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## EDITORIAL NOTE

The Editorial Board of the *African Research Journal of Education and Social Sciences* (ARJESS) is pleased to present Volume 10, Issue 3 (2023), a continuation of our commitment to advancing scholarly discourse in education and the social sciences across Africa and beyond. This issue brings together a collection of rigorously peer-reviewed articles that reflect both the diversity and depth of contemporary research addressing critical educational, social, and developmental challenges.

The contributions in this issue explore a wide range of thematic areas, including educational policy and reform, curriculum development, pedagogy, governance, social transformation, and community development. The studies are grounded in empirical inquiry and theoretical reflection, offering insights that are relevant to policymakers, educators, researchers, and practitioners. In particular, the articles highlight the evolving dynamics within African education systems, the need for context-responsive interventions, and the importance of interdisciplinary approaches in addressing complex societal issues.

As ARJESS continues to grow, we remain committed to promoting high-quality academic research that contributes to evidence-based decision-making and sustainable development. We recognize the invaluable role of our authors, reviewers, and editorial team in maintaining the integrity and quality of the journal. Their dedication ensures that ARJESS remains a credible platform for knowledge dissemination and scholarly engagement.

We encourage our readers to engage critically with the articles presented in this issue and to contribute to ongoing conversations that shape the future of education and social sciences in Africa.

### **Editorial Board**

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## INFLUENCE OF ENVIRONMENTAL FACTORS ON TEACHER TURNOVER IN WAJIR WEST SUB COUNTY, KENYA

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**Abstract:** *Teacher turnover in Wajir West Sub County, Kenya, has significant implications for the quality of education. This study explores the influence of environmental factors on teacher turnover, focusing on geographical remoteness, climatic conditions, security concerns, and access to basic amenities. The study adopted a descriptive survey design to achieve its objectives. The research targeted key stakeholders, including 3 Wajir West Sub County educational officers, 47 head teachers, 47 deputy head teachers, and 225 teachers. Purposive sampling was employed to select head teachers and deputy head teachers from the selected schools, ensuring a representative sample. Additionally, a simple random sampling technique was applied to select three sub-counties and 225 teachers who participated in the study. Data collection was carried out through the administration of questionnaires. The collected data underwent rigorous analysis using statistical software, including Statistical Package for Social Science (SPSS) version 29 and STATA. The study's findings reveal the complex interplay of environmental factors in influencing teacher turnover. Geographical remoteness and challenging climate conditions impact teachers' job satisfaction and retention. Security concerns, including incidents of insecurity and violence, further exacerbate turnover rates. Inadequate access to basic amenities, such as clean water and healthcare, also plays a pivotal role in teachers' decisions to leave the region. The research sheds light on the multifaceted nature of teacher turnover in Wajir West Sub County, Kenya. Addressing this challenge requires a comprehensive approach, including policy interventions aimed at improving living conditions, ensuring security, and enhancing infrastructure. These findings provide valuable insights for educational policymakers and stakeholders seeking to retain and support qualified teachers in resource-constrained environments.*

**Keywords:** *Environmental Factors, Teacher Turnover, Teacher Turnover Factors, Teacher challenges*

### INTRODUCTION

Teacher turnover remains a persistent and complicated challenge, exerting a significant influence on educational systems across the globe. Its far-reaching implications extend beyond the immediate disruption of classroom continuity, profoundly impacting educational quality and institutional stability. The retention of skilled and dedicated educators is a recurring concern that echoes not only within the field of academia but also at the highest educational governance rank as a whole, where top-level authorities

struggle with the complexity of maintaining a healthy and effective teacher workforce (Ingersoll, 2012). While teacher turnover is often viewed as a sign of failure within the education system, recent research has produced more contradictory perspective evidence (Maithya, 2012). The issue of teacher turnover is not unique to Wajir West Sub County or specifically Kenya as a nation. It is a global phenomenon. Across continents and other nations, educational institutionals frequently grapple with the challenge of retaining qualified teaching professionals. Samuel and Chipunza (2009) highlight the pervasive nature of this problem, emphasizing that managers and authorities are constantly confronted with the task of retaining employees in various fields, including education.

Contrary to the commonly held belief that teacher turnover is uniformly high and indicative of systemic failure within the education sector, recent studies have offered a more open and approachable perspective (Maithya, 2012). These studies have begun to unravel the complex web of factors that contribute to teacher turnover, recognizing that it varies significantly from one region to another. In many African countries, the phenomenon of teacher turnover is closely associated with environmental-based factors that encompass a wide range of challenges and circumstances. Sub-Saharan nations, including Zambia, Kenya, Nigeria, the Central African Republic, and South Africa, have grappled with the impact of the HIV/AIDS epidemic, which has contributed to teacher turnover (Coombe, 2002). The devastating effects of this epidemic on the teaching profession have been particularly pronounced, further highlighting the urgency of understanding the multifaceted factors at play.

Beyond the health crisis, various environmental factors exert significant influence. These factors have continued to show variation ranging from insufficient salaries, allowances, inadequate housing, to limited opportunities for career advancement. These challenging factors have led to a substantial teacher turnover from their individual profession (Kamara, 2002). Additionally, economic factors have played a pivotal role in teacher turnover, as demonstrated by the loss of newly-qualified teachers to alternative employment opportunities in countries like Zimbabwe (Mukumbira, 2001). Within this global and continental context of teacher turnover, Wajir West Sub County in Kenya presents a unique set of circumstances. This region grapples with a combination of environmental challenges, including geographical remoteness, climatic unfriendly conditions, security concerns, and access to basic amenities, all of which intersect with the broader issue of teacher retention.

In Wajir West Sub County, Kenya, where various ethnic and religious groups coexist, tolerance is a pivotal factor influencing teacher turnover. The region's socio-cultural diversity demands a harmonious relationship between teachers and the local community to ensure effective teaching and community engagement (Hall, 2012). Tolerance, in this context, pertains to the ability of educators from different backgrounds to work harmoniously within the local community. By educators experiencing lack of tolerance, it

has led to feelings of isolation and discomfort. Such sentiments have greatly contributed to a higher likelihood of teachers seeking opportunities elsewhere, thereby increasing turnover rates (Johnson & Birkeland, 2019). Conversely, a tolerant and inclusive environment continues to foster a sense of belonging and acceptance among teachers in this county. According to Johnson & Birkeland (2019), teachers feel valued and respected within the community, when they are shown compassion. They are more likely to remain in their positions, contributing to teacher retention efforts.

Hardship is also another factor resulting to teacher turnover in Wajir West Sub County. This encompasses various challenges that teachers face due to the region's environmental conditions and limited access to basic amenities. These hardships can significantly influence teacher turnover rates (Ong, 2016). Limited access to clean water, inadequate housing, and challenging climatic conditions are common hardships faced by educators in the region. These difficulties negatively affect teachers' quality of life and job satisfaction. Educators who perceive these hardships as insurmountable may be more inclined to leave their positions in search of better living conditions and improved overall well-being (Ong, 2016). Efforts to alleviate these hardships, such as improving infrastructure and providing essential services, are essential for teacher retention in Wajir West Sub County, Kenya.

Security is a critical consideration for every employee in all fields. and it plays a pivotal role in influencing teacher turnover rates. Security concerns can encompass both personal safety and the safety of educators' possessions. Insecurity, including the risk of theft or violence, can lead to increased teacher turnover. Educators who do not feel safe in their working and living environments are more likely to seek employment opportunities in areas with better security measures (Ting, 2017). Ensuring the safety of teachers and their belongings is crucial for teacher retention in regions like Wajir West Sub County, Kenya. Measures to enhance security, such as community policing initiatives and improved infrastructure, can contribute to a safer environment for educators, thereby reducing turnover rates (Ting, 2017).

Tolerance, hardship, and security are integral aspects that shape teacher turnover in Wajir West Sub County, Kenya. These factors interact with the broader environmental conditions and socioeconomic challenges, influencing the decision-making process of teachers. Understanding and addressing these aspects are essential for educational policymakers and administrators in their efforts to improve teacher retention and enhance the quality of education in the region. This research paper endeavors to explore the intricate dynamics of teacher turnover within this specific context. Given this background, the current study intended to examine the influence of environmental factors on educators' decisions to stay or leave Wajir West Sub County, Kenya.

## METHODOLOGY

### Research Design

Creswell (2009) defines research designs as plans and the procedures for research that plans the decisions from broad assumptions to detailed methods of data collection and analysis. This study adopted descriptive survey design. Descriptive survey design enables the researcher to describe the state of affairs as they are and report the findings (Kombo & Tromp, 2009). According to Kothari (2016), such design is efficient method of collecting descriptive data regarding the characteristics of populations to justify current conditions and practices. Moreover, descriptive survey allows rapid collection of data from a large sample within the shortest time possible by use of questionnaires.

### Target Population

According Mugenda and Mugenda (2019) target population refers to the entire group of individuals, items, cases or things with common attributes or characteristics. This study covered all counties and primary schools in Wajir County. Wajir County has 8 sub counties and 47 primary schools. Thus the study targeted 3 Wajir West sub county educational officers, 47 Head teachers, 47 Deputy Head Teachers and 225 teachers. The selection of the aforementioned office holders is informed by the fact that the office bearers have teacher's records, both at Sub-County Educational Offices as well as Individual school; also teachers interacted with those who moved out of their schools and therefore have the relevant information required in this study.

### Sample Size and Sampling Techniques

According to Orodho and Kombo (2002) sampling is the process of collecting a number of individual or objects from a population. The study applied the Yamane (1967) formula for calculating sample size. According to Israel this formulae is used for calculating sample size. In this formula Glen recommended a 95% confidence level and 5% level of precision, thus the sample size will be.

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

Where

n= required sample Size

N= target population

e = level of precision

$$\text{Therefore } n = \frac{97}{1 + 97(.05)^2} = \frac{97}{1 + 97(.0025)} = \frac{97}{1.24} = 78$$

Thus = 3 Education Officer

= 38 Head Teachers

= 38 Deputy Head Teachers

=225 Teachers

The sample above was arrived at using the formula when deciding on the sample size. Purposive sampling method was used to select the head teachers and deputy head teachers in the selected schools. Simple random sampling was used to select 3 sub counties and 225 teachers who participated in the study

### **Data Collection Instruments**

The study used questionnaires to collect data. Accordingly, to Kothari (2016) questionnaires are usually free from bias, as the answers are in respondents' own words, in addition the instrument has the advantages of saving the much-needed time and are appropriate for the literate educated and co-operative respondents. Four questionnaires were used to collect data, they included: questionnaire for education Officers, head Teachers, deputy head teachers and teachers. The questionnaires consist of three section, section one dealt with demographic description of the respondent, section two seek information on cause of primary teachers turn over in Wajir West Sub County and section three seek views on mitigating measures on teachers turn over in Wajir west Sub-County.

### **Data Collection Procedure**

When the researcher obtained an introductory letter from the university, researcher applied for a research permit from the National Commission for Science, Technology and Innovation (NACOSTI). Permission was also obtained from respective county directors of education in Wajir County. The researcher proceeded to education offices to administer questionnaires to county education officers and thereafter to every selected school to collect data from the principals, deputy principals and selected teachers.

### **Data Analysis**

After the data was collected it was entered into a computer program, data was analyzed using Statistical Package for Social Science (SPSS) version 29 and STATA. The two tested the strength of independent variables as well as perform both descriptive and inferential statistics which involved percentages, frequencies, means and standard deviation.

## **RESULTS**

### **Background Characteristics of the Respondents**

The background information of the respondents that were considered by the current study included gender, age, highest level of education, teaching experience, current position, and number of years in current position.

Majority of the respondents were male. (75%) of the respondents who participated in the study were female. The remaining 25% of the respondents were female.

When the respondents were asked to indicate their age bracket, 5% of the respondent were below 25 years, 5% were between 25- 30 years, 15% were between 31-35 years, 20%

were 35-40 years, 40% were 41-45, 10% were 46-50 years and 5% were 50 years and above

The respondents were asked to indicate their level of education. This was categorized into the following: O-level, A-level, P1, ATS, Degree, Master, PhD and others Table 4.3 shows the distribution of the respondents per level of education. The respondents indicated their responses in percentage as O level 10.3%, A level 9.1%, P1 37.3%, S131%, ATS 21.1%, Degree 3.0%, 1. Masters 1, %, PhD 0 %, and others 10.6 %

When the respondents were asked to indicate their experience levels. This was categorized into the following; below 5 years, 6 – 10 years, 11 – 15 years, 16 – 20 years and over 21 year. The respondents' responses in percentage are below 5 years 6.1%, -10 years 31.9%, 11-15 years 36.5% and 11-20 years 27.5%

Respondents were asked to indicate their years in the current position. Their responses were categorized as follows; below 5 years, 6 – 10 years, 11 – 15 years and 16 – 20 years. The respondents' responses in percentage are; The respondents' responses in percentage are below 5 years 6.1%, 6-10 years 31.9%, 11-15 years 36.5% and 11-20 years 27.5%

### **Information on the extent to which Environmental Factors affect Teacher Turnover**

Respondents were asked to indicate their responses on the extent to which environmental factors affect teacher turnover. Respondents were expected to choose by picking from the choices provided. Their responses were categorized as follows; great extent, moderate extent and low extent. Figure 1 show their total responses in percentage. Great extent had 51 %, moderate extent had 31% and low extent had 18 %. Environmental factors are a great concern when it comes to teacher turnover.

