLY
CENTRE ORGANIZER
NAIROBI LEARNING CENTRE

APPENDIX IV: RESEARCH AUTHORIZATION LETTER

MINISTRY OF EDUCATION, SCIENCE & TECHNOLOGY

Telegram:
Tel: 0202661941
Email: matunguedu@yahoo.com

When replying please quote our

Ref. and date



REPUBLIC OF KENYA

SUB COUNTY EDUCATION OFFICE,
MATUNGU SUB-COUNTY,
P.O. BOX 960 - 50102
MUMIAS.

Date: 22ND JANUARY, 2018.

REF: MTG/ADM/26/1/57

WANG'ANYA ANNE AROCHI
REG NO. 46/33151/2015.

RE: RESEARCH AUTHORIZATION.

Your request for the authority to conduct research on Effects of provision of sanitary towels on performance of adolescent girls' in primary school. She has the authority of this office to carry out research on 23rd January -9th February 2018 in Matungu Sub- County.

Please accord her the necessary assistance that she may require.

Thank you.

IMMACULATE OBARI
SUB- COUNTY DIRECTOR OF EDUCATION
MATUNGU SUB-COUNTY.



APPENDIX V: PROJECT SANITARY CODELIST

	Project Sanitary Code-list	
	Primary School	Ward
1	Ebusambe Primary	Khalaba
2	Khalaba Primary	
3	Eshibanze Primary	Kholera
4	Bulimbo Primary	
5	Mayoni Township Primary	Mayoni
6	Mwira Primary	
7	Ikulumwoyo Primary	Koyonzo
8	Koyonzo Primary	
9	Lung'anyiro Primary	Namamali
10	Mungore Primary	
	Q5 (Experience)	
1	Happy/Felt good	
2	I was not happy/Unhappy/Sad/Don't feel good/Felt bad	
3	Severe abdominal pains/Body pains/Sickness	
4	Didn't understand what was happening to my body	
5	I felt Shy/Embarrassed/Moody	
6	Scared/Afraid/Screamed/Worried/Nervous and Cried	
7	Approached my Teacher/Mum/Aunty/Relative for assistance and advise	
8	Kept away from people/Felt Lonely	
9	Feared to tell my Mum/Parents/Anybody	
10	Felt Uncomfortable	
11	Thought it was urine/Felt like urine/Water	
12	I stained my dress in class and fellow students laughed at me/Stained panty/dress at home	
13	I was sweating	
14	Was astonished/surprised/perplexed	

15	Felt Tired	
16	Felt Confident	
99	Nothing/None	
	Q11 (Reasons absent from school)	
1	Lack of Sanitary Towels	
2	General Sickness	
3	When on my periods / Menstruation	
4	Attend funeral/Wedding (Ceremony)/Meeting at home	
5	Abdominal Pains	
6	Lack of Fees	
	Q14 (Other Reasons)	
1	Menstruation and Cramps	
2	Lack of sanitary towels	
3	Embarrassed and Bored	
4	Boys being rude to girls during their periods	
99	Nothing/None	
	Q15 - Others Specify	
7	Being addicted in bad behavior	
8	Funeral Programme	

APPENDIX VI: FIELDWORK PHOTOS



Figure 2: Mayoni Township Primary School filling the questionnaire plus a pose with the entire group including their teacher, Madam Betty



Figure 3: Mwira Primary School pupils filling the questionnaire



Figure 4: Lung'anyiro Primary School group photo after filling the questionnaire with Madam Aziza



Figure 5: Mungore Primary School filling the questionnaire and a group photo with the girls



Figure 6: Koyonzo Primary School filling the questionnaire as the researcher facilitates



Figure 7: Ikulumwoyo Primary School filling the questionnaire and a group photo with their teacher, Madam Beatrice Opiyo



Figure 8: Ebusambe Primary School filling the questionnaire with the help of their teacher, Madam Juliana Daraja and a group photo



Figure 9: Khalaba Primary School filling the questionnaire and a group photo of the girls



Figure 10: Eshibanze Primary School holding the questionnaire after filling



Figure 11: Bulimbo Primary School filling the questionnaire and a group photo with the girls



Figure 12: A picture of the Government Sanitary Towels distributed in the government schools in the sub-county