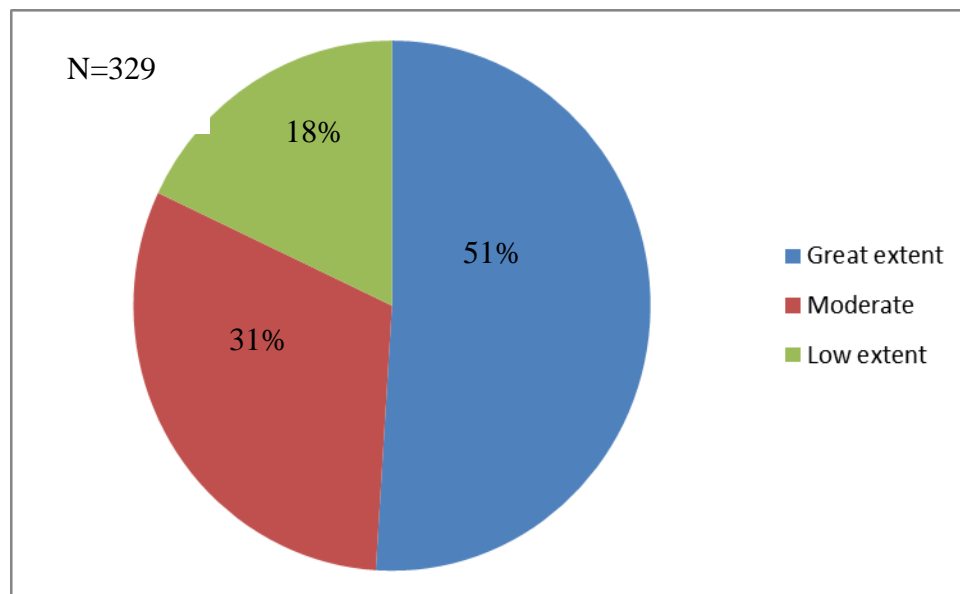


Figure 1: Information on the extent to which Environmental Factors affect Teacher Turnover

According to the findings, 9% of the respondents agreed that the County government of Wajir should consider building more health facilities in the area to reduce the journeys of travelling to the County headquarter for treatment. This will motivate the teachers and the learner and also reduce time lost when travelling for medications in other regions. About 29% of the respondents would like the amount of money given for teachers working in such environment to be increased. This hardship allowance which is given by the government working in hardship areas is considered as a motivation by teachers. The findings also established that there should be more tolerance on religion and culture of the people working and residing in this region. Over 505 of the respondents would like the security in the region to be beefed up. The area is prone to terrorists' attack and there is therefore need to build more security stations and deployment of personnel in the region. Figure 2 below shows this information

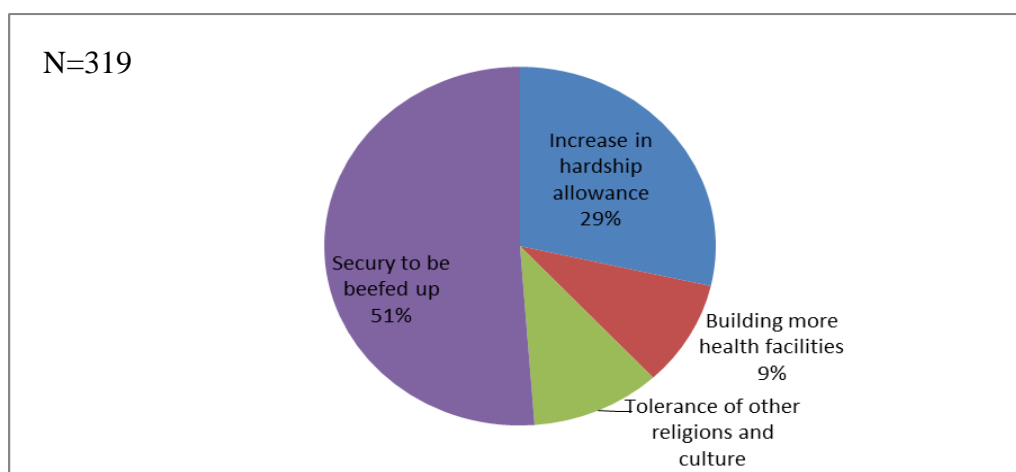


Figure 2: Information on Environmental factors

## DISCUSSION

The findings of this study provide a comprehensive perspective on the intricate challenges and dynamics of teacher turnover within the realm of educational settings. These insights not only corroborate existing research but also expand our understanding of the multifaceted nature of teacher preferences and the intricate web of factors that contribute to turnover rates. In this discussion, we delve deeper into each of the research findings and their implications for the field of education.

Eric's 2013 study underlines a compelling aspect of teacher preferences: the inclination to teach in schools characterized by wealthier student populations and higher academic performance. This preference is not merely a matter of convenience; it signifies the pivotal role that resources, parental involvement, and a conducive learning environment play in fostering teacher satisfaction and effectiveness. When teachers have access to ample resources and support systems, they are more likely to excel in their roles and contribute positively to the educational experience of their students. However, the downside of this preference is the potential exacerbation of educational disparities, where schools in less affluent areas may face difficulties in attracting and retaining qualified educators.

In stark contrast, Okemwa's 2003 research shines a spotlight on the challenges faced by teachers in rural centers, emphasizing the adverse effects of underdevelopment on teacher turnover rates. The rural-urban divide in educational infrastructure is a persistent concern that extends far beyond the boundaries of Wajir County. The lack of resources and educational opportunities in rural areas not only hampers the recruitment of teachers but also contributes to the migration of educators to urban centers in search of better working conditions and prospects. Addressing this rural-urban disparity is imperative to ensure equitable access to quality education across regions.

Wisegeeq's 2012 findings introduce the critical dimension of job dissatisfaction as a driver of high employee turnover, a concept that resonates profoundly within the teaching profession. The observation that dissatisfied teachers are more likely to seek alternative employment opportunities underscores the significance of addressing workplace-related issues. Beyond financial incentives, fostering a nurturing and supportive work environment is essential in retaining educators. Strategies that enhance job satisfaction, such as professional development opportunities, reduced administrative burdens, and mechanisms for teacher input in decision-making, can prove instrumental in this regard.

Boyd's 2005 study reinforces the importance of workplace conditions as a determinant of teacher job satisfaction and retention. It underscores the influence of factors like school policies and classroom dynamics on the career decisions of educators. In essence, teachers who perceive their working conditions as conducive to effective teaching are

more likely to stay committed to their profession. Educational institutions must, therefore, pay close attention to creating an environment that empowers teachers to thrive and fosters a sense of ownership over their classrooms.

Lockwood's 2007 research amplifies the significance of the workplace environment, particularly positive interpersonal relationships among staff members, in teacher retention. It underscores the importance of building a collaborative and supportive atmosphere within educational institutions. Positive relationships among teachers, administrators, and support staff contribute not only to a more harmonious work environment but also to enhanced job satisfaction and a reduced likelihood of teacher turnover.

The findings from the study conducted in Wajir County provide a valuable local perspective that aligns with the broader research landscape. The call for improved healthcare access and increased hardship allowances reflects the tangible challenges faced by educators working in remote and challenging environments. These demands, if met, can serve as powerful incentives to attract and retain teachers who are often the lifeline of education in such areas. Furthermore, the emphasis on promoting cultural and religious tolerance speaks to the need for inclusive and respectful environments within educational institutions, fostering harmony among diverse communities. Lastly, the urgent need for enhanced security measures highlights the vulnerability of certain regions to external threats, underscoring the need for a safe and secure teaching environment.

## CONCLUSION

In conclusion, this study provides a comprehensive understanding of the intricate web of factors influencing teacher turnover within educational settings, with a specific focus on the role of environmental factors. The findings underscore the multifaceted nature of teacher preferences and their profound impact on educators' career decisions. Teachers' preferences for schools characterized by wealthier student populations and higher academic performance highlight the crucial significance of resources, parental involvement, and conducive learning environments in fostering teacher satisfaction and effectiveness, although they also raise concerns about exacerbating educational disparities. Conversely, the challenges faced by teachers in underdeveloped rural centers emphasize the urgent need for concerted efforts to bridge the rural-urban educational divide and ensure equitable access to quality education. Furthermore, the link between job dissatisfaction and teacher turnover underscores the imperative of cultivating supportive work environments and addressing educators' concerns to enhance teacher retention, while the importance of workplace conditions, including school policies and classroom dynamics, underscores the necessity for educational institutions to empower teachers and provide the necessary support for effective teaching. These findings culminate in a call for targeted strategies tailored to the unique challenges faced by

teachers in different contexts, encompassing equitable resource allocation, enhancements in rural education, measures to boost job satisfaction, and efforts to improve workplace conditions. By implementing these recommendations, educational institutions can take meaningful steps towards reducing teacher turnover, thereby fostering a more stable and effective educational environment for students.

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## CHALLENGES IN MANAGING TUBERCULOSIS TO ATTAIN YOUTH PRODUCTIVITY IN PROMOTING NATIONAL DEVELOPMENT IN KENYA

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**Abstract:** Tuberculosis (TB) disease is highly infectious and a big threat to humankind. The pathogen that causes TB has diverse ways of surviving and evading the immune system making it very difficult to treat TB. The youth (18-35 years) who are actively engaged in national development are threatened by Tuberculosis, which may render them unproductive. The findings of this research paper were attained through cross-sectional study design. In this design, the challenges in the management of Tuberculosis amongst the youth and young adults in Kenya were investigated. The sample size was identified through the Krejcie and Morgan (1970) table which shows that when the population is over 1 million, then the sample size is 384. Further, Mugenda and Mugenda (2003) argue that sample sizes of 10 to 30 per cent are sufficient for data analysis. Therefore, this study used 15% of the sample size, which was 59 respondents. The rest, 10 respondents were caregivers, nurses and doctors from whom data was collected by used of a key informant guide. The collected data was uploaded in Kobocollect server and later exported to excel CSV file for cleaning. It was later exported to SPSS for analysis. Descriptive statistics were generated by SPSS. The narratives were analyzed according to topics and themes. The data was presented in percentages, tables and narratives. The study found out that amongst the challenges faced in the management of TB in the youth in Kenya are poor access to health facilities, lack of income, HIV infections, substance abuse, poor housing, poverty and poor implementation of policies by the government. The study recommends awareness creation amongst the youth on the importance of adhering to TB medication and establishing sustainable partnerships with the government for implementation of Policies on TB prevention and management.

**Keywords:** Tuberculosis management, Tuberculosis management Challenges, Youth Productivity challenges, National Development challenges, Tuberculosis prevention, Tuberculosis management.

### INTRODUCTION

Tuberculosis is among the top global health challenges whose transmission rate is high when cohabiting with an infected person. Globally, about 10 million people were infected with TB in 2019, where over one million succumbed to the disease. In 2020, India, Pakistan, Philippines, some parts of West Pacific, Nigeria and South Africa recorded the biggest numbers of TB infections globally (Chakaya et al., 2021). Tuberculosis is ranked 9<sup>th</sup> among killer diseases and the second leading infectious killer after COVID-19 globally (Floyd et al., 2018).

The youth (18-35 years) are a set of age group that is understudied even as the world works to end Tuberculosis. They are a unique population which the globe is trying to understand to end Tuberculosis, which has caused more deaths than COVID 19. Youth have been overlooked, yet they are a unique group of people with physiologic, social and developmental features that need to be studied and understood.

The youth have extensive social contacts outside the household hence at a high risk of TB infections. Adolescents are also at risk of Tuberculosis due to household exposures as a study conducted in India revealed (Dolla et al., 2019). Historical Data has shown that TB is high amongst the youth where the infections can progress. However, it is not clear whether the youth are more vulnerable to the infection than young ones because it depends on the strength of transmission. Globally, there are over 2 million young adults (15-24 years) who contracted TB in 2012, contributing to 17% of new infections (Snow et al., 2018).

In Kenya, TB ranks 9<sup>th</sup> among the killer and highly infectious diseases. In 2019, over 86,000 Kenyans were reportedly treated from TB with 10% of them being children. TB management in Kenya is taken care of at the governments expense, in the government health facilities. However, not all TB cases are reached out to and treated. According to a study conducted in 2020 overcrowded universities in Kenya, 8.3% of 200 students tested positive for TB. This was as a result of sharing rooms/beds with index cases (MoH, 2020). TB is preventable and curable but the disease continues to ravage vulnerable populations in Kenya and across Africa.

The importance of the youth in making peace, national security and challenging terrorism is gaining momentum in the international community. As such, the youth need to be empowered to shift from victims of violence to agents of positive change and peace (Shepherd, 2018). One of the greatest challenges in the implementation of this framework in Africa continent is lack of opportunities for the youth. In a country where there are limited job opportunities for the youth, disease burden can worsen the situation and render the youths unproductive towards national development opportunities. Kenyan youth are recruited in the national Youth Service, police, military and technical schools, where they get opportunities to engage in nation building activities.

Diseases like Tuberculosis, HIV/AIDS among others can affect the youth and therefore national development. According to Unicef, there were about 1.71 million on average, adolescents living with HIV/AIDS globally in 2021. Adolescents account for 5% out of the 11% of adults living with the diseases globally (Hosek & Pettifor, 2019). According to CDC, the youth account for over 20% of the new HIV diagnosis. African youths accounts for 82% of the newfangled infections. There is a growing and worrying trend of infections amongst the youth as the advocacy for Social Change revealed. The youth normally tend to experiment with drugs, alcohol, substance abuse and indulge in unsafe sexual practices. According to the National AIDs Control Council, males aged 15-35

years are more affected by the HIV disease because of their “don’t care attitude” (MoH, 2019a). These men suffer silently due to the fear of stigmatization.

Research has shown that HIV/AIDS patients are at a higher risk of Tuberculosis. According to CDC, Tuberculosis is the major cause of death for HIV patients. The problem of HIV and Tuberculosis infections amongst the youth has been compounded by poverty, unemployment and cultural practices that encourage girls to be submissive. The population of the youth is burgeoning and there are no job opportunities to absorb them. Some of those that are lucky to secure jobs cannot sustain their basic needs because they live from hand to mouth; the vicious cycle of poverty. Consequently, majority of the youth lack adequate food and income to replenish their lives. This makes them vulnerable to immoralities through which they contract the disease.

Additionally, the rising infections of Tuberculosis have been driven by COVID19, which has caused the youth to lose their sources of income which has therefore resulted to their indulgence in drugs, alcohol and substance abuse. This has equally led to the new infections. The six months lock down in Kenya that happened when COVID 19 struck the country contributed greatly to rising cases of HIV amongst young people in Kenya as well as gender-based violence. These cases came with Tuberculosis infections.

The youth play a vital role in renewing and refreshing the current status of leadership, skills and innovations in our society. The youthful energy and capabilities are key in peacebuilding work, mediation, humanitarian work, and community mobilization. It becomes challenging to advance in these undertakings when one has health issues. A generation of young people suffering from infectious diseases cannot be fit to participate in nation building activities. The young people may shy away from getting diagnosed from TB or it may be difficult to get diagnosed. Additionally, TB may be difficult to get diagnosed. Those joining different sectors to support nation building such as the military, police, National Youth Service, Jua-Kali sector and others may be hindered by the Tuberculosis because they cannot work. Additionally, TB is air borne and spreads very fast. The disease deprives them of their energy, sources of income and self-esteem and therefore cannot participate optimally in nation building and promotion of national security.

In this context, the government's efforts to harness the potential of the youth for Kenya's development face a significant obstacle due to the increasing infections among young individuals, particularly concerning Tuberculosis (TB) and other infectious diseases. The rising infections among the youth negatively impact the government's agenda of empowering them and hinder the recruitment of young individuals for various National Security roles. This research paper specifically investigates the management challenges of Tuberculosis within young adults, considering their unique developmental needs. It explores the vulnerability of certain groups of young adults to TB, emphasizing factors such as increased disease acquisition chances, barriers to accessing TB care, and immunity issues. These vulnerable groups encompass individuals facing challenges like

migration, refugee status, homelessness, substance abuse, incarceration, and those living with HIV and AIDS. Consequently, this study aims to shed light on the challenges faced in managing Tuberculosis, ultimately aiming to enhance youth productivity and contribute to national development in Kenya.

## METHODOLOGY

### Research Design

The study employed cross-sectional research design in investigating the youth in various sectors and how they have been affected by Tuberculosis. This design was appropriate in understanding the prevalence of tuberculosis amongst the youth. The design has been used in epidemiology in assessing prevalence of diseases in a particular population. The study focused on the youths in Kenya, those that have been affected or infected with TB and how this has affected them socially as well as the challenges they may have encountered as a result of the disease burden. Cross-sectional design was employed because the study was looking at the youth 14-29 years in relation to Tuberculosis and their productivity.

### Sample Size and Sampling Techniques

The total population of the youth infected with or affected by TB is not known. Therefore, the sample size was derived from Krejcie and Morgan 1970 which shows that when the population is over 1 million, the sample size is 384 (Krejcie RV and Morgan DW, 1970). However, Mugenda and Mugenda (2003) argue that sample sizes of 10 to 30 per cent are sufficient for data analysis (Mugenda O & Mugenda A, 2003). Therefore, this study used 15% of the sample size, which was 59 respondents.

Table 1

*Krejcie and Morgan Table*

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

### Data Collection Methods

Primary data was gathered digitally by use of structured questionnaires for the TB patients and Key informant guide for the key informants. The structured questionnaire and the key informant guide were uploaded in Kobocollect, an open source android application, making it easy to use android devices in collecting the data. A total of 59 respondents were interviewed. This composed of 49 TB patients and 10 key informants which were clinical officers, and patient care givers.

### Data Analysis

The collected data was uploaded in Kobocollect server and later exported to excel CSV file for cleaning. It was later exported to SPSS version 25 for analysis. Descriptive statistics were generated by SPSS. The narratives were analyzed according to topics and themes. The data was presented in percentages, tables and narratives.

## RESULTS

In the study, 49 (83%) patients and 10 (17%) key informants were interviewed. The study purposed to know the number of patients interviewed by gender; Females comprised of 49% of the participants while men were 51%.

From The selected sample, 47% had attained primary academic qualifications while 20.4 % had secondary education. 6.1% had no education, but were literate based on the fact that they could communicate. A few, 10.2% had attained a university degree while 16.3% had attended college level.

The age of the patients (respondents) was classified in to three; below 18 years, 18- 35 years and over 35 years. There was none below 18 years while those at the age of 18 -35 years were 63.3%. The study purposively targeted on the youth. Those over 35 years were 36.7%.

The study revealed that the source of income for the interviewed TB patients was varied. Some, 33% did not have a source of income, while 47% are either in business or employed. A good number, 33% did not have a source of income.

67.3% of the respondents believed that the government of Kenya has not engaged the youth fully in development and creation of opportunities. Likewise, 73.5% reported that the youth were not involved in decision-making and the development of services and programs for the youth.

### **Challenges in Managing Tuberculosis to Attain Youth Productivity in Promoting National Development**

The study sought to examine challenges in managing tuberculosis to attain youth productivity in promoting national development in Kenya. The respondents were asked to give their views on the challenges. Table 2 summarises the distribution of the respondents by challenges in managing tuberculosis

Table 2

*Challenges in managing tuberculosis*

	Frequency	Percentage
Poor access to TB health centers	9	18.4
Poverty	29	59.2
Delayed Diagnosis	32	65.3
No income	36	73.5
Poor Housing	24	49
HIV / AIDs preference	14	28.6
Substance abuse	28	57.1
Non-adherence to TB medication	26	53.1

The study identified various challenges that TB patients were experiencing. Those with poor access to TB centers or health facilities were 18.4%, poverty was represented by more than a half (59.2%) of the respondents, delayed diagnosis 65.3%, lack of income 73.5%. Those with poor housing were represented by 49%, HIV/AIDs preference was 28.6%, substance abuse 57.1% and the ones experiencing challenge with adherence to TB medication were 53.1%.

Of importance to be noted from the table displaying the challenges is that some patients were experiencing more than one challenge. Therefore, every challenge was rated as a percentage of the total respondents.

The question on how the government of Kenya is committed to treatment and prevention of Tuberculosis was thrown to the respondents. Those of the opinion that the government is very highly committed were 83.7% while those of the opinion that the commitment was low were 9 17.3%. A total of 89.8% believed that the government of Kenya had adopted innovative technologies in TB testing and screening.

All the key informants (10) that comprised of Doctors, care givers, nurses and Medical officers reported that the youths in Kenya were highly vulnerable to Tuberculosis. The reasons given for the vulnerability were sharing of cigarettes and alcohol; low immunity; large crowds and ignorance. Five of the key informants expressed their opinion that the government of Kenya had involved the youth in the development and creation of job opportunities for them. Those of the opinion that the government had involved the youth gave reasons such as Kazi mtaani program by the government, Higher Education loans,

and promotion of health education, all of which target and benefit the youth. All of the key informants were of the opinion that the government of Kenya did not involve the youth in decision making, designing policies, programs and services for the youth. Additionally, all of the Key informants agreed that the government of Kenya was committed to the treatment of TB as evidenced with adoption of innovative technologies in diagnosis and treatment of TB and equipping of TB medical facilities across the country.

The Key informants who were doctors, medical officers, and caregivers recommended that for the government to score more in the management of TB amongst the youth, they need to Carry out capacity buildings through intensive sensitization campaigns; train the youth on TB, include TB in the curriculum, strengthening of community health groups; creating opportunities for the youth to be engaged in and express their opinions, a paradigm shift from using media to using community health groups to reach out more youth through sensitization and capacity building, providing nutritional support; reducing pill burden, avail tools and instruments for investigation, Equip laboratories for effective testing, proper affordable housing for the youth, involving the youth in policy making and; more adherence treatment platforms for patients.

## **DISCUSSION**

Gender disparity has been noted with HIV and TB cases where women tend to seek for medical attention as opposed to men (Enos et al., 2018a). The findings in this study show that 49% of those interviewed were females while men were 51%. The chosen sample size cannot be used to conclude that more men with TB infection seek medical care than women. The Kenya Tuberculosis prevalence survey that was conducted in 2016 suggested that more women with TB infection seek medical care, as compared to their male counterparts (Enos et al., 2018b).

Studies have shown that children at the age below two years are more vulnerable to Tuberculosis. This risk declines at the age of 1-4 years but rises again at the age of 15-25 years, which are the youth (Narasimhan et al., 2013). This study showed that those TB patients at the age of 18 -35 years were 63.3% as compared to 36.7% that were over 35 years of age. The youth and adolescents are very highly vulnerable to Tuberculosis.

Tuberculosis vulnerability is influenced by various factors such as age, social behaviors, living conditions, health of an individual, occupation and source of income. The study revealed that 49% did not have a source of income, while 51% were either in casual jobs or small-scale businesses that were not performing well. Those challenged with poverty were 59.2%. People with low and unstable incomes and living in poverty were at a higher risk of Tuberculosis. A study conducted in Malawi, Rwanda, Tanzania, the Philippines and Myanmar revealed that household socioeconomic levels such as poverty and lack of income contributed to severity of Tuberculosis. lack or inadequate income means that a Tuberculosis patient may not afford the recommended nutrition and may have limited

access to healthcare and proper housing, which in turn may increase the risk of transmitting the disease (Siroka et al., 2016).

The government of Kenya recognizes the significance of youth involvement in decision making processes on all sectors, including health. Youths have been involved in developing effective policies in TB management and designing initiatives for the youth to engage in TB-related activities such as policy formulation, planning and implementation of TB programs. The youth are also encouraged to come up with innovative approaches in raising awareness. From the study, 83.7% of the interviewed TB patients acknowledge that the government of Kenya is very highly committed to TB diagnosis and treatment. Additionally, the study revealed that 67.3% of the respondents believed that the government of Kenya has not engaged the youth fully in development and creation of opportunities. However, the youth that are already infected with TB have not had the opportunity to be involved in these opportunities. There is lack of inclusivity amongst the youth on how they are involved. Secondly, there education and awareness creation campaigns are not as vigorous as they used to be. This is inline with the response of the Key Informants that were mainly doctors, care givers and nurses, who reported that the government of Kenya does not involve the youth in decision making, designing policies, programs and services for the youth that are already infected with TB, since they better understand the challenges they face.

According to the study, only 18.4% of the interviewed patients had challenges with accessing healthcare facilities. Access to healthcare facilities can be influenced by factors such as geographical location of the facility, transport and infrastructure, finances, stigmatization and the quality of the healthcare services provided. The youth may shy away from seeking medical care, while others fall victim of stigmatization. The health care services in TB centres in Kenya are deliberately sensitive to the needs of the youth. Firstly, the healthcare facilities are many, they operate in convenient hours for the youth, the patient's information is treated with confidentiality and the youth are empowered and taken through education and training session. Additionally, like other TB patients, the youth are assigned a healthcare worker who are friendly, to follow whether the youths are adhering to the TB medication and general care of the patients as provided in the National Tuberculosis, Leprosy and Lung Disease strategy (MoH, 2019b). This was also reported by the interviewed respondents who were TB patients visiting various TB centers for their clinics. The TB medicines and related services were freely provided to the patients.

While improved access to primary healthcare contributes significantly to reducing disease burden and mortality, the low- and middle-income countries are yet to fulfil the Alma Ata Declaration (Jamison et al., 2018). In the context of Kenya, which is a middle-income country, access to healthcare is not as difficult in the urban areas. However, it is challenging in the rural areas with poor road infrastructure. Accessing healthcare facilities for TB treatment can be constrained by lack of money for transport, even when the medical care is free at the health facility. A study conducted in the rural parts of

Makueni county found out that access to healthcare was limited due to lack of infrastructural prerequisites such as poor roads, and neglected health facilities (Essendi et al., 2015). This applies to North Eastern Parts of Kenya and other areas away from major towns and urban centers.

While all the ten key informants reported that Kenya had adopted the state-of-the-Art technology in TB diagnosis and treatment, a good number of the patients interviewed (65.3%) reported that they had suffered delayed diagnosis due to misdiagnosis. The big number of the respondents that suffered misdiagnosis can be explained by the fact that patients adopt different treatment pathways, e.g. herbalist, private clinics, on counter drugs, public hospitals and traditional healers (Mbuthia et al., 2018). Additionally, there are many reasons that can lead to misdiagnosis of Tuberculosis. TB can present with atypical symptoms, it can come along with infection of other diseases such as HIV, similar symptoms to other diseases, limited access to diagnosis tools, poor medical history and drug resistance (Kunjok, et al. 2021).

The patients (respondents) that suffered poor housing were 49%. Tuberculosis, like may SARs is a social disease that is affected by poor housing, poor quality of life, overcrowding, burgeoning population, large families, lack of education, alcoholism amongst other social factors (Khan et al., 2019) . Poor housing comes with poorly ventilated houses, or small houses without adequate space for the household members. In such cases, saliva or body fluid droplets from the infected person can easily get in conduct with the rest of the members sharing the household and get infected (Mathema et al., 2017). TB is mainly concentrated on vulnerable members of the community such as homeless people, prisoners, persons living with HIV and the poor. Ancient methods of TB control in Kenya have led to humiliation and discernment for the infected, fear and mistrust for health institutions. These challenges have led to delayed TB diagnosis, continuous transmission, poor treatment outcomes and low treatment completion rates (Jetty, 2021).

HIV and AIDs burden was reported by the interviewed TB patients (28.6%) as one of the challenges they face. Tuberculosis and HIV is a duet noted as a public health challenge in the world. People with HIV develop low immunity and therefore become highly susceptible to TB infection (Tiberi et al., 2017). Improved diagnostics and accessibility of medical care can improve this challenge.

The study revealed that 57.1% of the respondents suffered substance abuse. Misuse of drugs and alcohol as well as cigarettes increase the risk TB infection and complicates management of the condition. Substance abuse leads to weakened immune system, damage of the lungs, reduced drug adherence and chronic health conditions (Nordholm et al., 2023). Patients with challenges of substance abuse should get integrated care to address both the TB and substance abuse challenges. This can be difficult to the youth that do not have a source of income, are in poverty and rely on casual jobs or their relatives for upkeep and care.

The study reported that 53.1% of the respondents had challenges with adhering to TB treatment. There are various reasons as to why the youth may fail to adhere to TB treatment. Firstly, TB treatment takes a long duration of time, such as six months and over, while taking the prescribed antibiotics. The patients under treatment may develop side effects such as lack of appetite, gastrointestinal discomforts, nausea, skin rash and fatigue, which may compromise medical prescriptions routine. Additionally, the youth may face stigmatization from the community, making it difficult to seek support or TB treatment. Some patients may also lack TB knowledge, in terms of its cause and duration of treatment, as reported in Asmara, Ethiopia (Gebreweld et al., 2018).

### CONCLUSION

The study has established several challenges faced in the management of Tuberculosis in Kenya and globally. These challenges can be categorized as household challenges and government challenges. Household challenges emanate from the socioeconomic levels of households that dictate management of TB patients in terms of financing the medication, nutrition for the patients, patient's capability of taking care of their families and source of livelihoods for the patients among others. Space in the household is a challenge because TB patients need unshared and open space since the disease is highly infectious. This gets more challenging to the youth who are more vulnerable and may not have a source of income. The government is challenged with implementation of policies and financing for treating TB patients and welfare programs for TB patients. Patients that go for diagnosis late when the TB infection has progressed and those that do not adhere to the prescribed medication develop the multi-drug resistant TB.

This study recommends the Kenya health professionals should be keen to use and follow the 2013 revised guidelines for dealing with TB and Leprosy to save lives. This also includes implementation of the WHO consolidated guideline on TB 2020. The government of Kenya should seek funds to implement the Kenya Latent TB infection policy 2020 document by providing preventive therapy to those considered at the risk of developing TB. there should be accountability in the management of the money and resources meant for TB programs to attain maximum output. Additionally, Kenya should adhere to these guidelines to get better TB infection outcomes amongst the adolescents and children. Rapid implementation of these guidelines will save young lives and avert suffering. Civil Society Organizations should be on the lookout for the government to implement their commitment and ensure that TB patients do not suffer in silence because TB can be treated, and government have the mandate to support the treatment process.

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## SOCIO-ECONOMIC IMPACTS OF SUGARCANE PRODUCTION FROM 1900 TO 2020 IN BUNGOMA COUNTY, KENYA

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**Abstract:** *Sugarcane production has played an important role in influencing farmers social and economic status over the years. This study interrogated the Socio-Economic Impact of Sugarcane Production from 1900 to 2020 in Bungoma County, Kenya. The study adopts a case study design to assess the social and economic impacts of sugarcane farming in Bungoma County. The target population included farmers and their dependents/beneficiaries, labourers in the sugarcane industry, that is, skilled, semi-skilled and unskilled; stakeholder representatives from the key agencies involved in sugarcane farming in the area; factory officials and field extension officers. A total of twenty respondents were sampled by the study through purposive sampling technique. Data collection instruments included observation protocol, interview guides and focused group discussion guides. Data was analyzed using standard descriptive methods and presented in the form of narrations and direct quotes where necessary. The findings of the study revealed that the sugar cane economy has had several social and economic impacts on Africans. Some of these impacts included, among others, the introduction of wage labour, the growth of urbanization and migrant labour. The recommendations included the restriction of the importation of cheap sugar and giving subsidies and incentives to sugar cane farmers to deflate the high cost of locally produced sugar.*

**Keywords:** *Sugarcane Production Impacts, sugarcane economy, sugarcane industry, sugarcane production socio-economic changes, sugarcane production colonial era, sugarcane farmers' livelihoods*

### INTRODUCTION

The sugar economy globally, regionally and nationally indicates the existence of a poor and punitive contract system between sugarcane farmers and sugar factories. There is a resurgence of casual employment in the sugar cane and sugar production industry that contributes towards indebtedness, severe income poverty, patronage, vulnerability and precarious livelihoods (Lorentzen, 2009). This is because sugarcane farmers feel short-changed by the millers and lenders. Contracted farmers also have institutional problems because they need stronger bargaining and negotiating skills for the contract on equal terms with the sugar companies (Andama, 1997). Farmers have no say when payments are delayed after sugarcane harvesting, nor can they negotiate when the produce is declared sub-standard by the millers. According to Kenya's

economic survey, the Muhoroni, Sony, Chemelili and Nzoia sugar factories owed farmers about 890 million dollars in accrued debts (KES, 2017).

According to the study conducted by Bundeh (2022) on the impact of relocation occasioned by sugarcane farming in Migori county, Kenya. The study established that there was a reduction in crop production due to the expansion of the Sony Nuclear farms thus resulting in food insecurity. The study also revealed that rural movement led to a decline in agricultural cultivation and food production. According to Omosa (1998), sugarcane farmers engage in the farming of crops such as sugarcane and use their incomes to meet their food needs on the market. However, the pressure on land resources has led to inadequate food to feed households all year round. This has been further exacerbated by population pressure, which means additional competition for resources such as land and water.

Sugarcane production also brought about immorality due to drunkenness. For example, in the study conducted by Swanson (1977), Gregory argues that Africans learnt to manufacture jaggery, which they used to make tembo (African local beer). The farmers adopted extension services, discarded traditional agriculture and adopted cooperative services. For example, the Nzoia Outgrowers Cooperative was registered by the Ministry of Cooperative Development and Marketing in 1987. The members were drawn from sugarcane farmers contracted to Nzoia Sugar Company (Wanyonyi, 2022). The establishment of the Asian sugar industry led to more people being involved in wage labour at the expense of agriculture in the reserves. Moreover, some of the labourers were engaged on three or six-month contracts, this duration was bound to affect agriculture, especially during the farming season (Osamba, 2016).

According to the study conducted by Kennedy (1989), the commercialization of sugarcane created employment opportunities and improved the overall welfare of small farm households. Commercialization of sugarcane also led to creation of social amenities such as schools and medical centres for the Europeans and the Asian communities. The Asians contributed to the building of schools by collecting money and building materials (Delf, 1963).

In reviewing the basic literature in the field, it is apparent that the previous studies lack a detailed assessment of the study subject. More specifically, there were several gaps in the literature reviewed on how sugarcane farming facilitated the outward migration of laborer's, the social and economic effects of contract farming, and the impact on food security and gender relations, among other effects. Any study dealing with the impacts of sugarcane production entails a consideration not only in Kenya but also other nations. This constituted the gaps that necessitated the study. As such, this study discusses the social and economic effects of sugar cane production from 1900 to 2020 in Bungoma County, Kenya in a more detailed manner. It begins by examining the impact that Asian and European sugar cane farmers had on the region. It then analyses the social and

economic implications of sugar cane production and the entire sector on Africans, particularly in Bungoma. The gender dimension of the sector is also discussed. Additionally, the data collection instruments, data collection procedures are discussed. Finally, the section contains the data analysis and presentation of the study.

## METHODOLOGY

A case study research design was adopted as it allowed for in-depth investigation. The chosen design allowed for in-depth data collection on the socio-economic impact of sugar cane farming in Bungoma County. The study was carried out in Bungoma County, where sugarcane is majorly grown. The land tenure system in the study area falls under commercial and individual land ownership. Nzoia Sugar Company is located in Bungoma County, Bungoma South sub-county.

The study targeted residents of various wards who were knowledgeable about sugarcane farming. Clan elders were targeted since they are the custodians of the community's social and economic aspects and thus possess vital information as far as farming is concerned. The target population included farmers and their dependents/beneficiaries, labourers in the sugarcane industry, that is, skilled, semi-skilled and unskilled; stakeholder representatives from the key agencies involved in sugarcane farming in the area; factory officials and field extension officers. The key agencies involved in sugarcane farming include the Ministry of Environment, Natural Resources and Disaster Management, Ministry of Water and Irrigation, Ministry of Lands, Housing and Urban Development, Ministry of Agriculture, Livestock and Fisheries, Ministry of Labour and East Africa Affairs and Ministry of Health.

Purposive sampling was used to select a sample of 20 respondents, including: the elderly, sugar cane farmers, and factory workers since the researcher considered them to have vital information as far as the study was concerned.

The researcher used the observation protocol, interview guide, and focus group discussion guide as the primary data collection instruments. A total of one hundred and fifty respondents were interviewed.

Data analysis began in the field to avoid the loss of important information. All the tape-recorded information was transcribed and then arranged according to themes, objectives and periods. Analyzed data was presented in the form of narrations followed by first-hand quotations from the primary respondents. Qualitative data obtained from key informant interviews and Focus Group Discussions was transcribed, translated and analyzed to show trends, deviations and relationships based on the study objectives and research questions. Data presentation was done qualitatively and presented in a descriptive form.

## RESULTS

### Demographic Characteristics of the Respondents

The respondents included both male and female gender. The age categories ranged from twenty-five to seventy-five. The education level varied from certificate holders to degree holders. In some instances, the respondents did hold formal education certification but were found to be knowledgeable and conversed in the local language and Kiswahili.

### Socio-Economic Impacts of Sugarcane Production

The study results observed that the Asians pioneered the sugarcane economy and contributed immensely to the social and economic aspects of western Kenya. They set up social amenities such as schools, hospitals, social halls, various club facilities, and temples. They introduced new architectural designs for building houses. In the early years of the colonial rule in western Kenya, the Asians established schools to educate their children. By 1920, several Asian schools had been opened in Kisumu and major towns in western Kenya.

It is important to note that though the schools in the colonial era catered for the Asian community in the entirety of colonial Nyanza, at independence, they were opened to a few African students. The Asians contributed to the building of schools by collecting money and building materials. Through such contributions, including the buying of books and stationery and payment of other fees levied in schools, the Asian cane growers and manufacturers in the Kibos-Muhoroni area, by extension, contributed to the building and maintenance of schools as most of their children attended schools in Kisumu, especially at the upper primary and the secondary level. With the political transformations at independence, these different Asian schools eventually were opened to all races.

The Asian initiative of offering social services in medicine began during the depression period of the 1930s due to the needs created when some Asians living in major urban centres like Nairobi and Mombasa lost their jobs while others had businesses that had collapsed. To address such problems, the Asian community came together, especially in the major towns of Nairobi, Mombasa and Kisumu, and formed a voluntary organization known as the Social Service League in the early 1930s. The league provided assistance during the depression, which included medical help where trained Asian doctors in the various towns offered their services to the affected people freely, while the league donated medicine.

This social service soon became permanent as Asians contributed to it, and soon afterwards, the league opened dispensaries and hospitals in various parts of the country, including Kisumu, Kakamega, Bungoma and Mumias. The Asians used their

money to build clinics and hospitals that served even the local communities before independence. The community continued to expand its medical facilities; by the late 1950s, Aga Khan Hospitals opened in Nairobi, Mombasa and Kisumu. Initially serving Asians, these were later opened to the public.

The capital accrued from the sugar industry led to the construction and maintenance of hospitals in Kisumu, Kakamega, Bungoma and Mumias. Sheth Haridas Chhagnal and Morzaria Chhagnal of Messrs Haridas Chhagnal Ltd of Kericho built the Jalaram Nursing Home. Meanwhile, the Guru Nanak Dispensary was built in Kisumu by the Siri Guru Singh Sabha fraternity.

The Asians also built buildings that introduced new architectural designs in the greater colonial Nyanza. The Asians living in Kisumu, Kakamega, Mumias and Bungoma built sports clubs such as the Sikh Club, Simba Club and the Goan Institute, where various sporting events took place. These venues continued to serve all races after independence as socializing places. In 1938, a significant Asian activity included the erection of the Kisumu clock tower by the Kasim Lakha family. The Hindocha Hall, Courtesy of the Hindocha Trust was built as a way of giving back to the community. This building eventually became part of Maseno University.

The Asians introduced an oriental style whereby many rooms were built within an enclosed wall with a main entrance. The Asian housing style also influenced Africans, who later copied the designs in the building of rental houses in Kisumu and the neighbouring areas such as Ahero, Kakamega and Bungoma.

Socially, Asians did not intermarry with Africans. However, in the interior of Kenya, Bharati (1976) points out that the Sikhs, who came earlier from India with no wives and had lived and traded with the Maasai, were known to have established quasi-liaison relationships with Maasai women who produced children.

The establishment of the Asian sugar industry led to more people being involved in wage labour at the expense of agriculture in the reserves, which suffered in turn. Not only did the absence of the male labour force impact agriculture in the sense that male labour was needed to clear virgin lands for cultivation. The women who were left at home had more tasks, such as taking over the responsibility of looking after livestock, which was traditionally a male domain. Moreover, some of the labourers were engaged on three or six-month contracts, this duration was bound to affect agriculture, especially during the farming season.

In the entire Nyanza and western Kenya, there was a decline in the production of food commodities, like maize, sorghum and Eleusine, between 1946 and 1951. However, the decrease in peasant production in the postwar period could also be attributed to

other factors. First, there was a decline in demand for the peasant produce as the war came to an end.

Land alienated for the Asian cane farmers in Kibos, Muhorni, Mumias and Bungoma denied the African population room for expansion. Secondly, part of the alienated land was at the foot of the Nandi Escarpment, which was the most fertile land in the area. Other areas that were alienated included Webuye and Lugari.

It meant that African people were denied an opportunity to have the best land for farming. Land shortages resulting from Asian settlement affected peasant production and forced many Africans into wage labour in Kisumu town and at the nearby Asian farms.

Another negative phenomenon that emerged was that of drunkenness, which was prevalent in the African reserves. Asian farmers produced jaggery and used it to make their alcoholic drinks in small quantities. However, it emerged that the farmers at Kibos and other areas sold jaggery to Africans who not only consumed it as sugar but also used it to manufacture Nubian gin. Gregory (1977) argues that Africans learnt to manufacture jaggery, which they used to make tembo (African local beer). Thus, the colonial administration associated the sale of molasses and jaggery from the Miwani and Muhoroni factories with drunkenness, which led to lawlessness in the area. In the 1940s, the sale of the Nubian gin and other local brews was a major cause of problems in the African reserves. Hence, sugar started to be rationed in the reserve so that there would be no excess sugar that could be used to make the Nubian gin. Furthermore, the native tribunals heard many cases of drunken behaviour, and even headmen stepped up and tried to prohibit the supply of liquor to unmarried males and females in an effort to control bad behavior. In 1955, the District Officers in greater colonial Nyanza reported increased assaults in African reserves. Consequently, sugar allocation to African reserves was reduced to curb illegal brewing. The sale of Nubian gin not only offered competition but also interfered with the sale of licensed local beer.

The transition towards independence meant that sugar cane growing became a major African activity. This followed the enactment of Sessional Paper No. 10 of 1965, which allowed Africans to grow sugarcane for industrial sugar. Sugarcane became the main economic activity alongside maize, pearl millet, sorghum and dairy farming. Webuye, Bokoli, Kabuchai, Kimilili, Mt Elgon, and Tongaren in Bungoma became part of the “sugar belt” in western Kenya. Sugarcane growing brought agricultural transformation in Bungoma as farmers adopted new farming methods, recommended practices and socio-economic changes. The farmers adopted extension services, discarded traditional agriculture and adopted cooperative service.

The majority of the farmers, also stated that sugarcane farming boosted their chances of taking their children to school, especially for higher education, due to the lump sum

amount of money obtained from sugarcane farming. The need to pay school fees, accumulate wealth and assets influenced sugar cane production in Bungoma. There were more enrollments in the primary schools within the sugar belt in Bungoma County. On the other hand, even some schools went a step further and turned their playgrounds into sugarcane farms in order to earn more income at the expense of the physical health of their pupils.

KI 1 2022, stated that sugarcane farming opened up the area to development in terms of accessibility to education, as evidenced by the setting up of satellite campuses (K1, 20th September 2022).

The growing of sugar cane, kale, and coffee allowed farmers multiple sources of income that led to better housing conditions, reflected by the shift in housing structures from mud and thatch houses to brick and iron sheet-clad houses. Some farmers were able to invest in other ventures, such as dairy farming, after ploughing money back into their farms, which was found to be less labour-intensive in nature and gave farmers more time to focus on other money-generating ventures as they wait for the sugar cane crop to mature.

KI 2, 2023 had the following to say:

Atrend had developed among sugarcane farmers in Bungoma County, whereby they sold off their indigenous cattle breeds in order to raise money to cater for the production costs of sugarcane. In return, they used the proceeds from sugarcane to invest in dairy cattle, which are easier to manage given the limited resources, namely pasturelands and labour, due to zero grazing (K.I. 2,20/2/2023).

Some sugar cane farmers leased their farms at Kshs 8,000 – Kshs. 20,000 per hectare annually. Most of the respondents noted that they could afford better healthcare for their beneficiaries as a result of greater earnings from sugarcane farming as compared to maize farming.

The introduction of sugarcane farming in Bungoma County meant that farmers committed majority (70.0%) of their land to sugar cane farming, leaving only (30%) for subsistence food from their farms to feed their families all year round. They also depend on food from the local market when their farm supply runs out.

Most respondents argued that they do not have enough food from their farms to feed their households all year round. This lack of food to sustain their families was caused by some farmers leasing their farms to other sugarcane farmers right up to their doorsteps due to the increasing demand for land.

Regarding the same sentiment, K.I3, 2022 had the following to say:

The leases go up to Kshs. 20,000 per hectare of land leased for cane farming, up from a maximum of Kshs. 5,000 obtained from maize farming. The high production costs meant they could not grow their own cane. Hence, they opt to lease out their land to those who are capable (K.I. 3, 20th Sept 2022).

In the same line, K.I4, 2022 observed the following:

As sugar cane replaces indigenous foods, it has led to high malnutrition rates, especially among children. The reduction in milk production, vegetables and maize production has also led to food insecurity. This is further compounded by expensive food commodities from neighboring communities (K.I. 4, 22nd September 2022).

The general perception is that there is a lot of money from sugar cane farming that has been injected into the local economy as supported by one K.I 5, 2022 who had the following to say:

Sugarcane farmers are able to afford the overpriced commodities in market places. The period from 1980 to 2000 was adverse for sugar cane farmers. Household financial stability was worse, leading to challenges in food security, education affordability, and health, among others. There has been a downward trend of food security over time, which has been occasioned by more and more farmers devoting their land to sugarcane farming at the expense of other crops. With the several challenges associated with the sugarcane industry, the principal being delayed sugarcane harvesting and payment, farmers have had difficulty coping with food shortages. The period between 1990 and 2000 was the worst, with farmers not being paid for sugarcane delivered as late as three years down the line (KI 5, 2022).

The analysis of the contracts signed between farmers and the sugar companies in Bungoma revealed the following. The farmers supplied their sugarcane to Mumias Sugar Company. The farmers are paid within 45 days to six months of their sugarcane being processed. The opening clause of the contract states, on the part of the miller, states that sugar milling companies get into binding contracts with farmers in order to purchase sugarcane from them for extraction and manufacturing of sugar and its by-products. Generally, the terms of the contract dictate sugarcane outputs as the quality of goods and services offered by the miller to the farmer.

The miller determines the quality and quantity of cane harvested. Subject to weather changes, productivity and overall cane availability are stated as plant crop, harvested within 18-26 months, first ratoon, 16-24 months and second ratoon, 16-24 months.

Millers also offer related products such as jaggery and other services in the form of agricultural extension services, transport and harvesting of cane(K.I 6, 22 September 2022).

On this clause, there is a fair distribution of returns as the miller provides quality and timely services in return for raw sugarcane of acceptable standards. Transport and harvesting services offered by the millers are done at a fee deducted from the price of raw cane tonnage. The same applies to the cost of seedlings delivered.

Furthermore, millers organize meetings and field days, which farmers are encouraged to attend for learning purposes aimed at proper sugarcane husbandry, operation and application of goods and services obtained from the miller for satisfactory sugarcane yield(K.I 7, 22 September 2022).

In this case, the miller profits from services offered while the farmer gets guaranteed and reliable goods and services during the production period. The miller extends credit facilities to farmers in exceptional circumstances, and in its sole discretion, provided set agreeable terms such as those regarding principal, interest and other statutory taxes are met. This allows the farmer to cultivate his farm on credit, only to be deducted upon the agreed amount when the cane is harvested and processed by the miller. Debt balances accrued by the farmer in the case of a bad season can also be warded off after agreeable repayment terms are set with the miller. This flexibility allows farmers to be able to survive ever-fluctuating sugar prices as well as vagaries of weather that occasion bad harvests. These terms also allow farmers to obtain payments for burnt sugarcane from arson, although at significantly low tonnages.

Most of the farmers interviewed said they were made aware of what sugarcane farming contracts would mean to them if they took up the contract. One of them had the following to say:

The miller is bound by contract to the farmer to harvest, upon maturity, one plant crop and two ratoon crops or for a period of about six years from the date the crop is planted, assuming cane matures between 18-24 months. In this case, the miller supplies the farmer with the seed cane, fertilizer, harvesting and transport of sugarcane to the factory(K.I 8, 23 September 2022).

However, the farmer is not bound by contract to purchase fertilizer from the miller or use the miller's transport services. These expenses are then deducted from the gross tonnage of harvested cane delivered to the miller. In this case, the miller has the upper hand as the farmer only gets paid for the tonnage of the harvested cane while the proceeds from the by-products, such as molasses and bagasse, are pocketed by the miller. This represents the skewed nature of this contract as farmers only benefit from sugar itself as the miller pockets the benefits accrued from the by-products. High

production of sugarcane and constantly fluctuating prices compound farmers' woes at times, resulting in net losses.

In an effort to contribute to Corporate Social Responsibility (CSR), the millers offer services that benefit the community as a whole. The refurbishment of the roads; however, farmers are deducted 1% of their proceeds from sugarcane to aid in opening up access roads and maintenance of already existing ones.

The generation of electric power from burning molasses to produce ethanol is sold by the companies, and hence, farmers do not benefit. In a bid to promote environmental conservation, farmers are encouraged to plant one row between cane rows of common beans, soya beans, groundnuts, mbabara nuts, Irish potatoes, tomatoes, onions, cabbages and carrots for up to the first six months of a given sugarcane cycle. This is as important for nitrogen fixation as it is in ensuring food security in an area mainly embracing sugarcane monoculture (K.I 9, 23 September 2022)

Some of the farmers lamented about sugarcane contract farming because of delayed payments, leading to indebtedness, poverty and food insecurity. The respondent argued that once they received their payments, it was used to settle outstanding debts. This forced farmers to venture into other economic activities. Some of the farmers destroyed their sugarcane and ventured into vegetable and dairy farming (K.I. 10, 23, September 2022).

Some respondents preferred cultivating private (non-contract) cane to avoid company deductions. Non-contracted cane allowed them to sell to any willing buyers without restrictions. However, it was observed that this had created opportunities for other sugar firms to infiltrate the area and poach the company-contracted cane. (K.I. 11, 23 September 2020). Nonetheless, most farmers asserted that growing and selling sugarcane privately has meagre returns.

K.I 12, 2022 had the following to say:

I sold out my sugarcane to Lorries. However, a cane that could earn Kshs. 40,000 through contract farming fetched Ksh.15, 000 locally (K.I. 12,23rd September 2022).

The Cane Crushing Machine was also used for making bagasse, a residue of cane stalk used as wood fuel. Farmers did not prefer selling the cane stalks to the local markets because it was not sold at once and did not earn much profit as it involved harvesting and transportation costs, which reduced the profit margin(K.I 13, 24 September 2022).

The analysis of the impact of sugar cane production on gender reveals the following from the Bokoli location of Bungoma County. Women actively participate in all domestic tasks, which include fetching water from long distances, milling grain, gathering wood, child-bearing and child-nurturing. This family labor is organized around the division of labor by gender, and in many cases, this division is based on Bukusu traditional norms. It was found that both men and women are responsible for weeding and top-dressing. However, men also cut and arrange sugarcane in stacks before it is transported to the Nzoia Sugar Factory. Lastly, children engage in weeding, top-dressing, harvesting, cutting and arranging the sugarcane in stacks, as well as being supervised by their parents (K.I 14, 25th November 2022).

It was noted from the study that there was male dominance when it came to the distribution of income coming from sugar cane farming.

K.I15,2022 from the Bokoli location provided the following insight:

The respondent indicated that he received payment from Nzoia Sugar Cooperative 15,400.00 after all the deductions were made in 2019. Out of this money, the husband allocated himself Kshs. 13,000/00 and gave her Kshs. 2,400/00 for her contributions to the care and management of the cane. (K.I 15, 25 September 2022)

Many of the male respondents from Machakha village of Bokoli location of Bungoma County stated that they bought their wives shoes, clothes, baking flour, maize flour, milk, sugar, bread and tea, as well as paid school fees and medical bills. In other words, most women in Machakha village did not directly benefit from sugarcane proceeds in the form of direct money being disbursed to them (K.I. 16, 27th November 2022).

K.I 17, 2022 had the following to say:

The respondent stated that when he received the money from the NSC, he bought his personal hectare of land. The NSC paid him Kshs. 56,000.00 in 2019, from which it deducted Kshs. 13,500.00. According to the account of this informant, sugarcane farming has been personally beneficial to his family. This is mainly because their general standard of living has improved tremendously. Payments from the sugarcane have enabled them to buy a bicycle, a radio and build a new iron-roofed house. The money also enabled the husband to start his onion business. Today, the couple also boasts of piped water, chicken, and dairy cows in the homestead. (KI 17, 27 November 2022).

Another respondent, who has three wives in Chebosivillage, stated that he allocated his wives land where they grow sugarcane, bananas, finger millet, cassava, sorghum and maize. His wives take care of their sugarcane farms.

According to his wife (K.I 18, 2022) who had the following to say:

She stated that she has benefited from sugarcane farming because she has been able to construct a modern permanent house and pipe-borne water in the homestead. Sugarcane farming has also enabled her to start a hotel business in the nearby market of Matisi. She said that her husband does not interfere with the money from the sugar cane sales, but instead, she is the one who gives him money from sugarcane sales only when she feels like it. She is the one who collects money from NSC(K.I 18, 27 November 2022).

From this analysis, sugar cane growing has a social and economic impact on gender relations in Bungoma. There is an actual economic gain being derived from sugarcane farming, and it contributes significantly to the material lifestyle of people in Bokoli location of Bungoma County. Women play the heavier role of planting, weeding, and harvesting while men at most cut the major cane and other supervisory roles in the family unit. This is a clear demonstration of male dominance attesting to the fact that patriarchal theory is still relevant in understanding the dominance of men in household economic activities (K.I. 19, 27th November 2022; K.I. 20, 27th November 2022).

### **DISCUSSION**

The socio-economic impacts of Sugarcane production range from food insecurity, introduction of wage labour, urbanization and growth of migrant labour among others. The study discussed the socio-economic impacts of sugar cane production in Bungoma county in Kenya. It began by examining the impacts of Asian sugar cane farming in Colonial Nyanza. Several studies, such as (Lorentzen, 2009 and Andama, 1997) indicate a resurgence of indebtedness, poverty, patronage, precarious livelihoods, and high cost of transportation and inputs. According to the study conducted by Bundeh (2022) on the impact of relocation occasioned by sugarcane farming in Migori county, Kenya. The findings revealed that crop production had reduced since the expansion of the Sony Nuclear farms thus resulting in food insecurity.

In the context of the study area, a detailed historical study has not been conducted to determine the social and economic impact of the sector over time. More specifically, there were several gaps in the literature review on how sugarcane farming facilitated the outward migration of laborer's, the social and economic effects of contract farming, and the impact on food security and gender relations, among other effects. This constituted the gaps that necessitated the study. The study, therefore, identified social and economic changes that took place in the study area with the establishment of the sugarcane industry. Sugarcane farming facilitated the entrance of Africans into wage labor.

The tax demands imposed by the colonial ruler forced Africans into wage labor in the Asian and European sugar plantations. As such, the Africans were forcefully thrust into

wage labor. Also, wage labor provided a means for an alternative source of income for African households in the study area (Osamba, 2016).

However, in the colonial state's attempt to provide labor, especially to the settlers, salient issues, such as the undercapitalization of the Asian and African sugarcane farmers, emerged. By the mid-1940s, there was a rapid expansion of the sugar Industry. Expansion of planting and sugar production continued in the post-war period as Asian capital penetrated the sugar manufacturing sector. This expansion reached its peak by the mid-1950s as Asian and African cane farmers were encouraged under the Swynerton plan (Ahluwalia, 1990). Furthermore, the response by the colonial government led to the identification of the best cane varieties suitable for the area. This contribution boosted the growth of the sugar industry as cane farmers intensified farming with better varieties of cane to plant. However, as cane farming intensified, other pertinent issues emerged, such as a lack of sufficient machinery for breaking land due to the undercapitalization of the cane farmers who could not afford the tractors (Odhiambo, 1989; Bolt, 2018) Their situation was compounded by the fact that they could not access loans from private banks or colonial state institutions to meet their needs.

By the 1960s, sugarcane production expanded and incorporated most Africans. However, African farmers needed help with issues such as land, transport, insufficient funds and diseases, among others. Thus, the African farmers struggled to get reliable, sufficient means of transport to ferry their produce from the farms to the factory (Wafula, 1993). The Africans entered into contract farming in agreement with the manufacturers to set up staggered planting seasons so that cane would not mature at the same time. This strategy eased transportation difficulties. The sugar production transformed the social and economic landscape of the region. This transformation included education, health, social halls, the gender dimension of African societies and the agrarian economy of the region.

## **CONCLUSION**

The study discussed the various impacts that the introduction of Asian sugar cane farming had in Colonial Nyanza, revealing that there were both positive and negative implications of the economic and social impacts of sugar cane farming. The introduction of commercial cane farming in the area spread to Africans, leading to the beginning of social differentiation in the area. This commercial cane farming continued to the independence period. It has also been revealed that the sugarcane industry led to increased earnings from wages and incomes. The cultivation and sale of sugarcane raised peoples' purchasing power, which led to increased peasant agricultural production. The Asian contribution in the social and economic spheres is demonstrated through built schools, hospitals, health centres and social halls that benefited Africans and others in the region after independence. The Asians also contributed to the new architectural design of urban areas. Despite all these, there were negative consequences that included land alienation and illicit drinking. Furthermore, the independence era also witnessed a negative impact

on security, poverty and adverse effects of contract farming and liberalization of the sugarcane sector. Therefore, the study recommends that these problems be addressed if Kenya is to improve the sugar industry to fulfil the great potential in western Kenya's sugar belt. Towards such a noble task, the Kenyan government needs to review its sugarcane policies and abolish importation of cheap sugar. State policies should be geared towards promoting sugarcane production at the farm level through the provision of subsidies and incentives so as to encourage the intensification of cane farming. This way, the government would reduce the amount of money used in the importation of sugar that could otherwise be channeled to more crucial issues.

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## **INFLUENCE OF HEAD TEACHERS' INTERPERSONAL SKILLS ON THE IMPLEMENTATION OF HEALTH AND HYGIENE SAFETY GUIDELINES IN PUBLIC PRIMARY SCHOOLS IN MURANGA SOUTH SUB-COUNTY, KENYA**

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**Abstract:** *The purpose of this article was to examine the influence of head teachers' interpersonal skills on the implementation of health and hygiene safety guidelines in public primary schools in Muranga South Sub-County, Kenya. The article is part of a larger research study entitled influence of Head teachers' leadership skills on the implementation of health and hygiene safety guidelines in public primary schools in Muranga South Sub-County, Kenya. The study employed convergent parallel mixed methods design. The target population consisted all the Head teachers, teachers, District Quality Assurance and standards officers (DQASO) and Officers in the Ministry Public Health and Sanitation (MPH&S) in Muranga South Sub-County. The study employed stratified random sampling, proportionate, simple random and purposive sampling procedures to arrive at a samples of 35 schools,35 Head teachers, 285 teachers, 2 DQASO and 2 MPH&S officers. Questionnaires and interview guides were used to collect data. Quantitative data were analyzed using descriptive and inferential statistics using SPSS (version 23), then presented inform of frequency tables and percentages. Qualitative data adopted a content and thematic analysis approach. The study findings showed that; Ability to work with stakeholders, Building partnerships, networks and Benchmarking greatly influence implementation of Health programmes in schools. The study findings also revealed a statistical significant positive association between head teachers' Interpersonal skills and the extent to which Ministry of Education( MOE) Health and Hygiene safety guidelines had been implemented in public primary schools in Muranga South Sub- County. The study recommended that: Emphasis should be placed towards intensive capacity building for head teachers on the whole issue of policy implementation and that DQASO and MPH&S officers should visit the schools more frequently to guide the Head teachers on effective and efficient implementation of Health and Hygiene safety programs .*

**Keywords:** *Interpersonal skills, Hygiene safety programs, Health and Hygiene safety guidelines, Health programs, leadership skills, school safety guidelines, safety guidelines implementation*

## INTRODUCTION

Interpersonal skills can be defined as the ability to work effectively as a group member and to build cooperative effort within the team one leads (Akpa 2016: Katz, 1974). Interpersonal skills are demonstrated by how a leader perceives and interacts with those around them, including superiors, peers, and followers. The head teacher is the primary source of leadership in a school, and he or she takes the lead in promoting change for the better. School leadership, according to Leithwood, Day, Sammons, Harris, and Hopkins (2011), is second only to classroom teaching in terms of influencing students' learning outcomes and wellbeing. This responsibility is further reinforced by Bush (2007) who advanced that effective implementation of government policies largely depend on the leadership abilities, skills and attitudes of the Head teacher and would not succeed unless the head teacher considered them significant enough to the school. Triumph (2008) supports this idea and contends that today's school health and safety is not only a money issue but also a leadership issue, where school leaders plan and budget for all forms of safety in schools. This shows the significant role that head teachers play in policy implementation.

UNICEF, WSP and World Bank Group (2010) conducted a longitudinal survey in Washington DC on school health programmes. The study used questionnaires and observation schedules in a sample of 50 schools. The findings established that where Health and hygiene programmes were successful and sustained, all the stakeholders had been involved including parents, teachers, and the local community. The study recommended that to foster representation and informed participation by all stakeholders, the head teacher should ensure the participation of all stakeholders, including teachers, children, parents and the wider community at all stages of the project cycle. This idea is echoed by MOE (2014) who stated that successful implementation of the safety measures in schools in Kenya would require partnerships with various stakeholders, among them learners, teachers, parents, local communities, NGOs, religious organizations and other community based organizations (CBOs). This is important in order to foster ownership and sustainability of the Health projects. Similarly, UNICEF (2013) states that effective Child-friendly school leaders reach out beyond their confines, seeking partnerships with other actors who contribute to the school's effective implementation of all aspects of child-friendliness. These stakeholders also include health care and social welfare professionals and institutions that contribute to child health and nutrition.

A review of literature by Leithwood et al (2011) in England on successful school leadership noted that for all successful heads, building and improving the reputation of the school and engaging with the wider community were essential to achieving long-term success. The successful head teachers and their senior leadership teams (SLTs) in the study schools had developed positive relationships with community leaders. Furthermore, they had built a web of links across the schools to other organizations and individuals. Strong links with key stakeholders in the local community benefited the schools in many

ways including creating healthy and a child-friendly school where all children were healthy and learnt to be healthy. Such head teachers had the capacity to lead staff in implementing National as well as local education policies in order to ensure quality outcomes for the learners. It is evident that the head teachers' leadership skills in creating linkages and health networks are important in effective implementation of health and hygiene safety in schools.

This also implies that it is the responsibility of the head teacher to create an environment conducive for effective teaching and learning. This can be achieved through creating a child-friendly school environment that ensures students are healthy in order for them to attend school and concentrate in class. According to Schleicher (2012), it is critical to have managers who can implement policies and guidelines in any organization, including a school. Head teachers are the key school managers, and as such, they should have leadership skills that enable them implement policies and guidelines, including those pertaining to the health and hygiene safety of the learners in schools. Such leadership skills include interpersonal skills such as the ability to work with all stakeholders, building partnerships and networks, Benchmarking and capacity building.

Obara (2011) investigated the effectiveness of school-community partnerships in educational development in Kenya's Kenyena district public secondary schools. Kenya. The findings revealed that infrastructural development, including water and sanitation, was good where the head teacher had established strong school-community partnerships. This implies that having a head teacher with good interpersonal skills enhances implementation of government policies including Health and Hygiene policies in schools.

Despite the success in increasing enrolment, about 1.1 million primary school-aged children in Kenya remain out of schools. This is the world's 7th largest out-of-school population (UNESCO, 2011, Republic of Kenya, 2014, Republic of Kenya, 2018). Though there are many factors that influence pupils' enrolment, absenteeism and dropout rates, UNICEF (2010) asserts that access to clean water, sanitation and proper hygiene at school is a critical factor that is understudied. Although health and hygiene safety guidelines in schools are critical, there have been few empirical studies on how leadership skills, particularly interpersonal skills of head teachers, affect the implementation of health and hygiene safety guidelines in schools. Therefore, this study examined the influence of head teachers' interpersonal skills on implementation of health and hygiene safety guidelines in public primary schools in Muranga South Sub-County.

## METHODOLOGY

The study employed convergent parallel mixed methods design to examine the influence of head teachers' interpersonal skills on the implementation of health and hygiene safety guidelines in public primary schools in Muranga South Sub-County, Kenya. This means that the researcher collected both quantitative and qualitative data simultaneously, and then merged the two sets of results into an overall interpretation, for corroboration and validation purposes (Creswell & Clark, 2011). A cross-sectional survey was used to gather data from a relatively large number of cases to assess the influence of Head teachers' interpersonal skills on the implementation of Health and Hygiene safety in primary schools. Phenomenology approach on the other hand enabled an in-depth study of the variables under study in order to establish the existing situation (Creswell 1998, Creswell, 2013). The target population for this study included all the 70 public primary schools in Muranga South-sub-county, all the 70 Head teachers, all the 1078 teachers, the three DQASO and the three MPH&S officers.

A total of 35 schools (50%) out of the 70 public primary schools in Muranga South Sub-county were sampled using stratified random technique. According to Orodho (2010), a sample of ten to twenty percent is representative enough. However, using a higher sample in this study made the results more reliable.

All the 35 head teachers of the sampled schools were automatically included in the study. A Sample size of 285 teachers was arrived at by using Krejcie and Morgan (1970) table. All the three DQASO and the two officers from the Ministry of Public Health and Sanitation( MPH&S) were purposively selected.

The study made use of both questionnaires and interview guides to collect data. Self-administered Questionnaires were used to collect information from head teachers and teachers. Interview guides were used to collect data from long serving head teachers, DQASO and from officers in the MPH&S. To ensure content validity, the researcher availed the research instruments to the supervisors who were also her mentors. Having worked with the researcher right from the beginning, the mentors understood the study better and were therefore in the best position to ascertain the validity of the instruments. Test-retest technique was used to ascertain reliability of the instruments. All quantitative instruments scored an alpha above 0.7, which was considered acceptable.

Both quantitative and qualitative data analysis methods were used to analyze the data. Quantitative data analysis was done using both descriptive and inferential statistics using a Statistical Package for Social Sciences (SPSS) version 23. Under descriptive statistics, data were presented in form of frequency tables and percentages. Qualitative data were from interviews and open-ended questions in the questionnaires. Interview data were transcribed first, coded, re-read and put into categories and themes. The researcher then created meaning from the data and the literature. The findings were reported in a

descriptive narrative form using excerpts from the interviews. The two strands of data were then merged during data presentation.

## RESULTS

The study examined the demographic characteristics of head teachers and teachers who participated in the study. The results are shown in Table 1.

Table 1  
*Demographic Characteristics of Head teachers and Teachers*

No	Demographic characteristic	Head teachers(n=25)		Teachers(n=200)		
		f	%	f	%	
1.	Gender	Male	12	48	91	45.5
		Female	13	52	109	54.5
2.	Age Bracket	25-30	-	-	5	2.5
		31-35	-	-	13	6.5
		36-40	1	4	-	-
		41-45	5	20	38	19.0
		46-50	8	32	69	34.5
		over 50	11	44	63	31.5
3.	Academic Qualification	Certificate	17	68	139	69.5
		Degree	5	20	54	27.0
		Masters	2	8	3	1.5
		PHD	1	4	0	0.0
4.	Years of Experience	1-4	3	12	4	2.0
		5-10	4	16	26	13.0
		11-15	6	24	28	14.0
		16-20	7	28	68	34.0
		Over 21	5	20	73	36.5
		Years				
5.	Year of experience in current school	1-4	17	68	77	38.5
		5-10	4	16	85	42.5
		11-14	3	12	23	11.5
		15-20	1	4	6	3.0
		Over 20	-	-	9	4.5

Source: Field Data, 2020

### Influence of Head Teachers' Interpersonal Skills on Implementation of Health and Hygiene Safety Guidelines in Public Primary Schools in Muranga South Sub-County

The aspects of interpersonal skills considered in this study included : The ability to involve stakeholders, ability to build partnership with relevant institutions, networking with relevant bodies, Benchmarking and capacity building. The results are presented in Table 2 below.

Table 2

*Effect of head teachers' Interpersonal skills on implementation of health and hygiene safety*

Statement		No effect		Minor effect		Neutral		Moderate effect		Major effect	
		f	%	f	%	f	%	f	%	f	%
Ability to involve all stakeholders	Head teachers	-	-	-	-	3	12	5	20	17	68
	Teachers	1	0.5	3	1.5	20	10	76	38	10	50
ability to build partnerships with relevant institutions	Head teachers	-	-	-	-	3	12	10	40	12	48
	Teachers	-	-	4	20	22	11	95	48	79	39.5
Networking with relevant bodies	Head teachers	-	-	-	-	1	4	12	48	12	48
	Teachers	1	0.5	9	4.5	19	9.5	59	29.5	11	56
Benchmarking with better institutions	Head teachers	-	-	2	8	4	16	9	36	10	40
	Teachers	2	1.0	10	5	17	8.5	107	53.5	64	32
Capacity building for teachers	Head teachers	-	-	1	4	1	4	7	28	16	64
	Teachers	1	0.5	7	3.5	9	4.5	87	43.5	92	46

As shown in table 2, a majority of head teachers (68%) were of the view that involving stakeholders had a major effect on the implementation of health and hygiene measures in schools. Another 20% felt it had a moderate effect. None of the head teachers stated that involving stakeholders in health programmes had no effect on its implementation. On the other hand, half (50%) of the teachers indicated that involvement of stakeholders had a major effect on the implementation of health hygiene programmes, while 40% felt that it had a moderate effect.

One Head teacher whose school had a big problem of water explained how she worked with the local community and the parents to buy water tanks to collect rain water for pupils' use. This is what she said:

...for example we used to have a big problem with water...when the promise given by CDF did not materialize, I called the chief who is also a parent in this school. So me and the chief mobilized the local community and they raised enough money to buy three large water tanks, so now unless there is a prolonged drought, we have enough water to take us up to the next rainy season though we also have plans for a borehole (Head teacher 2, interview January 20, 2020).

However, some head teachers were experiencing challenges trying to involve parents in the improvement of sanitation facilities in schools. One head teacher lamented saying:

In this area parents like a lot of politics. Last time I tried to involve them to give us additional latrines and they were like...no! That is not our work, it should be done by the government... So I think this notion of free primary education is really confusing most parents. (Head teacher 4, interview February 20, 2020).

Ability to build partnerships and networks with relevant institutions was also considered as an essential skill for head teachers in promoting health and hygiene implementation in public primary schools. From the study findings, majority of head teachers (48% ) indicated that building partnerships is a skill that had a major effect, another 40% said it had a moderate effect on the implementation of health and hygiene safety programmes in schools. The response trend was similar to that of teachers where 39.5% stated that building partnerships had a major effect while 48% indicated that it had a moderate effect. Only 20% of teachers indicated that building partnerships had a minor effect on the implementation of health and hygiene safety programmes in schools. Speaking on building partnerships, one head teacher had this to say:

In this school, we have partnered with Macheo a local NGO... they do for us Deworming of pupils once or twice in a year. Occasionally, they also support our girls in class six to eight with sanitary pads whenever we call

upon them ... and this has helped us to keep our girls in school (Head teacher 4, January 16, 2020).

Moreover, some schools had partnered with the local churches to improve the welfare of the learners. For example one school had partnered with the nearby church where there was a Health clinic so that when pupils are sick they can be treated at a subsidized price. The head teacher explained;

We realized that when we send pupils home when they get sick, most of the time they are not taken to hospital because the parents have no money to pay for treatment. And they end up staying at home a long time. So I just talked to the chairman of the church and after consultation with other church leaders they agreed to be treating our pupils at a subsidized price. So when they get sick in school, we refer them to the clinic instead of telling them to go home. This has reduced absenteeism in our school. The clinic also donates Deworming drugs for the pupils whenever we request them (Head teacher 3, interview January 30, 2020).

The local politicians had not been left behind as partnering with schools as have they donated water tanks and built additional classrooms in many schools. This was evidence as the researcher observed that there were many water tanks and classrooms labeled CDF (Constituency Development Fund), meaning that they were funded from the local Member of Parliament's office. One head teacher said;

...when we are in need we call upon our politicians for help, sometimes they respond other times they don't. However, last year I contacted the area MP and he gave us two water tanks which we using to collect rain water for use by the pupils (Head teacher 4, January 16, 2020).

The study also sought to investigate whether networking skills were essential for head teachers in public primary schools in the implementation of health and hygiene programmes in schools. From the study, 48% of head teachers and 56% of the teachers agreed that networking with relevant bodies had a major effect on the implementation of health and hygiene safety programmes in schools. Only 4% of head teachers were neutral while 4.5% of teachers indicated networking as a skill had a minor effect on the implementation of health and hygiene safety programmes in schools. One Head teacher had a problem when three of the pupils' latrines sunk due to heavy rains. He had tried to mobilize parents to replace the latrines to no avail, so he decided to involve the old boys and girls of the school. This is what he said:

Three of the pupils' latrines sunk last year when it rained heavily. I tried to mobilize parents to raise some money but they were resistant... and children were defecating outside around those toilets, and it was becoming a health hazard. So I

contacted one of the old boys and we formed a WhatsApp group where we included other old boys and girls. They were able to raise enough money to construct a block of eight latrines and that work is going on right now as we speak (Head teacher1, January 27, 2020).

The study also sought to establish whether benchmarking with well performing schools in terms of health and hygiene was a skill being practiced and was considered by head teachers and teachers as essential in the implementation of ministry of health and education guidelines on health and hygiene in public primary schools. The findings established that 40% of head teachers felt that it was a leadership skill that moderately influenced implementation of health and hygiene guidelines. Additionally, slightly more than a third (36%) of head teachers indicated that it had a major effect on how the programmes were implemented. Slightly more than half (53.5%) of the teachers agreed that benchmarking had a major effect on how health and hygiene measures were being implemented while 32% said benchmarking as a skills had a moderate influence on how health and hygiene safety programmes are implemented in schools.

However, head teachers lamented the challenges that come with benchmarking. One head teacher who had attempted benchmarking had this to say:

We tried benchmarking with a private school in Muranga town. We found that they had a block of latrines for every class and had also employed someone to clean the toilets. But we were not able to implement that idea here because we lack enough resources, so we did not find it very useful to us (Head teacher 1, January 27, 2020).

The study also sought the views of head teachers and teachers on whether capacity building of teachers who are the implementers of health and hygiene programme in public primary schools could alter the way the programme was being implemented either positively or negatively. The findings established that, majority of head teachers 64% and 46% of teachers agreed that capacity building was necessary while only 4% percent of the head teachers and 8.5% of the teachers indicated that capacity building had a minor influence on the implementation of health and hygiene programmes in schools. One of the head teachers through interview indicated that;

We normally release teachers who are in-charge of health in our school to attend seminars which are organized by Ministry of public health and Sanitation in partnership with ministry of education. For example, last year during school holiday two teachers from my school attended a training seminar which was hosted at Muranga High School on school and health. After the training they were able to start a health club in the school whose activities have helped improve hygiene standards among the learners (Head teacher 1, January 27, 2020).

### 3.2.2 Association between the Head teacher' Interpersonal Skills and MOE Health and Hygiene safety Guidelines Implementation

The study sought to examine whether there was a statistical significant association between head teachers' interpersonal skills and the extent to which MOE health and hygiene safety guidelines had been implemented in public primary schools in Muranga. The null hypothesis was stated as:

H<sub>01</sub>: There is no statistical significant association between the head teachers' interpersonal skills and the extent of implementation of MOE Health and Hygiene safety guidelines in public primary schools in Muranga South Sub-County. Table 2 shows chi-square test for independence results.

Table 3

*Association between the Head teacher's Interpersonal Skills and MOE Health and Hygiene Safety Programmes Implementation in schools.*

	Chi-Square Tests		
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	215.419 <sup>a</sup>	5	.008
Likelihood Ratio	162.813	5	.599
Linear-by-Linear Association	.039	1	.843
N of Valid Cases	200		

As shown in Table 3, the obtained level of significance for the association between the head teachers' interpersonal skills and the extent of implementation of MOE health and hygiene safety in public primary schools is smaller than the level of significance, 0.05,  $\chi^2$  (5, N = 200) = 215.419,  $p = .008$ , the null hypothesis is rejected. Therefore, the study concludes that there is a statistical significant association between the head teachers' interpersonal skills and the extent of implementation of MOE health and hygiene safety guidelines in public primary schools in Muranga South Sub-County. This implies that the head teachers' ability to involve stakeholders, build partnership, network and benchmark with others plays a critical role in implementation of the MOE health and hygiene safety guidelines in schools.

## DISCUSSION

The study findings revealed that the ability to involve various stakeholders had a major effect on the implementation of health and hygiene measures in schools. This implies that when all the stakeholders are brought together, various ideas are brought to the table hence the team is able to pick the best idea that will lead to the best result. This involvement also enables the stakeholders to own the program being implemented. The findings were consistent with those of Gatua (2013) who assessed the implementation of Ministry of Education safety Guidelines on physical infrastructure in public secondary

schools in Nairobi west Region Kenya. The study findings established that involving all stakeholders including teachers and students brings about a sense of ownership and hence sustainability of the programmes.

The findings further established that building partnerships is an important skill in promoting health and hygiene implementation in primary schools. The partners bring in their skills, experiences and funding necessary for policy implementation. The findings agreed with those of Obara (2011), who conducted a descriptive cross-sectional study on the effectiveness of school community partnerships in educational development in public secondary schools in Kenya's Kenyenyema district, Kenya. According to the study findings, the Head Teachers had established strong school-community partnerships, which improved health and sanitation services in schools. Similarly, a study by Samdal and Rowling (2012) discovered that mutually beneficial partnerships and networking are most important for successful health-promoting school development. According to Project Management Body of Knowledge PMBOK (2017), networking is an essential skill for project managers since it assists them to understand both internal project environment and the external potential project beneficiaries and suppliers of materials. Head teachers with appropriate networking skills stand a better chance of implementing school programmes since they get people who can help them with ideas as well as finances to implement various programmes in their schools.

The study established that capacity building of head teachers who are the implementers of health and hygiene programme in public primary schools has a major effect on implementation of health and hygiene safety guidelines. However, the Head teachers felt that they lacked the necessary leadership skills due to inadequate training. Being the project managers and policy implementers in schools, Head teachers need to be equipped with the skills to enable them implement government policies in schools. Gatua (2013) found that, capacity building and training for all those directly involved in Safety implementation in schools was very critical in policy implementation.

## CONCLUSION

This study examined the influence of head teachers' interpersonal skills on implementation of health and hygiene safety guidelines in public primary schools in Muranga South Sub-County, Kenya. Overall, the finding suggested that head teachers' interpersonal skills had a major effect on implementation of health and hygiene safety guidelines in schools. However, the Head teachers lamented lack of the leadership skills due to inadequate training. In addition, the head teachers had challenges in terms of ability to involve all stakeholders, particularly parents who believed that they had no role in the implementation of health and hygiene safety guidelines in schools. As such, this created a gap between the policy and the actual implementation. The study recommended that: Emphasis should be placed towards intensive capacity building for head teachers on the whole issue of policy implementation and that DQASO and officers from the MPH&S should visit the schools more frequently to guide the head teachers on effective and efficient implementation of Health and Hygiene safety programs in schools.

The study further recommended that the school management committee, in collaboration with MOE establish forums to sensitize parents on the importance of supporting health and hygiene safety programs in schools. This will enhance implementation of health and hygiene safety guidelines through shared ideas, responsibilities and resource mobilization.

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## INFLUENCE OF SCHOOL BOARD OF MANAGEMENT ON ACADEMIC PERFORMANCE IN PUBLIC PRIMARY SCHOOLS IN GARISSA COUNTY, KENYA

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**Abstract:** *The main purpose of this study was to assess the influence of school Board of Management on academic performance in public primary schools in Garissa Sub-County, Garissa County, Kenya. The study applied the stakeholder involvement theory, school management theory and academic achievement theory. This research adopted quantitative and qualitative methods and applied both descriptive survey and phenomenological research designs. Sample size in this study included 67 teachers and 9 head teachers as representatives of BoM. Stratified random sampling procedure was used to arrive at the sample. Interview guides were used to collect qualitative data from the head teachers who represented the BoM while questionnaire were used to collect data from teachers. Qualitative data were analyzed thematically along the objectives and presented in narrative forms. Quantitative data were analyzed descriptively using frequencies and percentages and inferentially using Pearson's Product Moment Correlation Analysis with the help of Statistical Packages for Social Sciences (SPSS 23) and presented using tables. The study established that in many public primary schools, KCPE performance has been on a downward trend with a progressive decrease for the last five years (2017 to 2021). A positive correlation coefficient of  $r = 0.766$  was also established, indicating that there was a significant relationship between members of school BoM and academic performance in public primary schools. The study recommended that it is imperative for the government to prioritize the provision of essential skills and resources to BoM members in order to enable them to maximize their influence on students' academic achievements.*

**Keywords:** *Board of Management, Academic Performance, Students' academic achievement, Garissa Students' achievement*

### INTRODUCTION

Stakeholders in the education sector encompass a diverse group of individuals and organizations concerned with the well-being and success of schools and students. This includes parents, government entities, school boards, and public benefit organizations. Their involvement varies, from providing tools, curriculum support, teachers, physical facilities, to supervising instruction and guiding students in adapting to new learning strategies. Lucas and Mbiti (2012) observes that the influence of the Board of Management (BOM) on academic performance in public primary schools in Garissa Sub-

County, Garissa County, Kenya, is a critical factor that shapes the quality of education in the region. The BOM plays a pivotal role in the administration, management, and oversight of schools, and its influence on academic outcomes cannot be underestimated.

According to the Ministry of Education (2019), the BOM is responsible for hiring and managing school staff, including teachers. The selection of competent teachers is vital for improving academic performance. An effective BOM can ensure that qualified and motivated teachers are recruited, which can positively impact student learning. Conversely, a poorly managed BOM may make poor staffing decisions that negatively affect academic performance. Agrian (2012) observes that the BOM manages the school's financial resources. Adequate funding and efficient allocation of resources are crucial for providing a conducive learning environment. A BOM that prioritizes the allocation of funds to support academic programs, purchase teaching materials, and maintain infrastructure can significantly enhance academic performance. Conversely, mismanagement or embezzlement of funds can lead to a decline in educational quality.

According to Hassan (2019), the Board of Management (BOM) plays a crucial role in enhancing education by setting policies that improve teaching and learning processes, fostering community engagement to support academic initiatives, and conducting regular monitoring and evaluation of school performance. These activities can lead to a more conducive learning environment, additional resources, and targeted interventions, ultimately contributing to improved academic outcomes and the overall quality of education in regions like Garissa County.

The Board of Management in public primary schools in Garissa Sub-County, Garissa County, Kenya, wields significant influence over academic performance. Its responsibilities in teacher recruitment, financial management, policy development, community engagement, and monitoring and evaluation collectively shape the quality of education. Therefore, a well-functioning and dedicated BOM can play a pivotal role in raising academic standards and improving the overall educational experience for students in the region (Hermalin & Weisbach, 2013). However, studies and reports reveal ongoing challenges, including mismanagement of physical facilities, curriculum issues, poor community relations, and financial misallocation in some regions, highlighting the need for continued improvement and accountability in primary school management.

In Garissa Sub-county, the scenario is the same and stakeholders' involvement in primary school management and their roles cannot be overemphasized. Despite these assertions, academic performance of public primary schools in national examinations has been low. For example, a report by the Ministry of Education (2021) shows that public primary schools in Garissa Sub-county have registered low grades in national examinations (KCPE) compared to the national statistics which reveals that there is a decreasing trend in the performance of pupils in Kenya Certificate of Primary Education (KCPE). To

mitigate these challenges, school heads have initiated strategies to involve stakeholders in the management of public primary schools. Despite these observations, few empirical studies have interrogated the extent to which stakeholders' involvement in management influences academic performance of public primary schools; hence the need for this study.

In many public primary schools in Garissa Sub-county, this has not been the case since performance in national examination (KCPE) has been on a decreasing trend. A report by the Ministry of Education (2021) shows that Garissa Sub-county registered a meanpoint grade of 5.7 in 2016 in KCPE, 5.042 in 2017, 4.613 in 2018, 3.917 in 2019 and 3.012 in 2020 which paints a picture of declining academic performance in public primary schools. Efforts to mitigate this challenge such as introduction of remedial teaching and increased staffing levels have not yielded much remarkable progress. Given this background, this study intended to examine the influence of Board of Management on Academic performance in primary schools in Garissa County, Kenya.

### METHODOLOGY

The study utilized two research designs, employing both quantitative and qualitative methodologies. The quantitative aspect was addressed through a descriptive survey research design, which involved collecting quantifiable data using questionnaires. This design was chosen for its ability to yield well-validated and substantiated quantitative findings. On the other hand, the qualitative dimension was explored using phenomenological research design, focusing on lived experiences within a particular group and using interviews to gather data. Combining both approaches allowed for a comprehensive understanding of the influence of stakeholder involvement in primary school management on academic performance.

To determine the sample size, the researcher employed Yamane's Formula, which yielded a representative sample of 238 respondents. Stratified sampling was used to ensure homogeneity by creating three strata based on the number of zones in Garissa Sub-county. The sample included headteachers, teachers, members of school Boards of Management (BoMs), coordinators of Parent-Teacher Associations (PTAs), and the sub-county director of education. This was applied as follows:

$$N_0 = \frac{N}{1 + N(e^2)}$$

Where  $N_0$  = desired sample size at 95% confidence interval

$N$  = Target Population

$e$  = Confidence level of 5% (decimal equivalent is 0.05)

Thus, the desired sample was:

$$N_0 = \frac{591}{1 + 591(0.05)^2}$$

$N_0 = 238$  respondents

To determine the sample size, the researcher employed Yamane's Formula, which yielded a representative sample of 238 respondents. Stratified sampling was used to ensure homogeneity by creating three strata based on the number of zones in Garissa Sub-county. The sample included headteachers, teachers, members of school Boards of Management (BoMs), coordinators of Parent-Teacher Associations (PTAs), and the sub-county director of education. These procedures enabled the researcher to realize a sample of nine (9) headteachers, 201 teachers, 18 members of school BoM, nine (9) coordinators of PBOs and one Sub-county Director of Education as shown in Table 1;

Table 1  
Sampling Grid

Categories	Target Population	Sample Size	Sampling Techniques
Headteachers	28	9	Purposive sampling
Teachers	302	201	Simple random sampling
Members of School BoM	260	18	Purposive sampling
Coordinators of PBOs	13	9	Purposive sampling
Sub-county Director of Education	1	1	Purposive sampling
<b>Total</b>	<b>591</b>	<b>238</b>	

Research instruments included a standardized questionnaire for teachers and an interview guide for headteachers and the sub-county director of education. The questionnaire was divided into sections covering demographic information, academic performance, and stakeholder involvement in school management. Likert scale responses were used to gauge agreement levels.

Data analysis involved coding, frequency counts, descriptive statistics, and inferential analysis using Pearson's Product Moment Correlation Analysis. Qualitative data from interviews were analyzed thematically based on study objectives.

## RESULTS

### Demographic Information of the respondents

In terms of gender, majority, 4(87.5%), of the headteachers were male whereas only 1(12.5%) were female. Similarly, most, 118(80.3%), of the teachers were male with 29(19.7%) being female. In the same token, majority, 12(70.6%), of the members of School BoMs were male whereas female counterparts constituted 5(29.4%). Two-thirds of the PBOs, 6(66.7%), were male whereas their female counterparts constituted a third, 3(33.3%) of the proportion. However, the Sub- County Director of Education was a male.

### **Influence of School BoM and Academic Performance in Public Primary Schools**

The study sought to examine how school Board of Management influences academic performance in public primary schools. Descriptive data were collected from teachers and results are shown in Table 2.

Table 2

Teachers' Views on the Influence of School BoM on Academic Performance

Test Items	Ratings									
	SA		A		U		D		SD	
	F	%	F	%	F	%	F	%	F	%
In public primary schools, BoM collaborates with other stakeholders to offer leadership	76	51.8	17	11.4	9	5.7	9	5.7	37	25.4
In public primary schools, BoM takes part in the monitoring of students' discipline	79	53.9	22	15.0	8	5.7	16	10.9	21	14.5
Public primary school BoMs source alternative funds for school programmes	84	57.5	14	9.3	11	7.3	14	9.3	24	16.6
School BoMs ensure that their schools have adequate curriculum support materials	71	48.2	27	18.7	8	5.7	14	9.3	27	18.1
Collaboration with public primary school BoMs has improved management approaches	98	66.8	17	11.4	5	3.6	8	5.7	18	12.5

As shown in Table 2, 76(51.8%) of teachers strongly agreed with the view that primary school BoM collaborates with other stakeholders to offer leadership as did 17(11.4%) who agreed. However, 9(5.7%) were undecided, 9(5.7%) disagreed whereas 37(25.4%) strongly disagreed. Similarly, 79(53.9%), of the teachers strongly agreed with the view that, in public primary schools, BoM takes part in the monitoring of students' discipline while 22(15.0%) agreed. However, 9(5.7%) were undecided, 16(10.9%) disagreed whereas 21(14.5%) strongly disagreed.

Majority, 85(57.5%), of the teachers strongly agreed with the view that public primary school BoMs source alternative funds for school programmes while 14(9.3%) agreed. However, 14(9.3%) disagreed whereas 24(16.6%) strongly disagreed.

A fair proportion, 71(48.2%), of the teachers strongly agreed with the view that public primary school BoMs ensure that schools have adequate curriculum support materials whereas 27(18.7%) agreed. A paltry, 9(5.7%) were undecided, 14(9.3%) disagreed whereas 27(18.1%) strongly disagreed.

Majority, 98(66.8%), of the teachers strongly agreed that school BOMs have improved management approaches while 17(11.4%) agreed. However, 9(5.7%) disagreed whereas 18(12.5%) strongly disagreed.

On their part, the head teachers and Members of School BoMs also responded in favor of the view that schools collaborate with parents to pay fees as a way of improving school management. They supported the view that management of public primary school has been smooth since parents are frequently involved in the decision-making.

Headteacher, H3, noted;

*In my primary school, I always involve parents in all decisions right from academic activities to discipline issues. This has made running of School efficient and smooth.*

In the same token, the sub-county director of education stated that parental involvement in the critical aspects of school management is mandatory.

The SCDE2 observed;

*Parents are supposed to own every decision taken by school Management and this cannot happen if they are not made part of it Right from the beginning.*

However, these views were not supported by the coordinators of PBOs who stated that, on many occasions, parents are just consumers of decisions made. On further probing, CPBOs1, affirmed;

*We witnessed a scenario where parents whose children were involved in cases of indiscipline were informed when already letters had been written suspending the students. This left many parents wondering at what point are they are supposed to be involved in such matters.*

Despite these contradictions from respondents, these views point to the vitality of parental involvement in school management decisions. As noted earlier, these findings attest to the fact that collaboration with parents in making key decisions concerning their children is paramount. Besides, on occasions where parents are fully involved in decision-making and academic activities in public primary schools, cases such as indiscipline tend to reduce and students perform better in their examinations.

### Association between BoM and Academic Performance in Public Primary Schools

The study sought to establish whether there was an association between BoM and academic performance in public primary schools. Table 3 shows a correlation between BoM and academic performance in public primary schools.

Table 3

Correlation between BoM and Academic Performance in Public Primary Schools

		Frequency of Collaboration with School BoM	Academic Performance in KCPE
Frequency of Collaboration with School BoM	Pearson Correlation	1	.766*
	Sig. (2-tailed)		.027
	N	8	8
Academic Performance in KCPE	Pearson Correlation	.766*	1
	Sig. (2-tailed)	.027	
	N	8	8

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

As shown in table 3, a Pearson Product-Moment Correlation Test Analysis which generated correlation coefficients of  $r = 0.766$  with corresponding significant level (p-value) of 0.027 which was less than the predetermined level of significance, 0.05, that is,  $p\text{-value} = 0.027 < 0.05$ . Thus, there is significant influence of members of school BoM on academic performance in public primary schools.

### DISCUSSION

Majority, 85(57.5%), of the teachers strongly agreed with the view that public primary school BoMs source alternative funds for school programmes. This was supported by 14(9.3%) of them who were in agreement with the statement. This supports the findings of a study carried out in Nigeria in which Enueme (2010) established that school BoM ensure that teachers are provided with instructional materials to aid the process of curriculum implementation. This indicates that implementation of curriculum is one of the key functions of school BoM and to achieve this, they ensure that schools are supplied with suitable and adequate teaching and learning resources.

The school BoM is important since they are tasked with the responsibilities of coordinating and monitoring school activities. Just like in quantitative findings, these views further corroborate the views expressed by Deborah (2014) that school BoMs are useful in developing a school culture conducive to teaching and learning through shared leadership and decision-making, risk taking as well as management of students'

discipline. On funding, the interviewees also responded in favour of the view that collaboration with primary school BoMs has made it easy to source alternative funds for school programs.

Regarding whether school BOMs have improved management approaches, Majority, 98(66.8%) of the teachers who took part in the study agreed with the statement. This is consistent with the assertions of Chapman and Burchfield (2014) that strategies adopted by BoMs are key to prudent management of school resources. According to Chapman and Burchfield (2014), partnering with the school BoM is the main source of the organizational development and academic growth of students. This indicates that school BoMs are crucial to the management of primary schools. Though not the panacea to all managerial challenges bedeviling schools, school Boards of Management constitute a major pillar in the daily operations and governance of primary schools and thus, cannot be overlooked.

It was established that that in public primary schools which often collaborate with members of BoM, have improved learners' academic performance. The major focus areas of the improvement in management and governance is school leadership and management, parent and community partnership, student- centered learning, professional development and collaboration and quality instructional program. This further corroborates the assertions of Chapman and Burchfield (2014) that collaboration with the school BoM is paramount since it the driving force and main source of the organizational development and academic growth of students.

79(53.9%), of the teachers strongly agreed with the view that, in public primary schools, BoM takes part in the monitoring of students' discipline while 22(15.0%) agreed with the statement. These findings corroborate the assertions of Baysinger and Butler (2014) that partnership with school management is important in they are tasked with the responsibilities of coordinating and monitoring school activities, manage the school resources economically, efficiently and effectively for the purposes of the school. In the same token, these findings support those of a study carried out in Kuala Lumpur by Deborah (2014) which established that school BoMs are useful in developing a school culture conducive to teaching and learning through shared leadership and decision-making, risk taking, management of students' discipline and co-curricular activities. These findings indicate that school BoM plays a major role in the day today running of school operations such as offering guidance and monitoring instances of indiscipline among staff and students.

### **CONCLUSION**

Drawing from the above findings, it is evident that, in many public primary schools in Garissa County, performance of students in KCPE has been on a downward trend with a progressive decrease for the last five years (2017 to 2021). It is also evident that primary schools collaborate with their BoM to offer leadership, source alternative funds for

school programmes and ensure provision of adequate curriculum support materials. From the study findings, the government funds school programmes, provides infrastructure, instructional resources as well as undertake recruitment of teachers. These findings emphasize the significant role of school Boards of Management in improving management approaches, enhancing resource management, promoting curriculum implementation, and ultimately contributing to the overall effectiveness and efficiency of schools in response to evolving societal needs and educational standards. It is also important to note that schools BoMs are crucial to the management of primary schools. Though not the panacea to all managerial challenges bedeviling schools, school Boards of Management constitutes a major pillar in the daily operations and governance of primary schools and thus, cannot be overlooked.

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